

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2023

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 001-38803

HOTH THERAPEUTICS, INC.

(Exact name of registrant as specified in charter)

Nevada

(State or other jurisdiction of
incorporation or organization)

82-1553794

I.R.S. Employer
Identification No.

590 Madison Ave, 21st Floor, New York, New York

(Address of principal executive offices)

10022

(Zip code)

(646) 756-2997

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value \$0.0001 per share	HOTH	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None.**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act) Yes No

The aggregate market value of the voting stock and non-voting common equity held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter ended June 30, 2023 was \$9.8 million based upon the closing price of the registrant's common stock of \$3.00 on The Nasdaq Capital Market as of that date.

4,403,804 shares of common stock outstanding as of March 26, 2024.

Documents Incorporated by Reference: None.

Table of Contents

Part I		1
Item 1.	Business	1
Item 1A.	Risk Factors	11
Item 1B.	Unresolved Staff Comments	42
Item 1C.	Cybersecurity	42
Item 2.	Properties	42
Item 3.	Legal Proceedings	42
Item 4.	Mine Safety Disclosures	42
Part II		43
Item 5.	Market For Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	43
Item 6.	[Reserved]	43
Item 7.	Management’s Discussion and Analysis of Financial Condition and Results of Operations	44
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk	48
Item 8.	Financial Statements and Supplementary Data	F-1
Item 9.	Changes in and Disagreements With Accountants on Accounting and Financial Disclosure	49
Item 9A.	Controls and Procedures	49
Item 9B.	Other Information	49
Item 9C.	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	49
Part III		50
Item 10.	Directors, Executive Officers and Corporate Governance	50
Item 11.	Executive Compensation	54
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	58
Item 13.	Certain Relationships and Related Transactions, and Director Independence	59
Item 14.	Principal Accountant Fees and Services	61
Part IV		62
Item 15.	Exhibit and Financial Statement Schedules	62
Item 16.	Form 10-K Summary	66
Signatures		67

CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Any statements in this Annual Report on Form 10-K about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements. These statements are often, but not always, made through the use of words or phrases such as “believe,” “will,” “expect,” “anticipate,” “estimate,” “intend,” “plan” and “would.” For example, statements concerning financial condition, possible or assumed future results of operations, growth opportunities, industry ranking, plans and objectives of management, markets for our common stock and future management and organizational structure are all forward-looking statements. Forward-looking statements are not guarantees of performance. They involve known and unknown risks, uncertainties and assumptions that may cause actual results, levels of activity, performance or achievements to differ materially from any results, levels of activity, performance or achievements expressed or implied by any forward-looking statement.

Any forward-looking statements are qualified in their entirety by reference to the risk factors discussed throughout this Annual Report on Form 10-K. Some of the risks, uncertainties and assumptions that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, but are not limited to:

- our business strategies;
- the timing of regulatory submissions;
- our ability to obtain and maintain regulatory approval of our existing product candidates and any other product candidates we may develop, and the labeling under any approval we may obtain;
- risks relating to the timing and costs of clinical trials and the timing and costs of other expenses;
- risks related to market acceptance of products;
- the ultimate impact of any public health crises on our business, our clinical trials, our research programs, healthcare systems or the global economy as a whole;
- intellectual property risks;
- risks associated with our reliance on third-party organizations;
- our competitive position;
- our industry environment;
- our anticipated financial and operating results, including anticipated sources of revenues;
- assumptions regarding the size of the available market, benefits of our products, product pricing and timing of product launches;
- management’s expectation with respect to future acquisitions;
- statements regarding our goals, intentions, plans and expectations, including the introduction of new products and markets; and
- our cash needs and financing plans.

The foregoing list sets forth some, but not all, of the factors that could affect our ability to achieve results described in any forward-looking statements. You should read this Annual Report on Form 10-K and the documents that we reference herein and have filed as exhibits to the Annual Report on Form 10-K, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this Annual Report on Form 10-K is accurate as of the date hereof. Because the risk factors referred to on page 11 of Annual Report on Form 10-K could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and except as required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this Annual Report on Form 10-K, and particularly our forward-looking statements, by these cautionary statements.

RISK FACTOR SUMMARY

Our business is subject to significant risks and uncertainties that make an investment in us speculative and risky. Below we summarize what we believe are the principal risk factors but these risks are not the only ones we face, and you should carefully review and consider the full discussion of our risk factors in the section titled “Risk Factors,” together with the other information in this Annual Report on Form 10-K. If any of the following risks actually occurs (or if any of those listed elsewhere in this Annual Report on Form 10-K occur), our business, reputation, financial condition, results of operations, revenue, and future prospects could be seriously harmed. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business.

Risks Related to our Financial Position and Need for Capital

- We have generated no revenue from commercial sales and our future profitability is uncertain. If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development.

Risks Related to Product Development, Regulatory Approval, Manufacturing and Commercialization

- The marketing approval process is lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain marketing approval for the product candidates we intend to develop, our business may be substantially harmed.
- We may encounter substantial delays in completing our clinical studies which in turn will require additional costs, or we may fail to demonstrate adequate safety and efficacy to the satisfaction of applicable regulatory authorities. If we are not able to obtain any required regulatory approvals for our product candidates, we will not be able to commercialize our product candidates and our ability to generate revenue will be limited.
- Conducting successful clinical studies may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit.
- We rely on and intend to rely on third parties to conduct our clinical trials, to assist us with pre-clinical development and for manufacturing and marketing of our proposed product candidates. If we are not able to secure favorable arrangements with such third parties, or such third parties do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or commercialize our products and our business and financial condition could be harmed.
- We rely on and intend to rely on third parties to manufacture our clinical product supplies, and to produce and process our product candidates, if approved. Our commercialization of any of our product candidates could be stopped, delayed, or made less profitable if those third parties fail to obtain approval of government regulators, fail to provide us with sufficient quantities of drug product, devices, or device components, or fail to do so at acceptable quality levels or prices.
- Even if our product candidates are approved by regulatory authorities, if we or our suppliers fail to comply with ongoing U.S. Food and Drug Administration regulations or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.
- Our revenue stream will depend upon third-party reimbursement.
- Our products will face significant competition, and if they are unable to compete successfully, our business will suffer.
- If we fail to comply with healthcare regulations, we could face substantial enforcement actions, including civil and criminal penalties and our business, operations and financial condition could be adversely affected.

Risks Related to our Intellectual Property Rights

- Our business depends upon us securing and protecting critical intellectual property. Patent positions in our industry are highly uncertain and involve complex legal and factual questions.
- We rely upon licenses granted to us by various licensors, and if such licensors do not adequately defend such licenses, our business may be harmed.

Risks Related to our Company

- We have expanded and may continue to expand, our business through the acquisition of rights to new drug candidates that could disrupt our business, harm our financial condition and may also dilute current shareholders' ownership interests in our Company.
- If a product liability claim is successfully brought against us for uninsured liabilities, or such claim exceeds our insurance coverage, we could be forced to pay substantial damage awards that could materially harm our business.
- Significant disruptions of information technology systems or breaches of data security could adversely affect our business
- Any international operations we undertake may subject us to risks inherent with operations outside of the United States.

Risks Related to our Common Stock

- Unstable market and economic conditions and adverse developments with respect to financial institutions and associated liquidity risk may have serious adverse consequences on our business, financial condition and stock price.
- Future sales and issuances of our securities could result in additional dilution of the percentage ownership of our shareholders and could cause our share price to fall.
- We do not intend to pay cash dividends on our shares of common stock so any returns will be limited to the value of our shares.
- If we are unable to maintain listing of our securities on The Nasdaq Capital Market ("Nasdaq") or any stock exchange, our stock price could be adversely affected and the liquidity of our stock and our ability to obtain financing could be impaired.
- Our Amended and Restated Bylaws provide that the Eighth Judicial District Court of Clark County, Nevada will be the sole and exclusive forum for certain disputes which could limit shareholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

PART I

Throughout this Annual Report on Form 10-K, the “Company,” “Hoth,” “we,” “us,” and “our” refers to Hoth Therapeutics, Inc., individually, or as the context requires, collectively with its subsidiaries, merveille.ai and Hoth Therapeutics Australia Pty Ltd.

ITEM 1. BUSINESS

Overview

We are a clinical-stage biopharmaceutical company focused on developing new generation therapies for unmet medical needs. We are focused on developing (i) a topical formulation for treating side effects from drugs used for the treatment of cancer (HT-001); (ii) a treatment for mast-cell derived cancers and anaphylaxis (HT-KIT); (iii) a treatment for traumatic brain injury and ischemic stroke (HT-TBI); and (iv) a treatment and/or prevention for Alzheimer’s or other neuroinflammatory diseases (HT-ALZ). We also have assets being developed for (i) atopic dermatitis (also known as eczema) (BioLexa); (ii) a treatment for asthma and allergies using inhalational administration (HT-004); and (iii) a treatment for acne as well as inflammatory bowel diseases (HT-003). In addition, the Company also has interests in certain other assets being developed by third parties (see Note 5 to the consolidated financial statements for a discussion of the Company’s agreements with Zylö Therapeutics, Inc. and Voltron Therapeutics).

Primary Development:

HT-001

On February 1, 2020, we entered into a patent license agreement with The George Washington University (“GW”) pursuant to which GW granted us a license to certain patent rights to, among other things, make, use, offer and sell certain licensed products throughout the world with respect to HT-001 which we intend to seek approval for use for treating dermatological side effects from epidermal growth factor receptor (“EGFR”) inhibitors, and potentially other drugs used for the treatment of cancer. HT-001 is a topical formulation under development for the treatment of patients with rash and skin disorders associated with initial and repeat courses of tyrosine kinase EGFR inhibitor therapy. EGFR inhibitors are used for the treatment of cancers with EGFR up-regulation (such as non-small cell lung cancer, pancreatic cancer, breast cancer and colon cancer); however, EGFR inhibitors are often associated with dose-limiting skin toxicities that can result in the interruption or reduction of treatment. HT-001 is targeted to treat these EGFR-induced skin disorders to allow patients to achieve the best potential outcomes of EGFR therapy. HT-001 has achieved positive results in its initial pre-clinical studies conducted at GW. In November 2022, we submitted an IND to the FDA with respect to HT-001 as a concomitant therapy with EGFR inhibitors, for a Phase 2a clinical trial in humans. We have engaged Worldwide Clinical Trials (“Worldwide”) as our clinical research organization to provide clinical management, data management, biostatistical, medical monitoring, pharmacovigilance, and other related services to support the CLEER-001 Phase 2a clinical trial in the United States. We received FDA approval to proceed with our clinical study on December 28, 2022 and it is currently enrolling patients.

We believe that the key elements for our market success with respect to HT-001 include:

- To our knowledge, there are currently no drugs approved for the treatment of skin toxicities associated with EGFR inhibitor therapy and 49-100% of patients develop skin toxicities during EGFR inhibitory therapy;
- The main active ingredient of HT-001 is already approved in oral and IV dosage forms which supports pursuit of the 505(b)(2) regulatory pathway to reduce development time and cost;
- To our knowledge, there are no current topical formulations available using HT-001’s active ingredient so we believe that there is no direct market competition; and
- We have the potential to pursue other indications such as chronic pruritus, atopic dermatitis and other skin toxicities that develop from anti-cancer therapies using the HT-001 formulation.

HT-KIT

We have obtained from North Carolina State University (“NC State”) an exclusive, worldwide, royalty bearing license to certain intellectual property to, among other things, discover, develop, make, have made, use and sell certain licensed products and sell, use and practice certain licensed services with respect to cancer and anaphylaxis; this is being developed as HT-KIT. The HT-KIT drug is designed to more specifically target the receptor tyrosine kinase KIT in mast cells, which is required for the proliferation, survival and differentiation of bone marrow-derived hematopoietic stem cells. Mutations in the KIT pathway have been associated with several human cancers, such as gastrointestinal stromal tumors and mast cell-derived cancers (mast cell leukemia and mast cell sarcoma). Based on the initial proof-of-concept success, we intend to initially target mast cell neoplasms for development of HT-KIT, which is a rare, aggressive cancer with poor prognosis.

The same target, KIT, also plays a key role in mast cell-mediated anaphylaxis, a serious allergic reaction that is rapid in onset and may cause death. Anaphylaxis typically occurs after exposure to an external allergen that results in an immediate and severe immune response. We also intend to pursue the anaphylaxis indication for HT-KIT in parallel to cancer treatment.

On November 15, 2021, we entered into a sponsored research agreement with NC State to focus on characterizing the HT-KIT dose and dosing frequency for treatment of aggressive mastocytosis and mast cell neoplasms using humanized tumor mouse models.

In December 2021, we submitted an Orphan Drug Designation (“ODD”) request to the U.S. Food and Drug Administration (“FDA”) for HT-KIT for the treatment of mastocytosis, and on March 10, 2022, we received such ODD. Drugs intended to treat orphan diseases (rare diseases that affect less than 200,000 people in the U.S.) are eligible to apply for ODD, which provides benefits such as 7-year marketing exclusivity and tax incentives to the sponsor during development and after approval. In September 2023, we submitted a pre-IND meeting request to the FDA with respect to HT-KIT as for the treatment of adult patients with advanced systemic mastocytosis (AdvSM), systemic mastocytosis with an associated hematological neoplasm (SM-AHN) and mast cell leukemia (MCL). In preparation for such pre-IND meeting, we prepared and submitted to the FDA our IND-opening clinical trial plan which includes two phase 1 trials conducted in patients. Based on the FDA’s feedback, we intend to advance our IND-enabling activities for HT-KIT as planned.

HT-ALZ

In February 2021, we filed a provisional patent application with the United States Patent and Trademark Office for the use of the active ingredient of HT-001 to treat and prevent Alzheimer’s disease and other neuroinflammatory diseases, and in February 2022, we filed a Patent Cooperation Treaty patent application, receiving confirmation of such filing on April 4, 2022.

We intend to develop HT-ALZ for use in patients following the Section 505(b)(2) regulatory pathway of the FDA rules. Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act (“FDCA”) was enacted to enable sponsors to seek New Drug Application (“NDA”) approval for novel repurposed drugs without the need for such sponsors to undertake time consuming and expensive pre-clinical safety studies and Phase 1 safety studies. Proceeding under this regulatory pathway, we will be able to rely upon publicly available data with respect to our active ingredient in our NDA submission to the FDA for marketing approval.

On June 7, 2021, we entered into a sponsored research agreement with Washington University in St. Louis to investigate the effects of HT-ALZ on behavioral and pathological markers of Alzheimer’s disease and to determine if HT-ALZ can improve learning and memory in an animal model of Alzheimer’s disease. Our study will also determine if behavior is improved utilizing HT-ALZ in blocking NK-1Rs. The study commenced in August 2021 and after positive initial preclinical results, a chronic dosing study in mice was initiated. We received preclinical results from the chronic dosing study in 2023 and amended the SRA to conduct additional studies. We expect the results from the additional preclinical studies in 2024.

HT-TBI

In October 2022, we filed a provisional patent application with the United States Patent and Trademark Office for the use of the active ingredient of HT-001 to treat traumatic brain injury and ischemic stroke. We intend to develop HT-ALZ for use in patients following the Section 505(b)(2) regulatory pathway of the FDA rules pursuant to which we will be able to rely upon publicly available data with respect to our active ingredient in our NDA submission to the FDA for marketing approval.

HT-TBI injection is being developed as a ready-to-inject autoinjector for intramuscular injection to be used in both traumatic brain injuries and ischemic stroke. The same dose and formulation can be used across both TBI and stroke indications in age two years through adult. Our focus of development is for point-of-care use in ambulatory and emergency room settings. HT-TBI's active ingredient targets substance P/NK-1 pathway, identified as a leading cause of post-brain injury inflammation and edema. Preclinical data has shown an NK-1 Antagonist significantly reduces brain edema and blood brain barrier disruption post-TBI and post-stroke.

The BioLexa Platform

We have obtained an exclusive license from the University of Cincinnati to make, use, have made, import, offer for sale, and sell products based upon or involving the use of (i) topical compositions comprising a zinc chelator and gentamicin and (ii) zinc chelators to inhibit biofilm formation (the "BioLexa Platform" or "BioLexa"). The license enables us to develop the platform for any indications in humans. The BioLexa Platform is a proprietary, patented, drug compound platform for the treatment of eczema. It combines an FDA approved zinc chelator with one or more approved antibiotics in a topical dosage form to address unchecked eczema flare-ups by preventing the formation of infectious biofilms and the resulting clogging of sweat ducts. We intend to develop the BioLexa Platform for use in patients following the Section 505(b)(2) regulatory pathway of the FDA rules. Proceeding under this regulatory pathway, we will be able to rely upon publicly available data with respect to gentamicin and the zinc chelator in our NDA submission to the FDA for marketing approval.

In December 2020, we received approval from the Belberry Human Research Ethics Committee in Australia to conduct our Phase 1b clinical trial of BioLexa, and we have engaged Novotech (Australia) Pty Limited as our local clinical research organization in Australia to provide clinical management, data management, biostatistical, medical monitoring, pharmacovigilance, and other related services to support the first in human clinical trial of BioLexa. Phase 1b of the trial was initiated in 2021 and final dosing of patients concluded in September 2022. At this time, we do not anticipate conducting any further trials in Australia.

We believe that the key elements for our market success with respect to BioLexa include:

- the proprietary formulation of two FDA-approved drugs to treat bacterial proliferation which may reduce development time and costs by giving us the ability to rely on safety and efficacy data from the two approved drugs;
- our proprietary formulation is not a topical corticosteroid, and provides a novel mechanism of action and potentially a preferred safety profile as a market differentiator; and
- the literature set forth below reaffirms the critical role that *S. aureus* plays in the development of atopic dermatitis flare-ups within the international medical community, supporting the targeted mechanism of action of BioLexa.

Shi et al, "MRSA Colonization is Associated with Decreased Skin Commensal Bacteria in Atopic Dermatitis," *Invest Dermatol.* 2018.

Blicharz, et al, "Staphylococcus aureus: an underestimated factor in the pathogenesis of atopic dermatitis?," *Adv Dermatol Allergol* 2019.

Preclinical Development

HT-003

On July 30, 2020 (the “Isoprene Effective Date”), we entered into a Sublicense Agreement (the “Isoprene Sublicense Agreement”) with Isoprene Pharmaceuticals, Inc. (“Isoprene”) pursuant to the commercial evaluation sublicense and option agreement dated March 8, 2019, by and among us, the University of Maryland, Baltimore and Isoprene. Pursuant to the Isoprene Sublicense Agreement, Isoprene granted us an exclusive sublicense to certain intellectual property (i) to make, have made, use, sell, offer to sell and import certain licensed products, (ii) in connection therewith, to use certain inventions and licensed materials and (iii) to practice certain patent rights for the treatment of dermatological conditions or diseases, referred to as HT-003. HT-003 is a novel retinoic acid metabolism blocking agents (“RAMBAs”) under investigation for topical treatment in acne and psoriasis applications.

In December 2019, we entered into a research collaboration agreement with Weill Cornell Medicine for the completion of pre-clinical studies investigating the mechanism of action of HT-003 that was renewed in January 2021 as a result of positive preclinical results. Dr. Jonathan Zippin, M.D., Ph.D., FAAD, Associate Professor of Dermatology at Weill Cornell Medicine and our Senior Scientific Advisor, was the principal investigator for such pre-clinical studies.

RAMBAs have the potential to be developed as a platform for multiple inflammatory-based indications. Accordingly, we entered into a Sublicense Agreement with Isoprene on July 2, 2021 pursuant to the option agreement dated December 22, 2020 to expand the therapeutic indication of the sublicensed RAMBAs from Isoprene to include inflammatory bowel diseases, including Crohn’s disease and ulcerative colitis. Preclinical proof-of-concept studies were conducted in 2021 for the investigation of RAMBAs for treatment of inflammatory bowel diseases, including Crohn’s disease and ulcerative colitis.

HT-004

On November 20, 2019, we entered into a license agreement with NC State pursuant to which NC State granted us an exclusive license to, among other things, develop, make, use, offer and sell certain licensed products throughout the world with respect to HT-004 for treating allergic diseases. HT-004 is a potential disease-modifying agent that uses exon-skipping oligonucleotide-targeted methods to reduce mast cell responses to immunoglobulin E (IgE)-directed antigens, which is one of the key mechanisms in the pathophysiology of asthma, atopic dermatitis and other allergic diseases. HT-004 is currently under investigation for the treatment of asthma and allergies using inhalational administration.

In December 2019, we entered a sponsored research agreement with NC State for proof of principle in targeting allergic inflammation in the airways. Preclinical proof-of-concept data was generated in October 2020 supporting efficacy of HT-004 after inhalational delivery in a mouse model. Critical proof-of-concept studies in a humanized mouse model were completed in 2023. Further preclinical studies are underway at NC State to study HT-004 in different animal models.

We believe that the key elements for our market success with respect to HT-004 include:

- To our knowledge, there are currently no disease-modifying agents for asthma or allergy diseases;
- The active pharmaceutical ingredient in HT-004 is a novel molecular class that we believe would prevent generic competition after commercialization;
- HT-004 is being developed for inhalational administration by either inhaler or nebulizer for easy access at home by patients; and
- HT-004 is applicable for both adult and pediatric patient populations with asthma and/or allergies.

Product Development Pipeline

The following table summarizes our product development pipeline.

	PRODUCT	DISEASE	PROOF OF CONCEPT	PRECLINICAL	IND-ENABLING	PHASE 1	PHASE 2	PHASE 3	LAUNCH
Oncology	HT-KIT	Mast-Cell Derived Cancers	[Progress bar from start to end of IND-ENABLING phase]						
Neurology	HT-TBI	Traumatic Brain Injury/Ischemic Stroke	[Progress bar from start to end of PRECLINICAL phase]						
	HT-ALZ	Alzheimer's Disease	[Progress bar from start to end of PROOF OF CONCEPT phase]						
Dermatology	HT-001	Skin Toxicity Associated with EGFR Inhibitors	[Progress bar from start to end of PHASE 1 phase]						
	BioLexa	Atopic Dermatitis	[Progress bar from start to end of PHASE 1 phase]						
	HT-003D	Acne	[Progress bar from start to end of PRECLINICAL phase]						
Inflammatory	HT-004	Asthma	[Progress bar from start to end of PRECLINICAL phase]						
	HT-003IBD	Inflammatory Bowel Diseases	[Progress bar from start to end of PROOF OF CONCEPT phase]						

Other Interests

We have interests in certain other assets being developed by third parties. Specifically, in December 2021, we entered into a license agreement with Zylö Therapeutics, Inc. (“Zylö”) with respect to the development of HT-005. We had previously entered into a sublicense agreement with Zylö pursuant to which we had advanced the development of HT-005 for patients with lupus. (See Note 5 to the consolidated financial statements for a discussion of our agreement with Zylö). In addition, in March 2020, we entered into a Royalty and Development Agreement (the “Voltron Agreement”) with Voltron Therapeutics, Inc. (“Voltron”) with respect to the development of potential product candidates for the prevention of COVID-19. (See Note 5 to the consolidated financial statements for a discussion of our agreement with Voltron).

Competition

The biopharmaceutical industry utilizes rapidly advancing technologies and is characterized by intense competition. There is also a strong emphasis on intellectual property and proprietary products. In our segment of the biopharmaceutical industry, competition from different sources including major biopharmaceutical companies, academic institutions, government agencies, and public and private research institutions will continue. Many of our competitors have significantly greater financial resources and expertise in product candidate development and may have progressed further toward approval and marketing. In addition, smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Manufacturing and Supply

We do not have any manufacturing capability and therefore we currently rely on and intend to continue to rely on contract manufacturing organizations to produce our product candidates in accordance with regulatory requirements.

Commercialization

Our success depends not only on the successful development and approval of our products candidates but also on the commercialization of our potential products. If and when our product candidates receive regulatory approval, we intend to engage third-parties such as pharmaceutical and biotechnology companies for the commercialization of our products.

Intellectual Property Portfolio

Our goal is to obtain, maintain and enforce patent protection for our products, formulations, processes, methods and other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the U.S. and in other countries. Our policy is to actively seek the broadest intellectual property protection possible for our products, proprietary information and proprietary technology through a combination of contractual arrangements and patents, both in the U.S. and elsewhere in the world. In addition, we intend to actively pursue product life-cycle management initiatives to extend our market exclusivity.

We intend to cement our market exclusivity in conjunction with our formulation-development partners through additional patents based on the pharmaceutical and clinical characteristics of our product candidates in the proprietary formulation and through the introduction of line extensions such as combination drugs and new formulations.

In addition to any granted patents, our products may be eligible for market exclusivity to run concurrently with the term of the patent for three and a half years in the U.S. pursuant to the Hatch-Waxman Act and pediatric exclusivity guideline and up to ten years of market exclusivity in the E.U. which includes eight years of data exclusivity and two years of market exclusivity from the date we file an NDA or the European equivalent referred to as Marketing Authorization Application.

We currently have licenses to six U.S. patents and one pending U.S. patent application, and we have licenses to three patents issued in Europe and Australia and five pending patent applications in foreign jurisdictions including Europe, Brazil, Canada and Hong Kong. Hoth also holds two pending U.S. patent applications, one European application and one pending PCT patent application.

In addition to patents, we rely on trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. However, trade secrets and know-how can be difficult to protect. We take measures to protect and maintain the confidentiality of proprietary information in order to protect aspects of the business that are not amenable to, or that we do not consider appropriate for, patent protection. We require employees, consultants, outside scientific partners, sponsored researchers and other advisors to execute confidentiality agreements with us on or prior to the commencement of employment or consulting relationships with us.

Government Regulations

Governmental authorities in the U.S. and other countries extensively regulate the research, development, testing, manufacture, labeling, promotion, advertising, distribution and marketing of pharmaceutical products, including biological products, and medical devices, such as those being developed by us. In the U.S., the FDA regulates such products under the FDCA and the Public Health Services Act and implements related regulations. Failure to comply with applicable FDA requirements, both before and after approval, may subject us to administrative and judicial sanctions, such as a delay in approving or refusal by the FDA to approve pending applications, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions and/or criminal prosecution.

U.S. Food and Drug Administration Regulations

United States Drug Development

In the United States, the FDA regulates drugs (including biological products, such as vaccines), medical devices and combinations of drugs and devices, or combination products, under the FDCA and its implementing regulations. These products are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, untitled or warning letters, requests for voluntary product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of extensive pre-clinical laboratory tests, animal studies and formulation studies in accordance with applicable regulations, including the FDA's Good Laboratory Practice regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;

- performance of adequate and well-controlled human clinical trials in accordance with an applicable IND and other clinical study related regulations, referred to as good clinical practice (“GCP”), to establish the safety and efficacy of the proposed drug for its proposed indication;
- submission to the FDA of an NDA or biologics license application (“BLA”);
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the product, or components thereof, are produced to assess compliance with the FDA’s current good manufacturing practice (“cGMP”) requirements;
- potential FDA audit of the clinical trial sites that generated the data in support of the NDA or BLA; and
- FDA review and approval of the NDA or BLA prior to any commercial marketing or sale.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1. The product is initially introduced into a small number of healthy human subjects or patients and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain early evidence on effectiveness. In the case of some products for severe or life-threatening diseases, especially when the product is suspected or known to be unavoidably toxic, the initial human testing may be conducted in patients.
- Phase 2. Involves clinical trials in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage and schedule.
- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit relationship of the product and provide an adequate basis for product labeling.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 trials. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the clinical trial sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an Institutional Review Board (“IRB”), which oversees the conduct of clinical trials, can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB’s requirements or if the product has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check points based on access to certain data from the study. The clinical trial sponsor may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

FDA Review Process

The results of product development, pre-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the drug, proposed labeling and other relevant information, are submitted to the FDA as part of an NDA for a new drug, or BLA for a biological product, requesting approval to market the product. The submission of an NDA or BLA is subject to the payment of a substantial user fee, and the sponsor of an approved NDA or BLA is also subject to an annual program user fee; although a waiver of such fee may be obtained under certain limited circumstances.

The FDA reviews all NDAs submitted before it accepts them for filing and may request additional information rather than accepting an NDA for filing. Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act (“PDUFA”), the FDA’s goal to complete its substantive review of a standard NDA and respond to the applicant is ten months from the receipt of the NDA. The FDA does not always meet its PDUFA goal dates, and the review process is often significantly extended by FDA requests for additional information or clarification and may go through multiple review cycles.

The review and evaluation of an NDA or BLA by the FDA is extensive and time consuming and may take longer than originally planned to complete, and we may not receive a timely approval, if at all.

Before approving an NDA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMPs. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. In addition, before approving an NDA, the FDA may also audit data from clinical trials to ensure compliance with GCP requirements.

There is no assurance that the FDA will ultimately approve a product for marketing in the United States, and we may encounter significant difficulties or costs during the review process. If a product receives marketing approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling or may condition the approval of the NDA or BLA on other changes to the proposed labeling, development of adequate controls and specifications, or a commitment to conduct post-market testing or clinical trials and surveillance to monitor the effects of approved products. For example, the FDA may require Phase 4 clinical trials to further assess drug safety and effectiveness and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized. The FDA may also place other conditions on approvals, including the requirement for a risk evaluation and mitigation strategy (“REMS”), to assure the safe use of the drug.

Section 505(b)(2) Regulatory Approval Pathway

Section 505(b)(2) of the FDCA provides an alternate regulatory pathway for approval of a new drug by allowing the FDA to rely on data not developed by the applicant. Specifically, Section 505(b)(2) permits the submission of an NDA where one or more of the investigations relied upon by the applicant for approval was not conducted by or for the applicant and for which the applicant has not obtained a right of reference. The applicant may rely upon published literature and/or the FDA’s findings of safety and effectiveness for an approved drug already on the market. Approval or submission of a 505(b)(2) application, like those for abbreviated new drugs (“ANDAs”), may be delayed because of patent and/or exclusivity rights that apply to the previously approved drug.

A 505(b)(2) application may be submitted for a new chemical entity (“NCE”) when some part of the data necessary for approval is derived from studies not conducted by or for the applicant and when the applicant has not obtained a right of reference.

Section 505(b)(2) applications also may be entitled to marketing exclusivity if supported by appropriate data and information. Three-year new data exclusivity may be granted to the 505(b)(2) application if one or more clinical investigations conducted in support of the application, other than bioavailability/bioequivalence studies, were essential to the approval and conducted or sponsored by the applicant. Five years of marketing exclusivity may be granted if the application is for an NCE, and pediatric exclusivity is likewise available.

Orange Book Listing and Paragraph IV Certification

For NDA submissions, including those under Section 505(b)(2), applicants are required to list with the FDA certain patents with claims that cover the applicant’s product. Upon approval, each of the patents listed in the application is published in *Approved Drug Products with Therapeutic Equivalence Evaluations*, commonly referred to as the Orange Book. Any applicant who subsequently files an ANDA or 505(b)(2) NDA that references a drug listed in the Orange Book must certify to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. This last certification is known as a Paragraph IV Certification.

If an applicant has provided a Paragraph IV Certification to the FDA, the applicant must also send notice of the Paragraph IV Certification to the holder of the NDA for the approved drug and the patent owner once the application has been accepted for filing by the FDA. The NDA holder or patent owner may then initiate a patent infringement lawsuit in response to notice of the Paragraph IV Certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV Certification prevents the FDA from approving the ANDA or 505(b)(2) application until the earlier of 30 months from the date of the lawsuit, the applicant’s successful defense of the suit, or expiration of the patent.

Reimbursement

Potential sales of any of our product candidates, if approved, will depend, at least in part, on the extent to which such products will be covered by third-party payors, such as government health care programs, commercial insurance and managed healthcare organizations. These third-party payors are increasingly limiting coverage and/or reducing reimbursements for medical products and services. A third-party payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage for the drug product. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our future revenues and results of operations. Decreases in third-party reimbursement or a decision by a third-party payor to not cover a product candidate, if approved, or any future approved products could reduce physician usage of our products, and have a material adverse effect on our sales, results of operations and financial condition.

In the United States, the Medicare Part D program provides a voluntary outpatient drug benefit to Medicare beneficiaries for certain products. We do not know whether our product candidates, if approved, will be eligible for coverage under Medicare Part D, but individual Medicare Part D plans offer coverage subject to various factors such as those described above. Furthermore, private payors often follow Medicare coverage policies and payment limitations in setting their own coverage policies.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting an NDA or BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full NDA or BLA, to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Healthcare Laws and Regulations

Sales of our product candidates, if approved, or any other future product candidate will be subject to healthcare regulation and enforcement by the federal government and the states and foreign governments in which we might conduct our business. The healthcare laws and regulations that may affect our ability to operate include the following:

- The federal Anti-Kickback Statute makes it illegal for any person or entity to knowingly and willfully, directly or indirectly, solicit, receive, offer, or pay any remuneration that is in exchange for or to induce the referral of business, including the purchase, order, lease of any good, facility, item or service for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. The term "remuneration" has been broadly interpreted to include anything of value.

- Federal false claims and false statement laws, including the federal civil False Claims Act, prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, for payment to, or approval by, federal programs, including Medicare and Medicaid, claims for items or services, including drugs, that are false or fraudulent.
- Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) created additional federal criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors or making any false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their implementing regulations, impose obligations on certain types of individuals and entities regarding the electronic exchange of information in common healthcare transactions, as well as standards relating to the privacy and security of individually identifiable health information.
- The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members.

Also, many states have similar laws and regulations, such as anti-kickback and false claims laws that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs. Additionally, we may be subject to state laws that require pharmaceutical companies to comply with the federal government’s and/or pharmaceutical industry’s voluntary compliance guidelines, state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, as well as state and foreign laws governing the privacy and security of health information, many of which differ from each other in significant ways and often are not preempted by HIPAA.

Additionally, to the extent that our product is sold in a foreign country, we may be subject to similar foreign laws.

Employees

As of March 26, 2024, we employed a total of 2 full-time employees, 3 employee consultants, and 1 part-time employee. We are not a party to any collective bargaining agreements. We believe that we maintain good relations with our employees.

Our Corporate Information and History

We were incorporated as a Nevada corporation on May 16, 2017. Our principal executive offices are located at 590 Madison Ave, 21st FL, New York, New York 10022 and our telephone number is (646) 756-2997.

Available Information

Our website address is www.hoththerapeutics.com. The contents of, or information accessible through, our website are not part of this Annual Report on Form 10-K, and our website address is included in this document as an inactive textual reference only. We make our filings with the U.S. Securities and Exchange Commission (“SEC”), including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, available free of charge on our website as soon as reasonably practicable after we file such reports with, or furnish such reports to, the SEC. The public may read and copy the materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Additionally, the SEC maintains an internet site that contains reports, proxy and information statements and other information. The address of the SEC’s website is www.sec.gov. The information contained in the SEC’s website is not intended to be a part of this filing.

ITEM 1A. RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the following risk factors and the other information in this Annual Report on Form 10-K before investing in our common stock. Our business and results of operations could be seriously harmed by any of the following risks. The risks set out below are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results. If any of the following events occur, our business, financial condition and results of operations could be materially adversely affected. In such case, the value and trading price of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Financial Position and Need for Capital

We have generated no revenue from commercial sales to date and our future profitability is uncertain.

We were incorporated in May 2017 and have a limited operating history and our business is subject to all of the risks inherent in the establishment of a new business enterprise. Our likelihood of success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with development and expansion of a new business enterprise. Since inception, we have incurred losses and expect to continue to operate at a net loss for at least the next several years as we commence our research and development efforts, conduct clinical trials and develop manufacturing, sales, marketing and distribution capabilities. Our net losses for the years ended December 31, 2023 and 2022 were \$7.8 million and \$11.4 million, respectively, and our accumulated deficit as of December 31, 2023 and 2022 was \$52.9 million and \$45.1 million, respectively. There can be no assurance that the products under development by us will be approved for sale in the U.S. or elsewhere. Furthermore, there can be no assurance that if such products are approved they will be successfully commercialized, and the extent of our future losses and the timing of our profitability are highly uncertain. If we are unable to achieve profitability, we may be unable to continue our operations.

If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development and you will likely lose your entire investment.

We will need to continue to seek capital from time to time to continue development of our product candidates. We cannot provide any assurances that any revenues that we may generate in the future will be sufficient to fund our ongoing operations. We believe that we will need to raise substantial additional capital to fund our operations and the development and commercialization of our product candidates.

Our business or operations may change in a manner that may consume available funds more rapidly than anticipated and substantial additional funding may be required to maintain operations, fund expansion, commercialize our product candidates, develop new or enhanced products, acquire complementary products, business or technologies or otherwise respond to competitive pressures and opportunities, such as a change in the regulatory environment or a change in preferred treatment modalities. In addition, we may need to accelerate the growth of our sales capabilities and distribution beyond what is currently envisioned, and this would require additional capital. However, we may not be able to secure funding on favorable terms, if at all.

If we cannot raise adequate funds to satisfy our capital requirements, we may have to delay, scale back or eliminate our research and development activities, clinical studies or operations. We may also be required to obtain funds through arrangements with collaborators, which arrangements may require us to relinquish rights to certain intellectual property, technologies or products that we otherwise would not consider relinquishing, including rights to future product candidates or certain major geographic markets. This could result in sharing revenues which we might otherwise retain for ourselves. Any of these actions may harm our business, financial condition and results of operations.

The amount of capital we may need depends on many factors, including the progress, timing and scope of our product development programs; the progress, timing and scope of our pre-clinical studies and clinical trials; the time and cost necessary to obtain regulatory approvals; the time and cost necessary to further develop manufacturing processes and arrange for contract manufacturing; our ability to enter into and maintain collaborative, licensing and other commercial relationships; and our partners' commitment of time and resources to the development and commercialization of our products.

Even if we can raise additional funding, we may be required to do so on terms that are dilutive to you.

The capital markets have been unpredictable in the recent past for unprofitable companies such as ours. The amount of capital that a company such as ours is able to raise often depends on variables that are beyond our control. As a result, we may not be able to secure financing on terms attractive to us, or at all. If we are able to consummate a financing arrangement, the amount raised may not be sufficient to meet our future needs. If adequate funds are not available on acceptable terms, or at all, our business, including our results of operations, financial condition and our continued viability will be materially adversely affected.

Risks Related to Product Development, Regulatory Approval, Manufacturing and Commercialization

We are dependent upon the clinical success of our licensed products and technologies. If we are unable to generate revenues from our licensed products and technologies, our ability to create shareholder value may be limited.

We do not currently generate revenues from any of our product candidates, and we may not be successful in obtaining regulatory approvals to commence our clinical trials. If we do not obtain such approvals, the time in which we expect to commence clinical programs for our product candidates will be extended and such extension may increase our expenses and our need for additional capital. Moreover, there is no guarantee that our clinical trials will be successful or that we will continue clinical development in support of an approval from the regulatory agencies for any indication. We note that most drug candidates never reach the clinical stage and even those that do commence clinical development have only a small chance of successfully completing clinical development and gaining regulatory approval. Therefore, our business currently depends entirely on the successful development, regulatory approval and commercialization of our product candidates, which may never occur.

Although we have entered into the Voltron Agreement pursuant to which we and HaloVax, LLC ("HaloVax") intend to jointly develop products to prevent COVID-19, no assurance can be given as to when, if ever, we will be able to develop any products for such purpose and if developed that such products will be successfully commercialized.

In March 2020, we entered into the Voltron Agreement pursuant to which we and HaloVax will work to jointly develop potential products candidates to prevent COVID-19; however, no assurance can be given as to when, if ever, we will be able to develop any products for such purpose. Furthermore, we are subject to risks including, but not limited to, the following with respect to the development of a treatment for COVID-19:

- the EUA marketing approval processes of the FDA are lengthy, time consuming and inherently unpredictable, and we cannot guarantee that we will ever have a marketable product
- we may encounter substantial delays in completing our clinical studies which in turn will require additional costs, or we may fail to demonstrate adequate safety and efficacy to the satisfaction of applicable regulatory authorities;
- conducting successful clinical studies may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit;
- to be commercially successful, physicians must be persuaded that using our products are effective alternatives to other existing therapies and treatments;

- we may depend on third parties for manufacturing our proposed product candidates and any conflicts with such partners could delay or prevent the development or commercialization of such product candidates;
- if third-party contract manufacturers upon whom we rely to formulate and manufacture our product candidates do not perform, fail to manufacture according to our specifications or fail to comply with strict regulations, our clinical studies could be adversely affected and the development of our product candidates could be delayed or terminated or we could incur significant additional expenses;
- adverse events involving our products may lead the FDA to delay or deny clearance for our products or result in product recalls that could harm our reputation, business and financial results; and
- if we fail to comply with healthcare regulations, we could face substantial enforcement actions, including civil and criminal penalties and our business, operations and financial condition could be adversely affected.

Although the federal government had previously declared COVID-19 a national emergency, that declaration expired on May 11, 2023, at which time the favorable payment provisions available to healthcare providers during the declared national emergency ended. The FDA issued EUAs for several COVID-19 related products in 2020 and 2021. EUAs are authorized pursuant to an EUA declaration under the U.S. Food, Drug, and Cosmetic Act and remain in effect until the Secretary of the U.S. Department of Health and Human Services terminates the EUA declaration or unless sooner terminated or revoked.

If our joint venture with HaloVax is not successful or if we fail to realize the benefits we anticipate from such joint venture, we may not be able to capitalize on the full market potential of our potential products.

In March 2020, we entered into the Voltron Agreement to form a joint venture entity named HaloVax to jointly develop potential product candidates for the prevention of the COVID-19. Pursuant to the terms of the Voltron Agreement we are entitled to receive sales-based royalties at low single digit percentages and shall contribute proceeds of the development of products to prevent COVID-19. In addition, in 2020, we purchased 6% of HaloVax's outstanding membership interests; however, during the fourth quarter of 2022, we identified indicators of impairment for the HaloVax investment as a result of adverse changes in HaloVax's business operations, including liquidity concerns. As a result, our investment in HaloVax was valued at \$0 as of December 31, 2023 and 2022. If and to the extent we and HaloVax are unable to develop potential product candidates for the prevention of COVID-19, we will not be entitled to any sale-based royalties.

While Voltron has agreed to cooperate and use commercially reasonable efforts to exchange information and resources that will lead to the development activities and established a Joint Development Committee consisting of seven members, two of which were selected by us, to plan, review, coordinate and oversee the performance of the development activities and timelines with respect to development activities, we have limited contractual rights to direct its activities. Moreover, we will not have any other control with respect to the operations of HaloVax. Therefore, HaloVax will have a greater influence with respect to its commercialization efforts and other operations. In general, our joint venture with HaloVax subjects us to a number of related risks including that:

- we may not receive sales-based royalties pursuant to the terms of the Voltron Agreement;
- we may not be successful in the development of any product candidates;
- HaloVax may not commit sufficient resources to the marketing and distribution of our products;
- HaloVax may infringe the intellectual property rights of third parties, which may expose us to litigation and other potential liability;
- disputes may arise between us and HaloVax that result in the delay or termination of the commercialization of our products or product candidates or that result in costly litigation or arbitration that diverts management attention and resources including, but not limited to, disputes with respect to commercializing products upon terms mutually agreeable or beneficial to us and HaloVax;
- any products, if developed, will be sold or licensed on terms that are beneficial to us;

- HaloVax may not provide us with timely and accurate information regarding commercialization status or results, which could adversely impact our ability to manage our own commercialization efforts, accurately forecast financial results or provide timely information to our shareholders regarding our commercialization efforts; and
- if any product candidates are successfully developed that we will be able to commercialize such products upon terms mutually agreeable or beneficial to us and HaloVax.

If HT-005 is not commercialized by Zylö or otherwise acquired by a third-party, we may not be able to capitalize on the full market potential of our interests with respect to HT-005.

In December 2021, we licensed HT-005 back to Zylö and are entitled to receive a low single digit percent of the net proceeds attributable to the sale of HT-005 to a third-party, a low single digit percent of the net proceeds from the sale of HT-005 in the United States and Canada and their respective territories (collectively, the “Territory”) and a low double digit percent of any royalty Zylö receives through the sublicense to a third-party based on the net sales of HT-005 in the Territory. In connection with the license of HT-005 back to Zylö, we acquired 100,000 shares of Zylö’s Class B common stock. As of December 31, 2023, we own 220,000 shares of Zylö’s Class B common stock. If Zylö is unable to sell or otherwise commercialize HT-005, we will not be entitled to any proceeds or sale-based royalties and the value of our ownership interest in Zylö could decline in which case we may lose all or part of our investment in Zylö.

The marketing approval process of the FDA is lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain marketing approval for the product candidates we intend to develop, our business may be substantially harmed.

None of the product candidates we intend to develop have gained marketing authorization, approval or clearance in the U.S. or elsewhere, and we cannot guarantee that we will ever have marketable products. Our business is substantially dependent on our ability to complete the development of, obtain marketing approval for, and successfully commercialize our product candidates in a timely manner. We cannot commercialize our product candidates in the United States or elsewhere without first obtaining approval from regulatory agencies such as the FDA to market each product candidate. Our product candidates could fail to receive marketing approval for many reasons, including among others:

- the FDA or other regulatory agencies may disagree with the design or implementation of our clinical trials;
- the FDA could determine that we cannot rely on Section 505(b)(2) for any of our product candidates; and
- the FDA may determine that we have identified the wrong reference listed drug or drugs or that approval of our Section 505(b)(2) application for any of our product candidates is blocked by patent or non-patent exclusivity of the reference listed drug or drugs.

In addition, the process of seeking regulatory clearance or approval to market the product candidates we intend to develop is expensive and time consuming and, notwithstanding the effort and expense incurred, clearance or approval is never guaranteed. If we are not successful in obtaining timely clearance or approval of our product candidates from the FDA or other foreign regulatory agencies, we may never be able to generate significant revenue and may be forced to cease operations. The NDA process is costly, lengthy and uncertain. Any NDA application filed by us will have to be supported by extensive data, including, but not limited to, technical, pre-clinical, clinical, manufacturing and labeling data, to demonstrate to the FDA’s satisfaction the safety and efficacy of the product for its intended use.

Obtaining clearances or approvals from the FDA and from regulatory agencies in other countries is an expensive and time-consuming process and is uncertain as to outcome. The FDA and other agencies could ask us to supplement our submissions, collect non-clinical data, conduct additional clinical trials or engage in other time-consuming actions, or it could simply deny our applications. In addition, even if we obtain an NDA approval or pre-market approvals in other countries, the approval could be revoked or other restrictions imposed if post-market data demonstrates safety issues or lack of effectiveness. We cannot predict with certainty how, or when, the FDA or other regulatory agencies will act. If we are unable to obtain the necessary regulatory approvals, our financial condition and cash flow may be adversely affected, and our ability to grow domestically and internationally may be limited. Additionally, even if cleared or approved, our products may not be approved for the specific indications that are most necessary or desirable for successful commercialization or profitability.

We may encounter substantial delays in completing our clinical studies which in turn will require additional costs, or we may fail to demonstrate adequate safety and efficacy to the satisfaction of applicable regulatory authorities.

It is impossible to predict if or when any of our product candidates will prove safe or effective in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of our product candidates, we must conduct extensive clinical studies to demonstrate the safety and efficacy of the product candidates in humans. Clinical testing is expensive, time-consuming and uncertain as to outcome. We cannot guarantee that any clinical studies will be conducted as planned or completed on schedule, if at all. A failure of one or more clinical studies can occur at any stage of testing. Events that may prevent successful or timely completion of clinical development include:

- delays in reaching, or failing to reach, a consensus with regulatory agencies on study design;
- delays in reaching, or failing to reach, agreement on acceptable terms with a sufficient number of prospective contract research organizations (“CROs”) and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- delays in obtaining required IRB or Ethics Committee (“EC”) approval at each clinical study site;
- delays in recruiting a sufficient number of suitable patients to participate in our clinical studies;
- imposition of a clinical hold by regulatory agencies, after an inspection of our clinical study operations or study sites;
- failure by our CROs, other third parties or us to adhere to clinical study, regulatory or legal requirements;
- failure to perform in accordance with the FDA’s GCP or applicable regulatory guidelines in other countries;
- delays in the testing, validation, manufacturing and delivery of sufficient quantities of our product candidates to the clinical sites;
- delays in having patients complete participation in a study or return for post-treatment follow-up;
- clinical study sites or patients dropping out of a study;
- delay or failure to address any patient safety concerns that arise during the course of a trial;
- unanticipated costs or increases in costs of clinical trials of our product candidates;
- occurrence of serious adverse events associated with the product candidate that are viewed to outweigh its potential benefits; or
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the IRBs or ECs of the institutions in which such trials are being conducted, by an independent Safety Review Board for such trial or by the FDA, Therapeutics Goods Administration (“TGA”), European Medicines Agency (“EMA”), or other regulatory authorities. Such authorities may suspend or terminate a clinical trial due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA, TGA, or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

Any inability to successfully complete pre-clinical and clinical development could result in additional costs to us or impair our ability to generate revenues from product sales, regulatory and commercialization milestones and royalties. In addition, if we make manufacturing or formulation changes to our product candidates, we may need to conduct additional studies to bridge our modified product candidates to earlier versions.

Clinical study delays could also shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which could impair our ability to successfully commercialize our product candidates. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

The outcome of pre-clinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Further, pre-clinical and clinical data are often susceptible to various interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in pre-clinical studies and clinical trials have nonetheless failed to obtain marketing approval. If the results of our clinical studies are inconclusive or if there are safety concerns or adverse events associated with our other product candidates, we may:

- be delayed in obtaining marketing approval for our product candidates, if approved at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;
- be required to change the way the product is administered;
- be required to perform additional clinical studies to support approval or be subject to additional post-marketing testing requirements;
- have regulatory authorities withdraw their approval of a product or impose restrictions on its distribution in the form of a modified risk evaluation and mitigation strategy;
- be sued; or
- experience damage to our reputation.

Additionally, our product candidates could potentially cause other adverse events that have not yet been predicted. The inclusion of ill patients in our clinical studies may result in deaths or other adverse medical events due to other therapies or medications that such patients may be using. As described above, any of these events could prevent us from achieving or maintaining market acceptance of our product candidates and impair our ability to commercialize our products.

If we are not able to obtain any required regulatory approvals for our product candidates, we will not be able to commercialize our product candidates and our ability to generate revenue will be limited.

We must successfully complete clinical trials for our product candidates before we can apply for marketing approval. Even if we complete our clinical trials, it does not assure marketing approval. Our pre-clinical trials may be unsuccessful, which would materially harm our business. Even if our initial pre-clinical trials are successful, we are required to conduct clinical trials to establish our product candidates' safety and efficacy, before a marketing application (NDA or BLA or their foreign equivalents) can be filed with the FDA, the EMA, or comparable foreign regulatory authorities for marketing approval of our product candidates.

Clinical testing is expensive, is difficult to design and implement, can take many years to complete and is uncertain as to outcome. Success in early phases of pre-clinical and clinical trials does not ensure that later clinical trials will be successful, and interim results of a clinical trial do not necessarily predict final results. A failure of one or more of our clinical trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent our ability to receive regulatory approval or commercialize our product candidates. The research, testing, manufacturing, labeling, packaging, storage, approval, sale, marketing, advertising and promotion, pricing, export, import and distribution of drug products are subject to extensive regulation by the FDA, EMA, and other regulatory authorities in the United States, European Union, and other countries, where regulations differ from country to country. We are not permitted to market our product candidates as prescription pharmaceutical products in the United States until we receive approval of an NDA from the FDA, or in any foreign countries until we receive the requisite approval from such countries. In the United States, the FDA generally requires the completion of clinical trials of each drug to establish its safety and efficacy and extensive pharmaceutical development to ensure its quality before an NDA is approved. Regulatory authorities in other jurisdictions impose similar requirements. Of the large number of drugs in development, only a small percentage result in the submission of an NDA to the FDA or other regulatory authorities and even fewer are eventually approved for commercialization. We have not submitted an NDA to the FDA or comparable applications to other regulatory authorities. If our development efforts for our product candidates, including regulatory approval, are not successful for their planned indications, or if adequate demand for our product candidates is not generated, our business will be materially adversely affected.

Our success depends on the receipt of regulatory approval and the issuance of such regulatory approvals is uncertain and subject to a number of risks, including the following:

- the results of nonclinical or toxicology studies may not support the filing of an IND or foreign equivalent for our product candidates;
- the FDA, EMA, or comparable foreign regulatory authorities or IRBs or ECs may disagree with the design or implementation of our clinical trials;
- we may not be able to provide acceptable evidence of our product candidates' safety and efficacy;
- the results of our clinical trials may not be satisfactory or may not meet the level of statistical or clinical significance required by the FDA, EMA, or other regulatory agencies for marketing approval;
- the dosing of our product candidates in a particular clinical trial may not be at an optimal level;
- patients in our clinical trials may suffer adverse effects for reasons that may or may not be related to our product candidates;
- the data collected from clinical trials may not be sufficient to support the submission of an NDA, BLA or other marketing application or to obtain regulatory approval in the United States or elsewhere;
- the requirement for additional studies;
- the FDA, EMA, or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies;
- the approval policies or regulations of the FDA, EMA, or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval;
- the FDA, EMA, or comparable foreign regulatory authorities may disagree on the design or implementation of our clinical trials, including the methodology used in our studies, our chosen endpoints, our statistical analysis, or our proposed product indication;
- our failure to demonstrate to the satisfaction of the FDA, EMA, or comparable regulatory authorities that a product candidate is safe and effective for its proposed indication;
- we may fail to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- immunogenicity might affect a product candidate's efficacy and/or safety;
- the FDA, EMA, or comparable foreign regulatory authorities may disagree with our interpretation of data from nonclinical studies or clinical trials;

- data collected from clinical trials of our product candidates may be insufficient to support the submission and filing of a marketing application or to obtain marketing approval. For example, the FDA may require additional studies to show that our product candidates are safe or effective;
- we may fail to obtain approval of the manufacturing processes or facilities of third-party manufacturers with whom we contract for clinical and commercial supplies;
- there may be changes in the approval policies or regulations that render our nonclinical and clinical data insufficient for approval; or
- the FDA, EMA or comparable foreign regulatory authority may require more information, including additional nonclinical or clinical data to support approval, which may delay or prevent approval and our commercialization plans, or we may decide to abandon the development program.

Failure to obtain regulatory approval for our product candidates for the foregoing, or any other reasons, will prevent us from commercializing our product candidates, and our ability to generate revenue will be materially impaired. We cannot guarantee that regulators will agree with our assessment of the results of the clinical trials we intend to conduct in the future or that such trials will be successful. The FDA, EMA and other regulators have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional clinical trials, or pre-clinical or other studies. In addition, varying interpretations of the data obtained from pre-clinical and clinical testing could delay, limit or prevent regulatory approval of our product candidates.

We have only limited experience in filing the applications necessary to gain regulatory approvals and expect to rely on consultants and third-party CROs with expertise in this area to assist us in this process. Securing regulatory approvals to market a product requires the submission of pre-clinical, clinical, and/or pharmacokinetic data, information about product manufacturing processes and inspection of facilities, proposed product labeling and supporting information to the appropriate regulatory authorities for each therapeutic indication to establish a product candidate's safety and efficacy for each indication. Our product candidates may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude us from obtaining regulatory approval or prevent or limit commercial use with respect to one or all intended indications.

The process of obtaining regulatory approvals is expensive, often takes many years, if approval is obtained at all, and can vary substantially based upon, among other things, the type, complexity and novelty of the product candidates involved, the jurisdiction in which regulatory approval is sought and the substantial discretion of the regulatory authorities. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for a submitted product application may cause delays in the approval or rejection of an application. Regulatory approval obtained in one jurisdiction does not necessarily mean that a product candidate will receive regulatory approval in all jurisdictions in which we may seek approval, but the failure to obtain approval in one jurisdiction may negatively impact our ability to seek approval in a different jurisdiction. Failure to obtain regulatory marketing approval for our product candidates in any indication will prevent us from commercializing our product candidates, and our ability to generate revenue will be materially impaired.

If we are unable to submit an application for product candidate approval under Section 505(b)(2) of the FDCA or if we are required to generate additional data related to the safety and efficacy of a product candidate in order to obtain approval under Section 505(b)(2), we may be unable to meet our anticipated development and commercialization timelines.

We may seek marketing authorization in the United States under Section 505(b)(2) of the FDCA which permits use of a marketing application, referred to as a 505(b)(2) application, where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use. The FDA interprets this to mean that an applicant may rely for approval on such data as that found in published literature or the FDA's finding of safety or effectiveness, or both, of a previously approved drug product owned by a third-party. There is no assurance that the FDA would find third-party data relied upon by us in a 505(b)(2) application sufficient or adequate to support approval and may require us to generate additional data to support the safety and efficacy of a product candidate. Consequently, we may need to conduct substantial new research and development activities beyond those we currently plan to conduct. Such additional new research and development activities would be costly and time consuming and there is no assurance that such data generated from such additional activities would be sufficient to obtain approval.

If the data to be relied upon in a 505(b)(2) application is related to drug products previously approved by the FDA and covered by patents that are listed in the FDA's Orange Book, we would be required to submit with our 505(b)(2) application a Paragraph IV Certification in which we must certify that we do not infringe the listed patents or that such patents are invalid or unenforceable, and provide notice to the patent owner or the holder of the approved NDA. The patent owner or NDA holder would have 45 days from receipt of the notification of our Paragraph IV Certification to initiate a patent infringement action against us. If an infringement action is initiated, the approval of our NDA would be subject to a stay of up to 30 months or more while we defend against such a suit. Approval of our product candidates under Section 505(b)(2) may therefore be delayed until patent exclusivity expires or until we successfully challenge the applicability of those patents to our product candidates. Alternatively, we may elect to generate sufficient clinical data so that we would no longer need to rely on third-party data, which would be costly and time consuming and there would be no assurance that such data generated from such additional activities would be sufficient to obtain approval.

We may not be able to obtain shortened review of our applications, and the FDA may not agree that a product candidate qualifies for marketing approval. If we are required to generate additional data to support approval, we may be unable to meet anticipated or reasonable development and commercialization timelines, may be unable to generate the additional data at a reasonable cost, or at all, and may be unable to obtain marketing approval. If the FDA changes its interpretation of Section 505(b)(2) allowing reliance on data in a previously approved drug application owned by a third-party, or there is a change in the law affecting Section 505(b)(2), this could delay or even prevent the FDA from approving any Section 505(b)(2) application that we submit.

We may not be able to obtain or maintain ODD or exclusivity for our product candidates.

Regulatory authorities in some jurisdictions, including the United States, may designate drugs for relatively small patient populations as "orphan drugs." Under the Orphan Drug Act, the FDA may designate a drug candidate as an orphan drug if it is intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the United States, or if the disease or condition affects more than 200,000 individuals in the United States and there is no reasonable expectation that the cost of developing and making a drug product available in the United States for the type of disease or condition will be recovered from sales of the product.

ODD entitles a party to financial incentives, such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. Additionally, if a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity. This means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in certain circumstances, including proving clinical superiority (i.e., another product is safer, more effective or makes a major contribution to patient care) to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity, or obtain approval for the same product but for a different indication than that for which the orphan product has exclusivity. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective.

Modifications to our products may require new drug approvals.

Once a particular product receives FDA approval or clearance, expanded uses or uses in new indications of our products may require additional human clinical trials and new regulatory approvals or clearances, including additional IND and NDA/BLA submissions or premarket approvals before we can begin clinical development, and/or prior to marketing and sales. If the FDA requires new clearances or approvals for a particular use or indication, we may be required to conduct additional clinical studies, which would require additional expenditures and harm our operating results. If the products are already being promoted for these new indications, we may also be subject to significant enforcement actions. Conducting clinical trials and obtaining clearances and approvals can be a time-consuming process, and delays in obtaining required future clearances or approvals could adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our future growth.

Conducting successful clinical studies may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit.

Patient enrollment in clinical trials and completion of patient participation and follow-up depends on many factors, including the size of the patient population; the nature of the trial protocol; the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects; the availability of appropriate clinical trial investigators; support staff; proximity of patients to clinical sites; ability to comply with the eligibility and exclusion criteria for participation in the clinical trial; and patient compliance. For example, patients may be discouraged from enrolling in our clinical trials if the trial protocol requires them to undergo extensive post-treatment procedures or follow-up to assess the safety and effectiveness of our product candidates or if they determine that the treatments received under the trial protocols are not attractive or involve unacceptable risks or discomforts. Patients may also not participate in our clinical trials if they choose to participate in contemporaneous clinical trials of competitive products.

Additional delays to the completion of clinical studies may result from modifications being made to the protocol during the clinical trial, if such modifications are warranted and/or required by the occurrences in the given trial.

Each modification to the protocol during a clinical trial has to be submitted to the FDA. This could result in the delay or halt of a clinical trial while the modification is evaluated. In addition, depending on the quantity and nature of the changes made, the FDA could take the position that the data generated by the clinical trial is not poolable because the same protocol was not used throughout the trial. This might require the enrollment of additional subjects, which could result in the extension of the clinical trial and the FDA delaying clearance or approval of a product. Any such delay could have a material adverse effect on our business and results of operations.

There can be no assurance that the data generated from our clinical trials using modified protocols will be acceptable to FDA.

There can be no assurance that the data generated using modified protocols will be acceptable to the FDA or that if future modifications during the trial are necessary, that any such modifications will be acceptable to the FDA. If the FDA believes that its prior approval is required for a particular modification, it can delay or halt a clinical trial while it evaluates additional information regarding the change.

Serious injury or death resulting from a failure of one of our drug candidates during clinical trials could also result in the FDA delaying our clinical trials or denying or delaying clearance or approval of a product candidate. Even though an adverse event may not be the result of the failure of our drug candidate, the FDA or an IRB could delay or halt a clinical trial for an indefinite period of time while an adverse event is reviewed, and likely would do so in the event of multiple such events.

Any delay or termination of our current or future clinical trials as a result of the risks summarized above, including delays in obtaining or maintaining required approvals from IRBs, delays in patient enrollment, the failure of patients to continue to participate in a clinical trial, and delays or termination of clinical trials as a result of protocol modifications or adverse events during the trials, may cause an increase in costs and delays in the filing of any product submissions with the FDA, delay the approval and commercialization of our products or result in the failure of the clinical trial, which could adversely affect our business, operating results and prospects.

We rely on and intend to rely on third-parties to conduct our clinical trials and to assist us with pre-clinical development. If these third-parties do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or commercialize our products.

We do not have the ability to independently conduct our pre-clinical and clinical trials for our product candidates, and we must rely on third-parties, such as CROs, medical institutions, clinical investigators and contract laboratories to conduct such trials. If these third-parties do not successfully carry out their contractual duties or regulatory obligations, meet expected deadlines or need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our pre-clinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize, our products on a timely basis, if at all. Furthermore, our third-party clinical trial investigators may be delayed in conducting our clinical trials for reasons outside of their control. The occurrence of any of the foregoing may adversely affect our business, operating results and prospects.

We rely on and intend to rely on third parties to manufacture our clinical product supplies, and to produce and process our product candidates, if approved. Our commercialization of any of our product candidates could be stopped, delayed, or made less profitable if those third parties fail to obtain approval of government regulators, fail to provide us with sufficient quantities of drug product, devices, or device components, or fail to do so at acceptable quality levels or prices.

We do not currently have, nor do we currently plan to develop, the infrastructure or capability internally to manufacture our clinical supplies for use in the conduct of our clinical trials, and we lack the resources and the capability to manufacture any of our product candidates, devices, or device components on a clinical or commercial scale. We currently rely on outside vendors to manufacture our clinical supplies of our product candidates and plan to continue relying on third parties to manufacture our product candidates, devices, or device components on a commercial scale, if approved. In particular, we rely upon single-sourced manufacturing with one third-party contract development and manufacturing organization (a “CDMO”), WuXi AppTec (“WuXi”) for HT-KIT.

In January 2024, the BIOSECURE Act (H.R. 7085) was introduced in the House of Representatives and a substantially similar bill (S.3558) was introduced in the Senate. If these bills became law, or similar laws are passed, they would have the potential to severely restrict the ability of U.S. biopharmaceutical companies to contract with certain Chinese biotechnology companies “of concern” without losing the ability to contract with, or otherwise receive funding from, the U.S. government. We do business with companies in China and it is possible some of our contractual counterparties could be impacted by this legislation.

Our reliance on third-party manufacturers exposes us to the following additional risks:

- We may be unable to identify manufacturers of our product candidates on acceptable terms or at all.
- Our third-party manufacturers might be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Contract manufacturers may not be able to execute our manufacturing procedures appropriately.
- Our future third-party manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store, and distribute our commercial products, if approved.
- Our reliance on single-sourced manufacturing with WuXi increases the risk that any problems or delays with WuXi could materially, negatively affect the development of our product candidates.
- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA and some state agencies to ensure strict compliance with cGMPs and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers’ compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our product candidates.
- Our third-party manufacturers could breach or terminate their agreement with us.
- Our third-party manufacturers’ performance, available capacity and ability to manufacture clinical or commercial products may be impacted by mergers and or acquisitions.
- We and our third-party manufacturers may be impacted by global conflicts, including any potential conflict involving China and Taiwan, and any resulting trade sanctions.
- Foreign third-party manufacturers may be subject to U.S. legislation or investigations, including the proposed BIOSECURE Act, trade restrictions and other foreign regulatory requirements, which could increase the cost or reduce the supply of HT-KIT, delay the procurement or supply of HT-KIT or delay clinical trials.

Each of these risks could delay our clinical trials, as well as the approval, if any, of our product candidates by the FDA, or the commercialization of our product candidates, or could result in higher costs, or could deprive us of potential product revenue.

We currently rely on foreign CROs and CDMOs, including WuXi, to manufacture HT-KIT, and will likely continue to rely on foreign CROs and CDMOs in the future. Foreign CDMOs may be subject to U.S. legislation or investigations, including the proposed BIOSECURE Act, sanctions, trade restrictions and other foreign regulatory requirements, which could increase the cost or reduce the supply of HT-KIT, delay the procurement or supply of HT-KIT, delay or impact clinical trials and could adversely affect our financial condition and business prospects. While we assume we could replace WuXi, this could be time consuming and expensive, which may adversely affect our financial condition and business prospects.

The future results of our current or future clinical trials may not support our product candidate claims or may result in the discovery of unexpected adverse side effects.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our drug candidate claims or that the FDA or foreign regulatory agencies will agree with our conclusions regarding them. Success in pre-clinical studies and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior trials and pre-clinical studies. The clinical trial process may fail to demonstrate that our drug candidates are safe and effective for the proposed indicated uses. If the FDA or other regulatory agencies conclude that the clinical trials for any of our product candidates has failed to demonstrate safety and effectiveness, we would not receive clearance from the FDA or other regulatory agencies to market that product in the United States or internationally for the indications sought.

In addition, such an outcome could cause us to abandon the product candidate and might delay development of other product candidates. Any delay or termination of our clinical trials will delay the filing of any product submissions with the FDA and, ultimately, our ability to commercialize our product candidates and generate revenues. It is also possible that patients enrolled in clinical trials will experience adverse side effects that are not currently part of the product candidate's profile. In addition, our clinical trials may involve a relatively small patient population. Because of the small sample size, our results may not be indicative of future results.

Even if our product candidates are approved by regulatory authorities, if we or our suppliers fail to comply with ongoing FDA regulations or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

The manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for any product candidate for which we obtain regulatory approval will be subject to continued regulatory review, oversight and periodic inspections by the FDA. In particular, we and our suppliers are required to comply with FDA's Quality System Regulations and International Standards Organization ("ISO") regulations for the manufacture of our products and other regulations which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product for which we obtain clearance or approval. Regulatory bodies, such as the FDA, enforce these regulations through periodic inspections. The failure by us or one of our suppliers to comply with applicable statutes and regulations administered by the FDA and other regulatory bodies, or the failure to timely and adequately respond to any adverse inspectional observations or product safety issues, could result in, among other things, enforcement actions by the FDA.

If any of these actions were to occur it would harm our reputation and cause our product sales and profitability to suffer and may prevent us from generating revenue. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements which could result in our failure to produce our products on a timely basis and in the required quantities, if at all.

Even if regulatory clearance or approval of a product is granted, such clearance or approval may be subject to limitations on the intended uses for which the product may be marketed and reduce the potential to successfully commercialize the product and generate revenue from the product. If the FDA determines that the product promotional materials, labeling, training or other marketing or educational activities constitute promotion of an unapproved use, it could request that we or our commercialization partners cease or modify our training or promotional materials or subject us to regulatory enforcement actions. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider such training or other promotional materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement.

In addition, we may be required to conduct costly post-market testing and surveillance to monitor the safety or effectiveness of our products, and we must comply with adverse event and pharmacovigilance reporting requirements, including the reporting of adverse events which occur in connection with, and whether or not directly related to, our products. Later discovery of previously unknown problems with our products, including unanticipated adverse events or adverse events of unanticipated severity or frequency, manufacturing problems, or failure to comply with regulatory requirements, may result in changes to labeling, restrictions on such products or manufacturing processes, withdrawal of the products from the market, voluntary or mandatory recalls, a requirement to recall, replace or refund the cost of any product we manufacture or distribute, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties which would adversely affect our business, operating results and prospects.

Our revenue stream will depend upon third-party reimbursement.

The commercial success of our products in both domestic and international markets will be substantially dependent on whether third-party coverage and reimbursement is available for patients that use our products. However, the availability of insurance coverage and reimbursement for newly approved therapies is uncertain, and therefore, third-party coverage may be particularly difficult to obtain even if our products are approved by the FDA as safe and efficacious. Patients using existing approved therapies are generally reimbursed all or part of the product cost by Medicare or other third-party payors. Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs, and, as a result, they may not cover or provide adequate payment for these products. Submission of applications for reimbursement approval generally does not occur prior to the filing of an NDA for that product and may not be granted for as long as many months after NDA approval. In order to obtain reimbursement arrangements for these products, we or our commercialization partners may have to agree to a net sales price lower than the net sales price we might charge in other sales channels. The continuing efforts of government and third-party payors to contain or reduce the costs of healthcare may limit our revenue. Initial dependence on the commercial success of our products may make our revenues particularly susceptible to any cost containment or reduction efforts.

Current and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain for such product candidates.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval for our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell our product candidates. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We do not know whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

In the United States, the Medicare Modernization Act ("MMA") changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for drugs. In addition, this legislation authorized Medicare Part D prescription drug plans to use formularies where they can limit the number of drugs that will be covered in any therapeutic class. As a result of this legislation and the expansion of federal coverage of drug products, we expect that there will be additional pressure to contain and reduce costs. These cost reduction initiatives and other provisions of this legislation could decrease the coverage and price that we receive for our product candidates and could seriously harm our business. While the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (collectively, the "Health Care Reform Law") is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. The Health Care Reform Law revised the definition of "average manufacturer price" for reporting purposes, which could increase the amount of Medicaid drug rebates to states. Further, the law imposed a significant annual fee on companies that manufacture or import branded prescription drug products.

The Health Care Reform Law remains subject to legislative efforts to repeal, modify or delay the implementation of the law. However, if the Health Care Reform Law is repealed or modified, or if implementation of certain aspects of the Health Care Reform Law are delayed, such repeal, modification or delay may materially adversely impact our business, strategies, prospects, operating results or financial condition. We are unable to predict the full impact of any repeal, modification or delay in the implementation of the Health Care Reform Law on us at this time. Due to the substantial regulatory changes that will need to be implemented by the Centers for Medicare & Medicaid Services and others, and the numerous processes required to implement these reforms, we cannot predict which healthcare initiatives will be implemented at the federal or state level, the timing of any such reforms, or the effect such reforms or any other future legislation or regulation will have on our business.

In addition, other legislative changes have been proposed and adopted in the United States since the Health Care Reform Law was enacted. We expect that additional federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, and in turn could significantly reduce the projected value of certain development projects and reduce or eliminate our profitability.

We are dependent on third parties for manufacturing and marketing of our proposed product candidates. If we are not able to secure favorable arrangements with such third parties, our business and financial condition could be harmed.

We will not manufacture any of our proposed product candidates for commercial sale nor do we have the resources necessary to do so. In addition, we currently do not have the capability to market our drug products ourselves. In addition to our internal sales force efforts, we have contracted with and intend to continue to contract with specialized manufacturing companies to manufacture our proposed product candidates and partner with larger pharmaceutical companies for commercialization of our products. In connection with our efforts to commercialize our proposed product candidates, we will seek to secure favorable arrangements with third parties to distribute, promote, market and sell our proposed product candidates. If our internal sales force is unable to successfully distribute, market and promote our product candidates and we are not able to secure favorable commercial terms or arrangements with third parties for the distribution, marketing, promotion and sales of our proposed product candidates, we may have to retain promotional and marketing rights and seek to develop the commercial resources necessary to promote or co-promote or co-market certain or all of our proposed drug candidates to the appropriate channels of distribution in order to reach the specific medical market that we are targeting. We may not be able to enter into any partnering arrangements on this or any other basis. If we are not able to secure favorable partnering arrangements or are unable to develop the appropriate resources necessary for the commercialization of our proposed product candidates, our business and financial condition could be harmed. In addition, we will have to hire additional employees or consultants, since our current employees have limited experience in these areas. Sufficient employees with relevant skills may not be available to us. Any increase in the number of our employees would increase our expense level and could have an adverse effect on our financial position.

In addition, we, or our potential commercial partners, may not successfully introduce our proposed product candidates or such candidates may not achieve acceptance by patients, health care providers and insurance companies. Further, it is possible that we may not be able to secure arrangements to manufacture, market, distribute, promote and sell our proposed product candidates at favorable commercial terms that would permit us to make a profit. To the extent that corporate partners conduct clinical trials, we may not be able to control the design and conduct of these clinical trials.

We may have conflicts with our partners that could delay or prevent the development or commercialization of our product candidates.

We may have conflicts with our partners, such as conflicts concerning the interpretation of pre-clinical or clinical data, the achievement of milestones, the interpretation of contractual obligations, payments for services, development obligations or the ownership of intellectual property developed during our collaboration. If any conflicts arise with any of our partners, such partner may act in a manner that is averse to our best interests. Any such disagreement could result in one or more of the following, each of which could delay or prevent the development or commercialization of our product candidates, and in turn prevent us from generating revenues: unwillingness on the part of a partner to pay us milestone payments or royalties we believe are due to us under a collaboration; uncertainty regarding ownership of intellectual property rights arising from our collaborative activities, which could prevent us from entering into additional collaborations; unwillingness by the partner to cooperate in the development or manufacture of the product, including providing us with product data or materials; unwillingness on the part of a partner to keep us informed regarding the progress of its development and commercialization activities or to permit public disclosure of the results of those activities; initiating of litigation or alternative dispute resolution options by either party to resolve the dispute; or attempts by either party to terminate the agreement.

Even if we receive regulatory approval for any of our product candidates, we may not be able to successfully commercialize the product and the revenue that we generate from its sales, if any, may be limited.

If approved for marketing, the commercial success of our product candidates will depend upon each product's acceptance by the medical community, including physicians, patients and health care payors. The degree of market acceptance for any of our product candidates will depend on a number of factors, including:

- demonstration of clinical safety and efficacy;
- relative convenience, dosing burden and ease of administration;
- the prevalence and severity of any adverse effects;
- the willingness of physicians to prescribe our product candidates, and the target patient population to try new therapies;
- efficacy of our product candidates compared to competing products;
- the introduction of any new products that may in the future become available targeting indications for which our product candidates may be approved;
- new procedures or therapies that may reduce the incidences of any of the indications in which our product candidates may show utility;
- pricing and cost-effectiveness;
- the inclusion or omission of our product candidates in applicable therapeutic and vaccine guidelines;
- the effectiveness of our own or any future collaborators' sales and marketing strategies;
- limitations or warnings contained in approved labeling from regulatory authorities;
- our ability to obtain and maintain sufficient third-party coverage or reimbursement from government health care programs, including Medicare and Medicaid, private health insurers and other third-party payors or to receive the necessary pricing approvals from government bodies regulating the pricing and usage of therapeutics; and
- the willingness of patients to pay out-of-pocket in the absence of third-party coverage or reimbursement or government pricing approvals.

If any of our product candidates are approved, but do not achieve an adequate level of acceptance by physicians, health care payors, and patients, we may not generate sufficient revenue and we may not be able to achieve or sustain profitability. Our efforts to educate the medical community and third-party payors on the benefits of our product candidates may require significant resources and may never be successful.

In addition, even if we obtain regulatory approvals, the timing or scope of any approvals may prohibit or reduce our ability to commercialize our product candidates successfully. For example, if the approval process takes too long, we may miss market opportunities thereby giving other companies the ability to develop competing products or establish market dominance. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render our product candidates not commercially viable. For example, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve any of our product candidates with a label that does not include the labeling claims necessary or desirable for the successful commercialization for that indication. Further, the FDA or comparable foreign regulatory authorities may place conditions on approvals or require risk management plans or a REMS to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS. The FDA will not approve the NDA without an approved REMS, if required. A REMS could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA may also require a REMS for an approved product when new safety information emerges. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of our product candidates. Moreover, product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following the initial marketing of the product. Any of the foregoing scenarios could materially harm the commercial success of our product candidates.

Our products will face significant competition, and if they are unable to compete successfully, our business will suffer.

Our product candidates face, and will continue to face, intense competition from large pharmaceutical companies, as well as academic and research institutions. We compete in an industry that is characterized by: (i) rapid technological change, (ii) evolving industry standards, (iii) emerging competition and (iv) new product introductions. Our competitors have and may develop products and technologies that will compete with our products and technologies. Because several competing companies and institutions have greater financial resources than us, they may be able to: (i) provide broader services and product lines, (ii) make greater investments in research and development and (iii) carry on larger research and development initiatives. Our competitors also have greater development capabilities than we do and have substantially greater experience in undertaking pre-clinical and clinical testing of products, obtaining regulatory approvals, and manufacturing and marketing pharmaceutical products. They also have greater name recognition and better access to customers than us.

Adverse events involving our products may lead the FDA or other regulatory agencies to delay or deny clearance for our products or result in product recalls that could harm our reputation, business and financial results.

Once a product receives clearance or approval, the agency has the authority to require the recall of commercialized products in the event of adverse side effects, material deficiencies or defects in design or manufacture. With respect to the FDA, the authority to require a recall must be based on an FDA finding that there is a reasonable probability that the product would cause serious injury or death. Manufacturers may, under their own initiative, recall a product if any material deficiency in a product is found. A government-mandated or voluntary recall by us or one of our distributors could occur as a result of adverse side effects, impurities or other product contamination, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of our products would divert managerial and financial resources and have an adverse effect on our financial condition and results of operations. In addition, the FDA requires that certain classifications of recalls be reported to FDA within ten working days after the recall is initiated. Companies are required to maintain certain records of recalls, even if they are not reportable to the FDA. We may initiate voluntary recalls involving our products in the future that we determine do not require notification of the FDA. If the FDA disagrees with our determinations, they could require us to report those actions as recalls. A future recall announcement could harm our reputation with customers and negatively affect our sales. In addition, the FDA could take enforcement action for failing to report the recalls when they were conducted.

If we fail to comply with healthcare regulations, we could face substantial enforcement actions, including civil and criminal penalties and our business, operations and financial condition could be adversely affected.

Sales of our product candidates, if approved, or any other future product candidate will be subject to healthcare regulation and enforcement by the federal government and the states and foreign governments in which we might conduct our business. The healthcare laws and regulations that may affect our ability to operate include the following:

- the federal Anti-Kickback Statute makes it illegal for any person or entity to knowingly and willfully, directly or indirectly, solicit, receive, offer, or pay any remuneration that is in exchange for or to induce the referral of business, including the purchase, order, lease of any good, facility, item or service for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. The term “remuneration” has been broadly interpreted to include anything of value;
- the Omnibus Budget Reconciliation Act of 1993 (42 U.S.C. § 1395nn) (the “Stark Law”) prohibit referrals by a physician of “designated health services” which are payable, in whole or in part, by Medicare or Medicaid, to an entity in which the physician or the physician’s immediate family member has an investment interest or other financial relationship, subject to several exceptions. The Stark Law also prohibits billing for services rendered pursuant to a prohibited referral. Several states have enacted laws similar to the Stark Law. These state laws may cover all (not just Medicare and Medicaid) patients. Many federal healthcare reform proposals in the past few years have attempted to expand the Stark Law to cover all patients as well. We consider the Stark Law in planning our products, marketing and other activities, and believe that our operations are in compliance with the Stark Law. If we violate the Stark Law, our financial results and operations could be adversely affected. Penalties for violations include denial of payment for the services, significant civil monetary penalties, and exclusion from the Medicare and Medicaid programs;

- federal false claims and false statement laws, including the federal civil False Claims Act and the Civil Monetary Penalties Law (“CMPL”), prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, for payment to, or approval by, federal programs, including Medicare and Medicaid, claims for items or services, including drugs, that are false or fraudulent;
- HIPAA, created additional federal criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors or making any false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their implementing regulations, impose obligations on certain types of individuals and entities regarding the electronic exchange of information in common healthcare transactions, as well as standards relating to the privacy and security of individually identifiable health information;
- the FDCA which among other things, strictly regulates drug and biologics manufacturing, sales, distribution, prohibits the adulteration or misbranding of drugs and biologics prohibits manufacturers from marketing drug products for off-label use and regulates the distribution of drug samples; and
- the federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services information related to payments or other transfers of value made to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members.

Also, many states have similar laws and regulations, such as Stark Law, anti-kickback and false claims laws that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs. Additionally, we may be subject to state laws that require pharmaceutical companies to comply with the federal government’s and/or pharmaceutical industry’s voluntary compliance guidelines, state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, as well as state and foreign laws governing the privacy and security of health information, many of which differ from each other in significant ways and often are not preempted by HIPAA.

The laws and regulations applicable to our business are complex, changing and often subject to varying interpretations. As a result, we may not be able to adhere to all applicable laws and regulations. Any violation or alleged violation of any of these laws or regulations by us could have a material adverse effect on our business, financial condition, cash flows and results of operations. We may be a party to various lawsuits, demands, claims, *qui tam* suits, government investigations and audits, of which any could result in, among other things, substantial financial penalties or awards against us, reputational harm, termination of relationships or contracts related to our business, mandated refunds, substantial payments made by us, required changes to our business practices, exclusion from future participation in Medicare and other healthcare programs, seizure of product and possible criminal penalties.

If we are found in violation of applicable laws or regulations, we could suffer severe consequences that would have a material adverse effect on our business, results of operations, financial condition, cash flows, reputation and stock price, including:

- suspension or termination of our participation in federal healthcare programs;
- criminal or civil liability, fines, damages or monetary penalties for violations of healthcare fraud and abuse laws, including the federal False Claims Act, CMPL, and Anti-Kickback Statute;
- enforcement actions by governmental agencies or claims for monetary damages by patients under federal or state patient privacy laws, including HIPAA;

- repayment of amounts received in violation of law or applicable payment program requirements, and related monetary penalties;
- mandated changes to our practices or procedures that materially increase operating expenses;
- imposition of corporate integrity agreements that could subject us to ongoing audits and reporting requirements as well as increased scrutiny of our business practices;
- termination of various relationships or contracts related to our business; and
- harm to our reputation which could negatively affect our business relationships, decrease our ability to attract or retain patients and physicians, decrease access to new business opportunities and impact our ability to obtain financing, among other things.

Responding to lawsuits and other proceedings as well as defending ourselves in such matters will continue to require management's attention and cause us to incur significant legal expense. It is also possible that criminal proceedings may be initiated against us or individuals in our business in connection with investigations by the federal government.

Furthermore, to the extent that our product is sold in a foreign country, we may be subject to similar foreign laws.

If a third-party contract manufacturing organization ("CMO") upon whom we rely to formulate and manufacture our product candidates does not perform, fails to manufacture according to our specifications or fails to comply with strict regulations, our pre-clinical studies or clinical trials could be adversely affected, and the development of our product candidates could be delayed or terminated or we could incur significant additional expenses.

We do not own or operate any manufacturing facilities. We rely on and intend to continue to rely on CMOs to formulate and manufacture our pre-clinical and clinical materials. Our reliance on a CMO exposes us to a number of risks, any of which could delay or prevent the completion of our pre-clinical studies or clinical trials, or the regulatory approval or commercialization of our product candidates, result in higher costs, or deprive us of potential product revenues. Some of these risks include:

- our CMO failing to develop an acceptable formulation to support later-stage clinical trials for, or the commercialization of, our product candidates;
- our CMO failing to manufacture our product candidate according to our specifications, the FDA's cGMP requirements, or otherwise manufacturing material that we or the FDA may deem to be unsuitable in our clinical trials;
- our CMO being unable to increase the scale of, increase the capacity for, or reformulate the form of our product candidates. We may experience a shortage in supply, or the cost to manufacture our products may increase to the point where it may adversely affect the cost of our product candidates. We cannot assure you that our CMO will be able to manufacture our product candidates at a suitable scale, or we will be able to find alternative manufacturers acceptable to us that can do so;
- our CMO placing a priority on the manufacture of their own products, or other customers' products;
- our CMO failing to perform as agreed upon or not remain in business; and
- our CMOs' plants being closed as a result of regulatory sanctions, natural disasters, health epidemics or otherwise.

Manufacturers of pharmaceutical products are subject to ongoing periodic inspections by the FDA, the U.S. Drug Enforcement Administration and corresponding state and foreign agencies to ensure strict compliance with FDA mandated cGMPs, other government regulations and corresponding foreign standards. While we are obligated to audit their performance, we do not have control over our CMO's compliance with these regulations and standards. Failure by any of our CMOs, or us, to comply with applicable regulations could result in sanctions being imposed on us or the CMOs. These sanctions may include fines, injunctions, civil penalties, failure of the government to grant pre-market approval of drugs, delays, suspension or withdrawal of approvals, seizures or recalls of product, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business.

In the event that we need to change our CMOs, our pre-clinical studies, clinical trials or the commercialization of our product candidates could be delayed, adversely affected or terminated, or such a change may result in significantly higher costs.

Various steps in the manufacture of our product candidates may need to be sole-sourced. In accordance with cGMP, changing manufacturers may require the re-validation of manufacturing processes and procedures, and may require further pre-clinical studies or clinical trials to show comparability between the materials produced by different manufacturers. Changing our current or future CMOs may be difficult for us and could be costly, which could result in our inability to manufacture our product candidates for an extended period of time and therefore a delay in the development of our product candidates. Further, in order to maintain our development time lines in the event of a change in our CMOs, we may incur significantly higher costs to manufacture our product candidates.

Healthcare Reform in the United States.

In the United States, there have been, and continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect the future results of pharmaceutical manufacturers' operations. In particular, there have been and continue to be a number of initiatives at the federal and state levels that seek to reduce healthcare costs. On the federal level, the Affordable Care Act ("ACA") was enacted in March 2010, and included measures to significantly change the way healthcare is financed by both governmental and private insurers. Among the provisions of the ACA that have been of greatest importance to the pharmaceutical and biotechnology industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- implementation of the federal physician payment transparency requirements, sometimes referred to as the "Physician Payments Sunshine Act";
- a licensure framework for follow-on biologic products;
- creation of Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- establishment of a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price;
- adoption of methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including our product candidates, that are inhaled, infused, instilled, implanted or injected;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;

- creation of a Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; and
- expansion of the entities eligible for discounts under the Public Health program.

Although there have been legal and political challenges to certain aspects of the ACA, the Biden Administration has affirmed support for the law and entered its own executive orders to enforce and strengthen it. Because of the volatility surrounding the implementation and enforcement of the ACA since its passage, and at this time, the full effect that the ACA would have on a pharmaceutical manufacturer remains unclear. This uncertainty is heightened by President Biden's January 28, 2021 Executive Order on Strengthening Medicaid and the Affordable Care Act which indicates that the Biden Administration may significantly modify the ACA and further reform the ACA and other federal programs in manner that may impact our operations. The Biden Administration has indicated that a goal of its administration is to expand and support Medicaid and the ACA and to make high-quality healthcare accessible and affordable. The potential increase in patients covered by government funded insurance may impact our pricing. Further, it is possible that the Biden Administration may further increase scrutiny of drug pricing. Indeed, the Biden Administration has been vocal that lowering prescription drug prices is a priority for the Biden Administration.

In addition, we cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. We expect that additional state and federal health care reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for health care products and services.

Further, there is uncertainty surrounding the applicability of the biosimilars provisions under the ACA. The FDA has issued several guidance documents, but no implementing regulations, on biosimilars. A number of biosimilar applications have been approved over the past few years. The regulations that are ultimately promulgated and their implementation are likely to have considerable impact on the way pharmaceutical manufacturers conduct their business and may require changes to current strategies. A biosimilar is a biological product that is highly similar to an approved drug notwithstanding minor differences in clinically inactive components, and for which there are no clinically meaningful differences between the biological product and the approved drug in terms of the safety, purity, and potency of the product.

Individual states have become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and marketing cost disclosure and transparency measures, and to encourage importation from other countries and bulk purchasing. Legally mandated price controls on payment amounts by third-party payors or other restrictions could harm a pharmaceutical manufacturer's business, results of operations, financial condition and prospects. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This could reduce ultimate demand for certain products or put pressure product pricing, which could negatively affect a pharmaceutical manufacturer's business, results of operations, financial condition and prospects.

In addition, given recent federal and state government initiatives directed at lowering the total cost of healthcare, Congress and state legislatures will likely continue to focus on healthcare reform, the cost of prescription drugs and biologics and the reform of the Medicare and Medicaid programs. While no one cannot predict the full outcome of any such legislation, it may result in decreased reimbursement for drugs and biologics, which may further exacerbate industry-wide pressure to reduce prescription drug prices. This could harm a pharmaceutical manufacturer's ability to generate revenue. Increases in importation or re-importation of pharmaceutical products from foreign countries into the United States could put competitive pressure on a pharmaceutical manufacturer's ability to profitably price products, which, in turn, could adversely affect business, results of operations, financial condition and prospects. A pharmaceutical manufacturer might elect not to seek approval for or market products in foreign jurisdictions in order to minimize the risk of re-importation, which could also reduce the revenue generated from product sales. It is also possible that other legislative proposals having similar effects will be adopted.

Furthermore, regulatory authorities' assessment of the data and results required to demonstrate safety and efficacy can change over time and can be affected by many factors, such as the emergence of new information, including on other products, changing policies and agency funding, staffing and leadership. We cannot be sure whether future changes to the regulatory environment will be favorable or unfavorable to our business prospects. For example, average review times at the FDA for marketing approval applications can be affected by a variety of factors, including budget and funding levels and statutory, regulatory and policy changes.

Our business may be adversely affected by cybersecurity threats, information systems interruptions and/or threats to our physical buildings.

It is essential to our business strategy that our technology and network infrastructure and our physical buildings remain secure and are perceived by our customers and corporate partners to be secure. Despite security measures, however, any network infrastructure may be vulnerable to cyber-attacks by hackers and other security threats. We may face cybersecurity threats that attempt to penetrate our network security, sabotage or otherwise disable our research, products and services, misappropriate our or our customers' and partners' proprietary information, which may include personally identifiable information, or cause interruptions or failures of our internal systems and services. Despite security measures, we also cannot guarantee security of our physical buildings. Physical building penetration or any cybersecurity threats could negatively affect our reputation, damage our network infrastructure and our ability to deploy our products and services, harm our relationship with customers and partners that are affected, and expose us to financial liability.

Although we continue to review and enhance our systems and cybersecurity controls, we may experience cybersecurity threats, including threats to our information technology infrastructure and attempts to gain access to our sensitive information, as do our customers and suppliers. Although we maintain information security policies and procedures to prevent, detect, and mitigate these threats, information system disruptions, equipment failures or cybersecurity attacks, such as unauthorized access, malicious software and other intrusions, could still occur and may lead to potential data corruption, exposure of proprietary and confidential information. Further, while we work cooperatively with our customers and suppliers to seek to minimize the impacts of cybersecurity threats, other security threats or business disruptions, in addition to our internal processes, procedures and systems, we must also rely on the safeguards put in place by those entities.

Any intrusion, disruption, breach or similar event may cause operational stoppages, fines, penalties, diminished competitive advantages through reputational damages and increased operational costs. The costs related to cybersecurity or other security threats or disruptions may not be fully mitigated by insurance or other means. In addition to existing risks, any adoption or deployment of new technologies may increase our exposure to risks, breaches, or failures, which could materially adversely affect our results of operations or financial condition.

Additionally, there are a number of state, federal and international laws protecting the privacy and security of health information and personal data. For example, HIPAA imposes limitations on the use and disclosure of an individual's healthcare information by healthcare providers, healthcare clearinghouses, and health insurance plans, or, collectively, covered entities, and also grants individuals rights with respect to their health information. HIPAA also imposes compliance obligations and corresponding penalties for non-compliance on individuals and entities that provide services to healthcare providers and other covered entities. As part of the American Recovery and Reinvestment Act of 2009 ("ARRA") the privacy and security provisions of HIPAA were amended. ARRA also made significant increases in the penalties for improper use or disclosure of an individual's health information under HIPAA and extended enforcement authority to state attorneys general. As amended by ARRA and subsequently by the final omnibus rule adopted in 2013, HIPAA also imposes notification requirements on covered entities in the event that certain health information has been inappropriately accessed or disclosed, notification requirements to individuals, federal regulators, and in some cases, notification to local and national media. Notification is not required under HIPAA if the health information that is improperly used or disclosed is deemed secured in accordance with encryption or other standards developed by the U.S. Department of Health and Human Services. Most states have laws requiring notification of affected individuals and/or state regulators in the event of a breach of personal information, which is a broader class of information than the health information protected by HIPAA. Many state laws impose significant data security requirements, such as encryption or mandatory contractual terms, to ensure ongoing protection of personal information. Activities outside of the U.S. implicate local and national data protection standards, impose additional compliance requirements and generate additional risks of enforcement for non-compliance. We may be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws, to protect against security breaches and hackers or to alleviate problems caused by such breaches.

Risks Related to Our Intellectual Property Rights

We rely upon licenses granted to us by various licensors, and if such licensors do not adequately defend such licenses, our business may be harmed.

We have entered into and may, in the future, enter into license and sublicense agreements with respect to our product candidates. We have limited control over the activities of our licensors, and we rely upon our licensors to protect their intellectual property, including the patents covered by our licenses. We cannot be certain that activities conducted by our licensors have been or will be conducted in compliance with applicable laws and regulations. Furthermore, we have no or limited control or input over whether, and in what manner, our licensors may enforce or defend the patents that we license against a third-party. Our licensors may defend the patents we license less vigorously than if we had enforced or defended the patents ourselves. Furthermore, our licensors may not necessarily seek enforcement in scenarios in which we would feel that enforcement was in our best interests. For example, our licensors may not enforce the patents against a competitor of ours who is not a direct competitor of such licensor. If our in-licensed intellectual property is found to be invalid or unenforceable, then our licensors may not be able to enforce the patents against a competitor of ours. Moreover, if we fail to meet our obligations under our license agreements, the licensor may terminate the license agreement. Furthermore, if we fail to meet our obligations under our sublicense agreements or our sublicensor fails to meet its obligations to the licensor, such licensor may terminate the license agreement thereby terminating our sublicense agreement.

Our business depends upon us securing and protecting critical intellectual property.

To the extent we develop intellectual property, our commercial success will depend in part on obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing and defending such intellectual property rights against third-party challenges. We will only be able to protect our intellectual property from unauthorized use by third parties to the extent that valid and enforceable intellectual property protection, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. Moreover, the degree of future protection of our proprietary rights is uncertain for products that are currently in the early stages of development because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Patent positions in our industry are highly uncertain and involve complex legal and factual questions.

Patent positions in our industry are highly uncertain and involve complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example, we or our licensors might not have been the first to make the inventions covered by our pending patent applications and issued patents, as applicable; we or our licensors might not have been the first to file patent applications for these inventions; others may independently develop similar or alternative technologies or duplicate any of our technologies; it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents; our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and, we may not develop additional proprietary technologies that are patentable. As a result, our owned and licensed patents may not be valid, and we may not be able to obtain and enforce patents and to maintain trade secret protection for the full commercial extent of our technology. The extent to which we are unable to do so could materially harm our business.

We and/or our licensors have applied for and will continue to apply for patents for certain products. Such applications may not result in the issuance of any patents, and any patents now held or that may be issued may not provide us with adequate protection from competition. Furthermore, it is possible that patents issued or licensed to us may be challenged successfully. In that event, if we have a preferred competitive position because of such patents, any preferred position held by us would be lost. If we are unable to secure or to continue to maintain a preferred position, we could become subject to competition from the sale of generic products. Failure to receive, inability to protect, or expiration of our patents for medical use, manufacture, conjugation and labeling of any of our product candidates may adversely affect our business and operations.

Patents issued or licensed to us may be infringed by the products or processes of others. The cost of enforcing our patent rights against infringers, if such enforcement is required, could be significant, and we do not currently have the financial resources to fund such litigation. Further, such litigation can go on for years and the time demands could interfere with our normal operations. There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical industry. We may become a party to patent litigation and other proceedings. The cost to us of any patent litigation, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation more effectively than we can because of their substantially greater financial resources. Litigation may also absorb significant management time.

Unpatented trade secrets, improvements, confidential know-how and continuing technological innovation are important to our scientific and commercial success. Although we attempt to and will continue to attempt to protect our proprietary information through reliance on trade secret laws and the use of confidentiality agreements with our corporate partners, collaborators, employees and consultants and other appropriate means, these measures may not effectively prevent disclosure of our proprietary information, and, in any event, others may develop independently, or obtain access to, the same or similar information.

If we are found to be infringing on patents or trade secrets owned by others, we may be forced to cease or alter our product development efforts, obtain a license to continue the development or sale of our products, and/or pay damages.

Our manufacturing processes and potential products may violate proprietary rights of patents that have been or may be granted to competitors, universities or others, or the trade secrets of those persons and entities. As the pharmaceutical industry expands and more patents are issued, the risk increases that our processes and potential products may give rise to claims that they infringe the patents or trade secrets of others. These other persons could bring legal actions against us claiming damages and seeking to enjoin clinical testing, manufacturing and marketing of the affected product or process. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to conduct clinical tests, manufacture or market the affected product or use the affected process. Required licenses may not be available on acceptable terms, if at all, and the results of litigation are uncertain. If we become involved in litigation or other proceedings, it could consume a substantial portion of our financial resources and the efforts of our personnel.

Our ability to protect and enforce any patents we may obtain does not guaranty that we will secure the right to commercialize such patents.

A patent is a limited monopoly right conferred upon an inventor, and his successors in title, in return for the making and disclosing of a new and non-obvious invention. This monopoly is of limited duration but, while in force, allows the patent holder to prevent others from making and/or using his invention. While a patent gives the holder this right to exclude others, it is not a license to commercialize the invention, where other permissions may be required for permissible commercialization to occur. For example, a drug cannot be marketed without the appropriate authorization from the FDA, regardless of the existence of a patent covering the product. Further, the invention, even if patented itself, cannot be commercialized if it infringes the valid patent rights of another party.

We rely on confidentiality agreements to protect our trade secrets. If these agreements are breached by our employees or other parties, our trade secrets may become known to our competitors.

We rely on trade secrets which we seek to protect through confidentiality agreements with our employees and other parties. If these agreements are breached, our competitors may obtain and use our trade secrets to gain a competitive advantage over us. We may not have any remedies against our competitors and any remedies that may be available to us may not be adequate to protect our business or compensate us for the damaging disclosure. In addition, we may have to expend resources to protect our interests from possible infringement by others.

Risks Related to the Company

We have expanded and may continue to expand, our business through the acquisition of rights to new drug candidates that could disrupt our business, harm our financial condition and may also dilute current shareholders' ownership interests in our Company.

Our business strategy includes expanding our products and capabilities, and we may seek acquisitions of additional drug candidates or technologies to do so. Acquisitions involve numerous risks, including substantial cash expenditures; potentially dilutive issuance of equity securities; incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition; difficulties in assimilating the acquired technologies or the operations of the acquired companies; diverting our management's attention away from other business concerns; risks of entering markets in which we have limited or no direct experience; and the potential loss of our key employees or key employees of the acquired companies.

We cannot assure you that any acquisition will result in short-term or long-term benefits to us. We may misjudge the value or worth of an acquired product, company or business. In addition, our future success would depend in part on our ability to manage the rapid growth associated with acquisitions. We cannot assure you that we will be able to make the combination of our business with that of acquired products, businesses or companies work or be successful. Furthermore, the development or expansion of our business or any acquired products, business or companies may require a substantial capital investment by us. We may not have these necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise funds by selling shares of our preferred or common stock, which could dilute each current shareholder's ownership interest in the Company.

Any international operations we undertake may subject us to risks inherent with operations outside of the United States.

We may seek to obtain market clearance for in foreign markets that we deem to generate significant opportunities. However, even with the cooperation of a commercialization partner, conducting drug development in foreign countries involves inherent risks, including, but not limited to: difficulties in staffing, funding and managing foreign operations; unexpected changes in regulatory requirements; export restrictions; tariffs and other trade barriers; difficulties in protecting, acquiring, enforcing and litigating intellectual property rights; fluctuations in currency exchange rates; and potentially adverse tax consequences. If we were to experience any of the difficulties listed above, or any other difficulties, our international development activities and our overall financial condition may suffer and cause us to reduce or discontinue our international development and registration efforts.

We may not be successful in hiring and retaining key employees, including executive officers.

Our future operations and successes depend in large part upon the strength of our management team. We rely heavily on the continued service of each member of our management team. Accordingly, if any member of our management team were to terminate their employment with us, such departure may have a material adverse effect on our business. In addition, our future success depends on our ability to identify, attract, hire or engage, retain and motivate other well-qualified financial, managerial, technical, clinical and regulatory personnel. There can be no assurance that these professionals will be available in the market, or that we will be able to retain existing professionals or to meet or to continue to meet their compensation requirements. Furthermore, the cost base in relation to such compensation, which may include equity compensation, may increase significantly, which could have a material adverse effect on us. Failure to establish and maintain an effective management team and work force could adversely affect our ability to operate, grow and manage our business.

Managing our growth as we expand operations may strain our resources.

We expect to grow rapidly in order to support additional, larger, and potentially international, pivotal clinical trials of our drug candidates, which will place a significant strain on our financial, managerial and operational resources. In order to achieve and manage growth effectively, we must continue to improve and expand our operational and financial management capabilities. Moreover, we will need to increase staffing and to train, motivate and manage our employees. All of these activities will increase our expenses and may require us to raise additional capital sooner than expected. Failure to manage growth effectively could harm our business, financial condition or results of operations.

If a product liability claim is successfully brought against us for uninsured liabilities, or such claim exceeds our insurance coverage, we could be forced to pay substantial damage awards that could materially harm our business.

The use of any of our existing or future product candidates in clinical trials and the sale of any approved pharmaceutical products may expose us to significant product liability claims. We currently do not have product liability insurance coverage but we intend to obtain such insurance. Such insurance coverage may not protect us against any or all of the product liability claims that may be brought against us in the future. We may not be able to acquire or maintain adequate product liability insurance coverage at a commercially reasonable cost or in sufficient amounts or scope to protect us against potential losses. In the event a product liability claim is brought against us, we may be required to pay legal and other expenses to defend the claim, as well as uncovered damage awards resulting from a claim brought successfully against us. In the event our product candidate is approved for sale by the FDA or other regulatory agency and commercialized, we may need to substantially increase the amount of our product liability coverage. Defending any product liability claim or claims could require us to expend significant financial and managerial resources, which could have an adverse effect on our business.

Our business may be adversely affected by public health crises, such as pandemics and epidemics, including the COVID-19 pandemic, which may have a material adverse effect on our business. The nature and extent of future impacts are highly uncertain and unpredictable.

We are subject to risks associated with public health crises, such as pandemics and epidemics, including the COVID-19 pandemic. While many countries around the world have removed or reduced the restrictions taken in response to the COVID-19 pandemic, the emergence of new variants of COVID-19 virus could result in new governmental lockdowns, quarantine requirements or other restrictions to slow the spread of the virus. In addition, any such measures could also impact the global economy more broadly, for example by leading to further economic slowdowns. While COVID-19 case volumes have decreased in the U.S and certain other countries, the global outlook remains uncertain as case counts fluctuate and vaccination and booster rates remain relatively low in many parts of the world. If we were to experience shutdowns or other significant business disruptions, our ability to conduct our business in the manner presently planned could be materially and negatively impacted.

For example, staffing issues related to a public health crises may disrupt our business operations, including our clinical trials. Site initiation, participant recruitment and enrollment, participant dosing, distribution of clinical trial materials, study monitoring and data analysis may be paused or delayed due to changes in hospital or university policies, federal, state or local regulations, prioritization of hospital resources toward other efforts, or other staffing issues related to any such health epidemic. Also, some participants and clinical investigators may not be able to comply with clinical trial protocols. For example, quarantines or other travel limitations (whether voluntary or required) stemming from a health epidemic may impede participant movement, affect sponsor access to study sites, or interrupt healthcare services, and we may be unable to conduct our clinical trials. In addition, if any third parties in the supply chain for materials used in the production of our product candidates are adversely impacted by a public health crises, our supply chain may be disrupted, limiting our ability to manufacture our product candidates for our clinical trials and research and development operations. Furthermore, we may be at a risk of delaying, defaulting and/or not performing under existing agreements, which may increase our costs. These cost increases may not be fully recoverable or adequately covered by insurance. Infections and deaths related to a health epidemic may also disrupt the United States' healthcare and healthcare regulatory systems which could divert healthcare resources away from, or materially delay FDA review and/or approval of our product candidates.

The scope and duration of any future public health crisis, including the potential emergence of new variants of the COVID-19 virus, the pace at which government restrictions are imposed and lifted, global vaccination and booster rates, the speed and extent to which global markets fully recover from the disruptions caused by such public health crisis, and the impact of these factors on our business, financial condition and results of operations, will depend on future developments that are highly uncertain and cannot be predicted with confidence.

Significant disruptions of information technology systems or breaches of data security could adversely affect our business.

Our business is increasingly dependent on critical, complex, and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. These systems are also critical to enable remote working arrangements, which have been growing in importance. The size and complexity of our computer systems make us potentially vulnerable to IT system breakdowns, internal and external malicious intrusion, and computer viruses and ransomware, which may impact product production and key business processes. We also have outsourced significant elements of our information technology infrastructure and operations to third parties, which may allow them to access our confidential information and may also make our systems vulnerable to service interruptions or to security breaches from inadvertent or intentional actions by such third parties or others.

In addition, our systems are potentially vulnerable to data security breaches - whether by employees or others - which may expose sensitive data to unauthorized persons. Data security breaches could lead to the loss of trade secrets or other intellectual property, result in demands for ransom or other forms of blackmail, or lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients, customers, and others. Such attacks are of ever-increasing levels of sophistication and are made by groups and individuals with a wide range of motives (including industrial espionage or extortion) and expertise, including by organized criminal groups, "hacktivists," nation states, and others. As a company with an increasingly global presence, our systems are subject to frequent attacks. There is the potential that our systems may be directly or indirectly affected as nation-states conduct global cyberwarfare, including in connection with the current Russia-Ukraine or Hamas-Israel armed conflict.

Due to the nature of some of these attacks, there is a risk that an attack may remain undetected for a period of time. While we continue to make investments to improve the protection of data and information technology, and to oversee and monitor the security measures of our suppliers and/or service providers, there can be no assurance that our efforts will prevent service interruptions or security breaches. In addition, we depend in part on third-party security measures over which we do not have full control to protect against data security breaches.

If we or our suppliers and/or service providers fail to maintain or protect our information technology systems and data security effectively and in compliance with U.S. and foreign laws, or fail to anticipate, plan for, or manage significant disruptions to these systems, we or our suppliers and/or service providers could have difficulty preventing, detecting, or controlling such disruptions or security breaches, which could result in legal proceedings, liability under U.S. and foreign laws that protect the privacy of personal information, disruptions to our operations, government investigations, breach of contract claims, and damage to our reputation (in each case in the U.S. or globally), which could have a material adverse effect on our business, prospects, operating results, and financial condition.

Risks Related to Our Common Stock

The price of our common stock may fluctuate substantially.

You should consider an investment in our common stock to be risky, and you should invest in our common stock only if you can withstand a significant loss and wide fluctuations in the market value of your investment. Some factors that may cause the market price of our common stock to fluctuate, in addition to the other risks mentioned in this "Risk Factors" section and elsewhere in this Annual Report on Form 10-K, are:

- sale of our common stock by our shareholders, executives, and directors;
- volatility and limitations in trading volumes of our shares of common stock;
- our ability to obtain financings to conduct and complete research and development activities including, but not limited to, our clinical trials, and other business activities;
- the timing and success of introductions of new products by us or our competitors or any other change in the competitive dynamics of our industry, including consolidation among competitors;
- our ability to attract new customers;
- our ability to secure resources and the necessary personnel to conduct clinical trials on our desired schedule;
- commencement, enrollment or results of our clinical trials for our product candidates;
- changes in the development status of our product candidates;
- any delays or adverse developments or perceived adverse developments with respect to a regulatory agency's review of our planned pre-clinical and clinical trials;

- any delay in our submission for studies or product approvals or adverse regulatory decisions, including failure to receive regulatory approval for our product candidates;
- unanticipated safety concerns related to the use of our product candidates;
- changes in our capital structure or dividend policy, future issuances of securities and sales of large blocks of common stock by our shareholders;
- our cash position;
- announcements and events surrounding financing efforts, including debt and equity securities;
- our inability to enter into new markets or develop new products;
- reputational issues;
- announcements of acquisitions, partnerships, collaborations, joint ventures, new products, capital commitments, or other events by us or our competitors;
- changes in general economic, political and market conditions in or any of the regions in which we conduct our business;
- changes in industry conditions or perceptions;
- analyst research reports, recommendation and changes in recommendations, price targets, and withdrawals of coverage;
- departures and additions of key personnel;
- disputes and litigations related to intellectual properties, proprietary rights, and contractual obligations;
- changes in applicable laws, rules, regulations, or accounting practices and other dynamics; and
- other events or factors, many of which may be out of our control, including, but not limited to, pandemics, war, or other acts of God.

In addition, if the market for stocks in our industry or industries related to our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition and results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

We may acquire other companies or technologies, which could divert our management's attention, result in dilution to our shareholders and otherwise disrupt our operations and adversely affect our operating results.

We may in the future seek to acquire or invest in businesses, applications and services or technologies that we believe could complement or expand our services, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

In addition, we do not have any experience in acquiring other businesses. If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;

- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our platform and contract terms, including disparities in the revenue, licensing, support or professional services model of the acquired company;
- diversion of management's attention from other business concerns;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations. Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

Unstable market and economic conditions and adverse developments with respect to financial institutions and associated liquidity risk may have serious adverse consequences on our business, financial condition and stock price.

The global credit and financial markets have recently experienced extreme volatility and disruptions, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, inflationary pressure and interest rate changes, increases in unemployment rates and uncertainty about economic stability. The financial markets and the global economy may also be adversely affected by the current or anticipated impact of military conflict, including the conflict between Russia and Ukraine, terrorism or other geopolitical events. Sanctions imposed by the United States and other countries in response to such conflicts, including the one in Ukraine, may also adversely impact the financial markets and the global economy, and any economic countermeasures by the affected countries or others could exacerbate market and economic instability. More recently, the closures of Silicon Valley Bank and Signature Bank and their placement into receivership with the Federal Deposit Insurance Corporation ("FDIC") created bank-specific and broader financial institution liquidity risk and concerns. Although the Department of the Treasury, the Federal Reserve, and the FDIC jointly released a statement that depositors at SVB and Signature Bank would have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception, future adverse developments with respect to specific financial institutions or the broader financial services industry may lead to market-wide liquidity shortages, impair the ability of companies to access near-term working capital needs, and create additional market and economic uncertainty. We have significant cash balances at financial institutions which, throughout the year, regularly exceed the federally insured limit of \$250,000. Any loss incurred or a lack of access to such funds could have a significant adverse impact on our financial condition, results of operations, and cash flows.

There can be no assurance that future credit and financial market instability and a deterioration in confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, liquidity shortages, volatile business environment or continued unpredictable and unstable market conditions. If the equity and credit markets deteriorate, or if adverse developments are experienced by financial institutions, it may cause short-term liquidity risk and also make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our financial institutions, manufacturers and other third parties with whom we engage may be adversely affected by the foregoing risks, which may have a material adverse effect on our business.

Future sales and issuances of our securities could result in additional dilution of the percentage ownership of our shareholders and could cause our share price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations, including research and development, increased marketing, hiring new personnel, commercializing our products, and continuing activities as an operating public company. To the extent we raise additional capital by issuing equity securities, our shareholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing shareholders, and new investors could gain rights superior to our existing shareholders.

We do not intend to pay cash dividends on our shares of common stock so any returns will be limited to the value of our shares.

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors that our board of directors deems relevant. Therefore, any return to shareholders will be limited to the increase, if any, of our share price.

We are an “emerging growth company” and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies, which could make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act of 2002, as amended (“Sarbanes-Oxley”), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. In addition, pursuant to Section 107 of the JOBS Act, as an “emerging growth company” we intend to take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act, for complying with new or revised accounting standards. In other words, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an “emerging growth company.” We will remain an “emerging growth company” until the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.235 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of our initial public offering; (iii) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC.

We may be at risk of securities class action litigation.

We may be at risk of securities class action litigation. In the past, biotechnology and pharmaceutical companies have experienced significant stock price volatility, particularly when associated with binary events such as clinical trials and product approvals. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business and results in a decline in the market price of our common stock.

We are currently listed on The Nasdaq Capital Market (“Nasdaq”). If we are unable to maintain listing of our securities on Nasdaq or any stock exchange, our stock price could be adversely affected and the liquidity of our stock and our ability to obtain financing could be impaired and it may be more difficult for our shareholders to sell their securities.

Although our common stock is currently listed on Nasdaq, we may not be able to continue to meet the exchange’s minimum listing requirements or those of any other national exchange. The Listing Rules of Nasdaq require listing issuers to comply with certain standards in order to remain listed on its exchange. If, for any reason, we should fail to maintain compliance with these listing standards and Nasdaq should delist our securities from trading on its exchange and we are unable to obtain listing on another national securities exchange, a reduction in some or all of the following may occur, each of which could have a material adverse effect on our shareholders:

- the liquidity of our common stock;
- the market price of our common stock;
- our ability to obtain financing for the continuation of our operations;
- the number of investors that will consider investing in our common stock;
- the number of market makers in our common stock;
- the availability of information concerning the trading prices and volume of our common stock; and
- the number of broker-dealers willing to execute trades in shares of our common stock.

Our Articles of Incorporation, as amended (“Articles of Incorporation”), our Amended and Restated Bylaws, and Nevada law may have anti-takeover effects that could discourage, delay or prevent a change in control, which may cause our stock price to decline.

Our Articles of Incorporation, Amended and Restated Bylaws, and Nevada law could make it more difficult for a third-party to acquire us, even if closing such a transaction would be beneficial to our shareholders. We are authorized to issue up to 10,000,000 shares of preferred stock, none of which are outstanding as of March 26, 2024. This preferred stock may be issued in one or more series, the terms of which may be determined at the time of issuance by our board of directors without further action by shareholders. The terms of any series of preferred stock may include voting rights (including the right to vote as a series on particular matters), preferences as to dividend, liquidation, conversion and redemption rights and sinking fund provisions. As of March 26, 2024, 5,000,000 shares of our preferred stock have been designated as Series A Preferred Stock of which 3,102,480 shares of Series A Preferred Stock were previously issued and converted into common stock at the time of our initial public offering and 1,897,520 shares of Series A Preferred Stock remain authorized. The issuance of any preferred stock could materially adversely affect the rights of the holders of our common stock, and therefore, reduce the value of our common stock. In particular, specific rights granted to future holders of preferred stock could be used to restrict our ability to merge with, or sell our assets to, a third-party and thereby preserve control by the present management.

Provisions of our Articles of Incorporation, our Amended and Restated Bylaws and Nevada law also could have the effect of discouraging potential acquisition proposals or making a tender offer or delaying or preventing a change in control, including changes a shareholder might consider favorable. Such provisions may also prevent or frustrate attempts by our shareholders to replace or remove our management. In particular, the Articles of Incorporation, our Amended and Restated Bylaws and Nevada law, as applicable, among other things:

- provide the board of directors with the ability to alter the Amended and Restated Bylaws without shareholder approval;
- place limitations on the removal of directors;
- establish advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at shareholder meetings; and
- provide that vacancies on the board of directors may be filled by a majority of directors in office, although less than a quorum.

Our Amended and Restated Bylaws provide that the Eighth Judicial District Court of Clark County, Nevada will be the sole and exclusive forum for certain disputes which could limit shareholders' ability to obtain a favorable judicial forum for disputes with us or its directors, officers, employees or agents.

Our Amended and Restated Bylaws provide that unless we consent in writing to the selection of an alternative forum, the Eighth Judicial District Court of Clark County, Nevada shall be the sole and exclusive forum for state law claims with respect to: (i) any derivative action or proceeding brought in the name or right of us or on our behalf, (ii) any action asserting a claim for breach of any fiduciary duty owed by any director, officer, employee or agent to us or our shareholders, (iii) any action arising or asserting a claim arising pursuant to any provision of Nevada Revised Statutes Chapters 78 or 92A or any provision of our Articles of Incorporation or Amended and Restated Bylaws or (iv) any action asserting a claim governed by the internal affairs doctrine, including, without limitation, any action to interpret, apply, enforce or determine the validity of our Articles of Incorporation or Amended and Restated Bylaws. This exclusive forum provision would not apply to suits brought to enforce any liability or duty created by the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. To the extent that any such claims may be based upon federal law claims, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

This choice of forum provision may limit a shareholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, other employees or agents and may result in increased costs to our shareholders, which may discourage such lawsuits against us and our directors, officers, other employees and agents. Alternatively, if a court were to find the choice of forum provision contained in our Amended and Restated Bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could have a material adverse effect on our business, results of operations, and financial condition.

General Risk Factors

If securities or industry analysts do not publish research or reports, or publish unfavorable research or reports about our business, our stock price and trading volume may decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us, our business, our markets and our competitors. We do not control these analysts. If securities analysts do not cover our common stock, the lack of research coverage may adversely affect the market price of our common stock. Furthermore, if one or more of the analysts who do cover us downgrade our stock or if those analysts issue other unfavorable commentary about us or our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fails to regularly publish reports on us, we could lose visibility in the market and interest in our stock could decrease, which in turn could cause our stock price or trading volume to decline and may also impair our ability to expand our business with existing customers and attract new customers.

Financial reporting obligations of being a public company in the United States are expensive and time-consuming, and our management will be required to devote substantial time to compliance matters.

As a publicly traded company we incur significant legal, accounting and other expenses. The obligations of being a public company in the United States require significant expenditures and places significant demands on our management and other personnel, including costs resulting from public company reporting obligations under the Exchange Act and the rules and regulations regarding corporate governance practices, including those under Sarbanes-Oxley, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the listing requirements of Nasdaq. These rules require the establishment and maintenance of effective disclosure and financial controls and procedures, internal control over financial reporting and changes in corporate governance practices, among many other complex rules that are often difficult to implement, monitor and maintain compliance with. Moreover, despite recent reforms made possible by the JOBS Act, the reporting requirements, rules, and regulations will make some activities more time-consuming and costly, particularly after we are no longer an "emerging growth company." Our management and other personnel will need to devote a substantial amount of time to ensure that we comply with all of these requirements and to keep pace with new regulations, otherwise we may fall out of compliance and risk becoming subject to litigation or being delisted, among other potential problems.

Failure to maintain effective internal controls could cause our investors to lose confidence in us and adversely affect the market price of our common stock. If our internal controls are not effective, we may not be able to accurately report our financial results or prevent fraud.

Section 404 of Sarbanes-Oxley requires annual management assessments of the effectiveness of our internal controls over financial reporting. If we fail to comply with the rules under Sarbanes-Oxley related to disclosure controls and procedures in the future, or, if we discover material weaknesses and other deficiencies in our internal controls over financial reporting, our stock price could decline significantly and raising capital could be more difficult. If material weaknesses or significant deficiencies are discovered or if we otherwise fail to achieve and maintain the adequacy of our internal controls, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of Sarbanes-Oxley. Moreover, effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our common stock could drop significantly.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 1C. CYBERSECURITY

We operate in the biotechnology sector, which is subject to various cybersecurity risks that could adversely affect our business, financial condition, and results of operations, including intellectual property theft; fraud; extortion; harm to customers and/or corporate partners or customers; violation of privacy laws and other litigation and legal risk; and reputational risk.

We have implemented various security measures to identify and assess the cybersecurity threats that could affect our business and information systems. We use various tools and methodologies to manage cybersecurity risk that are tested on a regular cadence. We also monitor and evaluate our cybersecurity posture and performance on an ongoing basis through regular vulnerability scans, penetration tests and threat intelligence feeds. We require third-party service providers with access to personal, confidential or proprietary information to implement and maintain comprehensive cybersecurity practices consistent with applicable legal standards and industry best practices.

Our business depends on the availability, reliability, and security of our information systems, networks, data, and intellectual property. Any disruption, compromise, or breach of our network systems or infrastructure due to a cybersecurity threat or incident could adversely affect our operations, serviced, product development, and competitive position. They may also result in a breach of our contractual obligations or legal duties to protect the privacy and confidentiality of our customers' and partners' proprietary information, which may include personally identifiable information. Such a breach could expose us to business interruption, lost revenue, ransom payments, remediation costs, liabilities to affected parties, cybersecurity protection costs, lost assets, litigation, regulatory scrutiny and actions, reputational harm, customer dissatisfaction and harm to our relationships with corporate partners.

We are currently in the process of implementing a more formalized cybersecurity program.

ITEM 2. PROPERTIES

Our executive office is located at 590 Madison Avenue, 21st Floor, New York, NY 10022. We currently lease such office for approximately \$2,700 per month pursuant to a lease which terminates on February 28, 2026. We lease an additional office located at 720 Monroe Street, #E514, Hoboken, NJ 07030 for approximately \$1,850 per month pursuant to a lease which expires on December 31, 2024. We believe that our existing facilities are suitable and adequate to meet our current needs. We intend to add new facilities or expand existing facilities as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may become involved in various lawsuits and legal proceedings, which arise in the ordinary course of business. Litigation is subject to inherent uncertainties, and an adverse result in these or other matters may arise from time to time that may harm our business. We are currently not aware of any such legal proceedings or claims that will have, individually or in the aggregate, a material adverse effect on our business, financial condition or operating results.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

On February 15, 2019, our common stock began trading on The Nasdaq Capital Market under the symbol "HOTH." Prior to that time, there was no public market for our common stock.

Shareholders

As of March 26, 2024, there were 101 shareholders of record of our common stock. The actual number of holders of our common stock is greater than this number of record holders, and includes shareholders who are beneficial owners, but whose shares are held in street name by brokers or held by other nominees. This number of holders of record also does not include shareholders whose shares may be held in trust by other entities.

Dividend Policy

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain all available funds and any future earnings to fund the development, operation and expansion of our business. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors that our board of directors deems relevant.

Recent Sales of Unregistered Securities

None.

Issuers Purchases of Equity Securities

None.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITIONS AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with and our consolidated financial statements and the related notes appearing elsewhere in this Annual Report on Form 10-K. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included elsewhere in this Annual Report on Form 10-K. All amounts in this report are in U.S. dollars, unless otherwise noted.

Overview

We are a clinical-stage biopharmaceutical company focused on developing new generation therapies for unmet medical needs. We are focused on developing (i) a topical formulation for treating side effects from drugs used for the treatment of cancer (HT-001); (ii) a treatment for mast-cell derived cancers and anaphylaxis (HT-KIT); (iii) a treatment for traumatic brain injury and ischemic stroke (HT-TBI); and (iv) a treatment and/or prevention for Alzheimer's or other neuroinflammatory diseases (HT-ALZ). We also have assets being developed for (i) atopic dermatitis (also known as eczema) (BioLexa); (ii) a treatment for asthma and allergies using inhalational administration (HT-004); and (iii) a treatment for acne as well as inflammatory bowel diseases (HT-003). Furthermore, we have interests in certain other assets being developed by third parties including a treatment for patients with lupus that is being developed by Zylö and potential product candidates being developed pursuant to our agreement with Voltron for the prevention of COVID-19.

Results of Operations

Comparison of Our Results of Operations for the Years Ended December 31, 2023 and 2022

Operating Costs and Expenses

Research and Development Expenses

For the year ended December 31, 2023, research and development expenses were approximately \$3.5 million. Specifically, during the year ended December 31, 2023, our research and development costs consisted primarily of the following costs for each of our key research and development projects: (i) HT-001, approximately \$1.7 million related to manufacturing and clinical activities; (ii) HT-KIT, approximately \$1.6 million related to manufacturing and preclinical activities; (iii) HT-ALZ, approximately \$65,000 related to preclinical studies; (iv) BioLexa, approximately \$56,000 related to manufacturing; and (v) HT-004, approximately \$59,000 related to sponsored research. In addition to the foregoing, we also incurred fees of approximately \$0.2 million payable to members of our scientific advisory board for services.

For the year ended December 31, 2022, research and development expenses were approximately \$4.9 million, of which approximately \$87,000 was related to licenses acquired and approximately \$4.8 million was related to other research and development expenses. Specifically, during the year ended December 31, 2022, our research and development costs consisted primarily of the following costs for each of our key research and development projects: (i) BioLexa, approximately \$1.0 million related to clinical trial costs; (ii) HT-001, approximately \$2.9 million related to manufacturing, preclinical and clinical activities; (iii) HT-TBI, approximately \$0.4 million related to manufacturing and preclinical activities; (iv) HT-003, approximately \$41,000 related to preclinical studies; (v) HT-004, approximately \$0.1 million related to sponsored research; (vi) HT-006, approximately \$51,000 related to sponsored research (on July 12, 2022, our non-exclusive commercial evaluation license agreement with the United States Army Medical Research and Development Command terminated and we are no longer pursuing HT-006); (vii) GW breath based diagnostic device, approximately \$76,000 related to research and development with respect to the design of device; (viii) HT-KIT, approximately \$0.2 million related to manufacturing and preclinical activities; and (ix) HT-ALZ, approximately \$0.2 million in sponsored research. In addition to the foregoing, we also incurred fees of approximately \$0.3 million payable to members of our scientific advisory board for services.

We expect our research and development activities to increase as we develop our existing product candidates and potentially acquire new product candidates, reflecting increasing costs associated with the following:

- employee-related expenses, which include salaries and benefits, and rent expenses;
- fees related to in-licensed products and technology;
- expenses incurred under agreements with CROs, investigative sites and consultants that conduct our clinical trials and a substantial portion of our pre-clinical activities;
- the cost of acquiring and manufacturing clinical trial materials; and
- costs associated with non-clinical activities and regulatory approvals.

General and Administrative Expenses

For the year ended December 31, 2023, General and Administrative Expenses were approximately \$4.2 million, which primarily consisted of approximately \$1.6 million related to payroll expenses and stock-based compensation, approximately \$2.1 million for professional fees and approximately \$0.5 million for other expenses.

For the year ended December 31, 2022, General and Administrative Expenses were approximately \$6.1 million, which primarily consisted of approximately \$2.6 million related to payroll expenses and stock-based compensation, approximately \$2.5 million for professional fees and approximately \$1.0 million for other expenses.

We anticipate that our General and Administrative expenses will increase in future periods, reflecting continued and increasing costs associated with:

- support of our research and development activities;
- stock compensation granted to key employees and non-employees;
- support of business development activities; and
- increased professional fees and other costs associated with regulatory requirements that we are subject to.

Other Income (Expenses), net

For the year ended December 31, 2023, net other expenses were approximately \$0.1 million, which primarily resulted from \$0.2 million of unrealized losses on marketable securities, partially offset by approximately \$0.1 million of dividend income.

For the year ended December 31, 2022, net other expenses were approximately \$0.3 million, which primarily resulted from \$0.6 million of losses on marketable securities and \$0.4 million change in fair value of investments in joint ventures, partially offset by \$0.1 million of unrealized gains on marketable securities, \$0.5 million of other income related to a research and development tax credit pursuant to Australian regulations and \$0.1 million in dividend income.

Liquidity and Capital Resources

To date we have funded our operations primarily through the sale of equity and debt securities. As of December 31, 2023, we had approximately \$9.3 million in cash and marketable securities, working capital of approximately \$8.8 million and an accumulated deficit of approximately \$52.9 million. Net cash used in operating activities was \$8.4 million and \$9.3 million for the years ended December 31, 2023 and 2022, respectively. We incurred losses of approximately \$7.8 million and \$11.4 million for the years ended December 31, 2023 and 2022, respectively. We have incurred substantial operating losses since inception and expect to continue to incur significant operating losses for the foreseeable future as we continue our pre-clinical and clinical development of our product candidates. We have not yet commercialized any products and have never generated any revenue from product sales. We believe that our existing cash as of December 31, 2023 will enable us to fund our operating expenses and capital expenditure requirements for at least 12 months from the date that our audited financial statements are available to be issued.

We have entered into certain license, sublicense, sponsored research and option agreements with third parties. Pursuant to such agreements, we may be required to make certain: (i) license maintenance fee payments; (ii) out-of-pocket expense payments, including, but not limited to, payments related to intellectual property and research related expenses; (iii) development and commercialization expense payments; (iv) annual and quarterly minimum payments; (v) diligence expense payments; and (vi) revenue interest payments. In addition, subject to the achievement of certain development and/or commercialization events, we may also be required to make certain: (i) minimum royalty payments, ranging from middle to high five figures, (ii) sales-based royalties and running royalties, ranging from low single digits to low double digits; and (iii) milestone payments, of up to approximately \$12 million (if all milestones in all of our current agreements are achieved).

Additional funding will be necessary to fund our future clinical and pre-clinical activities. We may obtain additional financing through sales of our equity and debt securities or entering into strategic partnership arrangements, or a combination of the foregoing. There are no assurances that we will be successful in obtaining an adequate level of financing as and when needed to finance our operations on terms acceptable to us or at all, particularly in light of the economic downturn. If we are unable to secure adequate additional funding as and when needed, we may have to significantly delay, scale back or discontinue the development and commercialization of one or more of our product candidates.

Cash Flows from Operating Activities

For the year ended December 31, 2023, net cash used in operating activities was approximately \$8.4 million, which primarily resulted from a net loss of approximately \$7.8 million, a \$0.3 million gain on termination of license agreement, offset by \$0.2 million unrealized loss on marketable securities, \$0.2 million stock-based compensation and changes in operating assets and liabilities of approximately \$0.7 million.

For the year ended December 31, 2022, net cash used in operating activities was approximately \$9.3 million, which primarily resulted from a net loss of approximately \$11.4 million and \$0.1 million unrealized gain on marketable securities, partially offset by approximately \$0.6 million in stock-based compensation, \$0.6 million realized loss on marketable securities, \$0.4 million change in fair value of investments in joint ventures and changes in operating assets and liabilities of approximately \$0.6 million.

Cash Flows from Investing Activities

The Company did not have any cash flows from investing activities for the year ended December 31, 2023.

For the year ended December 31, 2022, net cash provided by investing activities was approximately \$1.2 million which was primarily related to the sale of marketable securities.

Cash Flows from Financing Activities

For the year ended December 31, 2023, net cash provided by financing activities was approximately \$11.3 million, which primarily resulted from net proceeds from the issuance of common stock, common stock warrants, and prefunded warrants.

For the year ended December 31, 2022, net cash provided by financing activities was approximately \$6.0 million, which primarily resulted from net proceeds from the issuance of common stock.

Our ultimate success is dependent on our ability to obtain additional financing and generate sufficient cash flow to meet our obligations on a timely basis. We will require significant amounts of capital to sustain operations, and we will need to make the investments we need to execute our longer-term business plan to support new technologies and help advance innovation. Absent generation of sufficient revenue from the execution of our long-term business plan, we will need to obtain debt or equity financing, especially if we experience downturns in our business that are more severe or longer than anticipated, or if we experience significant increases in expense levels resulting from being a publicly traded company or from operations. Such additional debt or equity financing may not be available to us on favorable terms, if at all.

We plan to pursue our plans with respect to the research and development of our pre-clinical products which will require resources beyond those that we currently have, ultimately requiring additional capital from third-party sources. We currently do not expect to generate any revenue.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these consolidated financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities as of the date of the balance sheet and the reported amounts of expenses during the reporting period. In accordance with GAAP, we evaluate our estimates and judgments on an ongoing basis. The most significant estimates relate to the valuation of stock options and the valuation allowance of deferred tax assets resulting from net operating losses. We base our estimates and assumptions on current facts, our limited historical experience and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We define our critical accounting policies as those accounting principles that require us to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations, as well as the specific manner in which we apply those principles. While our significant accounting policies are more fully described in Note 2 to our consolidated financial statements appearing elsewhere in Annual Report on Form 10-K, we believe the following are the critical accounting policies used in the preparation of our consolidated financial statements that require significant estimates and judgments:

Stock-based compensation

We expense stock-based compensation to employees and non-employees over the requisite service period based on the estimated grant-date fair value of the awards. Stock-based awards with graded-vesting schedules are recognized on a straight-line basis over the requisite service period for each separately vesting portion of the award. We record the expense for stock-based compensation awards subject to performance-based milestone vesting over the remaining service period when management determines that achievement of the milestone is probable. Management evaluates when the achievement of a performance-based milestone is probable based on the expected satisfaction of the performance conditions at each reporting date. All stock-based compensation costs are recorded in general and administrative or research and development costs in the statements of operations based upon the underlying employees' or non-employees' roles.

Income taxes

Income taxes are recorded in accordance with Accounting Standards Codification ("ASC") 740, Income Taxes ("ASC 740") which provides for deferred taxes using an asset and liability approach. We recognize deferred tax assets and liabilities for the expected future tax consequences of events that have been included in our consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between our financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We account for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, we recognize the tax benefit of tax positions to the extent that the benefit would more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances.

Significant Accounting Policies

See Note 2 to the consolidated financial statements for a discussion of significant accounting policies and recent accounting pronouncements.

JOBS Act

On April 5, 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act, for complying with new or revised accounting standards. In other words, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies.

We have chosen to take advantage of the extended transition periods available to emerging growth companies under the JOBS Act for complying with new or revised accounting standards until those standards would otherwise apply to private companies provided under the JOBS Act. As a result, our consolidated financial statements may not be comparable to those of companies that comply with public company effective dates for complying with new or revised accounting standards.

Subject to certain conditions set forth in the JOBS Act, as an “emerging growth company,” we intend to rely on certain of these exemptions, including, without limitation, (i) providing an auditor’s attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of Sarbanes-Oxley and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an “emerging growth company” until the earliest of (i) the last day of the fiscal year in which we have total annual gross revenues of \$1.235 billion or more; (ii) the last day of our fiscal year following the fifth anniversary of the date of our initial public offering; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the SEC. However, beginning December 31, 2024, we will no longer be an “emerging growth company,” and will no longer have the ability to delay adoption of these new or revised accounting standards, or to take advantage of reduced corporate governance disclosures.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

As a smaller reporting company, we are not required to provide the information required by this item.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

**Hoth Therapeutics, Inc.
Consolidated Financial Statements**

TABLE OF CONTENTS

	<u>Page No.</u>
Consolidated Financial Statements	
Report of Independent Registered Public Accounting Firm (PCAOB ID: 100)	F-2
Consolidated Balance Sheets as of December 2023 and 2022	F-3
Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2023 and 2022	F-4
Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2023 and 2022	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2023 and 2022	F-6
Notes to Consolidated Financial Statements	F-7

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
Hoth Therapeutics, Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Hoth Therapeutics, Inc. (the “Company”) as of December 31, 2023 and 2022, the related consolidated statements of operations, changes in stockholders’ equity and cash flows, for each of the two years in the period ended December 31, 2023, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2023 and 2022, and the consolidated results of its operations and its cash flows for each of the two years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/S/ WithumSmith+Brown, PC

We have served as the Company’s auditor since 2018.

New York, New York
March 28, 2024
PCAOB ID No. 100

Hoth Therapeutics, Inc.
Consolidated Balance Sheets

	<u>December 31,</u> <u>2023</u>	<u>December 31,</u> <u>2022</u>
ASSETS		
Current assets:		
Cash	\$ 9,292,352	\$ 6,428,611
Marketable equity securities, at fair value	—	209,320
Prepaid expenses and other current assets	135,361	88,450
Total current assets	<u>9,427,713</u>	<u>6,726,381</u>
Right of use asset – operating lease	55,165	—
Investment in joint ventures at fair value	37,400	33,000
Total assets	<u><u>\$ 9,520,278</u></u>	<u><u>\$ 6,759,381</u></u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 35,592	\$ 694,989
Accrued expenses	614,226	667,742
Accrued license fee - current portion	—	25,000
Lease liability, current	28,839	—
Total current liabilities	<u>678,657</u>	<u>1,387,731</u>
Lease liability, noncurrent	26,326	—
Accrued license fee - less current portion	—	250,000
Total liabilities	<u><u>704,983</u></u>	<u><u>1,637,731</u></u>
Commitments and Contingencies (See Note 7)		
Stockholders' equity:		
Preferred stock, \$0.0001 par value, 10,000,000 shares authorized; 3,000,000 shares undesignated; 0 shares issued and outstanding as of December 31, 2023 and December 31, 2022	—	—
Series A Convertible Preferred Stock, \$0.0001 par value, 5,000,000 shares designated; 0 shares issued and outstanding at December 31, 2023 and December 31, 2022	—	—
Series B Preferred Stock, \$0.0001 par value, 2,000,000 shares designated; 0 shares issued and outstanding as of December 31, 2023 and December 31, 2022	—	—
Common stock, \$0.0001 par value, 50,000,000 shares authorized, 4,348,129 and 1,302,113 shares issued and outstanding as of December 31, 2023 and December 31, 2022, respectively	435	130
Additional paid-in capital	61,732,106	50,198,630
Accumulated deficit	(52,944,506)	(45,099,116)
Accumulated other comprehensive income	27,260	22,006
Total stockholders' equity	<u>8,815,295</u>	<u>5,121,650</u>
Total liabilities and stockholders' equity	<u><u>\$ 9,520,278</u></u>	<u><u>\$ 6,759,381</u></u>

The accompanying notes are an integral part of these consolidated financial statements.

Hoth Therapeutics, Inc.
Consolidated Statements of Operations and Comprehensive Loss

	For the Year Ended December 31,	
	2023	2022
Operating costs and expenses		
Research and development	\$ 3,480,053	\$ 4,931,164
General and administrative expenses	4,212,189	6,134,390
Total operating expenses	7,692,242	11,065,554
Loss from operations	(7,692,242)	(11,065,554)
Other income (expense), net		
Unrealized gain (loss) on marketable securities	(209,320)	119,870
Realized loss on marketable securities	—	(567,692)
Change in fair value of investments in joint ventures	4,400	(377,000)
Interest income	781	6,370
Dividend income	50,991	60,913
Other income, net	—	451,140
Total other income (expense), net	(153,148)	(306,399)
Net loss	\$ (7,845,390)	\$ (11,371,953)
Deemed dividend to Series B Preferred Stock being redeemed	—	990
Net Loss Attributable to Common Stockholders	\$ (7,845,390)	\$ (11,370,963)
Net loss per share - basic and diluted	\$ (2.30)	\$ (9.50)
Weighted average number of common shares outstanding, basic and diluted	3,409,190	1,197,521
Comprehensive loss:		
Net loss	\$ (7,845,390)	\$ (11,371,953)
Other comprehensive income		
Foreign currency translation adjustment	5,254	4,420
Total comprehensive loss	\$ (7,840,136)	\$ (11,367,533)

The accompanying notes are an integral part of these consolidated financial statements.

Hoth Therapeutics, Inc.
Consolidated Statements of Changes in Stockholders' Equity

	Series B Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulate Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2021	—	\$ —	959,009	\$ 96	\$43,591,773	\$(33,727,163)	\$ 17,586	\$ 9,882,292
Stock-based compensation	—	—	10	—	620,798	—	—	620,798
Vesting of restricted stock	—	—	1,791	—	—	—	—	—
Issuance of common stock (net of offering costs of \$1,014,896)	—	—	329,412	33	5,985,070	—	—	5,985,103
Issuance of Series B preferred stock	2,000,000	1,000	—	—	—	—	—	1,000
Redemption of Series B preferred stock	(2,000,000)	(1,000)	—	—	990	—	—	(10)
Fractional shares adjusted for reverse split	—	—	11,891	1	(1)	—	—	—
Cumulative translation adjustment	—	—	—	—	—	—	4,420	4,420
Net loss	—	—	—	—	—	(11,371,953)	—	(11,371,953)
Balance as of December 31, 2022	—	\$ —	1,302,113	\$ 130	\$50,198,630	\$(45,099,116)	\$ 22,006	\$ 5,121,650
Exercise of warrants	—	—	2,355,050	236	2,119	—	—	2,355
Stock-based compensation	—	—	—	—	216,428	—	—	216,428
Common stock and warrants issued in private placement (net of offering costs of \$1,575,645)	—	—	689,275	69	11,314,929	—	—	11,314,998
Vesting of restricted stock awards	—	—	1,691	—	—	—	—	—
Cumulative translation adjustment	—	—	—	—	—	—	5,254	5,254
Net loss	—	—	—	—	—	(7,845,390)	—	(7,845,390)
Balance as of December 31, 2023	—	\$ —	4,348,129	\$ 435	\$61,732,106	\$(52,944,506)	\$ 27,260	\$ 8,815,295

The accompanying notes are an integral part of these consolidated financial statements.

Hoth Therapeutics, Inc.
Consolidated Statements of Cash Flows

	Year Ended December 31,	
	2023	2022
Cash flows from operating activities		
Net loss	\$ (7,845,390)	\$ (11,371,953)
Adjustments to reconcile net loss to net cash used in operating activities:		
Research and development-acquired license, expensed	—	34,000
Gain on termination of license agreement	(275,000)	—
Change in fair value of investments in joint ventures	(4,400)	377,000
Stock-based compensation	216,428	620,798
Realized loss on marketable securities	—	567,692
Unrealized (gain) loss on marketable securities	209,320	(119,870)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(47,300)	3,847
Accounts payable and accrued expenses	(700,752)	590,632
Net cash used in operating activities	(8,447,094)	(9,297,854)
Cash flows from investing activities		
Purchase of research and development licenses	—	(74,000)
Sale of marketable securities	—	1,235,695
Net cash provided by investing activities	—	1,161,695
Cash flows from financing activities		
Proceeds from issuance common stock, common stock warrants and prefunded warrants, net of offering costs	11,314,998	—
Proceeds from exercise of warrants	2,355	—
Proceeds from issuance common stock, net of offering costs	—	5,985,103
Proceeds from issuance of Series B Preferred Stock	—	1,000
Redemption of Series B Preferred Stock	—	(10)
Proceeds from repayment of note receivable and interest received	—	50,000
Net cash provided by financing activities	11,317,353	6,036,093
Effect of exchange rate changes on cash and cash equivalents	(6,518)	(9,593)
Net change in cash	2,870,259	(2,100,066)
Cash, beginning of year	6,428,611	8,538,270
Cash, end of year	\$ 9,292,352	\$ 6,428,611
Supplemental disclosure of cash flow information:		
ROU assets obtained in exchange for lease liability	\$ 59,698	\$ —

The accompanying notes are an integral part of these consolidated financial statements.

Hoth Therapeutics, Inc.
Notes to Consolidated Financial Statements

Note 1-Organization and description of business operations

Hoth Therapeutics, Inc. (together with its wholly-owned subsidiaries, merveille.ai and Hoth Therapeutics Australia Pty Ltd, the “Company”) was incorporated under the laws of the State of Nevada on May 16, 2017. The Company is a clinical-stage biopharmaceutical company focused on developing new generation therapies for unmet medical needs. The Company is focused on developing (i) a topical formulation for treating side effects from drugs used for the treatment of cancer (HT-001); (ii) a treatment for mast-cell derived cancers and anaphylaxis (HT-KIT); (iii) a treatment for traumatic brain injury and ischemic stroke (HT-TBI); and (iv) a treatment and/or prevention for Alzheimer’s or other neuroinflammatory diseases (HT-ALZ). We also have assets being developed for (i) atopic dermatitis (also known as eczema) (BioLexa); (ii) a treatment for asthma and allergies using inhalational administration (HT-004); and (iii) a treatment for acne as well as inflammatory bowel diseases (HT-003). The Company also has interests in certain other assets being developed by third parties (see Note 5 to the consolidated financial statements for a discussion of the Company’s agreement with Zylö Therapeutics, Inc. and Voltron Therapeutics, Inc.).

Liquidity and capital resources

Accounting Standards Update (“ASU”) No. 2014-15, Presentation of Financial Statements - Going Concern, requires management to evaluate the Company’s ability to continue as a going concern one year beyond the filing date of the given financial statements. This evaluation requires management to perform two steps. First, management must evaluate whether there are conditions and events that raise substantial doubt about the entity’s ability to continue as a going concern. Second, if management concludes that substantial doubt is raised, management is required to consider whether it has plans in place to alleviate that doubt. Disclosures in the notes to the consolidated financial statements are required if management concludes that substantial doubt exists or that its plans alleviate the substantial doubt that was raised.

The Company has funded its operations from proceeds from the sale of equity and debt securities. The Company will require significant additional capital to make the investments it needs to execute its longer-term business plan. The Company’s ability to successfully raise sufficient funds through the sale of debt or equity securities when needed is subject to many risks and uncertainties and, even if it were successful, future equity issuances may result in dilution to its existing shareholders and future debt securities may contain covenants that limit the Company’s operations or ability to enter into certain transactions.

The Company believes its current cash is sufficient to fund operations for at least the next 12 months from the issuance date of these financial statements. However, the Company will need to raise additional funding, through strategic relationships, public or private equity or debt financings, grants or other arrangements, to develop and seek regulatory approvals for the Company’s current and future product candidates. If such funding is not available, or not available on terms acceptable to the Company, the Company’s current development plan and plans for expansion of its general and administrative infrastructure may be curtailed.

On September 13, 2023, the Company entered into a securities purchase agreement with certain institutional investors pursuant to which it sold (i) 549,275 shares of common stock and (ii) pre-funded warrants (the “September Pre-Funded Warrants”) to purchase up to 550,725 shares of common stock at a purchase price of \$2.63 per share of common stock and a purchase price of \$2.629 per September Pre-Funded Warrant. Concurrently with the sale of common stock and/or the September Pre-Funded Warrants, pursuant to the securities purchase agreement, in a private placement, the Company issued and sold warrants (the “September Common Stock Warrants”) to purchase up to 1,100,000 shares of common stock. Proceeds from the offering were approximately \$2.9 million, prior to deducting placement agent’s fees and other offering expenses payable by the Company. The closing of the offering occurred on September 15, 2023. Each September Common Stock Warrant is exercisable for a period of five years from the issuance date at an exercise price of \$2.505 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis. Each September Pre-Funded Warrant is exercisable until exercised in full at an exercise price of \$0.001 per share and may be exercised on a cashless basis. In addition, pursuant to the terms of the offering, the Company issued to designees of H.C. Wainwright & Co., LLC warrants (“September Wainwright Warrants”) to purchase up to 55,000 shares of the Company’s common stock. The September Wainwright Warrants are exercisable for a period of five years from the commencement of sales pursuant to the offering at an exercise price of \$3.2875 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis.

Note 2-Significant accounting policies

Basis of presentation and principles of consolidation

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The accompanying consolidated financial statements include the accounts of the Company's wholly-owned subsidiaries, merveille.ai which was incorporated under the laws of Nevada on October 4, 2023 and Hoth Therapeutics Australia Pty Ltd, which was incorporated under the laws of the State of Victoria in Australia on June 5, 2019. All significant intercompany balances and transactions have been eliminated in consolidation.

Reclassifications

Certain line items on the statement of operations and comprehensive loss for the year ended December 31, 2022 have been reclassified to conform to the current period presentation. Research and development - licenses acquired (including stock-based compensation) of \$0.1 million was reclassified to research and development. Compensation and related expenses (including stock-based compensation) of \$2.6 million, professional fees (including stock-based compensation) of \$2.5 million, rent of \$0.1 million, and other general and administrative expense of \$1.0 million were consolidated into one general and administrative line item. Dividend income and realized and unrealized gains and losses have been separately presented within other income (expense), net. These reclassifications did not change our reported net loss or comprehensive loss for the year ended December 31, 2022.

Emerging growth company

As an emerging growth company, the Company may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the Jumpstart Our Business Startups Act of 2012 ("JOBS Act") exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act of 1933, as amended, registration statement declared effective or do not have a class of securities registered under the Securities Exchange Act of 1934, as amended) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that an emerging growth company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's financial statement with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used. However, beginning December 31, 2024, we will no longer be an "emerging growth company," and will no longer have the ability to delay adoption of these new or revised accounting standards, or to take advantage of reduced corporate governance disclosures.

Use of estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting periods. The most significant estimates in the Company's consolidated financial statements relate to stock-based compensation and the valuation allowance of deferred tax assets resulting from net operating losses. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

Cash and cash equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. There were no cash equivalents as of December 31, 2023 and December 31, 2022, respectively. Cash held in foreign bank accounts totaled \$0.1 million and \$0.4 million as of December 31, 2023 and December 31, 2022, respectively.

Marketable securities

Marketable securities are classified as trading and are carried at fair value. The Company's marketable securities consist of a mutual fund which is valued at a quoted market price.

Concentrations of credit risk and off-balance sheet risk

The Company has significant cash balances at financial institutions which, throughout the year, regularly exceed the federally insured limit of \$250,000. Any loss incurred or a lack of access to such funds could have a significant adverse impact on the Company's financial condition, results of operations, and cash flows.

Fair Value of Financial Instruments

Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 820, *Fair Value Measurements*, provides guidance on the development and disclosure of fair value measurements. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The fair value of the Company's assets and liabilities, which would qualify as financial instruments under ASC Topic 820, approximates the carrying amounts represented in the Company's balance sheet, primarily due to their short-term nature.

The accounting guidance classifies fair value measurements in one of the following three categories for disclosure purposes:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs other than Level 1 prices for similar assets or liabilities that are directly or indirectly observable in the marketplace.

Level 3: Unobservable inputs which are supported by little or no market activity and values determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

In some circumstances, the inputs used to measure fair value might be categorized within different levels of the fair value hierarchy. In those instances, the fair value measurement is categorized in its entirety in the fair value hierarchy based on the lowest level input that is significant to the fair value measurement. During the years ended December 31, 2023 and December 31, 2022, there were no changes in valuation techniques or transfers between Level 1, Level 2, and Level 3.

Leases

The Company determines if an arrangement is a lease at inception and classifies its leases at commencement. Operating leases are presented as right-of-use ("ROU") assets and the corresponding lease liabilities are included in lease liability, current and lease liability, on the Company's balance sheets. ROU assets represent the Company's right to use an underlying asset, and lease liabilities represent the Company's obligation to make lease payments in exchange for the ability to use the asset for the duration of the lease term.

The Company has lease agreements which contain both lease and non-lease components, which it has elected to account for as a single lease component. As such, minimum lease payments include fixed payments for non-lease components within a lease agreement but exclude variable lease payments not dependent on an index or rate, such as common area maintenance, operating expenses, utilities, or other costs that are subject to fluctuation from period to period. Certain of the leases contain an option to extend the term of the lease. The option to extend a lease is included in the lease term only when it is reasonably certain that the Company will elect that option. Additionally, the Company does not record ROU assets or lease liabilities for short-term leases that have a term of twelve months or less at lease commencement.

ROU assets and lease liabilities are recognized at the commencement date and determined using the present value of the future minimum lease payments over the lease term. The Company uses an incremental borrowing rate based on an estimated rate of interest for collateralized borrowing since the Company's leases do not include an implicit interest rate. The estimated incremental borrowing rate considers market data, actual lease economic environment, and the lease term at commencement date.

Investment in joint ventures

Ownership interests in entities for which the Company has significant influence that are not consolidated are accounted for as equity method investments. SEC Staff Announcement: "Accounting for Limited Partnership Investments" (codified in ASC 323-30-S99-1) guidance requires the use of the equity method unless the investor's interest "is so minor that the limited partner may have virtually no influence over partnership operating and financial policies." The SEC staff's position is that investments in limited partnerships of greater than 3% to 5% are considered more than minor and, therefore, should be accounted for using the equity method or fair value option. Investments accounted for using the equity method may be reported on a lag up to three months if financial statements of the investee are not available in sufficient time for the investor to apply the equity method as of the current reporting date. The determination of whether an investee's results are recorded on a lag is made on an investment-by-investment basis. This investment in joint ventures is further described in Note 5 of these consolidated financial statements.

Accounts Payable

For the year ended December 31, 2023, the Company's subsidiary Hoth Therapeutics Australia Pty Ltd, recorded approximately a \$260,000 gain due to a settlement agreement on a payable balance with Novotech, a clinical trial management vendor. The gain is recognized in the consolidated statements of operations and comprehensive loss following a manner consistent with how the expense was originally recorded.

Research and development costs

Research and development costs, including acquired in-process research and development expenses for which there is no alternative future use, are expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Stock-based compensation

The Company accounts for share-based payment awards exchanged for services at the estimated grant date fair value of the award. Stock options issued under the Company's long-term incentive plans are granted with an exercise price equal to no less than the market price of the Company's stock at the date of grant and expire up to ten years from the date of grant. Options are generally issued fully vested. The Company accounts for forfeited awards as they occur.

The Company estimates the fair value of stock option grants using the Black-Scholes option pricing model and the assumptions used in calculating the fair value of stock-based awards represent management’s best estimates and involve inherent uncertainties and the application of management’s judgment.

Expected Term - The expected term of options represents the period that the Company’s stock-based awards are expected to be outstanding based on the simplified method, which is the half-life from vesting to the end of its contractual term.

Expected Volatility - The Company computes stock price volatility over expected terms based on its historical common stock trading prices.

Risk-Free Interest Rate - The Company bases the risk-free interest rate on the implied yield available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

Expected Dividend - The Company has never declared or paid any cash dividends on its common shares and does not plan to pay cash dividends in the foreseeable future, and, therefore, uses an expected dividend yield of zero in its valuation models.

The Company grants restricted stock awards under its equity incentive plan. Restricted stock awards are granted to employees and non-employees. The restricted stock awards are measured based on the grant-date fair value. In general, the restricted stock awards vest over a service period of zero to three years. Stock-based compensation expense is generally recognized based on the straight-line basis over the requisite service period and forfeitures are accounted for as they occur.

The Company has issued warrants to non-employees. The warrants are measured based on the grant-date fair value. In general, the warrants vest over a term of zero to ten years. Stock-based compensation expense is generally recognized based on the straight-line basis over the vesting term.

Income taxes

Income taxes are recorded in accordance with ASC 740, Income Taxes (“ASC 740”), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit would more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances.

Net loss per share

Net loss per share is computed by dividing net loss by the weighted average number of common stock outstanding during the period. Since the Company had a net loss in the periods presented, basic and diluted net loss per common share are the same. The following were excluded from the computation of diluted shares outstanding due to the losses for each period presented, as they would have had an anti-dilutive impact on the Company’s net loss:

Potentially dilutive securities	Year Ended December 31,	
	2023	2022
Warrants	4,213,515	402,840
Options	169,362	104,651
Non-vested restricted stock awards	1,693	3,384
Total	<u>4,384,570</u>	<u>510,875</u>

Recent accounting pronouncements

Currently, management does not believe that any recently issued, but not yet effective accounting pronouncements, if currently adopted, would have a material impact on the Company's consolidated financial statements.

Note 3-License Agreements

The following summarizes the Company's research and development expenses for licenses acquired during the years ended December 31, 2023 and 2022:

	Year Ended December 31,	
	2023	2022
The George Washington University	\$ 66,172	\$ 66,586
North Carolina State University	—	27,500
Virginia Commonwealth University	(275,000)	—
University of Cincinnati	7,500	7,500
Adjustment	—	(15,000)
	\$ (201,328)	\$ 86,586

The George Washington University

During the year ended December 31, 2023, the Company recorded an expense of approximately \$29,000 related to warrants granted to The George Washington University ("GW") pursuant to the patent license agreement with GW dated February 1, 2020 ("GW Patent License Agreement") and the patent license agreement with GW dated August 7, 2020 ("Second GW Patent License Agreement"). The Company recorded an expense of \$30,000 for a milestone payment pursuant to GW Patent License Agreement. The Company also recorded \$7,500 the year ended December 31, 2023 for license maintenance fees.

During the year ended December 31, 2022, the Company recorded an expense of approximately \$53,000 related to warrants granted to The George Washington University ("GW") pursuant to the patent license agreement with GW dated February 1, 2020 ("GW Patent License Agreement") and the patent license agreement with GW dated August 7, 2020 ("Second GW Patent License Agreement"). The Company also recorded \$14,000 the year ended December 31, 2022 for license maintenance fees.

North Carolina State University

During the year ended December 31, 2023, the Company paid \$0 for the license fee associated with the license agreement by and between the Company and North Carolina State University dated February 25, 2021.

During the year ended December 31, 2022, the Company paid approximately \$28,000 for the license fee associated with the license agreement by and between the Company and North Carolina State University dated February 25, 2021.

Virginia Commonwealth University

On August 16, 2023, the Company terminated its license agreement by and between the Company and Virginia Commonwealth University dated May 18, 2020. As of December 31, 2023, the Company reversed its prior accrual of \$150,000 for five years of annual minimum payments and \$125,000 for annual maintenance fees.

As of December 31, 2022, the Company accrued \$150,000 for five years of annual minimum payments and \$125,000 for annual maintenance fees.

Chelexa Biosciences, Inc. and the University of Cincinnati

During the year ended December 31, 2023, the Company paid \$2,500 for the annual license maintenance fee and \$5,000 for the minimum royalty fee to the University of Cincinnati associated with the Assignment and Assumption Agreement by and between the Company and Chelexa Biosciences dated May 14, 2020.

During the year ended December 31, 2022, the Company paid \$2,500 for the annual license maintenance fee and \$5,000 for the minimum royalty fee associated to the University of Cincinnati with the Assignment and Assumption Agreement by and between the Company and Chelexa Biosciences dated May 14, 2020.

Note 4-Note Receivable

Pursuant to the sublicense agreement dated July 30, 2020 by and between the Company and Isoprene Pharmaceuticals, Inc. (“Isoprene”), the Company made an investment of \$50,000 in Isoprene in the form of a convertible promissory note (the “Isoprene Note”) on September 10, 2020. The Isoprene Note was due to mature on September 10, 2022 and accrued interest at a rate equal to the lower of: (i) the highest lawful rate permitted under applicable law and (ii) 6% per annum. The Isoprene Note could not be prepaid without the prior written consent of the Company; provided, however, that if the Isoprene Note had not been converted in connection with a Qualified Financing (as defined) or a Change of Control (as defined) by the two year anniversary of the date of the issuance of the Isoprene Note, Isoprene could elect, in its sole discretion, to repay the Isoprene Note and any accrued interest thereon. As of the maturity date of the Isoprene Note, neither a Qualified Financing nor a Change of Control had occurred, and the Isoprene Note of \$50,000 and accrued interest of approximately \$6,000 was paid off on October 21, 2022.

Note 5-Fair Value of Financial Assets and Liabilities

The following tables present the Company’s assets and liabilities that are measured at fair value at December 31, 2023 and 2022:

	Fair value measured at December 31, 2023			
	Total at December 31, 2023	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Marketable securities - mutual fund	\$ —	\$ —	\$ —	\$ —
Investment in joint ventures	\$ 37,400	\$ —	\$ —	\$ 37,400
	Fair value measured at December 31, 2022			
	Total at December 31, 2022	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Assets				
Marketable securities - mutual fund	\$ 209,320	\$ 209,320	\$ —	\$ —
Investment in joint ventures	\$ 33,000	\$ —	\$ —	\$ 33,000

Level 3 Measurement

The following table sets forth a summary of the changes in the fair value of the Company’s Level 3 financial assets that are measured at fair value on a recurring basis:

Investment in joint ventures at fair value at December 31, 2021	\$ 410,000
Change in fair value of investments in joint ventures	(377,000)
Investment in joint ventures at fair value at December 31, 2022	33,000
Change in fair value of investments in joint ventures	4,400
Investment in joint ventures at fair value at December 31, 2023	\$ 37,400

Investment in joint ventures

The Company has elected to measure the investment in joint ventures using the fair value option at each reporting date. Under the fair value option, bifurcation of an embedded derivative is not necessary, and all related gains and losses on the host contract and derivative due to change in the fair value will be reflected in interest income and other income (expense), net in the consolidated statements of operations and comprehensive loss.

The value at which the Company's investment in joint ventures is carried on its books is adjusted to estimated fair value at the end of each quarter, taking into account general economic and stock market conditions and those characteristics specific to the underlying investments.

Investment in HaloVax

On March 23, 2020, the Company entered into a Development and Royalty Agreement (the "Development and Royalty Agreement") with Voltron Therapeutics, Inc. ("Voltron") to form a joint venture entity named HaloVax, LLC ("HaloVax") to jointly develop potential product candidates for the prevention of COVID-19 based upon certain technology that had been exclusively licensed by Voltron from The General Hospital Corporation (d/b/a Massachusetts General Hospital). Pursuant to the Development and Royalty Agreement, the Company is entitled to receive sales-based royalties. In addition, pursuant to the terms of the Development and Royalty Agreement, on March 23, 2020, the Company and HaloVax entered into a Membership Interest Purchase Agreement pursuant to which the Company purchased 5% of HaloVax's outstanding membership interests for \$250,000 on March 27, 2020 (the "Initial Closing Date") and had the option to purchase up to an additional 25% of HaloVax's membership interests (for \$3,000,000 (inclusive of the \$250,000)), which option expired 30 days after the Initial Closing Date. On May 28, 2020, the Company entered into a Membership Interest Purchase Agreement to purchase 1% of HaloVax's outstanding membership interest for a purchase price of \$100,000.

During the fourth quarter of 2022, the Company identified indicators of impairment for the HaloVax investment as a result of adverse changes in HaloVax's business operations, including liquidity concerns. As a result, the Company recorded an impairment charge of approximately \$0.4 million in the fourth quarter of 2022. The investment in HaloVax was valued at \$0 as of December 31, 2023 and 2022.

Investment in Zylö

In connection with the Company's March 2020 underwritten public offering of shares of its common stock, on May 4, 2020, the Company purchased 120,000 shares of Zylö's Class B common stock for \$60,000. On December 8, 2021, the Company entered into a third amendment (the "Zylö Amendment") to the Exclusive Sublicense Agreement with Zylö originally dated August 19, 2019, pursuant to which the Company licensed its novel cannabinoid therapeutic, HT-005 for lupus patients, back to Zylö. Pursuant to the Zylö Amendment, on December 6, 2021, Zylö issued the Company 100,000 shares of its Class B common stock. In addition, pursuant to the Zylö Amendment, within 90 days following a sale by Zylö of all of its assets and rights related to HT-005 to a third-party (a "Sale"), Zylö shall pay the Company a low single digit percent of the net proceeds received by it attributable to HT-005 in the United States and Canada and their respective territories (collectively, the "Territory") for the purposes of therapeutic uses related to lupus in humans (the "Field"). After the Sale, any and all rights of the Company pursuant to the Exclusive Sublicense Agreement, including all amendments thereto, shall terminate. Furthermore, pursuant to the Zylö Amendment, following the date of the first commercial sale of HT-005 in the Territory, in the Field, Zylö shall pay the Company (i) a low single digit percent of the Net Sales (as defined in the Exclusive Sublicense Agreement) of HT-005 in the event HT-005 is sold in the Territory and (ii) a low double digit percent of any royalty that Zylö receives through the sublicense to a third-party based on Net Sales of HT-005 in the Territory which payments shall continue in each country in the Territory until expiration of the last-to-expire Valid Claim (as defined in the Exclusive Sublicense Agreement). During December 2022, Zylö conducted a 409A valuation of their Class B common stock and valued its share price at \$0.15 per share. This value was ratified by Zylö's board of directors in December 2022. In December 2023, Zylö conducted a 409A valuation of their Class B common stock and valued its share price at \$0.17 per share. This value was ratified by Zylö's board of directors in December 2023. The valuation reflects a probability-weighted present value of expected future investment returns considering certain possible outcomes and the rights of each class of Zylö's equity. The future values of the common stock under the various outcomes are discounted back to the valuation date at a risk-adjusted discount rate and probability weighted to determine the value for the Class B common stock. Significant unobservable inputs in the valuation include: (i) probabilities of each scenario, (ii) timing of occurrence, (iii) future valuation; (iv) and the risk-adjusted discount rate.

During the years ended December 31, 2023 and 2022, the Company recorded approximately \$4,400 in unrealized gain on this investment and \$27,000 in unrealized loss on this investment, respectively. The investment in Zylö was valued at \$37,400 and \$33,000 as of December 31, 2023 and 2022, respectively.

Note 6-Stockholder's Equity

Preferred Stock

The Company is authorized to issue up to 10,000,000 shares of preferred stock. This preferred stock may be issued in one or more series, and shall have such designations, preferences and relative, participating, optional or other special rights and qualifications, limitations or restrictions thereof as shall be determined at the time of issuance by the Company's board of directors without further action by the Company's shareholders. As of December 31, 2023, 5,000,000 shares of the Company's preferred stock has been designated as Series A Convertible Preferred Stock and 2,000,000 shares of the Company's preferred stock has been designated as Series B Preferred Stock.

Series A Convertible Preferred Stock

The shares of Series A Convertible Preferred Stock, par value \$0.0001 per share, are not mandatorily redeemable and do not embody an unconditional obligation to settle in a variable number of equity shares. As such, the shares of Series A Convertible Preferred Stock are classified as permanent equity on the consolidated balance sheets. The holders' contingent redemption right in the event of certain deemed liquidation events does not preclude permanent equity classification. Further, the shares of Series A Convertible Preferred Stock are considered an equity-like host for purposes of assessing embedded derivative features for potential bifurcation. The embedded conversion feature is considered to be clearly and closely related to the associated convertible preferred stock host instrument and therefore was not bifurcated from the equity host.

Series B Preferred Stock

On November 2, 2022, the Company filed a Certificate of Designation of the Series B Preferred Stock (the "Certificate of Designation") with the Secretary of State of the State of Nevada to create a new class of Series B Preferred Stock, par value \$0.0001 per share (the "Series B Preferred Stock"). The Certificate of Designation designated 2,000,000 shares of authorized preferred stock as Series B Preferred Stock. The Series B Preferred Stock were not entitled to receive dividends or any other distributions. The Series B Preferred Stock were entitled to ten votes per share and voted together with the Company's issued and outstanding shares of common stock as a single class exclusively with respect to the Authorized Stock Increase (as defined herein). The Series B Preferred Stock had no rights as to any distribution or assets of the Company upon a liquidation, bankruptcy, reorganization, merger, acquisition, sale, dissolution or winding up of the Company.

On November 2, 2022, the Company entered into a Subscription and Investment Representation Agreement with an investor pursuant to which the Company issued and sold 2,000,000 shares of its newly designated Series B Preferred Stock to such purchaser for an aggregate purchase price of \$1,000.

On December 12, 2022, the Company's shareholders approved an increase to the number of authorized shares of the Company's common stock from 3,000,000 to 50,000,000 shares (the "Authorized Stock Increase"). On December 13, 2022, upon filing a Certificate of Amendment to its Articles of Incorporation, as amended, to increase its authorized shares of common stock, the outstanding shares of Series B Preferred Stock were redeemed in whole for an aggregate price of \$10 automatically and effective immediately after the effectiveness of the Authorized Stock Increase.

Common Shares

On December 12, 2022, shareholders of the Company approved an increase to the number of authorized shares of the Company's common stock from 3,000,000 shares to 50,000,000 shares, and on December 13, 2022, the Company filed a Certificate of Amendment to its Articles of Incorporation, as amended, to effectuate such increase.

Securities Purchase Agreements

On September 13, 2023, the Company entered into a securities purchase agreement with certain institutional investors pursuant to which it sold (i) 549,275 shares of common stock and (ii) pre-funded warrants (the “September Pre-Funded Warrants”) to purchase up to 550,725 shares of common stock at a purchase price of \$2.63 per share of common stock and a purchase price of \$2.629 per September Pre-Funded Warrant. Concurrently with the sale of common stock and/or the September Pre-Funded Warrants, pursuant to the securities purchase agreement, in a private placement, the Company issued and sold warrants (the “September Common Stock Warrants”) to purchase up to 1,100,000 shares of common stock. Proceeds from the offering were approximately \$2.9 million, prior to deducting placement agent’s fees and other offering expenses payable by the Company. The closing of the offering occurred on September 15, 2023. Each September Common Stock Warrant is exercisable for a period of five years from the issuance date at an exercise price of \$2.505 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis. Each September Pre-Funded Warrant is exercisable until exercised in full at an exercise price of \$0.001 per share and may be exercised on a cashless basis. In addition, pursuant to the terms of the offering, the Company issued to designees of H.C. Wainwright & Co., LLC warrants (“September Wainwright Warrants”) to purchase up to 55,000 shares of the Company’s common stock. The September Wainwright Warrants are exercisable for a period of five years from the commencement of sales pursuant to the offering at an exercise price of \$3.2875 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis.

On December 29, 2022, the Company entered into a securities purchase agreement with an accredited investor pursuant to which it agreed to sell an aggregate of (i) 140,000 shares of common stock, (ii) December Pre-Funded Warrants to purchase up to 1,860,000 shares of common stock and (iii) December Common Stock Warrants to purchase up to 2,500,000 shares of common stock at a purchase price of \$5.00 per share and accompanying warrant (less \$0.001 for each December Pre-Funded Warrant and accompanying warrant) in a private placement for aggregate gross proceeds of approximately \$10 million, exclusive of placement agent commission and fees and other offering expenses. The closing of the offering occurred on January 3, 2023. Each December Common Stock Warrant is exercisable for a period of five and one-half years from the issuance date at an exercise price of \$5.00 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis. Each December Pre-Funded Warrant is exercisable until exercised in full at an exercise price of \$0.001 per share and may be exercised on a cashless basis. In addition, pursuant to the terms of the offering, the Company issued H.C. Wainwright & Co., LLC the December Wainwright Warrants to purchase up to 100,000 shares of the Company’s common stock. The December Wainwright Warrants are exercisable for a period of five and one-half years from the issuance date at an exercise price of \$6.25 per share, subject to adjustment, and may, under certain circumstances, be exercised on a cashless basis.

Public Offering of Securities

On April 14, 2022, the Company closed an underwritten public offering of 329,412 shares of the Company’s common stock at a price to the public of \$21.25 per share (the “Offering Price”). Pursuant to the terms of an underwriting agreement dated April 11, 2022 between the Company and EF Hutton, division of Benchmark Investments, LLC, as representative of the several underwriters (the “Underwriters”), the Company granted the Underwriters a 45-day option to purchase up to an additional 49,412 shares of the Company’s common stock to cover over-allotments, if any, at the Offering Price less the underwriting discounts and commissions. The net proceeds to the Company from the sale of the shares, after deducting the underwriting discounts and commissions and other estimated offering expenses payable by the Company, were \$6.0 million. The Underwriters did not exercise their over-allotment option.

2018 Equity Incentive Plan

The compensation committee of the board of directors increased the number of shares reserved pursuant to the Company’s 2018 Equity Incentive Plan (“2018 Plan”) by 26,878 shares effective as of January 1, 2021, such that as of January 1, 2021, the Company had an aggregate of 66,878 shares of common stock reserved for issuance pursuant to the 2018 Plan. On June 24, 2021, at the annual meeting of shareholders, shareholders of the Company approved an amendment to the 2018 Plan to further increase the number of shares reserved for issuance thereunder from 66,878 shares to 146,878 shares. On February 2, 2022, the compensation committee of the board of directors further increased the number of shares reserved for issuance under the 2018 Plan from 146,878 shares to 156,878 shares. On January 11, 2023, the compensation committee of the board of directors further increased the number of shares reserved for issuance under the 2018 Plan from 156,878 shares to 166,878 shares. On January 4, 2024, the compensation committee of the board of directors further increased the number of shares reserved for issuance under the 2018 Plan from 166,878 shares to 176,878 shares.

2022 Equity Incentive Plan

On March 24, 2022, the Company's board of directors adopted the Hoth Therapeutics, Inc. 2022 Omnibus Equity Incentive Plan (the "2022 Plan") initially reserving 96,000 shares of the Company's common stock for issuance thereunder. The 2022 Plan became effective on June 23, 2022 upon approval of the 2022 Plan by the Company's shareholders at the Company's annual meeting of shareholders. On June 2, 2023, the Company's board of directors approved the Hoth Therapeutics, Inc. Amended and Restated 2022 Omnibus Equity Incentive Plan (the "Amended and Restated 2022 Plan") which was approved by stockholders on August 18, 2023. Under the Amended and Restated 2022 Plan there are 591,317 shares of Company common stock available for grant.

Restricted Stock Awards

A summary of the Company's restricted stock awards granted under the equity incentive plans during the years ended December 31, 2023 and 2022 is as follows:

	Number of Restricted Stock Awards	Weighted Average Grant Day Fair Value
Nonvested at December 31, 2021	100	\$ 75.00
Granted	5,075	3.16
Vested	(1,791)	7.17
Nonvested at December 31, 2022	3,384	\$ 3.16
Vested	(1,691)	3.16
Nonvested at December 31, 2023	1,693	\$ 3.16

As of December 31, 2023, approximately \$3,000 of unrecognized stock-based compensation expense was related to restricted stock awards. The weighted average remaining contractual term of unvested restricted stock awards was approximately 1.0 year at December 31, 2023.

Stock Options

During the year ended December 31, 2023, pursuant to and subject to the available number of shares reserved under the 2022 Plan, the Company issued an aggregate of 90,000 options to the Company's employees and directors. The aggregate grant date fair value of these options was approximately \$0.2 million.

During the year ended December 31, 2022, pursuant to and subject to the available number of shares reserved under the 2018 Plan, the Company issued an aggregate of 51,800 options to the Company's directors. The aggregate grant date fair value of these options was approximately \$0.6 million.

The fair value of options granted in 2023 and 2022 was estimated using the following assumptions:

	Year Ended December 31,	
	2023	2022
Exercise price	\$ 2.59	\$ 14.75
Term (years)	10	10
Expected stock price volatility	105.00%	96.10%
Risk-free rate of interest	4.02%	2.10%

A summary of option activity under the Company's stock option plan for the years ended December 31, 2023 and 2022 is presented below:

	Number of Shares	Weighted Average Exercise Price	Total Intrinsic Value	Weighted Average Remaining Contractual Life (in years)
Outstanding as of December 31, 2021	52,851	84.15	—	8.6
Options issued	51,800	14.75	—	9.2
Outstanding as of December 31, 2022	104,651	49.80	—	8.3
Options expired	(25,289)	46.10	—	—
Options issued	90,000	2.59	—	9.5
Outstanding as of December 31, 2023	169,362	26.78	—	8.4
Options vested and exercisable as of December 31, 2023	169,362	26.78	—	8.4

All outstanding stock options are fully vested.

Stock Based Compensation

Stock-based compensation expense for the years ended December 31, 2023 and 2022 was as follows:

	Year Ended December 31,	
	2023	2022
Employee and director stock option awards	\$ 182,522	\$ 560,376
Employee and director restricted stock awards	7,734	7,836
Non-employee stock warrant awards	26,173	52,586
	<u>\$ 216,428</u>	<u>\$ 620,798</u>

For the years ended December 31, 2023 and 2022, the amount of stock-based compensation expense included within research and development and general and administrative expenses was as follows:

	Year Ended December 31,	
	2023	2022
Research and development	\$ 26,172	\$ 52,586
General and administrative	190,256	568,212
	<u>\$ 216,428</u>	<u>\$ 620,798</u>

Warrants

A summary of warrant activity for the years ended December 31, 2023 and 2022 is presented below:

	Number of Warrants	Weighted Average Exercise Price	Total Intrinsic Value	Weighted Average Remaining Contractual Life (in years)
Outstanding as of December 31, 2021	402,840	49.83	—	2.3
Outstanding as of December 31, 2022	402,840	49.83	—	1.4
Issued	6,165,725	2.61	—	4.5
Exercised	(2,355,050)	0.00	—	—
Outstanding as of December 31, 2023	4,213,515	7.01	—	4.5
Warrants exercisable as of December 31, 2023	4,212,751	6.99	—	4.5

The Company has determined that the warrants should be accounted as a component of stockholders' equity.

Note 7-Commitments and Contingencies

Office lease

Effective November 2023, the Company leased office space for a two year term. The Company's office lease contains a renewal option. The Company has evaluated several factors in assessing whether there is reasonable certainty that the Company will exercise its contractual renewal option concluding that it is not reasonably certain to exercise such option. As it is not reasonably certain to be exercised, the Company excluded the renewal term in determining the lease term used in calculating the right-of-use asset and lease liability. Prior to entering into this lease, the Company has not entered into any lease arrangements in excess of 12 months.

The table below presents certain information related to the Company's lease cost:

	Year Ended December 31,	
	2023	2022
Operating lease expense	\$ 5,464	\$ —
Short term lease expense	\$ 33,351	\$ 66,834
Total lease cost	<u>\$ 38,815</u>	<u>\$ 66,834</u>

Right-of-use asset and lease liability for operating leases were recorded in the consolidated balance sheets as follows:

	As of December 31, 2023
Assets	
Lease right of use assets	\$ 55,165
Total lease assets	<u>\$ 55,165</u>
Liabilities	
Current liabilities:	
Lease liability - current portion	\$ 28,839
Noncurrent liabilities:	
Lease liability, net of current portion	\$ 26,326
Total lease liability	<u>\$ 55,165</u>

Supplemental cash flow information related to the Company's leases for the year ended December 31, 2023 were as follows:

Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows for operating leases	\$ 5,464

The weighted-average remaining lease term for the operating lease is 1.8 years and the weighted-average incremental borrowing rate is 10% as of December 31, 2023.

As of December 31, 2023, future minimum lease payments required under operating leases are as follows:

2024	\$ 32,784
2025	27,320
Total minimum lease payments	<u>\$ 60,104</u>
Less: effects of discounting	(4,939)
Present value of future minimum lease payments	<u><u>\$ 55,165</u></u>

Litigation

The Company is not currently a party to any material legal proceedings and is not aware of any pending or threatened claims. From time to time, the Company may be subject to various legal proceedings and claims that arise in the ordinary course of its business activities.

Note 8-Income taxes

The table below presents the components of the provision for taxes:

The Company's provision is primarily driven by the full valuation allowance in 2023 and 2022.

	<u>As of December 31,</u>	
	<u>2023</u>	<u>2022</u>
Current		
U.S. Federal	\$ -	\$ -
U.S. State	-	-
U.S. Foreign	-	-
Total current provision	<u>-</u>	<u>-</u>
Deferred		
U.S. Federal	-	-
U.S. State	-	-
U.S. Foreign	-	-
Total deferred benefit	<u>-</u>	<u>-</u>
Change in valuation allowance	-	-
Total provision for income taxes	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>

At December 31, 2023 and 2022, the tax effects of the temporary differences and carryforwards that give rise to deferred tax assets consist of the following:

	<u>As of December 31,</u>	
	<u>2023</u>	<u>2022</u>
Deferred tax assets		
Net operating loss carryforwards	\$ 11,926,158	\$ 10,378,471
Research and development credits	-	-
Capitalized research costs	2,272,029	1,211,477
Equity based compensation	549,587	670,035
Licenses acquired	266,091	338,239
Depreciation	-	-
Accruals and other temporary differences	297,949	215,152
Total deferred tax assets	<u>15,311,814</u>	<u>12,813,374</u>
Less valuation allowance	<u>(15,311,814)</u>	<u>(12,813,374)</u>
Deferred tax assets, net of allowance	<u><u>\$ -</u></u>	<u><u>\$ -</u></u>

A reconciliation of the statutory income tax rates and the Company's effective tax rate for the years ended December 31, 2023 and 2022 is as follows:

	Years Ended December 31,	
	2023	2022
Statutory federal income tax rate	21.0%	21.0%
State taxes, net of federal benefit	10.3%	9.5%
Impact of non-U.S. earnings	0.0%	0.0%
Permanent items	0.0%	(0.9)%
Credits	0.8%	0.0%
Equity compensation	0.0%	(0.1)%
Rate changes	0.0%	0.0%
Foreign rate differential	0.1%	0.0%
Previous tax year adjustment	(0.2)%	10.0%
Other	0.0%	0.0%
Change in valuation allowance	(32.0)%	(39.6)%
Total	<u>0.0%</u>	<u>0.0%</u>

The Company has determined, based upon available evidence, that it is more likely than not that the net deferred tax assets will not be realized and, accordingly, has provided a full valuation allowance against its net deferred tax assets.

As of December 31, 2023 and December 31, 2022, the Company has Federal net operating loss carryforwards of approximately \$37.7 million and \$32.9 million available to reduce future taxable income, if any, for Federal tax purposes. Approximately \$1.5 million of Federal net operating losses can be carried forward to future tax years and expire in 2037. The Federal net operating loss generated during the years ended after December 31, 2017 of approximately \$36.0 million can be carried forward indefinitely; however, the deduction for net operating losses incurred in tax years beginning after January 1, 2018 is limited to 80% of annual taxable income. In addition, the Company had approximately \$0.5 million and \$0.3 million of net operating losses at its subsidiary located in Australia, as of December 31, 2023 and December 31, 2022, respectively.

As required by the 2017 Tax Cuts and Jobs Act and effective in 2022, the deferred tax asset as of December 31, 2023 and December 31, 2022, included \$2.3 million and \$1.2 million related to the mandatory capitalization of research and development expenses.

On August 16, 2022, the Inflation Reduction Act of 2022 ("IRA") was signed into law. The IRA increased and modified the qualified small business ("QSB") payroll tax credit for increasing research activities. Provision 13902 of the IRA of 2022 increased the maximum amount of payroll tax research credit that a QSB can elect to apply against payroll tax liability from \$250,000 to \$500,000 for tax years beginning after December 31, 2022. This payroll tax credit is a creditable tax credit against the employer's portion of social security taxes, and the IRA also modified IRC 3111(f) to allow a portion of the payroll tax credit to apply against the employer's portion of Medicare tax. For the year ended December 31, 2023, the Company recorded \$0.1 million of other income for the payroll tax credit and \$0.2 million is still outstanding. The remaining research credit carryforward of \$0.2 million will be utilized in the future as an offset against payroll taxes at the time the payroll tax is incurred.

The utilization of the Company's net operating loss carryforwards and research tax credit carryovers could be subject to annual limitations under Section 382 and 383 of the Internal Revenue Code of 1986, as amended (the "Code"), and similar state tax provisions, due to ownership change limitations that may have occurred previously or that could occur in the future. These ownership changes limit the amount of net operating loss carryforwards and other deferred tax assets that can be utilized to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382 and 383 of the Code, results from transactions increasing ownership of certain stockholders or public groups in the stock of the corporation by more than 50 percent points over a three-year period. The Company has not conducted an analysis of an ownership change under Section 382 of the Code. To the extent that a study is completed and an ownership change is deemed to occur, the Company's net operating losses and tax credits could be limited.

At December 31, 2023 and 2022, the Company did not have any significant uncertain tax positions. The Company will recognize interest and penalties related to uncertain tax positions, as applicable, in income tax expense. As of December 31, 2023 and 2022, the Company had no accrued interest or penalties related to uncertain tax positions and no amounts have been recognized in the Company's statements of operations. The Company does not anticipate a material change to unrecognized tax benefits in the next twelve months.

All of the Company's tax years will remain open for examination by the Federal and state tax authorities from the date of utilization of the net operating loss.

Management asserts that its foreign earnings are permanently reinvested, and therefore, have not provided deferred taxes on foreign cash. Additionally, no additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis differences inherent in our foreign subsidiaries, as these amounts continue to be indefinitely reinvested in foreign operations. The company will continue to monitor the foreign cash position as they maintain the assertion that foreign earnings are permanently reinvested.

Note 9-Subsequent Events

The Company has evaluated subsequent events and transactions that occurred up to the date the consolidated financial statements were issued. Based upon this review, except for as noted below, the Company did not identify any subsequent events that would have required adjustment or disclosure in the consolidated financial statements.

On January 4, 2024, the compensation committee of the board of directors increased the number of shares reserved for issuance under the 2018 Plan from 166,878 shares to 176,878 shares.

On January 26, 2024, the Company provided 60 days notice to the George Washington University of its termination of the license agreement for its breath based diagnostic device. The license agreement terminated on March 26, 2024.

On February 6, 2024, the Company received notice that its office lease was to be terminated. The Company and its landlord agreed to relocate its office space to another location under substantially the same terms and conditions as its existing lease. Monthly payments for the new office lease are unchanged and term of the lease expires in February 2026.

On March 27, 2024, the Company entered into a warrant inducement agreement with a holder of certain of its existing warrants to immediately exercise for cash an aggregate 2,500,000 warrants to purchase shares of the Company's common stock at a reduced exercise price of \$1.6675 per share for gross proceeds to the Company of approximately \$4.2 million. The exercised warrants were issued pursuant to a securities purchase agreement dated December 29, 2022, by and between the Company and a certain accredited investor. Each warrant was exercisable for a period of five and one-half years from the issuance date at an original exercise price of \$5.00 per share. As an inducement to such exercise, the Company agreed to issue new unregistered warrants to purchase up to 3,750,000 shares of the Company's common stock at an exercise price of \$1.50 per share. The warrants are exercisable immediately upon issuance and will expire on July 3, 2028.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls

Our principal executive officer and principal financial officer, after evaluating the effectiveness of the Company's "disclosure controls and procedures" (as defined in Exchange Act Rule 13a-15(e) and 15d-15(e)) as of December 31, 2023, the end of the period covered by this Annual Report on Form 10-K, have concluded that our disclosure controls and procedures were effective such that the information required to be disclosed by us in reports filed under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, cannot provide absolute assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Exchange Act Rule 13a-15(f). Internal control over financial reporting is a process designed under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with GAAP. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

As of December 31, 2023, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control Integrated Framework 2013. Based on this assessment, our management concluded that, as of December 31, 2023, our internal control over financial reporting was effective based on such criteria.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during our last fiscal quarter ended December 31, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

During our last fiscal quarter ended December 31, 2023, none of our directors or executive officers adopted, modified or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement" as such terms are defined under Item 408 of Regulation S K.

On March 27, 2024, the Company entered into a warrant inducement agreement (the "Warrant Inducement Agreement") with the holder of certain common stock purchase warrants issued pursuant to a securities purchase agreement dated December 29, 2022 by and between the Company and holder. Pursuant to the Warrant Inducement Agreement, the holder has agreed to immediately exercise in cash all 2,500,000 of the common stock purchase warrants at a reduced exercise price of \$1.6675 per share (reduced from \$5.00 per share) for gross proceeds to the Company of approximately \$4.2 million. As an inducement to such exercise, the Company has agreed to issue to the Holder unregistered warrants to purchase up to 3,750,000 shares of the Company's common stock at an exercise price of \$1.50 per share. Each new warrant will be immediately exercisable upon issuance and expire on July 3, 2028.

The offering is expected to close on or about April 1, 2024, subject to satisfaction of customary closing conditions. The Company intends to use the net proceeds from the offering for general working capital needs.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth the name, age and positions of our executive officers and directors as of March 26, 2024.

NAME	AGE	POSITION
Robb Knie	55	President, Chief Executive Officer and Director
David Briones	47	Chief Financial Officer
Wayne Linsley	67	Director
David B. Sarnoff	56	Director
Graig Springer	44	Director
Jeff Pavell	57	Director

The business background and certain other information about our directors and executive officers is set forth below.

Robb Knie

Robb Knie has served as President and Chief Executive Officer and as a director of the Company since May 2017 and served as our principal financial and accounting officer from June 2018 until March 2019. From October 2020 to January 2023, Mr. Knie served as the Chief Executive Officer, Chief Financial Officer and chairman of the board of directors of FoxWayne Enterprises Acquisition Corp. (“FoxWayne”), a special purpose acquisition corporation. Mr. Knie served as the President of Lifeline Industries Inc. since its inception in 1995. From 2002 to 2010 he was a Semiconductor Analyst for PAW Partners. From 1993 until 1995, Mr. Knie served as Northeast Regional Manager of American Express Financial Advisors. Mr. Knie has served as a board member for Nasdaq-listed companies. He has been featured on Bloomberg, The Wall Street Journal and Forbes Magazine as an Independent Equity Analyst. Mr. Knie has over 20 years of equity markets experience. Mr. Knie has been a member of the American Chemical Society, Institute of Electrical and Electronics Engineers, as well as The National Alliance for Youth Sports. We believe that Mr. Knie is qualified to serve as a director because of his business and leadership experience and experience as a board member of public companies in the healthcare industry.

David Briones

David Briones has served as Chief Financial Officer of the Company since March 2019 and has over 24 years of public accounting and executive level experience. He consults with various public companies in financial reporting, internal control development and evaluation, budgeting and forecasting. Since September 2021, Mr. Briones has served as Chief Financial Officer, Treasurer and Secretary and a member of the board of directors of Larkspur Healthcare Acquisition Corp. (Nasdaq: LSPR), a special purpose acquisition corporation. Since October 2010, he has served as the managing member and founder of Brio Financial Group, LLC, a full-service financial consulting firm that brings experienced finance and accounting expertise to both public and private companies. Since 2010, Mr. Briones has served over 75 companies as well as numerous banks, hedge funds, venture capital funds and private equity firms. In addition, from May 2018 until its dissolution in April 2021, Mr. Briones served as Executive Chair of Zovis Pharmaceuticals, and from August 2013 to January 2020, Mr. Briones served as Chief Financial Officer of Petro River Oil Corp. (“PTRC”), an independent energy company focused on the exploration and development of conventional oil and gas assets. Mr. Briones also served as interim Chief Financial Officer of AdiTx Therapeutics, Inc. (Nasdaq: ADTX), a pre-clinical stage, life sciences company with a mission to prolong life and enhance life quality of transplanted patients from January 2018 to July 2020 (until the company’s initial public offering). From October 2017 to May 2018, Mr. Briones served as the Chief Financial Officer of Bitzumi, Inc., a Bitcoin exchange and marketplace. Prior to founding Brio Financial Group, LLC, Mr. Briones was an auditor with Bartolomei Pucciarelli, LLC in Lawrenceville, New Jersey and PricewaterhouseCoopers LLP in New York, New York. Since May 2020, Mr. Briones has served as a member of the board of directors of Unique Logistics International Inc (OTC Pink: UNQL). Mr. Briones received a bachelors of science degree in accounting from Fairfield University.

Wayne Linsley

Wayne D. Linsley has served as a director of the Company since April 2020. Mr. Linsley has been in business management for over 40 years. He possesses a wide and varied skillset including sales and sales management, finance (for both public and private companies), accounting, audit support and financial reporting. He has a bachelor's in business administration from Siena College in Loudonville, NY. From 2009 to September 2021 he worked for a financial reporting firm that works with publicly traded companies. He has extensive knowledge of financial statements, MD&A, SEC Filings (10-K, 10-Q, 8-K, etc.) Edgar, etc. He often negotiated on behalf of clients in such areas as audit fees, transfer agents, Edgar companies, etc. He currently serves as an independent director for DatChat Inc. (Nasdaq: DATS), serving as the chair of its audit committee, compensation committee and nominating and corporate governance committee, and Silo Pharma, Inc. (Nasdaq: SILO) serving as the chair of its audit committee and compensation committee. We believe Mr. Linsley is qualified to serve as a member of the board because of his business management experience.

David B. Sarnoff

David Sarnoff has served as a director of the Company since August 2018. Since May 2015, Mr. Sarnoff has served as the founder and Principal of Sarnoff Group, LLC, and since January 2019, he has served as the Director of Strategic Partnerships and Executive Leadership Coach at Loeb Leadership. In addition, since December 2021, Mr. Sarnoff has served as Adjunct Faculty at iCoach Global (formally known as iCoach New York) with respect to a professional coaching program affiliated with the Zicklin School of Business at Baruch College. From October 2003 until May 2015, Mr. Sarnoff served as the co-founder and Principal of Morandi, Taub & Sarnoff LLC, an executive search firm, and from July 1998 until October 2003 he served as a Legal Recruiter for Schneider Legal Search, Inc. From August 1994 until July 1998, Mr. Sarnoff served as a litigation associate attorney at Wachtel Missry LLP (formerly known as Gold & Wachtel LLP). Since July 2018, Mr. Sarnoff has served as a member of the advisory committee of the New Jersey Association of School Resource Officers. From January 2015 until January 2018, Mr. Sarnoff served as board President of Fort Lee Board of Education and served as a board member from January 2013 through January 2019. In September of 2020, Mr. Sarnoff was appointed to a three year term on the Diversity, Equity & Inclusion Committee of the New York City Bar Association, and in September 2022, he was appointed as Co-Chair of that committee. Mr. Sarnoff received his Juris Doctor from Rutgers University School of Law and his bachelor of arts from Hofstra University. Mr. Sarnoff is admitted to the New York and New Jersey (retired status) state bars. We believe that Mr. Sarnoff is qualified to serve as a director because of his legal experience as well as his extensive experience in executive leadership and business development.

Graig Springer

Graig Springer has served as a director of the Company since February 2020. Since April 2021, Mr. Springer has served as Vice President for Brookfield Oaktree Wealth Solutions LLC ("Brookfield") in their Legal and Regulatory Department, and from August 2020 to April 2021, he served as a consultant to Brookfield Public Securities Group LLC. From May 2019 to August 2019, Mr. Springer assisted with product development and governance at Invesco U.S., an investment management company, and from December 2013 to May 2019, he served in various capacities at OppenheimerFunds, Inc., an investment management company acquired by Invesco U.S., including distribution compliance and product development. In addition, Mr. Springer served on the Sub-Adviser Oversight Committee at OppenheimerFunds, Inc. Mr. Springer received his bachelor of arts from Columbia University and his Juris Doctor from Fordham University School of Law. Mr. Springer also holds a Series 7 and a Series 24 license. We believe that Mr. Springer is qualified to serve as a director because of his fifteen years of experience within the financial services industry overseeing and advising firms' compliance with federal rules and regulations.

Jeff Pavell

Jeff Pavell has served as a director of the Company since December 2022. Since January 2017, Dr. Pavell has served as Chief of Rehabilitation Medicine at Englewood Health, and since November 2021, he has been on the teaching staff at New York-Presbyterian. In addition, since December 2020 he has been on the teaching staff at Hackensack Meridian School of Medicine at Seton Hall. Furthermore, since 2010, Dr. Pavell has served as a partner at Patient Care Associates, an outpatient surgical center, and since 2002, he has served as a Partner at the Physical Medicine and Rehabilitation Center, a private medical practice serving patients with spine, sports and occupational injuries. Dr. Pavell is a Board Certified physician specializing in the field of physical medicine and rehabilitation. Dr. Pavell is also certified in pain medicine and specializes in the most advanced non-operative treatments for spine, sports and interventional pain medicines. Dr. Pavell received his bachelor of arts from Johns Hopkins University and his D.O. degree with honors from the New York College of Osteopathic Medicine. From January 2021 to January 2023, Dr. Pavell served as a member of the board of directors as well as chairman of the audit committee and a member of the compensation committee of FoxWayne, a special purpose acquisition corporation. Furthermore, since September 2022, Dr. Pavell has served as a director of Silo Pharma, Inc. (Nasdaq: SILO) (“Silo”) as well as a member of the audit committee, compensation committee and chair of the nominating and corporate governance committee. We believe that Dr. Pavell is qualified to serve as a director due to his extensive experience practicing in the healthcare industry as well as his prior experience serving as a director for other public companies.

Family Relationships

There are no family relationships among any of our executive officers or directors.

Arrangements between Officers and Directors

Except as set forth herein, to our knowledge, there is no arrangement or understanding between any of our officers or directors and any other person pursuant to which the officer or director was selected to serve as an officer or director.

Involvement in Certain Legal Proceedings

We are not aware of any of our directors or officers being involved in any legal proceedings in the past ten years relating to any matters in bankruptcy, insolvency, criminal proceedings (other than traffic and other minor offenses), or being subject to any of the items set forth under Item 401(f) of Regulation S-K.

Committees of Our Board of Directors

Our board of directors directs the management of our business and affairs, as provided by Nevada law, and conducts its business through meetings of the board of directors and its standing committees. We have a standing audit committee, compensation committee and nominating and corporate governance committee. In addition, from time to time, special committees may be established under the direction of the board of directors when necessary to address specific issues.

Our board of directors has determined that all of the members of the audit committee, the compensation committee and the nominating and corporate governance committee are independent as defined under the applicable rules of Nasdaq, including, in the case of all of the members of our audit committee, the independence requirements contemplated by Rule 10A-3 under the Exchange Act. In making such determination, the board of directors considered the relationships that each director has with our Company and all other facts and circumstances that the board of directors deemed relevant in determining director independence, including the beneficial ownership of our capital stock by each director.

Audit Committee

Our audit committee is responsible for, among other things:

- approving and retaining the independent registered public accounting firm to conduct the annual audit of our consolidated financial statements;
- reviewing the proposed scope and results of the audit;
- reviewing and pre-approval of audit and non-audit fees and services;

- reviewing accounting and financial controls with the independent registered public accounting firm and our financial and accounting staff;
- reviewing and approving transactions between us and our directors, officers and affiliates;
- establishing procedures for complaints received by us regarding accounting matters;
- overseeing internal audit functions, if any; and
- preparing the report of the audit committee that the rules of the Securities and Exchange Commission require to be included in our annual meeting proxy statement.

Our audit committee consists of Wayne Linsley, David Sarnoff and Graig Springer, with Wayne Linsley serving as chair. Each member of our audit committee meets the financial literacy requirements of the Nasdaq rules. In addition, our board of directors has determined that Wayne Linsley qualifies as an “audit committee financial expert,” as such term is defined in Item 407(d)(5) of Regulation S-K.

Our board of directors adopted a written charter for the audit committee which is available on our website at www.hoththerapeutics.com.

Compensation Committee

Our compensation committee is responsible for, among other things:

- reviewing and recommending the compensation arrangements for management, including the compensation for our president and chief executive officer;
- establishing and reviewing general compensation policies with the objective to attract and retain superior talent, to reward individual performance and to achieve our financial goals;
- administering our stock incentive plans; and
- preparing the report of the compensation committee that the rules of the Securities and Exchange Commission require to be included in our annual meeting proxy statement.

Our compensation committee currently consists of Wayne Linsley, Graig Springer and Jeff Pavell, with Wayne Linsley serving as chair.

Our board of directors adopted a written charter for the compensation committee which is available on our website at www.hoththerapeutics.com.

Nominating and Governance Committee

Our nominating and governance committee is responsible for, among other things:

- identifying and nominating members of the board of directors;
- developing and recommending to the board of directors a set of corporate governance principles applicable to our Company; and
- overseeing the evaluation of our board of directors.

Our nominating and corporate governance committee consists of Wayne Linsley, Graig Springer and David Sarnoff, with Graig Springer serving as chair.

Our board of directors adopted a written charter for the nominating and corporate governance committee which is available on our website at www.hoththerapeutics.com.

Scientific Advisory Board

In July 2017, the board of directors formed a Scientific Advisory Board (formerly known as the Technology Advisory Board). As of March 26, 2024, the members of such board are as follows: (i) Dr. Mario Lacouture, Dr. William Weglicki, and Dr. Adam Friedman as Medical Doctor members and (ii) Dr. Glenn Cruse, Dr. Carla Yuede, Dr. John Cirrito, and Sergio Traversa as Non-Medical Doctor members.

Code of Business Code and Ethics Conduct

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of the code is posted on our website at www.hoththerapeutics.com. Disclosure regarding any amendments to, or waivers from, provisions of the code of conduct and ethics that apply to our directors, principal executive and financial officers will be posted on the “Investors-Corporate Governance” section of our website at www.hoththerapeutics.com or will be included in a Current Report on Form 8-K, which we will file within four business days following the date of the amendment or waiver.

Changes in Nominating Procedures

None.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth the compensation paid or accrued during the fiscal year ended December 31, 2023 and 2022 to our principal executive officer and an additional officer (collectively, the “named executive officers”):

- Robb Knie, Chief Executive Officer and President; and
- Stefanie Johns, former Chief Scientific Officer.

Name and Principal Position	Year	Salary (\$)	Bonus \$(1)	Stock Awards (\$)	Option Awards \$(2)	Non-Equity Incentive Plan Compensation (\$)	Nonqualified deferred compensation earnings (\$)	All Other Compensation \$(3)	Total (\$)
Robb Knie Chief Executive Officer and President	2023	450,000	200,000	-	103,601	-	-	115,222	868,823
Stefanie Johns Former Chief Scientific Officer	2022	382,443	20,000	-	108,181	-	-	185,263	695,886

(1) Represents payments of discretionary bonuses for performance during the applicable years as determined by the board, and as further described below Bonus Arrangements.

- (2) Represents the aggregate grant date fair value of options granted for the fiscal year ended December 31, 2023 and December 31, 2022 as determined in accordance with FASB ASC Topic 718, rather than the amount paid to or realized by Robb Knie and Stefanie Johns. See Note 6, “Stockholders’ Equity” in the notes to the Company’s consolidated financial statements for the fiscal year ended December 31, 2023 and December 31, 2022 included in this Annual Report on Form 10-K for more information regarding the Company’s accounting for share-based compensation plans.
- (3) All other compensation represents the employer matching contributions to each Robb Knie’s and Stefanie Johns’ 401(k) accounts and the amounts received for their executive health or supplemental health insurance premiums. Mr. Knie received (i) an employer 401(k) contribution in the amounts of \$19,800 and \$18,000 for fiscal years 2023 and 2022, respectively, and (ii) payments for executive health or supplemental medical insurance premiums in the amounts of \$95,422 and \$76,009 for fiscal years 2023 and 2022, respectively. Ms. Johns received (A) an employer 401(k) contribution in the amounts of \$0 and \$18,300 for fiscal years 2023 and 2022, respectively, and (B) payments for executive health or supplemental medical insurance premiums in the amounts of \$0 and \$34,463 for fiscal years 2023 and 2022, respectively. For 2022, all other compensation for Ms. Johns includes the following in connection with payments received under the Stefanie Johns Separation Agreement and General Release, dated December 9, 2022, pursuant to which Ms. Johns was entitled to the following payments for the fiscal year ended on December 31, 2022:

<u>Name</u>	<u>Separation Payment</u>	<u>Total of All Other Compensation</u>
Stefanie Jones	\$ 132,500	\$ 132,500

Employment Agreements

Robb Knie Employment Agreement

On March 28, 2023, we entered into an employment agreement (the “2023 Knie Employment Agreement”) with Robb Knie, pursuant to which Mr. Knie continues to serve as our Chief Executive Officer. The term of the 2023 Knie Employment Agreement will continue for a period of three years from the date of execution and automatically renews for successive one-year periods at the end of each term until either party delivers written notice of their intent not to review at least six months prior to the expiration of the then effective term. Mr. Knie’s base salary is \$450,000 per year. Mr. Knie is eligible to receive an annual bonus of up to \$350,000 per year at the discretion of the compensation committee of the Company, based upon the achievement of Company and individual performance targets established by the compensation committee. Under the 2023 Knie Employment Agreement, Mr. Knie is also entitled to receive equity-based compensation awards. In addition, the 2023 Knie Employment Agreement contains standard non-competition and non-solicitation provisions. Mr. Knie is also eligible to receive additional equity-based compensation awards as the Company may grant from time to time. The 2023 Knie Employment Agreement further provides for standard expense reimbursement, vacation time and other standard executive benefits.

Pursuant to the 2023 Knie Employment Agreement, in the event Mr. Knie’s employment is terminated without Cause (as defined in the 2023 Knie Employment Agreement), due to a non-renewal by the Company, he voluntarily resigns, or if he resigns for Good Reason (as defined in the 2023 Knie Employment Agreement), Mr. Knie is entitled to (i) a cash payment equal to the sum of (x) 24 months of his base salary at the then current rate (or 36 months if such termination occurs within 12 months of a Change in Control (as defined in the 2023 Knie Employment Agreement)) and (y) annual bonus in effect on his last day of employment; (ii) continuation of health benefits for a period of 24 months (or 36 months if such termination occurs within 12 months of a Change in Control); (iii) a lump sum payment equal to the amount of any annual bonus earned with respect to a prior fiscal year, but unpaid as of the date of termination; (iv) a lump sum payment equal to the amount of annual bonus that was accrued through the date of termination for the year in which employment ends; and (v) subject to Mr. Knie’s compliance with his restrictive covenants, the outstanding and unvested portion of any equity award will accelerate and immediately vest on the date of Mr. Knie’s termination.

In the event that Mr. Knie's employment is terminated due to his death or disability, he will be entitled to receive (i) a lump sum payment equal to the amount of any annual bonus earned with respect to a prior fiscal year, but unpaid as of the date of termination; (ii) a lump sum payment equal to the amount of annual bonus that was accrued for the year in which employment ends; and (iii) the treatment of any equity awards in accordance with their respective equity award agreements.

In the event that Mr. Knie's employment is terminated due to his non-renewal or resignation without Good Reason, he will be entitled to receive a lump sum payment equal to the amount of any annual bonus earned with respect to a prior fiscal year, but unpaid as of the date of termination.

Equity Grant Practices

2018 Equity Incentive Plan

On May 4, 2018, the Company's board of directors adopted the Hoth Therapeutics, Inc. 2018 Omnibus Equity Incentive Plan (the "2018 Plan"). The 2018 Plan became effective on May 4, 2018 upon approval of the 2018 Plan by the Company's shareholders at the Company's annual meeting of shareholders. Pursuant to the 2018 Plan, the Company can grant stock options, stock appreciation rights, restricted stock, restricted stock units, deferred stock units, annual or long-term performance awards or other stock-based awards. As of December 31, 2023, the outstanding option awards under the 2018 Plan total 79,360, as described in the table "Option Awards" below.

2022 Equity Incentive Plan

On March 24, 2022, the Company's board of directors adopted the Hoth Therapeutics, Inc. 2022 Omnibus Equity Incentive Plan (the "2022 Plan") initially reserving 96,000 shares of the Company's common stock for issuance thereunder. The 2022 Plan became effective on June 23, 2022 upon approval of the 2022 Plan by the Company's shareholders at the Company's annual meeting of shareholders. On June 2, 2023, the Company's board of directors approved the Hoth Therapeutics, Inc. Amended and Restated 2022 Omnibus Equity Incentive Plan (the "Amended and Restated 2022 Plan") which was approved by stockholders on August 18, 2023. Pursuant to the Amended and Restated 2022 Plan, the Company can grant stock options, stock appreciation rights, restricted stock, restricted stock units, deferred stock units, annual or long-term performance awards or other stock-based awards. As of December 31, 2023, the outstanding option awards under the Amended and Restated 2022 Plan total 90,000, as described in the table "Option Awards" below.

Bonus Arrangements

Pursuant to the terms of the executive employment agreements described above, the Company, through the board, has the discretion to determine the amounts of the annual incentive bonus payments which executives may receive Based on the review of the Company's performance for calendar year 2023, the board, in its sole discretion, determined to pay the bonuses to the named executive officers listed in the summary compensation table above.

401(k) Plan

The Company maintains a defined contribution employee retirement plan, or 401(k) plan, for its employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code so that contributions to the 401(k) plan, and income earned on such contributions, are not taxable to participants until withdrawn or distributed from the 401(k) plan. The Company will match a participant's contribution 100% up to 6% of their compensation, subject to statutory limits.

Perquisites

Perquisites are not a material component of compensation. In general, named executive officers do not receive reimbursements for meals, airlines, and travel costs, other than those costs allowed for all employees. During 2023, no named executive officers received an allowance from the Company or any of the above or a reimbursement for any expense incurred for non-business purposes.

Outstanding Equity Awards at December 31, 2023

The following table provides information regarding option awards held by each of our named executive officers that were outstanding as of December 31, 2023. There were no stock awards or other equity awards outstanding as of December 31, 2023.

Name	Option Awards			
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Robb Knie	10,000(1)	-	\$ 131.50	12/24/2029
	3,201(2)	-	\$ 76.25	7/21/2030
	9,000(3)	-	\$ 52.75	1/29/2031
	20,000(4)	-	\$ 14.75	3/16/2032
	40,000(5)	-	\$ 2.59	7/17/2033

- (1) Stock options granted to Robb Knie vested in full immediately upon grant.
- (2) Stock options granted to Robb Knie vested in full immediately upon grant.
- (3) Stock options granted to Robb Knie vested in full immediately upon grant.
- (4) Stock options granted to Robb Knie vested in full immediately upon grant.
- (5) Stock options granted to Robb Knie vested in full immediately upon grant.

Non-Employee Director Compensation

The following table presents the total compensation for each person who served as a non-employee member of our board of directors and received compensation for such service during the fiscal year ended December 31, 2023. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our board of directors in 2023.

Name	Fees earned or paid in cash (\$)	Stock Awards (\$)	Option Awards (\$)(1)(2)	Non-Equity Incentive Plan Compensation (\$)	Nonqualified deferred compensation earnings (\$)	All Other Compensation (\$)	Total (\$)
Jeff Pavell	50,000	-	15,210	-	-	-	65,210
David Sarnoff	50,000	-	15,210	-	-	-	65,210
Graig Springer	50,000	-	15,210	-	-	-	65,210
Wayne Linsley	50,000	-	15,210	-	-	-	65,210

- (1) Amounts reported represent the aggregate grant date fair value for option awards granted in each respective year in accordance with FASB ASC Topic 718, excluding the effect of forfeitures. See Note 6, "Stockholders' Equity" in the notes to the Company's consolidated financial statements for the fiscal year ended 2023 included in this Annual Report on Form 10-K for the year ended 2023 for more information regarding the Company's accounting for share-based compensation plans.
- (2) On July 17, 2023, Jeff Pavell was granted ten-year options to purchase up to 7,500 shares of the Company's common stock at an exercise price of \$2.59, which options vested in full upon grant.

On July 17, 2023, David Sarnoff was granted ten-year options to purchase up to 7,500 shares of the Company's common stock at an exercise price of \$2.59, which options vested in full upon grant.

On July 17, 2023, Graig Springer was granted ten-year options to purchase up to 7,500 shares of the Company's common stock at an exercise price of \$2.59, which options vested in full upon grant.

On July 17, 2023, Wayne Linsley was granted ten-year options to purchase up to 7,500 shares of the Company's common stock at an exercise price of \$2.59, which options vested in full upon grant.

Non-Employee Director Compensation Policy

Our directors receive \$50,000 cash compensation per year for their service on the board of directors, as well as reimbursement for out-of-pocket expenses with respect to such directors' attendance at meetings of the board of directors of the Company.

Committee chairs receive an additional one-time \$6,000 cash compensation upon appointment for their added services in such roles.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information regarding beneficial ownership of shares of our common stock as of March 26, 2024 by (i) each person known to beneficially own more than 5% of our outstanding common stock, (ii) each of our directors, (iii) each of our named executive officers and (iv) all of our directors and named executive officers as a group. Except as otherwise indicated, the persons named in the table below have sole voting and investment power with respect to all shares beneficially owned, subject to community property laws, where applicable.

Beneficial Owner ⁽¹⁾	Shares of Common Stock Beneficially Owned	Percentage ⁽²⁾
Directors and Named Executive Officers:		
Robb Knie	340,331(3)	7.22%
Wayne Linsley	36,154(4)	*
David Sarnoff	38,420(5)	*
Graig Springer	177,067(6)	3.87%
Jeff Pavell	35,882(7)	*
All Named Executive Officers and Directors as a Group (5 persons)	629,545	12.61%
5% or Greater Shareholders:		
Armistice Capital, LLC (8) 510 Madison Avenue, 7th Floor New York, New York 10022	228,278(9)	5.18%

* Represents beneficial ownership of less than 1%.

(1) The address of each person is c/o Hoth Therapeutics, Inc., 590 Madison Ave, 21st Floor, New York, New York 10022 unless otherwise indicated herein.

(2) The calculation in this column is based upon 4,403,804 shares of common stock outstanding on March 26, 2024. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to the subject securities. Shares of common stock that are currently exercisable or convertible within 60 days of March 26, 2024 are deemed to be beneficially owned by the person holding such securities for the purpose of computing the percentage beneficial ownership of such person, but are not treated as outstanding for the purpose of computing the percentage beneficial ownership of any other person.

(3) Includes options to purchase up to 307,200 shares of the Company's common stock.

(4) Includes options to purchase up to 36,020 shares of the Company's common stock.

(5) Includes options to purchase up to 37,4204 shares of the Company's common stock.

- (6) Includes (i) 134 shares of the Company’s common stock held by Graig Springer, (ii) options to purchase up to 36,020 shares of the Company’s common stock held by Graig Springer, (iii) 1,113 shares of the Company’s common stock held by Mr. Springer’s spouse and (iv) options to purchase up to 139,800 shares of the Company’s common stock held by Mr. Springer’s spouse. Mr. Springer’s spouse is an employee of the Company.
- (7) Excludes 1,693 shares of the Company’s common stock that are subject to vesting.
- (8) Armistice Capital, LLC (“Armistice Capital”) is the investment manager of Armistice Capital Master Fund Ltd. (the “Master Fund”), and shares voting and investment power with respect to these shares in this capacity. As manager of Armistice Capital, Steven Boyd also shares voting and investment power on behalf of Master Fund. Each of Armistice Capital and Mr. Boyd disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein. Amount of shares beneficially owned by Master Fund prior to the offering is based upon the Schedule 13G/A filed by the Master Fund on February 14, 2024.
- (9) Includes warrants to purchase 228,278 shares of the Company’s common stock. The warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the holder from exercising that portion of the warrants that would result in the holder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. Amount of shares beneficially owned by Master Fund prior to the offering is based upon the Schedule 13G/A filed by the Master Fund on February 14, 2024.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table summarizes information about our equity compensation plans as of December 31, 2023.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	181,205	\$ 25.03	586,990
Equity compensation plans not approved by security holders	-	-	-
Total	181,205		586,990

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The following includes a summary of transactions during our fiscal years ended December 31, 2023 and December 31, 2022 to which we have been a party, including transactions in which the amount involved in the transaction exceeds the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described elsewhere in this Annual Report on Form 10-K. We are not otherwise a party to a current related party transaction, and no transaction is currently proposed, in which the amount of the transaction exceeds the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years and in which a related person had or will have a direct or indirect material interest.

Related Person Transaction Policy

We have adopted a formal policy regarding approval of transactions with related parties. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds the lesser of \$120,000 or 1% of our total assets at the end of our last completed fiscal year. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third-party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant shareholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our code of business conduct and ethics, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our shareholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

Director Independence

Our board of directors determined that a majority of the board during the year ended December 31, 2023 consisted of members who were "independent" as that term is defined under Nasdaq Listing Rule 5605(a)(2). The Board considered Wayne Linsley, David Sarnoff, Graig Springer and Jeff Pavell to be "independent."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the aggregate fees billed by WithumSmith+Brown, PC as described below:

	<u>2023</u>	<u>2022</u>
Audit Fees	\$ 193,758	\$ 149,791
Audit Related Fees	-	-
Tax Fees	9,800	6,650
All Other Fees	-	-
Total	<u>\$ 203,558</u>	<u>\$ 156,441</u>

Audit Fees: Audit fees consist of fees billed for professional services performed by WithumSmith+Brown, PC for the audit of our annual consolidated financial statements, the review of interim consolidated financial statements, and related services that are normally provided in connection with registration statements. There were \$193,758 and \$149,791 of such fees incurred by the Company in the fiscal years ended December 31, 2023 and 2022, respectively.

Audit-Related Fees: Audit related fees consist of fees billed by an independent registered public accounting firm for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements. There were no such fees incurred by the Company in the fiscal years ended December 31, 2023 and 2022.

Tax Fees: Tax fees consist of fees for professional services, including tax compliance performed by WithumSmith+Brown, PC. There were \$9,800 and \$6,650 of such fees incurred by the Company in the fiscal years ended December 31, 2023 and 2022, respectively.

All Other Fees: There were no such fees incurred by the Company in the fiscal years ended December 31, 2023 and 2022.

Pre-Approval Policies and Procedures

In accordance with Sarbanes-Oxley, our audit committee charter requires the audit committee to pre-approve all audit and permitted non-audit services provided by our independent registered public accounting firm, including the review and approval in advance of our independent registered public accounting firm's annual engagement letter and the proposed fees contained therein. The audit committee has the ability to delegate the authority to pre-approve non-audit services to one or more designated members of the audit committee. If such authority is delegated, such delegated members of the audit committee must report to the full audit committee at the next audit committee meeting all items pre-approved by such delegated members. In the fiscal years ended December 31, 2023 and 2022 all of the services performed by our independent registered public accounting firm were pre-approved by the audit committee.

PART IV

ITEM 15. EXHIBIT AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) Financial Statements:

Report of Independent Registered Public Accounting Firm (PCAOB ID: 100)	F-2
Consolidated Balance Sheets as of December 31, 2023 and 2022	F-3
Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2023 and 2022	F-4
Consolidated Statements of Changes in Stockholders' Equity for the years ended December 31, 2023 and 2022	F-5
Consolidated Statements of Cash Flows for the years ended December 31, 2023 and 2022	F-6
Notes to Consolidated Financial Statements	F-7

The consolidated financial statements required by this Item are included beginning at page F-1.

(1) Financial Statement Schedules:

All financial statement schedules have been omitted because they are not applicable, not required or the information required is shown in the consolidated financial statements or the notes thereto.

(b) Exhibits**EXHIBIT INDEX**

Exhibit Number	Exhibit
3.1	<u>Articles of Incorporation (Incorporated by reference to Exhibit 3.1 to the Company's Form S-1/A filed on December 14, 2018)</u>
3.2	<u>Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.2 to the Company's Form S-1/A filed on December 14, 2018)</u>
3.3	<u>Certificate of Designations, Preferences and Rights of the Series A Convertible Preferred Stock (Incorporated by reference to Exhibit 3.3 to the Company's Form S-1/A filed on December 14, 2018)</u>
3.4	<u>Amendment to Articles of Incorporation (Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on February 20, 2019)</u>
3.5	<u>Amended and Restated Bylaws (Incorporated by reference to Exhibit 3.2 to the Company's Form 8-K filed on February 20, 2019)</u>
3.6	<u>Amendment to the Amended and Restated Bylaws of Hoth Therapeutics, Inc. (Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on August 22, 2022)</u>
3.7	<u>Certificate of Change dated October 20, 2022 (Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on October 24, 2022)</u>
3.8	<u>Certificate of Designation dated November 2, 2022 (Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on November 3, 2022)</u>
3.9	<u>Certificate of Amendment (Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed on December 13, 2022)</u>
4.1	<u>Specimen Stock Certificate evidencing the shares of common stock (Incorporated by reference to Exhibit 4.1 to the Company's Form S-1/A filed on December 14, 2018)</u>
4.2	<u>Form of Underwriter Warrant (Incorporated by reference to Exhibit 4.2 to the Company's Form S-1/A filed on January 11, 2019)</u>
4.3	<u>Form of Warrant (Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed on March 25, 2020)</u>
4.4	<u>Form of Warrant (Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed on May 22, 2020)</u>
4.5*	<u>Form of Warrant</u>
4.6	<u>Description of the Registrant's Securities (Incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-K filed with the SEC on March 31, 2023)</u>
10.1+	<u>Amended and Restated Employment Agreement between Hoth Therapeutics, Inc. and Robb Knie (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed with the SEC on February 20, 2019)</u>
10.2	<u>Form of Warrant (Incorporated by reference to Exhibit 10.8 to the Company's Form S-1/A filed on December 14, 2018)</u>
10.3+	<u>2018 Equity Incentive Plan (Incorporated by reference to Exhibit 10.1 to the Company's Form S-8 filed on February 4, 2022)</u>
10.4	<u>Renewal Agreement with Regus dated July 22, 2022 (Incorporated by reference to Exhibit 10.5 to the Company's Annual Report on Form 10-K filed with the SEC on March 31, 2023)</u>

10.5	<u>Form of Registration Rights Agreement (Incorporated by reference to Exhibit 10.14 to the Company's Form S-1/A filed on December 14, 2018)</u>
10.6+	<u>Employment Agreement between Hoth Therapeutics, Inc. and David Briones (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on March 7, 2019)</u>
10.7	<u>Form of Warrant (Incorporated by reference to Exhibit 10.3 to the Company's Form 8-K filed on August 21, 2019)</u>
10.8	<u>Form of Registration Rights Agreement (Incorporated by reference to Exhibit 10.4 to the Company's Form 8-K filed on August 21, 2019)</u>
10.9	<u>Form of Placement Agent Warrant (Incorporated by reference to Exhibit 10.5 to the Company's Form 8-K filed on August 21, 2019)</u>
10.10	<u>License Agreement with North Carolina State University dated November 20, 2019 (Incorporated by reference to Exhibit 10.22 to the Company's Form 10-K filed on March 2, 2020)</u>
10.11	<u>Development and Royalty Agreement by and between the Company and Voltron Therapeutics, Inc. dated March 23, 2020 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on March 23, 2020)</u>
10.12#	<u>Exclusive License Agreement between the Company and Virginia Commonwealth University Intellectual Property Foundation dated May 18, 2020 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on May 19, 2020)</u>
10.13#	<u>Sublicense Agreement by and between the Company and Isoprene Pharmaceuticals, Inc. dated July 30, 2020 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 5, 2020)</u>
10.14	<u>License Agreement by and between the University of Cincinnati and Chelexa BioSciences, Inc. dated February 27, 2013 assigned to the Company on May 14, 2020 (Incorporated by reference to Exhibit 10.3 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.15	<u>First Amendment to Exclusive License Agreement by and between the University of Cincinnati and Chelexa BioSciences, Inc. dated April 17, 2013 assigned to the Company on May 14, 2020 (Incorporated by reference to Exhibit 10.4 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.16	<u>Second Amendment to Exclusive License Agreement by and between the University of Cincinnati and Chelexa BioSciences, Inc. dated February 27, 2013 assigned to the Company on May 14, 2020 (Incorporated by reference to Exhibit 10.5 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.17	<u>Assignment and Assumption Agreement by and between the Company and Chelexa BioSciences, Inc. dated May 14, 2020 (Incorporated by reference to Exhibit 10.6 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.18	<u>Royalty Agreement by and between the Company and Chelexa BioSciences, Inc. dated May 14, 2020 (Incorporated by reference to Exhibit 10.7 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.19	<u>Novation Agreement by and among the Company, Chelexa BioSciences, Inc. and the University of Cincinnati dated May 14, 2020 (Incorporated by reference to Exhibit 10.8 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.20	<u>Patent License Agreement by and between the Company and the George Washington University dated August 7, 2020 (Incorporated by reference to Exhibit 10.9 to the Company's Form 10-Q filed on August 13, 2020)</u>
10.21+	<u>Employment Agreement by and between the Company and Stefanie Johns dated August 28, 2020 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 31, 2020)</u>

10.22	Form of Warrant (Incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed on January 8, 2021)
10.23	Form of Registration Rights Agreement (Incorporated by reference to Exhibit 10.3 to the Company's Form 8-K filed on January 8, 2021)
10.24	Form of Placement Agent Warrant (Incorporated by reference to Exhibit 10.4 to the Company's Form 8-K filed on January 8, 2021)
10.25+	First Amendment to the Employment Agreement between Hoth Therapeutics, Inc. and Stefanie Johns (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on January 29, 2021)
10.26	Form of Common Stock Warrants (Incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed on March 9, 2021)
10.27	Form of Pre-Funded Warrants (Incorporated by reference to Exhibit 10.3 to the Company's Form 8-K filed on March 9, 2021)
10.28	Form of Registration Rights Agreement (Incorporated by reference to Exhibit 10.4 to the Company's Form 8-K filed on March 9, 2021)
10.29	Form of Placement Agent Warrants (Incorporated by reference to Exhibit 10.5 to the Company's Form 8-K filed on March 9, 2021)
10.30+	First Amendment to the Amended and Restated Employment Agreement between the Company and Robb Knie dated June 25, 2021 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on June 30, 2021)
10.31+	Second Amendment to the Employment Agreement between the Company and Stefanie Johns dated June 25, 2021 (Incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed on June 30, 2021)
10.32+	Hoth Therapeutics, Inc. 2022 Omnibus Equity Incentive Plan (Incorporated by reference to Appendix A to the Company's Definitive Proxy Statement on Schedule 14A filed with the SEC on April 27, 2022)
10.33+	Third Amendment to Employment Agreement by and between the Company and Stefanie Johns dated November 10, 2022 (Incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q filed on November 10, 2022)
10.34+	Separation Agreement and General Release by and between the Company and Stefanie Johns dated December 9, 2022 (Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on December 13, 2022)
10.35+	Employment Agreement by and between the Company and Robb Knie dated as of March 28, 2023 (Incorporated by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K filed with the SEC on March 31, 2023)
10.36*	Form of Warrant Inducement Agreement
21.1*	Subsidiaries of the registrant
23.1*	Consent of WithumSmith+Brown, PC
24.1*	Power of Attorney (included on the signature page hereto)
31.1*	Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) of the Exchange Act, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

32.1*	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to Rule 13a-14(b) of the Exchange Act and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
97.1*	Clawback Policy
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File - the cover page of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2023 is formatted in Inline XBRL

* Filed herewith.

+ Indicates a management contract or any compensatory plan, contract or arrangement.

Pursuant to Item 601(b)(10) of Regulation S-K, certain confidential portions of this exhibit were omitted by means of marking such portions with an asterisk because it is both not material and is the type of information that the Company treats as private or confidential.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

SIGNATURES

Pursuant to the requirements of Section 13 and 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized on this 28th day of March, 2024.

HOTH THERAPEUTICS, INC.

/s/ Robb Knie

Robb Knie
Chief Executive Officer
(Principal Executive Officer)

/s/ David Briones

David Briones
Chief Financial Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Robb Knie as his or her attorney-in-fact, with full power of substitution and resubstitution, for him or her in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Robb Knie</u> Robb Knie	Chief Executive Officer, President and Director (Principal Executive Officer)	March 28, 2024
<u>/s/ David Briones</u> David Briones	Chief Financial Officer (Principal Financial and Accounting Officer)	March 28, 2024
<u>/s/ Wayne Linsley</u> Wayne Linsley	Director	March 28, 2024
<u>/s/ David B. Sarnoff</u> David B. Sarnoff	Director	March 28, 2024
<u>/s/ Graig Springer</u> Graig Springer	Director	March 28, 2024
<u>/s/ Jeff Pavell</u> Jeff Pavell	Director	March 28, 2024

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

COMMON STOCK PURCHASE WARRANT

HOTH THERAPEUTICS, INC.

Warrant Shares: _____

Issue Date: March ____, 2024

Initial Exercise Date: March ____, 2024

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date set forth above (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on ___¹ (the "Termination Date") but not thereafter, to subscribe for and purchase from Hoth Therapeutics, Inc., a Nevada corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

¹ The date that is the ___ year anniversary of the Issue Date, provided that, if such date is not a Trading Day, insert the immediately following Trading Day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.0001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Letter Agreement” means that certain letter agreement between the initial Holder hereof and the Company, dated as of March 19 2024, pursuant to which such initial Holder agreed to exercise one or more warrants to purchase shares of Common Stock and the Company agreed to issue to the initial Holder this Warrant.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company required to be listed pursuant to Item 601(b)(21) of Regulation S-K.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means _____, and any successor transfer agent of the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Letter Agreement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation as soon as reasonably practicable of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Trading Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$____, subject to adjustment hereunder (the “Exercise Price”).

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the resale of the Warrant Shares by the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

- (A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. (“Bloomberg”) as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;
- (B) = the Exercise Price of this Warrant, as adjusted hereunder; and
- (X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if the OTCQB Venture Market (“OTCQB”) or the OTCQX Best Market (“OTCQX”) is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (“Pink Market”) operated by the OTC Markets, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the holding period of the Warrant Shares being issued may be tacked on to the holding period of this Warrant. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) the Warrant Shares are eligible for resale by the Holder without volume or manner-of-sale limitations pursuant to Rule 144 (assuming cashless exercise of the Warrants), and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by the Warrant Share Delivery Date. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the third Trading Day after the Warrant Share Delivery Date) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one (1) Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be [9.99/4.99%] of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or reclassification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (or any Subsidiary), directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock or 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the outstanding shares of Common Stock or 50% or more of the voting power of the common equity of the Company (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable contemplated Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Common Stock of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Stock will be deemed to have received common stock of the Successor Entity (which Entity may be the Company following such Fundamental Transaction) in such Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable contemplated Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the highest VWAP during the period beginning on the Trading Day immediately preceding the public announcement of the applicable contemplated Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder’s request pursuant to this Section 3(d) and (D) a remaining option time equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds (or such other consideration) within the later of (i) five Business Days of the Holder’s election and (ii) the date of consummation of the Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall be added to the term “Company” under this Warrant (so that from and after the occurrence or consummation of such Fundamental Transaction, each and every provision of this Warrant and the other Transaction Documents referring to the “Company” shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Successor Entity or Successor Entities, jointly and severally with the Company, may exercise every right and power of the Company prior thereto and the Successor Entity or Successor Entities shall assume all of the obligations of the Company prior thereto under this Warrant and the other Transaction Documents with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (or any of its Subsidiaries) is a party, any sale or transfer of all or substantially all of its assets, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by email to the Holder at its last email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. Subject to compliance with any applicable securities laws and the conditions set forth in Section 4(d) hereof, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the Issue Date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Transfer Restrictions. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale without volume or manner-of-sale restrictions or current public information requirements pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, provides to the Company an opinion of counsel, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that the transfer of this Warrant does not require registration under the Securities Act.

e) Representation by the Holder. The Holder, by the acceptance hereof, represents and warrants that it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a “cashless exercise” pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Purchase Agreement, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at _____, Attention: Chief Executive Officer, email address: _____, or such other email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder of this Warrant, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

HOTH THERAPEUTICS, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: HOTH THERAPEUTICS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

(4) Accredited Investor. The undersigned is an “accredited investor” as defined in Regulation D promulgated under the Securities Act of 1933, as amended.

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

Signature of Authorized Signatory of Investing Entity: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to exercise the Warrant to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

HOTH THERAPEUTICS, INC.

March 27, 2024

Holder of Common Stock Purchase Warrants

Re: Inducement Offer to Exercise Common Stock Purchase Warrants

Dear Holder:

Hoth Therapeutics, Inc. (the “Company”) is pleased to offer to you (“Holder”, “you” or similar terminology) (i) the opportunity to receive new warrants to purchase shares of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”), (ii) a reduction in the Exercise Price (as defined in the respective Existing Warrants) of the warrants set forth on Exhibit A hereto (the “Existing Warrants”) held by you in consideration for exercising by you for cash all of the Existing Warrants, as set forth on the signature page hereto. The resale of the shares of Common Stock underlying the Existing Warrants (the “Existing Warrant Shares”) has been registered pursuant to the registration statement on Form S-3 (File No. 333-269224) (the “Registration Statement”). The Registration Statement is currently effective and, upon exercise of the Existing Warrants pursuant to this letter agreement, will be effective for the resale of the Existing Warrant Shares. Capitalized terms not otherwise defined herein shall have the meanings set forth in the New Warrants (as defined herein).

The Company desires to reduce the Exercise Price (as defined in the respective Existing Warrants) of the Existing Warrants to \$1.6775 per share (the “Reduced Exercise Price”). In consideration for the exercise in full for cash all of the Existing Warrants held by the Holder as set forth on the Holder’s signature page hereto (the “Warrant Exercise”) on or before the Execution Time (as defined below), the Company hereby offers to sell and issue you new unregistered Common Stock purchase warrants (the “New Warrants”) pursuant to Section 4(a)(2) of the Securities Act of 1933, as amended (“Securities Act”), to purchase up to a number of shares (the “New Warrant Shares”) of Common Stock equal to 150% of the number of Warrant Shares issued pursuant to the Warrant Exercise hereunder, which New Warrants shall have an exercise price per share equal to \$1.50, subject to adjustment as provided in the New Warrants, will be exercisable immediately and expire on July 3, 2028, which New Warrants shall be substantially in the form as set forth in Exhibit A-1 hereto.

The New Warrant certificate(s) will be delivered at Closing (as defined below), and such New Warrants, together with any underlying shares of Common Stock issued upon exercise of the New Warrants, will, unless and until their sales are registered under the Securities Act, contain customary restrictive legends and other language typical for an unregistered warrant and unregistered shares. Notwithstanding anything herein to the contrary, in the event that any Warrant Exercise would otherwise cause the Holder to exceed the beneficial ownership limitations (“Beneficial Ownership Limitation”) set forth in Section 2(e) of the Existing Warrants (or, if applicable and at the Holder’s election, 9.99%), the Company shall only issue such number of Existing Warrant Shares to the Holder that would not cause the Holder to exceed the maximum number of Warrant Shares permitted thereunder, as directed by the Holder, with the balance to be held in abeyance until notice from the Holder that the balance (or portion thereof) may be issued in compliance with such limitations, which abeyance shall be evidenced through the Existing Warrants which shall be deemed prepaid thereafter (including the cash payment in full of the exercise price), and exercised pursuant to a Notice of Exercise in the Existing Warrants (provided no additional exercise price shall be due and payable). The parties hereby agree that the Beneficial Ownership Limitation for purposes of the Existing Warrants is as set forth on the Holder’s signature page hereto.

Expressly subject to the paragraph immediately following this paragraph below, Holder may accept this offer by signing this letter agreement below, with such acceptance constituting Holder's exercise in full of the Existing Warrants for an aggregate exercise price set forth on the Holder's signature page hereto (the "Warrant Exercise Price") on or before 2:00 p.m., Eastern Time, on March 27, 2024 (the "Execution Time").

Additionally, the Company agrees to the representations, warranties and covenants set forth on Annex A attached hereto. Holder represents and warrants that, as of the date hereof it is, and on each date on which it exercises any New Warrants it will be, an "accredited investor" as defined in Rule 501 of Regulation D promulgated under the Securities Act, and agrees that the New Warrants will contain restrictive legends when issued, and neither the New Warrants nor the shares of Common Stock issuable upon exercise of the New Warrants will be registered under the Securities Act, except as provided in Annex A attached hereto. Also, Holder represents and warrants that it is acquiring the New Warrants as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of the New Warrants or the New Warrant Shares (this representation is not limiting Holder's right to sell the New Warrant Shares pursuant to an effective registration statement under the Securities Act or otherwise in compliance with applicable federal and state securities laws).

The Holder understands that issuance of the New Warrants and the New Warrant Shares are not, and may never be, registered under the Securities Act, or the securities laws of any state and, accordingly, each certificate, if any, representing such securities shall bear a legend substantially similar to the following:

"THE OFFER AND SALE OF THIS SECURITY HAS NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, THIS SECURITY MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS."

Certificates evidencing the New Warrant Shares shall not contain any legend (including the legend set forth above), (i) while a registration statement covering the resale of such New Warrant Shares is effective under the Securities Act, (ii) following any sale of such New Warrant Shares pursuant to Rule 144 under the Securities Act, (iii) if such New Warrant Shares are eligible for sale under Rule 144 (assuming cashless exercise of the New Warrants), without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such New Warrant Shares and without volume or manner-of-sale restrictions, (iv) if such New Warrant Shares may be sold under Rule 144 (assuming cashless exercise of the New Warrants) and the Company is then in compliance with the current public information required under Rule 144 as to such New Warrant Shares, or (v) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the Securities and Exchange Commission (the "Commission") and the earliest of clauses (i) through (v), the "Delegend Date"). The Company shall cause its counsel to issue a legal opinion to the Transfer Agent promptly after the Delegend Date if required by the Company and/or the Transfer Agent to effect the removal of the legend hereunder, or at the request of the Holder, which opinion shall be in form and substance reasonably acceptable to the Holder. From and after the Delegend Date, such New Warrant Shares shall be issued free of all legends. The Company agrees that following the Delegend Date or at such time as such legend is no longer required under this Section, it will, no later than two (2) Trading Days following the delivery by the Holder to the Company or the Transfer Agent of a certificate representing the New Warrant Shares issued with a restrictive legend (such second (2nd) Trading Day, the "Legend Removal Date"), deliver or cause to be delivered to the Holder a certificate representing such shares that is free from all restrictive and other legends or, at the request of the Holder shall credit the account of the Holder's prime broker with the Depository Trust Company System as directed by the Holder.

In addition to the Holder's other available remedies, the Company shall pay to a Holder, in cash, (i) as partial liquidated damages and not as a penalty, for each \$1,000 of New Warrant Shares (based on the VWAP of the Common Stock on the date such New Warrant Shares are submitted to the Transfer Agent) delivered for removal of the restrictive legend, \$10 per Trading Day (increasing to \$20 per Trading Day five (5) Trading Days after such damages have begun to accrue) for each Trading Day after the Legend Removal Date until such certificate is delivered without a legend and (ii) if the Company fails to (a) issue and deliver (or cause to be delivered) to the Holder by the Legend Removal Date a certificate representing the New Warrant Shares that is free from all restrictive and other legends and (b) if after the Legend Removal Date the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock that the Holder anticipated receiving from the Company without any restrictive legend, then, an amount equal to the excess of the Holder's total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including brokerage commissions and other out-of-pocket expenses, if any) over the product of (A) such number of New Warrant Shares that the Company was required to deliver to the Holder by the Legend Removal Date and for which the Holder was required to purchase shares to timely satisfy delivery requirements, multiplied by (B) the weighted average price at which the Holder sold that number of shares of Common Stock.

The Holder agrees with the Company that it will sell the New Warrant Shares pursuant to either the registration requirements of the Securities Act, including any applicable prospectus delivery requirements, or an exemption therefrom, and that if the New Warrant Shares are sold pursuant to a Registration Statement, they will be sold in compliance with the plan of distribution set forth therein, and acknowledges that the removal of the restrictive legend from certificates representing the New Warrant Shares as set forth above is predicated upon the Company's reliance upon this understanding.

If this offer is accepted and the transaction documents are executed by the Execution Time, then as promptly as possible following the Execution Time, but in any event no later than [____] p.m., Eastern Time, on the date hereof, the Company shall issue a press release disclosing the material terms of the transactions contemplated hereby and shall file a Current Report on Form 8-K with the Commission disclosing all material terms of the transactions contemplated hereunder, including the filing with the Commission of this letter agreement as an exhibit thereto within the time required by the Exchange Act. From and after the dissemination of such press release, the Company represents to you that it shall have publicly disclosed all material, non-public information delivered to you by the Company, or any of its respective officers, directors, employees or agents in connection with the transactions contemplated hereunder. In addition, effective upon the dissemination of such press release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates on the one hand, and you and your Affiliates on the other hand, shall terminate. The Company represents, warrants and covenants that, upon acceptance of this offer, the Warrant Shares shall be issued at Closing free of any legends or restrictions on resale by Holder.

No later than the second (2nd) Trading Day following the date of the public disclosure of the transactions hereunder, the closing ("Closing") shall occur at such location as the parties shall mutually agree. Unless otherwise directed by H.C. Wainwright & Co., LLC (the "Placement Agent"), settlement of the Warrant Shares shall occur via "Delivery Versus Payment" ("DVP") (i.e., on the Closing Date (as defined below), the Company shall issue the Warrant Shares registered in the Holder's name and address provided to the Company in writing and released by the Transfer Agent directly to the account(s) at the Placement Agent identified by the Holder; upon receipt of such Warrant Shares, the Placement Agent shall promptly electronically deliver such Warrant Shares to the Holder, and payment therefor shall concurrently be made to the Company by the Placement Agent (or its clearing firm) by wire transfer to the Company). The date of the Closing of the Warrant Exercise shall be referred to as the "Closing Date".

The Company shall pay all transfer agent fees, stamp taxes and other taxes and duties levied in connection with the delivery of any Exiting Warrant Shares. This letter agreement shall be construed and enforced in accordance with the laws of the State of New York, without regards to conflicts of laws principles. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby.

Sincerely yours,

HOTH THERAPEUTICS, INC.

By: _____

Name:

Title:

[Holder Signature Page Follows]

Accepted and Agreed to:

Name of Holder: _____

Signature of Authorized Signatory of Holder: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Number of Existing Warrants: _____

Aggregate Warrant Exercise Price at the Reduced Exercise Price being exercised contemporaneously with signing this letter agreement:

Existing Warrants Beneficial Ownership Blocker: 4.99% or 9.99%

New Warrants: _____ (150% of the total Existing Warrants being exercised)

New Warrants Beneficial Ownership Blocker: 4.99% or 9.99%

DTC Instructions:

[Holder signature page to HOTH Inducement Offer]

Annex A

Representations, Warranties and Covenants of the Company. The Company hereby makes the following representations and warranties to the Holder:

- a) SEC Reports. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the one year preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein "SEC Reports"). As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Exchange Act and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company is not currently an issuer identified in Rule 144(i) under the Securities Act.
- b) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this letter agreement and otherwise to carry out its obligations hereunder. The execution and delivery of this letter agreement by the Company and the consummation by the Company of the transactions contemplated hereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, its board of directors or its stockholders in connection herewith. This letter agreement has been duly executed by the Company and, when delivered in accordance with the terms hereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.
- c) No Conflicts. The execution, delivery and performance of this letter agreement by the Company and the consummation by the Company of the transactions contemplated hereby do not and will not: (i) conflict with or violate any provision of the Company's certificate or articles of incorporation, bylaws or other organizational or charter documents; or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any liens, claims, security interests, other encumbrances or defects upon any of the properties or assets of the Company in connection with, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any material agreement, credit facility, debt or other material instrument (evidencing Company debt or otherwise) or other material understanding to which such Company is a party or by which any property or asset of the Company is bound or affected; or (iii) conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company is bound or affected, except, in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company, taken as a whole, or in its ability to perform its obligations under this letter agreement.

- d) Registration Obligations. As soon as reasonably practicable (and in any event within 30 calendar days of the date of this letter agreement), the Company shall file a registration statement on Form S-3 (or other appropriate form, including on Form S-1, if the Company is not then S-3 eligible) providing for the resale of the New Warrant Shares by the holders of the New Warrants (the “Resale Registration Statement”). The Company shall use commercially reasonable efforts to cause the Resale Registration Statement to become effective within sixty (60) calendar days following the date hereof (or within 90 calendar days following the date hereof in case of “full review” of such registration statement by the Commission) and to keep the Resale Registration Statement effective at all times until no holder of the New Warrants owns any New Warrants or New Warrant Shares.
- e) Trading Market. The transactions contemplated under this letter agreement comply with all the rules and regulations of the Nasdaq Capital Market.
- f) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of this letter agreement, other than: (i) the filings required pursuant to this letter agreement, (ii) application(s) or notice to each applicable Trading Market for the listing of the New Warrants and New Warrant Shares for trading thereon in the time and manner required thereby, (iii) the filing of Form D with the Commission, and (iv) such filings as are required to be made under applicable state securities laws.
- g) Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the New Warrant Shares on such Trading Market and promptly secure the listing of all of the New Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the New Warrant Shares, and will take such other action as is necessary to cause all of the New Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company’s reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

h) Subsequent Equity Sales.

- (i) From the date hereof until sixty (60) days after the Closing Date, after the Closing Date, neither the Company nor any Subsidiary shall (A) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any Common Stock or Common Stock Equivalents or (B) file any registration statement or any amendment or supplement to any existing registration statement (other than (x) the Resale Registration Statement referred to herein, (y) a resale registration statement for the shares of common stock underlying the warrants and placement agent warrants issued in the Company's private placement offering which was completed pursuant to the securities purchase agreement dated September 30, 2023, or (z) a registration statement on Form S-8 in connection with any employee benefit plan).
- (ii) From the date hereof until two (2) years following the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company nor any Subsidiary of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an "at-the-market offering", whereby the Company may issue securities at a future determined price, regardless of whether shares pursuant to such agreement have actually been issued and regardless of whether such agreement is subsequently canceled; provided, however, that, following the expiration of the restrictive period set forth in Section (h)(i) above, the entry into and/or issuance of shares of Common Stock in an "at the market" offering with the Placement Agent as sales agent shall not be deemed a Variable Rate Transaction. The Holder shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

- (iii) Notwithstanding the foregoing, this Section (h) shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance. “Exempt Issuance” means the issuance of (a) shares of Common Stock or options to employees, officers, directors, consultants or advisors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company (provided that securities issued to consultants and advisors are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section (h)(i) above), (b) warrants to the Placement Agent in connection with the transactions pursuant to this letter agreement (the “Placement Agent Warrants”) and any shares of Common Stock upon exercise of the Placement Agent Warrants and the shares of Common Stock issuable upon the exercise or exchange of or conversion of any securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this letter agreement, provided that such securities have not been amended since the date of this letter agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock splits or combinations) or to extend the term of such securities, and (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section (h)(i) above, and provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.
- i) Form D; Blue Sky Filings. If required, the Company agrees to timely file a Form D with respect to the New Warrants and New Warrant Shares as required under Regulation D and to provide a copy thereof, promptly upon request of any Holder. The Company shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for, or to qualify the New Warrants and New Warrant Shares for, sale to the Holder at Closing under applicable securities or “Blue Sky” laws of the states of the United States, and shall provide evidence of such actions promptly upon request of any Holder.

List of Subsidiaries of Hoth Therapeutics, Inc.

Name	State/Country of Organization or Incorporation
Hoth Therapeutics Australia Pty Ltd	Australia
merveille.ai	Nevada

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-27620, 333-269224, 333-254638, and 333-251994) and Form S-8 (Nos. 333-262530, 333-265984, and 333-274125) of Hoth Therapeutics, Inc. of our report dated March 28, 2024, relating to the consolidated financial statements of Hoth Therapeutics, Inc. as of and for the years ended December 31, 2023 and 2022, which appear in this Form 10-K.

/s/ WithumSmith+Brown, PC

New York, New York
March 28, 2024

**Certification of Chief Executive Officer of Hoth Therapeutics, Inc.
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Robb Knie, certify that:

1. I have reviewed this Annual Report on Form 10-K of Hoth Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 28, 2024

/s/ Robb Knie

Robb Knie,
Chief Executive Officer
(Principal Executive Officer)

**Certification of Chief Financial Officer of Hoth Therapeutics, Inc.
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, David Briones, certify that:

1. I have reviewed this Annual Report on Form 10-K of Hoth Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 28, 2024

/s/ David Briones

David Briones
Chief Financial Officer
(Principal Financial and Accounting Officer)

**Statement of Chief Executive Officer and Chief Financial Officer
Pursuant to Section 1350 of Title 18 of the United States Code**

Pursuant to Section 1350 of Title 18 of the United States Code as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, Robb Knie and David Briones, the, Chief Executive Officer and Chief Financial Officer, respectively, of Hoth Therapeutics, Inc. (the "Company"), hereby certifies that based on the undersigned's knowledge:

1. The Company's Annual Report on Form 10-K for the year ended December 31, 2023, (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 28, 2024

/s/ Robb Knie

Robb Knie,
Chief Executive Officer
(Principal Executive Officer)

Date: March 28, 2024

/s/ David Briones

David Briones
Chief Financial Officer
(Principal Financial and Accounting Officer)

HOTH THERAPEUTICS, INC.

CLAWBACK POLICY

I. Purpose and Scope

The Board of Directors (the “**Board**”) of the Company believes that it is in the best interests of the Company and its shareholders to create and maintain a culture that emphasizes integrity and accountability and that reinforces the Company’s pay-for-performance compensation philosophy. The Board has therefore adopted this Clawback Policy (this “**Policy**”), which provides for the recovery of erroneously awarded Compensation in the event of a Triggering Event (as defined below). Unless otherwise defined herein, the capitalized terms have the meanings set forth under “XIII. Definitions.”

II. Administration

This Policy is designed to comply with, and shall be interpreted to be consistent with, Section 10D of the Exchange Act, Rule 10D-1 of the Exchange Act, Nasdaq Listing Rule 5608 and other regulations, rules and guidance of the Securities and Exchange Commission (the “**SEC**”) thereunder, and related securities regulations and regulations of the stock exchange or association on which Company’s common shares are listed (collectively, the “**Listing Standards**”). This Policy shall be administered by the Compensation Committee of the Board (the “**Committee**”).

Any determinations made by the Committee shall be final and binding. In addition, the Company shall file all disclosures with respect to this Policy in accordance with the Listing Standards. The Committee hereby has the power and authority to enforce the terms and conditions of this Policy and to use any and all of the Company’s resources it deems appropriate to recoup any excess Compensation subject to this Policy.

III. Covered Executives

This Policy applies to the Company’s current and former Covered Executives, as determined by the Committee in accordance with the Listing Standards.

IV. Events That Trigger Recoupment Under This Policy

The Board or Committee will be required to recoup any excess Compensation received by any Covered Executive during the three (3) completed fiscal years (together with any interim stub fiscal year period(s) of less than nine (9) months resulting from the Company’s transition to different fiscal year measurement dates) immediately preceding the date the Company is deemed (as determined pursuant to the immediately following sentence) to be required to prepare a Covered Accounting Restatement (the “**Three-Year Recovery Period**”) irrespective of any fault, misconduct or responsibility of such Covered Executive for the Covered Accounting Restatement. For purposes of the immediately preceding sentence, the Company is deemed to be required to prepare a Covered Accounting Restatement on the earlier of (A) the date upon which the Board or applicable committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Covered Accounting Restatement; or (B) the date a court, regulator, or other legally authorized body directs the Company to prepare a Covered Accounting Restatement (each a “**Triggering Event**”).

V. Excess Compensation: Amount Subject to Recovery

The amount of Compensation to be recovered shall be the excess of the Compensation received by the Covered Executive over the amount of Compensation which would have been received by the Covered Executive had the amount of such Compensation been calculated based on the restated amounts, as determined by the Committee. For purposes of this Policy, Compensation shall be deemed “received”, either wholly or in part, in the fiscal year during which any applicable Financial Reporting Measure is attained, even if the payment, vesting or grant of such Compensation occurs after the end of such fiscal year. Amounts required to be recouped under this Policy shall be calculated on a pre-tax basis. The date of receipt of the Compensation depends upon the terms of the award of such Compensation. For example:

- a. If the *grant* of an award of Compensation is based, either wholly or in part, on the satisfaction of a Financial Reporting Measure performance goal, then the award would be deemed received in the fiscal period when that measure was *satisfied*;
 - b. If the *vesting* of an equity award of Compensation occurs *only* upon the satisfaction of a Financial Reporting Measure performance condition, then the award would be deemed received in the fiscal period when it *vests*;
-

- c. If the *earning* of a non-equity incentive plan award of Compensation is based on the satisfaction of the relevant Financial Reporting Measure performance goal, then the non-equity incentive plan award will be deemed received in the fiscal year in which that performance goal is *satisfied*; and
- d. If the *earning* of a cash award of Compensation is based on the satisfaction of a Financial Reporting Measure performance goal, then the cash award will be deemed received in the fiscal period when that measure is *satisfied*.

It is specifically understood that, to the extent that the impact of the Covered Accounting Restatement on the amount of Compensation received cannot be calculated directly from the information in the Covered Accounting Restatement (e.g., if such restatement's impact on the Company's share price is not clear), then such excess amount of Compensation shall be determined based on the Committee's reasonable estimate of the effect of the Covered Accounting Restatement on the share price or total shareholder return upon which the Compensation was received. The Company shall maintain documentation for the determination of such excess amount and provide such documentation to the Nasdaq Stock Market ("**Nasdaq**").

VI. Method of Recovery

The Committee shall determine, in its sole discretion, the methods for recovering excess Compensation hereunder, which methods may include, without limitation:

- a. requiring reimbursement of cash Compensation previously paid;
- b. seeking recovery of any gain realized on the vesting, exercise, settlement, sale, transfer, or other disposition of any equity-based awards;
- c. offsetting the recouped amount from any compensation otherwise owed by the Company to the Covered Executive;
- d. cancelling outstanding vested or unvested equity awards; and/or
- e. taking any other remedial and recovery action permitted by law, as determined by the Committee.

Notwithstanding anything in this Section VI, and subject to applicable law, the Committee may cause recoupment under this Policy from any amount of Compensation approved, awarded, granted, paid, or payable to any Covered Executive prior to, on, or following the Effective Date (as defined below).

VII. Impracticability

The Committee shall recover any excess Compensation in accordance with this Policy unless such recovery would be impracticable, as determined by the Committee in accordance with the Listing Standards. It is specifically understood that recovery shall only be deemed impractical if (A) the direct expense paid to a third party to assist in enforcing the Policy would exceed the amount to be recovered (before concluding that it would be impracticable to recover any amount of erroneously awarded Compensation based on the expense of enforcement, the Committee shall make a reasonable attempt to recover such erroneously awarded Compensation, document such reasonable attempt(s) to recover, and provide that documentation to Nasdaq); (B) recovery would violate home country law where that law was adopted prior to the November 28, 2022 (before concluding that it would be impracticable to recover any amount of erroneously awarded Compensation based on violation of home country law, the Committee shall obtain an opinion of home country counsel, acceptable to the applicable national securities exchange or association on which Company's common shares are trading, that recovery would result in such a violation, and must provide such opinion to the exchange or association); or (C) recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the registrant, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a), and the regulations promulgated thereunder.

VIII. Other Recoupment Rights; Acknowledgement

The Committee may require that any employment agreement, equity award agreement, or similar agreement entered into on or after the Effective Date shall, as a condition to the grant of any benefit thereunder, require a Covered Executive to agree to abide by the terms of this Policy. Any right of recoupment under this Policy is in addition to, and not in lieu of, any other remedies or rights of recoupment that may be available to the Company pursuant to the terms of any similar policy in any employment agreement, equity award agreement, or similar agreement and any other legal remedies available to the Company. The Company shall provide notice and seek written acknowledgement of this Policy from each Covered; *provided*, that the failure to provide such notice or obtain such acknowledgement shall have no impact on the applicability or enforceability of this Policy to, or against, any Covered Executive.

IX. No Indemnification of Covered Executives

Notwithstanding any right to indemnification under any plan, policy or agreement of the Company or any of its affiliates, the Company shall not indemnify any Covered Executives against the loss of any excess Compensation. In addition, the Company shall be prohibited from paying or reimbursing a Covered Executive for premiums of any third-party insurance purchased to fund any potential recovery obligations.

X. Indemnification

To the extent allowable pursuant to applicable law, each member of the Board or the Committee and any officer or other employee to whom authority to administer any component of this Policy is designated shall be indemnified and held harmless by the Company from any loss, cost, liability, or expense that may be imposed upon or reasonably incurred by such member in connection with or resulting from any claim, action, suit, or proceeding to which he or she may be a party or in which he or she may be a party or in which he or she may be involved by reason of any action or failure to act pursuant to this Policy and against and from any and all amounts paid by him or her in satisfaction of judgment in such action, suit, or proceeding against him or her; *provided, however*, that he or she gives the Company an opportunity, at its own expense, to handle and defend the same before he or she undertakes to handle and defend it on his or her own behalf. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such individuals may be entitled pursuant to the Company's Articles of Incorporation or Bylaws, as a matter of law, or otherwise, or any power that the Company may have to indemnify them or hold them harmless.

XI. Effective Date

This Policy shall be effective as of the date the Policy is adopted by the Board (the "**Board Adoption Date**"). This Policy shall apply to any Compensation that is received by Covered Executives on or after the October 2, 2023 (the "**Effective Date**"), even if such Compensation was approved, awarded, granted, or paid to Covered Executives prior to the Effective Date or the Board Adoption Date.

XII. Amendment and Termination; Interpretation

The Board may amend this Policy from time to time in its sole discretion and shall amend this Policy as it deems necessary to reflect and comply with further regulations, rules and guidance of the SEC and Nasdaq Listing Rules. The Board may terminate this Policy at any time.

The Committee is authorized to interpret and construe this Policy and to make all determinations necessary, appropriate, or advisable for the administration of this Policy. This Policy is designed and intended to be interpreted in a manner that is consistent with the requirements of the Listing Standards. To the extent there is any inconsistency between this Policy and such regulations, rules and guidance, such regulations, rules and guidance shall control, and this Policy shall be deemed amended to incorporate such regulations, rules and guidance until or unless the Board or the Committee expressly determine otherwise.

This Policy shall be applicable, binding and enforceable against all Covered Executives and their beneficiaries, heirs, executors, administrators or other legal representatives to the fullest extent of the law. For the avoidance of doubt, this Policy shall be in addition to (and not in substitution of) any other clawback policy of the Company in effect from time to time or applicable to any Covered Executive.

XIII. Definitions

For purposes of this Policy, the following terms shall have the following meanings:

1. “**Company**” means Hoth Therapeutics, Inc., a Nevada corporation, and its subsidiaries and their successors.
2. “**Compensation**” means any compensation which was approved, awarded or granted to, or earned by a Covered Executive (A) while the Company had a class of securities listed on a national securities exchange or a national securities association, and (B) following on or after the Effective Date (including any award under any short-term or long-term incentive compensation plan of the Company, including any other short-term or long-term cash or equity incentive award or any other payment) that, in each case, is granted, earned, or vested based wholly or in part upon the attainment of any Financial Reporting Measure (i.e., any measures that are determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements, and any measure that is derived wholly or in part from such measures, including share price and total shareholder return). Compensation may include (but is not limited to) any of the following:
 - a. Annual bonuses and other short- and long-term cash incentives;
 - b. Stock options;
 - c. Stock appreciation rights;
 - d. Restricted shares;
 - e. Restricted share units;
 - f. Performance shares; and
 - g. Performance units.
3. “**Covered Accounting Restatement**” means any accounting restatement of the Company’s financial statements due to the Company’s material noncompliance with any financial reporting requirement under U.S. securities laws. A Covered Accounting Restatement includes any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements (commonly referred to as “Big R” restatements) or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (commonly referred to as “little r” restatements). A Covered Accounting Restatement does not include (A) an out-of-period adjustment when the error is immaterial to the previously issued financial statements, and the correction of the error is also immaterial to the current period; (B) a retrospective application of a change in accounting principle; (C) a retrospective revision to reportable segment information due to a change in the structure of an issuer’s internal organization; (D) retrospective reclassification due to a discontinued operation; (E) a retrospective application of a change in reporting entity, such as from a reorganization of entities under common control; or (F) a retrospective revision for stock splits, reverse stock splits, stock dividends or other changes in capital structure.

4. “**Covered Executive**” means any person who:
 - a. Has received applicable Compensation:
 - i. During the Three-Year Recovery Period; and
 - ii. After beginning service as an Executive Officer; and
 - b. Has served as an Executive Officer at any time during the performance period for such Compensation.
5. “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.
6. “**Executive Officer(s)**” means an “executive officer” as defined in Exchange Act Rule 10D-1(d) and the Listing Standards and includes any person who is the Company’s president, principal financial officer, principal accounting officer (or if there is no such accounting officer, the controller), any vice president of the issuer in charge of a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person who performs similar policy-making functions for the Company (with any executive officers of the Company’s parent(s) or subsidiaries being deemed Covered Executives of the Company if they perform such policy making functions for the Company), and such other senior executives or employees who may from time to time be deemed subject to the Policy by the Board in its sole discretion. All executive officers of the Company identified by the Board pursuant to 17 CFR 229.401(b) shall be deemed “Executive Officers.”
7. “**Financial Reporting Measure(s)**” means any measures that are determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements, and any measure that is derived wholly or in part from such measures, including share price and total shareholder return, including, but not limited to, financial reporting measures including “non-GAAP financial measures” for purposes of Exchange Act Regulation G and 17 CFR 229.10, as well other measures, metrics and ratios that are not non-GAAP measures, like same store sales. Financial Reporting Measures may or may not be included in a filing with the SEC and may be presented outside the Company’s financial statements, such as in Management’s Discussion and Analysis of Financial Conditions and Results of Operations or the performance graph. Financial Reporting Measures include, without limitation, any of the following:
 - a. Company share price;
 - b. Total shareholder return;
 - c. Revenues;
 - d. Net income;
 - e. Earnings before interest, taxes, depreciation, and amortization (EBITDA);
 - f. Funds from operations;
 - g. Liquidity measures such as working capital or operating cash flow;
 - h. Return measures such as return on invested capital or return on assets; and
 - i. Earnings measures such as earnings per share.