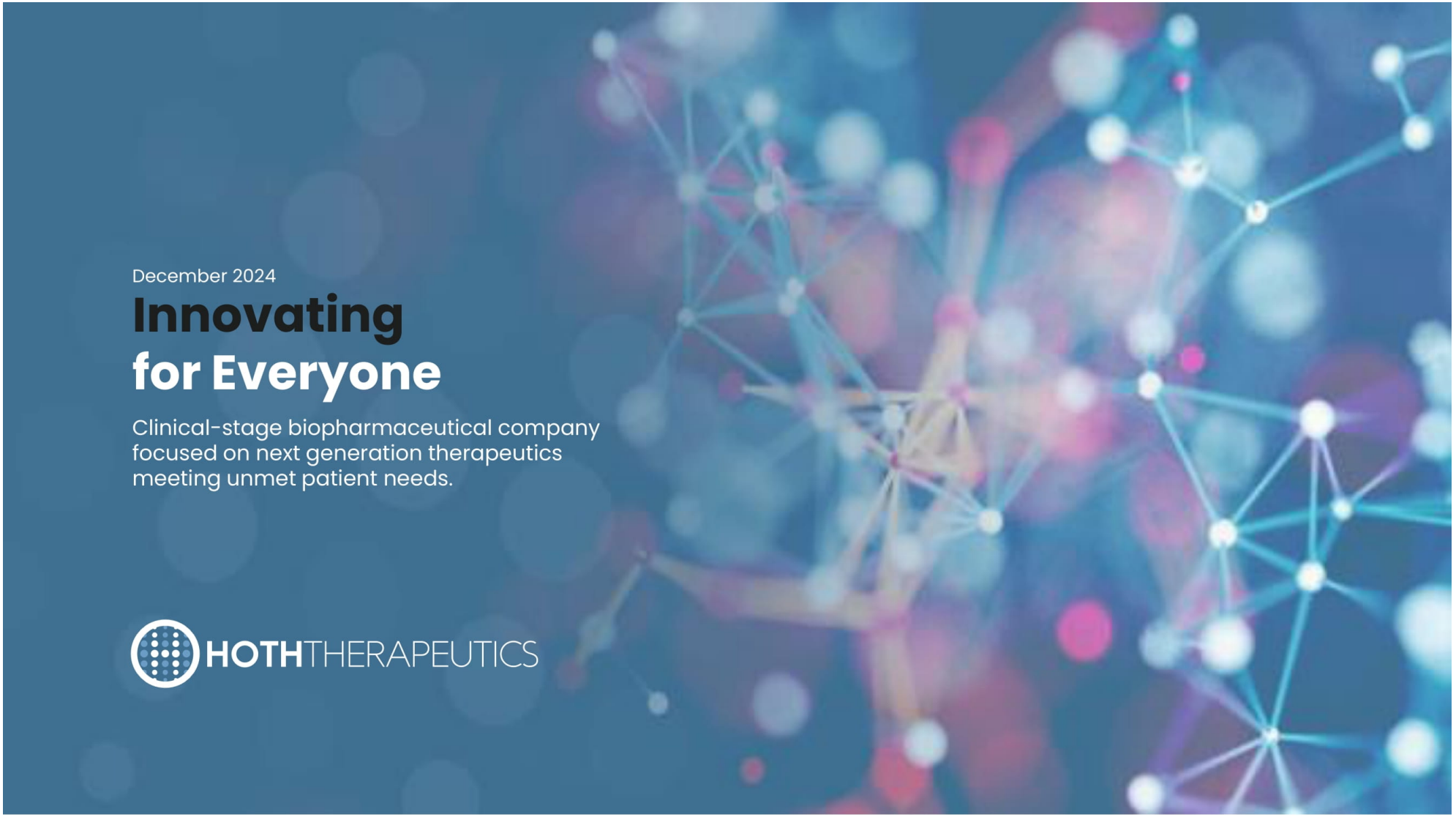
December 2024

Innovating for Everyone

Clinical-stage biopharmaceutical company focused on next generation therapeutics meeting unmet patient needs.



HOTHTHERAPEUTICS

Nasdaq: HOTH

Safe Harbor Statement

HOTHTHERAPEUTICS

This presentation contains "forward-looking statements" within the meaning of the “safe-harbor” provisions of the Private Securities Litigation Reform Act of 1995. These statements are identified by the use of words “could,” “believe,” “anticipate,” “intend,” “estimate,” “expect,” “may,” “continue,” “predict,” “potential” and similar expressions that are intended to identify forward-looking statements. Such statements involve known and unknown risks, uncertainties and other factors that could cause the actual results of Hoth Therapeutics, Inc. (“Hoth” or the “Company”) to differ materially from the results expressed or implied by such statements. These forward-looking statements are made on the basis of the current beliefs, expectations and assumptions of management, are not guarantees of performance and are subject to significant risks and uncertainty. These forward-looking statements should, therefore, be considered in light of various important factors, including those set forth in Hoth’s reports that it files from time to time with the Securities and Exchange Commission (the “Commission”) and which you should review, including those statements under “Item 1A – Risk Factors” in Hoth’s Annual Report on Form 10-K, as amended by its Quarterly Reports on Form 10-Q and other reports that Hoth files with the Commission. Important factors that could cause actual results to differ materially from those described in forward-looking statements contained in this presentation include, but are not limited to: the adverse impact on economies around the world of the ongoing COVID-19 pandemic; changes to our anticipated sources of revenues; competitive conditions; difficulties in obtaining regulatory approvals for the Company’s product candidates; changes in economic and political conditions; the success of our research and development initiates; and other factors. These forward-looking statements should not be relied upon as predictions of future events and Hoth cannot assure you that the events or circumstances discussed or reflected in these statements will be achieved or will occur. If such forward-looking statements prove to be inaccurate, the inaccuracy may be material. You should not regard these statements as representation or warranty by Hoth or any other person that we will achieve our objectives and plans in any specified timeframe, or at all. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this presentation. The Company disclaims any obligations to publicly update or release any revisions to the forward-looking information contained in this presentation, whether as a result of new information, future events or otherwise, after the date of this presentation or to reflect the occurrence of unanticipated events, except as required by law.

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Our Mission

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At Hoth Therapeutics, we strive to develop innovative, impactful, and ground-breaking treatments with a goal to improve patient quality of life. We are a catalyst in early-stage pharmaceutical research and development, elevating promising drugs from the bench to pre-clinical and clinical testing. Utilizing a patient-centric approach, we collaborate and partner with a team of scientists, clinicians, and key opinion leaders to seek out and investigate medications that hold immense potential to create breakthroughs and diversify treatment options. Our mission is to bring value to both our shareholders and our patient populations.

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Key Investment Highlights

HOTHTHERAPEUTICS

Clinical Programs

Robust Pre-Clinical Development Programs

Targeting Unmet Medical Needs to Address Broad Market

Experienced Management and Advisory Board

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Pipeline:
Multiple Shots on Goal

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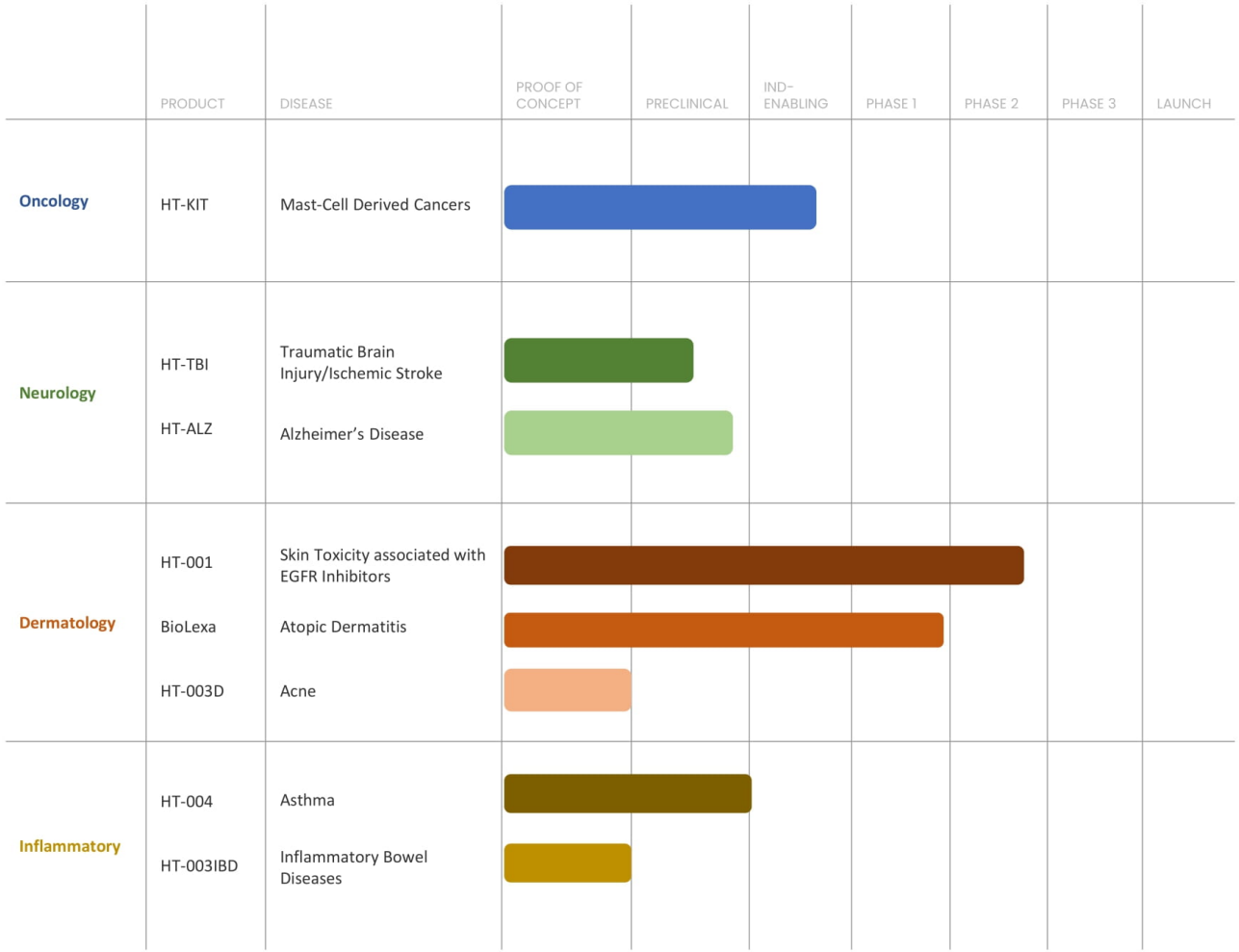

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Primary Development

HOTHTHERAPEUTICS

- HT-001 Topical Gel
- HT-KIT Injection
- HT-ALZ Oral Soluble Film
- BioLexa Lotion

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HT-001:
Value Proposition

Market Growth: EGFR Inhibitor Skin Toxicity market predicted to grow from $52M in 2018 to $391M by end of 2030*

Mechanism of Action: 12-week study conducted at GW suggests the topical application of HT-001 significantly reduces erlotinib-induced cutaneous toxicities applied preventatively or proactively. It supports that HT-001 may be used as a topical intervention to treat EGFR-inhibitor-induced cutaneous toxicity.**

Addresses Unmet Need: No current approved product on the market that specifically treats EGFR inhibitor cutaneous toxicities, which occur in up to 90% of patients undergoing EFGR inhibitor therapy.***

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*EGFR Inhibitors-Induced Skin Disorders-Market Insights, Epidemiology, and Market Forecast-2030

**https://ir.hoththerapeutics.com/ht-001

***https://jamanetwork.com/journals/jamadermatology/article-abstract/2767656

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Recent & Upcoming Milestones:

HT-001 Topical Gel

Q1 2023

Initiated Phase 2a Clinical Trial in Open Label Cohort

Q4 2024

All Clinical Sites Active and Enrolling in Open Label and Double-Blind Randomized Cohorts

Q1 2025

Initial Interim Open Label PK Cohort Data

Q3 2025

Full Data Set for Open Label PK Cohort

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IND-Opening Trial:

CLEER-001 Phase 2a Dose Ranging Study

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A Randomized, Placebo-Controlled, Parallel Phase 2a Dose Ranging Study to Investigate the Efficacy, Safety, and Tolerability of Topical HT-001 for the Treatment of Cutaneous Toxicities Associated with EGFR Inhibitors

2 Parts – Parallel Study Design:

- **Part 1:** Open-label treatment with HT-001 2% for 6 weeks (PK cohort)
- **Part 2:** Randomized double-blind treatment with HT-001 0.5%, 1%, 2% or placebo

Part 1

Open-Label PK Cohort

(6 weeks treatment
+ 2 weeks follow-up)
N = 12 patients

Part 2

Randomized, Double Blind Period

(6 weeks treatment
+ 2 week treatment follow-up)
N = 140 patients

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HT-001
505(b)(2) Development Pathway

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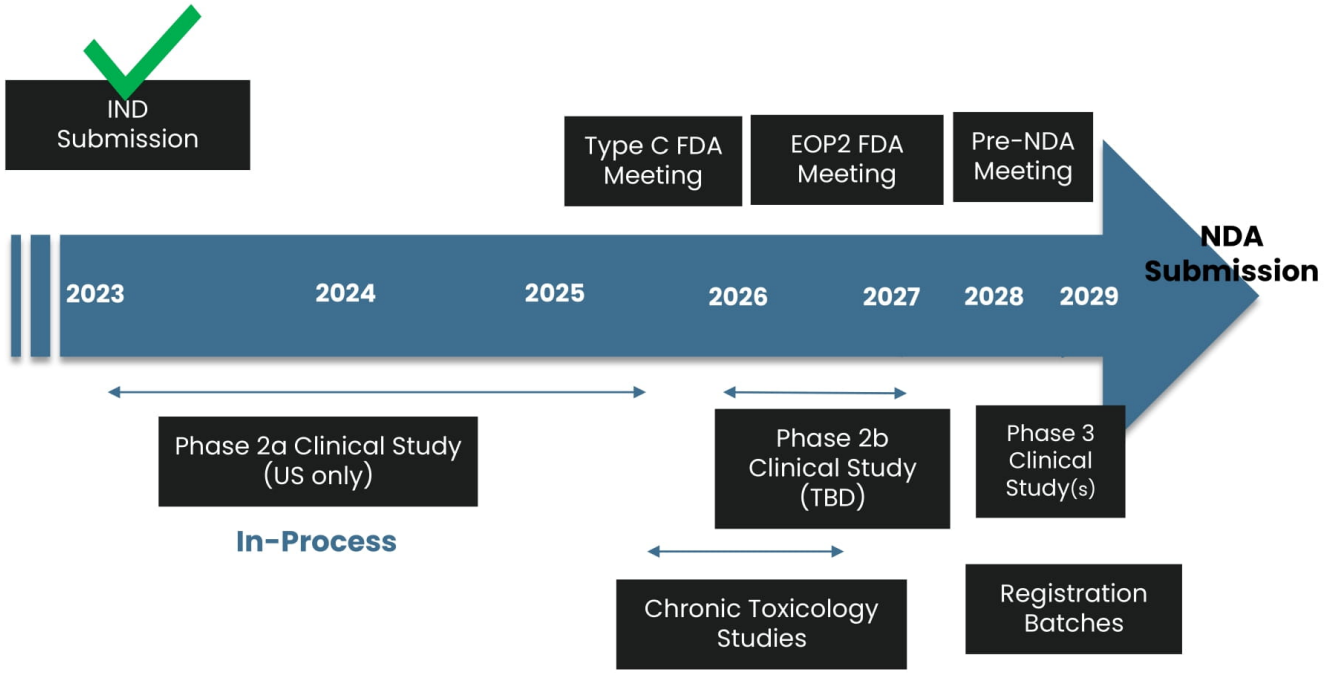

Current estimated dates; pending FDA meetings for phase 2b/phase 3 clinical studies

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Proactive Topical HT-001 Significantly Reduces EGFR Inhibitor-Induced Cutaneous Toxicity

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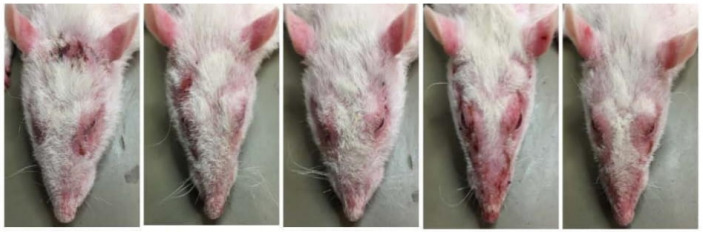
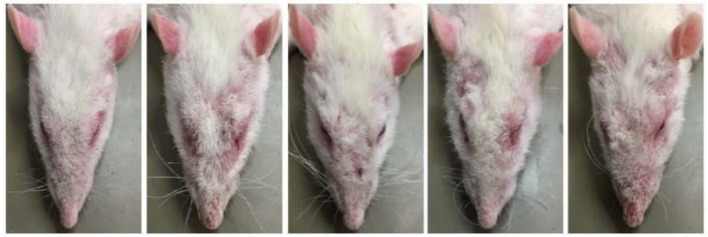
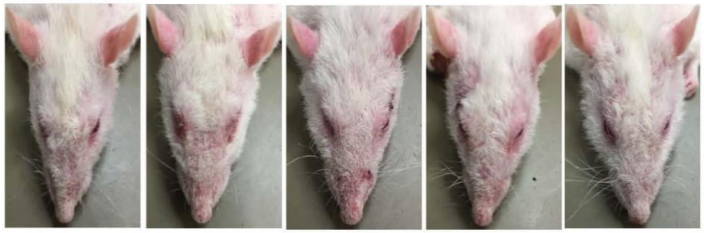
Erlotinib (noVeh C) – Week 12



Erlotinib + Topical HT-001 Initiated Week 1 – Week 12



Erlotinib + Topical HT-001 Initiated Week 6 – Week 12



Group	Change Compared to Erlotinib Only Group: Facial Skin Lesions at 12 weeks	Change Compared to Erlotinib Only Group: Hair Loss at 12 weeks
Preventative Topical HT-001 + Erlotinib	58.5% Reduction ($p<001$ vs Erl and $p<0.01$ vs control)	56.2% reduction in hair loss ($p<0.001$ vs Erl and $p<0.001$ vs control)
Proactive (week 6) Topical HT-001 + Erlotinib	47.8% reduction ($p<0.001$ vs Erl and $p<0.001$ vs control)	44.4% reduction in hair loss ($p<0.001$ vs Erl and $p<0.001$ vs control)

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HT-KIT:
Value Proposition

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Market Growth: Global systemic mastocytosis treatment revenue is $128M and projected to grow at 5.8% CAGR through 2031*

Mechanism of Action: HT-KIT is an antisense oligonucleotide that results in non-functional cKIT via mRNA frameshift.**

Addresses Unmet Need: KIT D816V mutation found in >80% of adult systemic mastocytosis cases results in confirmational changes that make some tyrosine kinase inhibitor drugs ineffective.**

cKIT is also implicated in gastrointestinal stromal tumors, acute myeloid leukemia, and other rare cancers

*Global Systemic Mastocytosis Treatment Market Research Report, January 2022, Market.US

**Snider et al., Targeting KIT by frameshifting mRNA transcripts as a therapeutic strategy for aggressive mast cell neoplasms, Molecular Therapy (2021), https://doi.org/10.1016/j.ymthe.2021.08.009

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Recent & Upcoming Milestones: HT-KIT Injection

Q4 2023
Pre-IND Meeting with FDA and strategy confirmed

Q1 2024
IND-enabling animal toxicology studies initiated

Q1 2025
GLP animal studies and GMP API manufacturing initiation target

Q4 2025
IND Submission target

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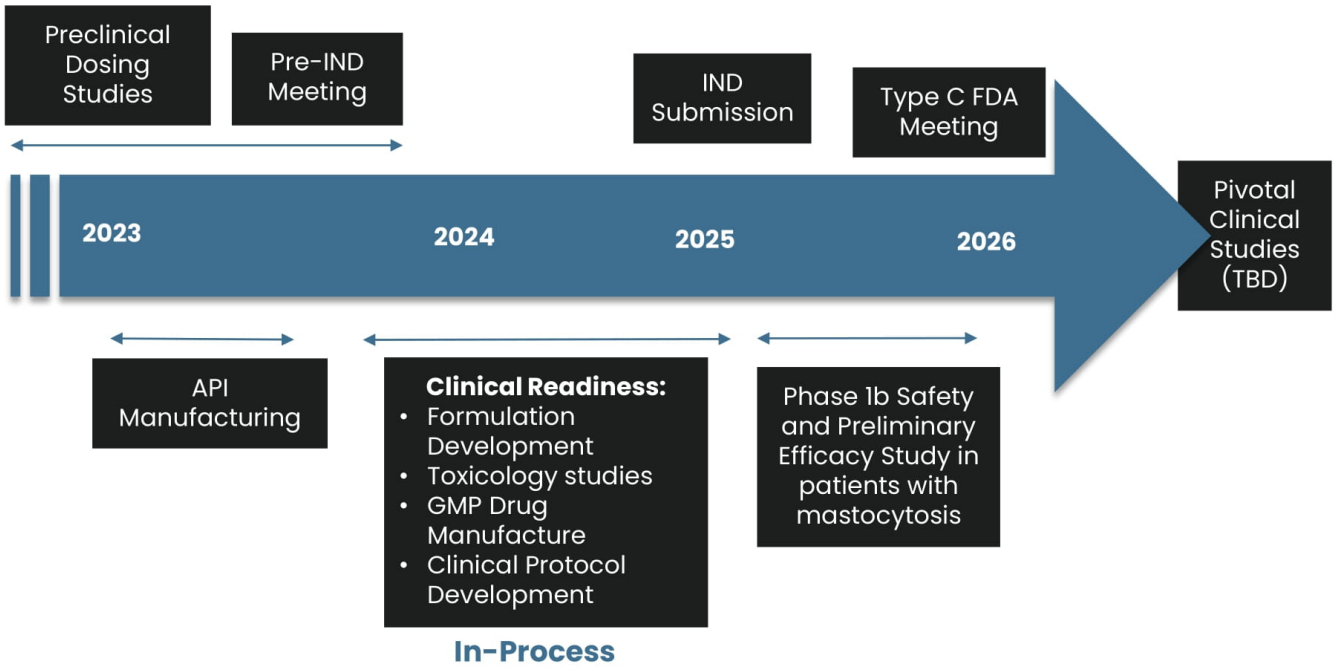
HT-KIT Orphan Drug Development Pathway



Current estimated dates; pending FDA meetings for clinical studies.

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Systemic delivery of human HT-KIT inhibits tumor growth in a humanized xenograft mast cell neoplasia model

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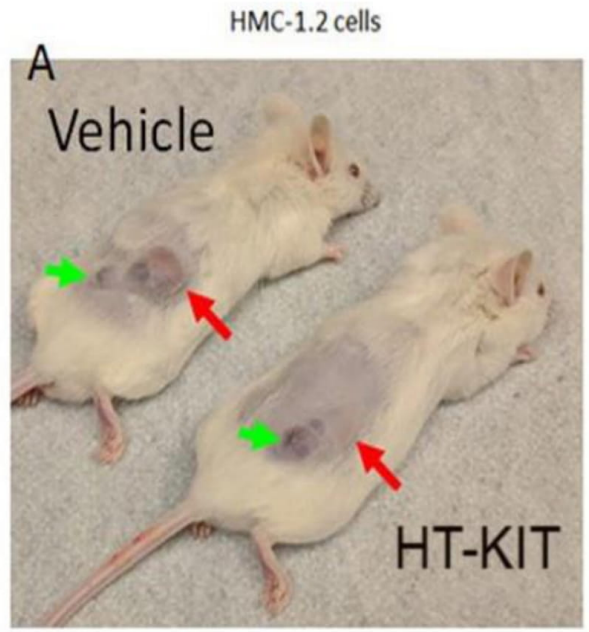

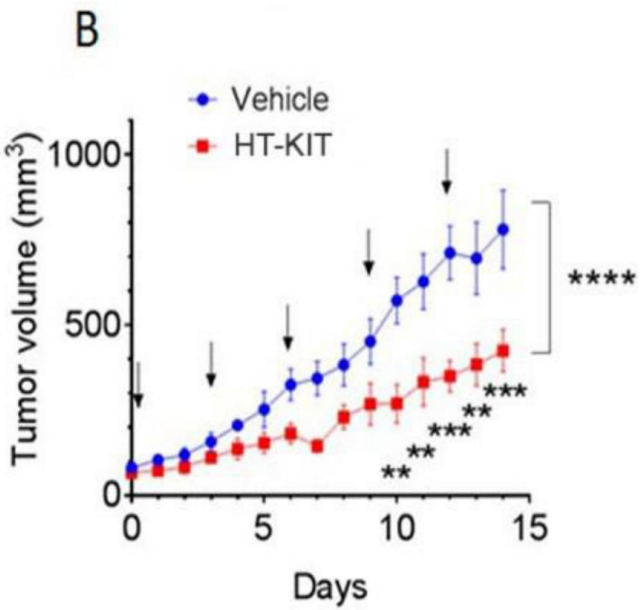

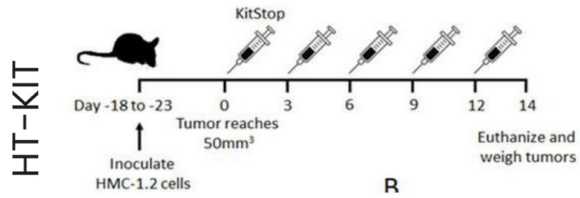

Figures from Douglas B. Snider1, Greer K. Arthur1, Guido H. Falduto2, Ana Olivera2, Lauren C. Ehrhardt-Humbert1, Emmaline Smith1, Cierra Smith1, Dean D. Metcalfe2 and Glenn Cruse1 (1Department of Molecular Biomedical Sciences, CVM, NC State University 2Laboratory of Allergic Diseases, NIAID, NIH). Targeting KIT by frameshifting mRNA transcripts as a therapeutic strategy for aggressive mast cell neoplasms. Poster presentation at ASCO June 2021.

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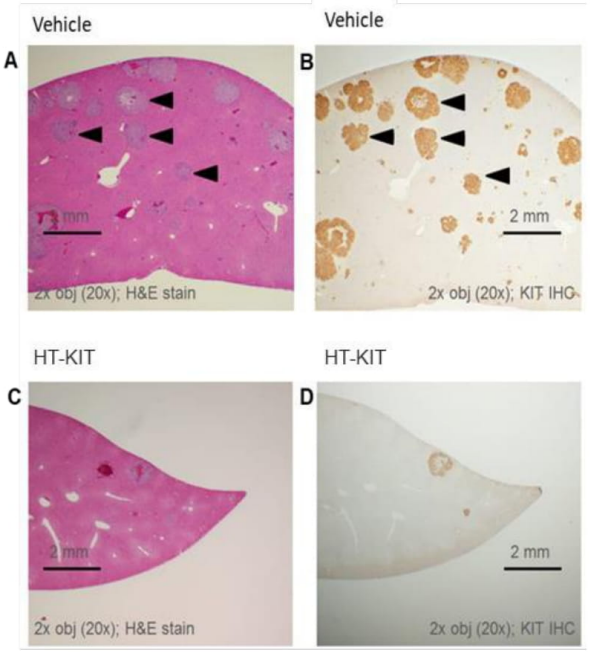
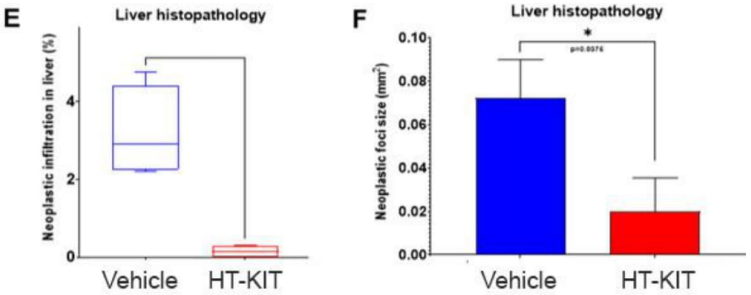
HT-KIT Reduces Liver Infiltration of Neoplastic Mast Cells in a Humanized Xenograft Model of Mast Cell Neoplasia





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HT-ALZ:
Value Proposition

Market Growth: The Global Alzheimer's Disease Treatment Market is expected to grow at a CAGR of around 12.8% from 2020 to 2027 and reach the market value of over $5.2B by 2027.*

Mechanism of Action: HT-ALZ targets the Substance P/Neurokinin-1 Receptor pathway** in the brain, which has both negative (inflammatory) and positive (anti-amyloidogenic, memory, neuroprotective) roles in Alzheimer's disease.

Addresses Unmet Need: : There are currently no drugs approved that are considered disease modifying and demonstrate cognitive improvement. Preclinical data with HT-ALZ indicates HT-ALZ may provide reduced neuroinflammation and significant improvements in cognitive functions such as memory and learning.

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*https://www.acumenresearchandconsulting.com/alzheimers-disease-treatment-market

**Martinez AN, Philipp MT. Substance P and Antagonists of the Neurokinin-1 Receptor in Neuroinflammation Associated with Infectious and Neurodegenerative Diseases of the Central Nervous System. J Neurol Neuromedicine. 2016;1(2):29-36. doi:10.29245/2572.942x/2016/2.1020

**Severini C, Petrella C, Calissano P. Substance P and Alzheimer's Disease: Emerging Novel Roles. Curr Alzheimer Res. 2016;13(9):964-72. doi: 10.2174/1567205013666160401114039. PMID: 27033058.

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Recent & Upcoming Milestones: HT-ALZ Oral Soluble Film

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Q2 2024
HT-ALZ Formulation Work initiated

Q3 2024
US Patent Office Awarded HT-ALZ Patent

Q3 2024
Preclinical Studies completed at WashU

2025
Pre-IND Meeting Submission

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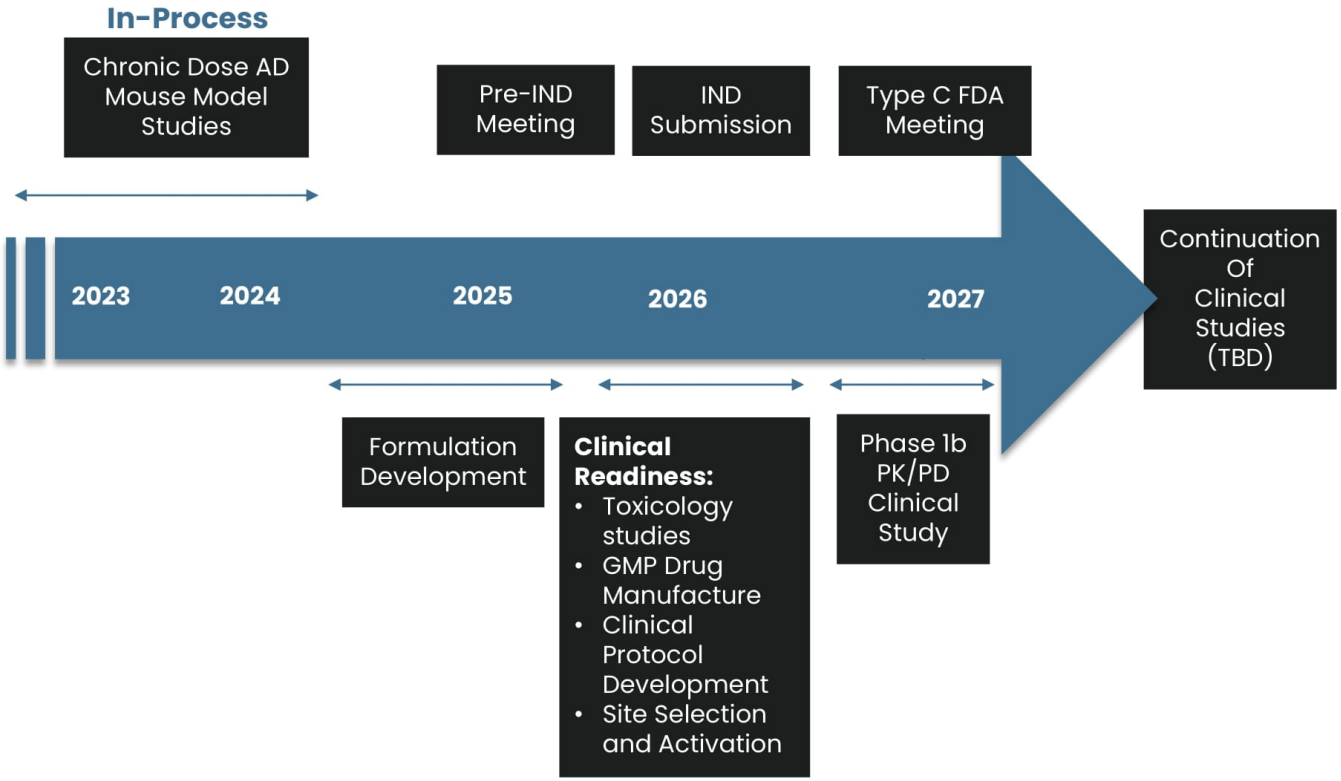
HT-ALZ 505(b)(2) Development Pathway



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Current estimated dates; pending FDA meetings for clinical studies.

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Biolexa:
Value Proposition

Market Growth: Atopic dermatitis market predicted to grow from $6.4B in 2017 to $18.3B by end of 2027*

Mechanism of Action: Novel mixture of two previously approved compounds targeting the underlying Staphylococcus aureus infection hypothesize to potentiate Atopic Dermatitis (AD) or eczema flares - First compound prevents biofilm formation, which protects the underlying infection, allowing the second, an antibiotic, to more effectively treat the underlying infection.

Addresses Unmet Need: Non-corticosteroid treatment targeted for treatment of both pediatric and adult mild to moderate AD populations

*Atopic Dermatitis Market – Global Industry Analysis, Size and Forecast, 2017-2027

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Nasdaq: HOTH

Recent & Upcoming Milestones: BioLexa Lotion

2021
Phase 1b Cohort 1 with healthy subjects completed

Dec 2021
Phase 1b cohort in patients with mild to moderate atopic dermatitis initiated

Sep 2022
Open Label dosing portion of Phase 1b Study is completed

2023
Data Readout from Phase 1b Clinical Study

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BioLexa Phase 1b Clinical Study Design

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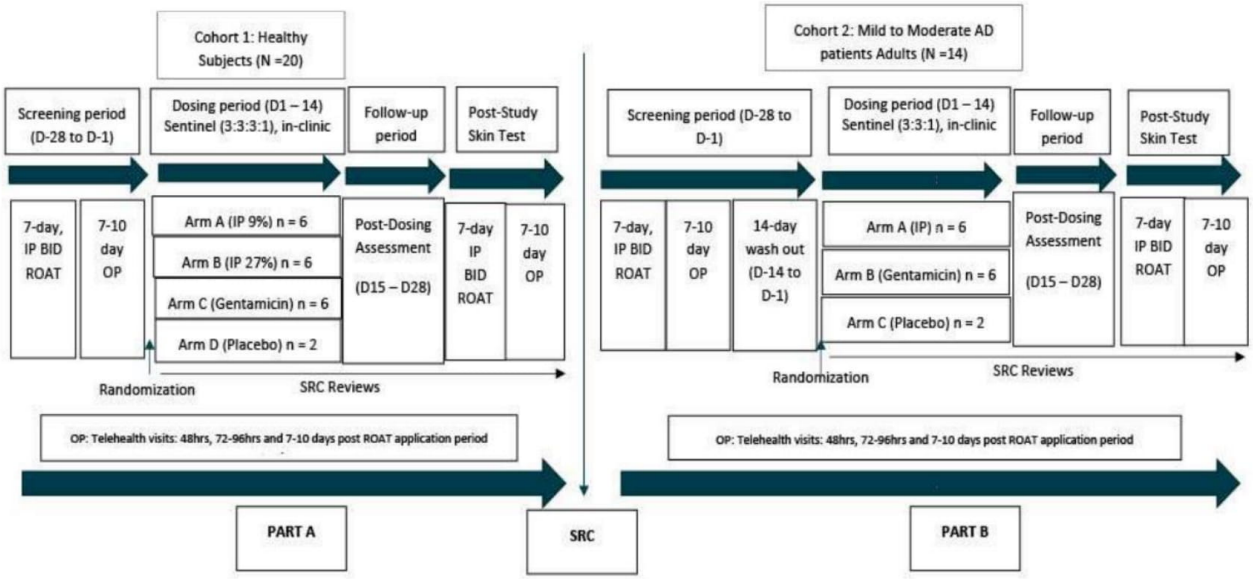
A Randomised, Double-Blind, Vehicle Controlled, Sequential Group Study to Determine the Safety, Tolerability, Pharmacokinetics and Efficacy of Twice Daily Application of Topical BioLexa™ in Adult Healthy Subjects and Patients with Mild to Moderate Atopic Dermatitis



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BioLexa: Proof-of-Concept Results

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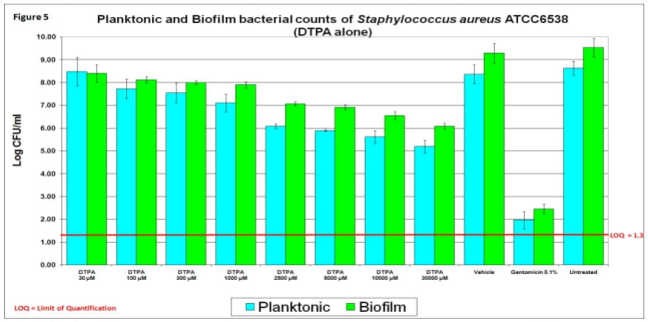
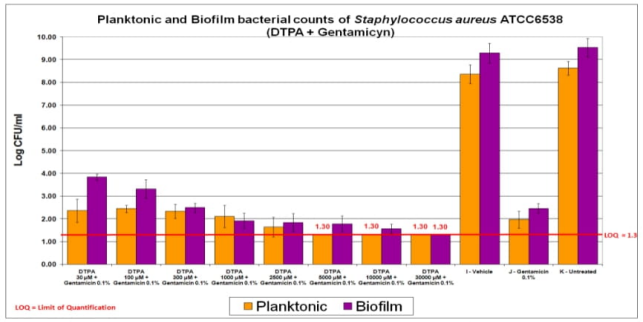
This study concluded that the combination of gentamicin and Ca-DTPA is more effective to reduce bacteria growth and inhibit the formation of biofilms than each compound individually.



DTPA Alone

Gentamicin Alone

Miller School of Medicine, of the University of Miami and University of Cincinnati - Determination of the effects of a novel antimicrobial agent used in conjunction with Gentamicin on *Staphylococcus aureus* using a porcine model: preliminary evaluations Jose Valdes, Joel Gil, Andrew Herr, Andrew Harding and Stephen Davis



Combination Reduced Bacteria Below LOQ

Miller School of Medicine, of the University of Miami and University of Cincinnati - Determination of the effects of a novel antimicrobial agent used in conjunction with Gentamicin on *Staphylococcus aureus* using a porcine model: preliminary evaluations Jose Valdes, Joel Gil, Andrew Herr, Andrew Harding and Stephen Davis

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Preclinical Development

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- HT-003
- HT-004
- HT-TBI

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HT-003:
Value Proposition

Market Growth: The global acne treatment market size was valued at $5.46 Bn in 2019 & is projected to reach $7.19 Bn by 2027, with a CAGR of 4.6% during forecast period.* IBD Treatment market was valued at USD 15.87 billion by 2019, growing with 4.1% CAGR during the forecast period, 2020-2026**

Mechanism of Action: Group of novel inhibitors of retinoic acid metabolism (collectively called RAMBAs), which prolong the presence of retinoic acid. Retinoids play key role in the regulation of immune cells and inflammation and are also important for differentiation of the skin.

Addresses Unmet Need: Focuses on restoring immune system rather than inducing immune suppression (current therapies)

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*https://www.fortunebusinessinsights.com/acne-treatment-market-103361

**https://www.marketwatch.com/press-release/inflammatory-bowel-disease-ibd-treatment-market-analysis-share-trends-size-forecast-from-2020---2030-2021-11-01?tesla=y

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HT-003D: Dermal Preclinical Study Results

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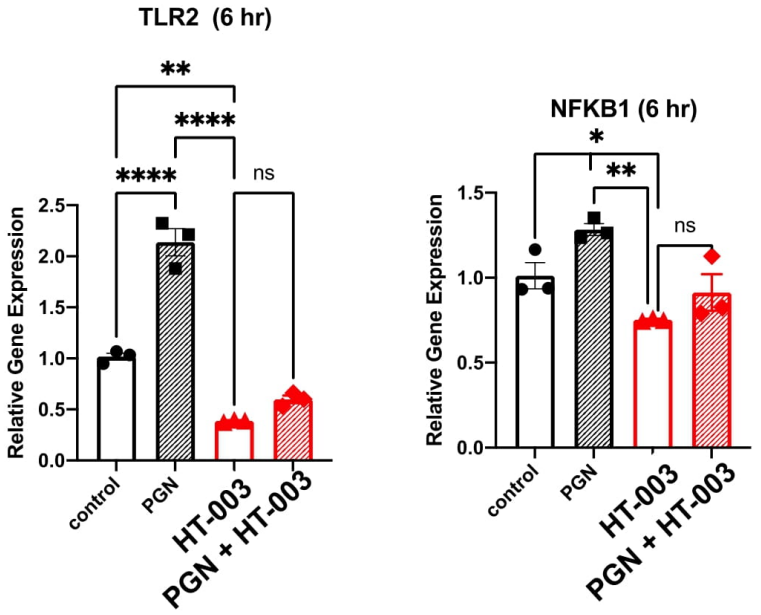

TLR2 is one of the most critical genes for acne pathophysiology

Data shows that HT-003 significantly downregulates TLR2 expression after challenge with PGN (TLR2 agonist) in an in vitro human keratinocyte model

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HT-003IBD: Preclinical Study Results

Ulcerative Colitis
Ex Vivo Tissue
(n = 2 donors)

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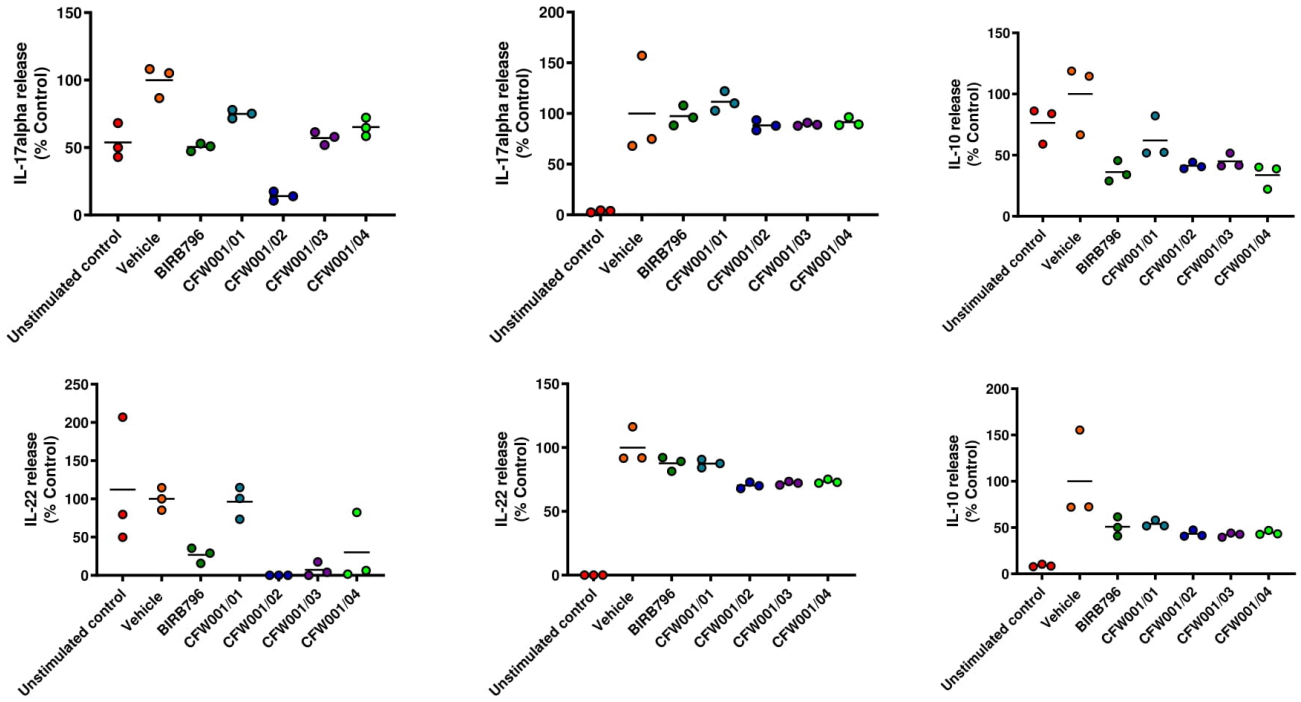

HT-003 molecules reduce inflammatory cytokines associated with IBD and promotes intestinal homeostasis

BIRB796 = positive therapeutic control | CFW = HT-003 molecules 1 – 4 unique entities

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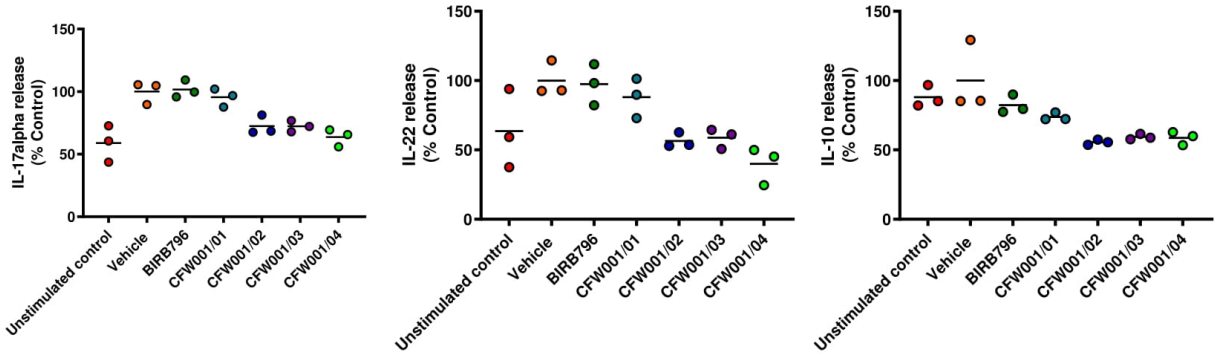
HT-003IBD: Preclinical Study Results

Crohn's Ex Vivo Tissue
(n = 1 donor)



HT-003 molecules reduce inflammatory cytokines associated with IBD and promotes intestinal homeostasis

CFW = HT-003 molecules 1 – 4 unique entities | BIRB796 = positive therapeutic control

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HT-004:
Value Proposition

Market Growth: The global asthma therapeutics market reached a value of $17.6B in 2020. The market is expected to reach a value of $19.13B by 2026, expanding at a CAGR of 1.60% during 2021-2026.*

Mechanism of Action: Target IgE receptor trafficking to prevent downstream inflammatory pathways

Addresses Unmet Need: New class of drug for maintenance treatment of asthma with potential for a better safety profile

*Asthma Therapeutics Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2021-2026, imarc

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HT-004: Asthma & Allergic Inflammation

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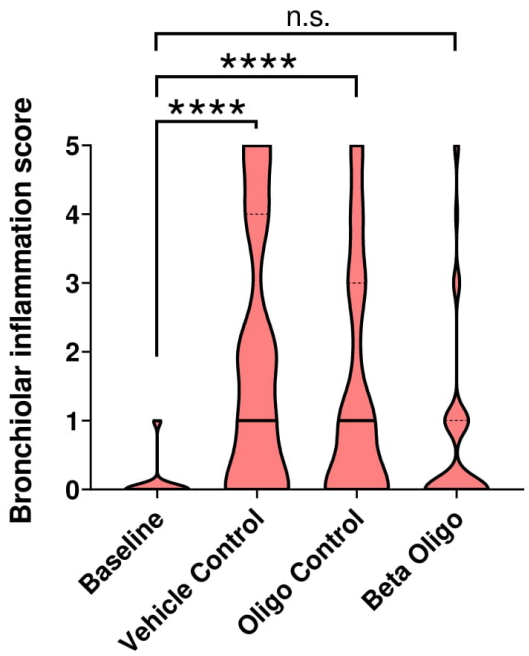

- Peribronchiolar Inflammation was reduced by inhalation of HT-004 that targets FcER1-beta alternative exon splicing.
- Ovalbumin inhalation induced airway-centric recruitment of inflammatory cells predominated by eosinophils admixed with lymphocytes, macrophages, and fewer mast cells.
- Inflammatory cell recruitment was minimal in lungs of mice lacking the ovalbumin-induced allergic airway disease and administered only PBS vehicle control.
- Inflammatory cell recruitment was moderate to marked resulting in expansion of peribronchiolar connective tissues by several cells thick in some areas for mice in control treatment groups with ovalbumin-induced allergic airway disease (vehicle control and oligo (non-target) control.
- Despite ovalbumin-induced allergic airway induction, lungs from mice receiving inhalation of HT-004 had reduced inflammatory cell recruitment around bronchioles.

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HT-TBI:
Value Proposition

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Market Growth: The global stroke management market size was valued at $31.7B in 2020, and is projected to reach $67.7B by 2030, registering a CAGR of 7.8% from 2021 to 2030.*

The traumatic brain injuries treatment market to account $201.1B by 2029 by growing at a CAGR of 5.00% in the forecast period of 2022-2029.**

Mechanism of Action: Target neurokinin-1/substance P to prevent downstream inflammatory pathways leading to secondary brain injury (edema, inflammation)

Addresses Unmet Need: : There is insufficient clinical evidence to support the use of the current hyperosmotic therapy methods (eg, mannitol) for lowering intracranial pressure per the Guidelines for the Management of Severe Traumatic Brain Injury; hyperosmotic therapy can also be associated with risk to patient morbidity and mortality.***

*Stroke Management Market Statistics 2030, Allied Market Research

**Global Traumatic Brain Injuries Treatment Market – Industry Trends and Forecast to 2029, Data Bridge Market Research

***Guidelines for the Management of Severe Traumatic Brain Injury 4th Edition, Brain Trauma Foundation

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Investment Highlights

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Programs in Clinical Stage of Development

- Addressing multi-billion-dollar unmet market opportunities across indications
- HT-001 – no approved product/competitor currently on the market, clinical trial currently enrolling
- HT-KIT – Pre-IND Meeting with FDA successful and IND-enabling tox studies and development planned for 2025

Diverse and Robust Pipeline of Pre-Clinical Candidates

- Offers strong intellectual property portfolio, including exclusive licenses to patents and trademarks
- Multiple shots on goal with diversified portfolio and market
- Multiple assets have platform technology possibilities

Clean Financials

- 7.7 million shares outstanding (as of November 29, 2024)
- Cash on hand is sufficient to take company through the clinical and pre-clinical programs currently in development

Experienced Management, Board and Scientific Advisors

- Experienced management team, board of directors and scientific advisors with proven financial, capital markets and drug development experience

Contact Information

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investorrelations@hoththerapeutics.com

Nasdaq: HOTH