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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): November 20, 2023

MATINAS BIOPHARMA HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-38022**	**46-3011414**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer ID Number)**

1545 Route 206 South, Suite 302 **Bedminster, New Jersey** **(Address of principal executive offices)**	**07921** **(Zip Code)**

Registrant's telephone number, including area code: (908) 484-8805

Not Applicable
(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock	MTNB	NYSE American

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company ☐

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. ☐

Item 7.01 Regulation FD Disclosure.

Matinas BioPharma Holdings, Inc. (the "Company") updated its corporate presentation (the "Corporate Presentation") which it intends to use at various conferences and investor meetings. The Corporate Presentation is attached hereto as Exhibit 99 and incorporated herein by reference.

The information in this Item 7.01 and Exhibit 99.1 attached hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, nor shall such information be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

Exhibit No.	Description
99.1	Corporate Presentation dated November 20, 2023
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MATINAS BIOPHARMA HOLDINGS, INC.

Dated: November 20, 2023

By: */s/ Jerome D. Jabbour*
Name: Jerome D. Jabbour
Title: Chief Executive Officer

MATINAS BIOPHARMA

Corporate Presentation

November 2023

www.matinasbiopharma.com
NYSE American: MTNB

Forward Looking Statements

This presentation contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including those relating to the Company's product development, clinical and regulatory timelines, market opportunity, cash flow and other statements that are predictive in nature, that depend upon or refer to future events or conditions. All statements other than statements of historical fact are statements that could be forward-looking statements. Forward-looking statements include words such as "expects," "anticipates," "intends," "plans," "could," "believes," "estimates" and similar expressions. These statements involve known and unknown risks, uncertainties and other factors which may cause actual results to be materially different from any future results expressed or implied by the forward-looking statements. Forward-looking statements are subject to a number of risks and uncertainties, including, but not limited to, our ability to obtain additional capital to meet our liquidity needs on acceptable terms, or at all, including the additional capital which will be necessary to complete the clinical trials of our product candidates; our ability to successfully complete research and further development and commercialization of our product candidates; the uncertainties inherent in clinical testing; the timing, cost and uncertainty of obtaining regulatory approvals; our ability to protect the Company's intellectual property; the loss of any executive officers or key personnel or consultants; competition; changes in the regulatory landscape or the imposition of regulations that affect the Company's products; and the other factors listed under "Risk Factors" in our filings with the SEC, including Forms 10-K, 10-Q and 8-K. Investors are cautioned not to place undue reliance on such forward-looking statements. Except as may be required by law, the Company does not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Matinas BioPharma's product candidates are all in a development stage and are not available for sale or use.

Matinas Investment Thesis: LNC Delivery Unlocks Therapeutic Value

Lipid Nanocrystals (LNCs)

- Intracellular delivery
- Oral administration
- Less toxicity
- Targeting beyond the liver

MAT2203 — Clinical Validation of LNC Capabilities → **Pipeline Products and Opportunities**

- **Oral** Amphotericin B - without nephrotoxicity
- Phase 3–ready (Invasive Aspergillosis in ~198 patients with limited or no treatment options)
- Provides effective longer-term fungicidal stepdown therapy for Invasive Fungal Infections
- 12 years of exclusivity* *QIDP and Orphan designations

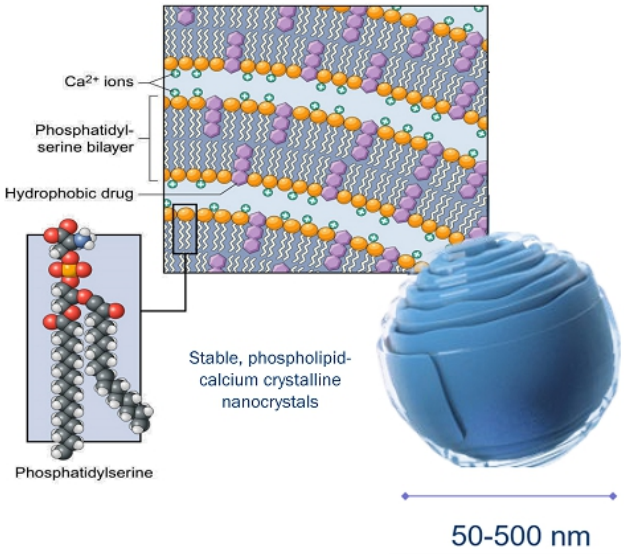
- Current efforts expanding LNC application beyond small molecules to include delivery of smaller oligonucleotides (ASOs, siRNA, RNAi)
- Expanding primary therapeutic applications from infectious disease (antifungal, antibiotic, antiviral) to ***inflammation*** and ***cancer***

Internal and External Pipeline

Program	Indication	Discovery	Preclinical	Phase 1	Phase 2	Phase 3	Collaborators
MAT2203 **LNC-Amphotericin B (oral)**	Invasive Aspergillosis (LPAD)				Phase 3 Ready		NIH
LNC Internal platform programs **(small oligonucleotides)**	Undisclosed	RNAi (siRNA, ASOs)					Undisclosed
LNC-ASO							
LNC-small molecule	Undisclosed						Genentech A Member of the Roche Group
LNC-Fab fragment							
PS-NPs – mRNA and Nucleic Acids	Undisclosed						RESILIENCE

Internal Programs Joint Programs

Lipid Nanocrystals (LNCs): A Clinically Validated Intracellular Delivery Platform



Delivery of small molecules and small oligonucleotides

- Successful delivery of small molecules, proteins, small oligos (siRNA, ASOs), and vaccines

Extra-hepatic targeting

- Selective uptake driven by phosphatidylserine enables delivery in infection, inflammation, oncology
- Validated Blood-Brain-Barrier penetration (MAT2203)

Oral delivery

- Unique structure protects cargo in GI tract, avoids first-pass hepatic metabolism

Safe & stable

- Deliver high-target tissue concentrations of drug with low plasma levels and no absorption by non-target tissues
- No evidence of immunogenicity or cytotoxicity

MATINAS BIOPHARMA

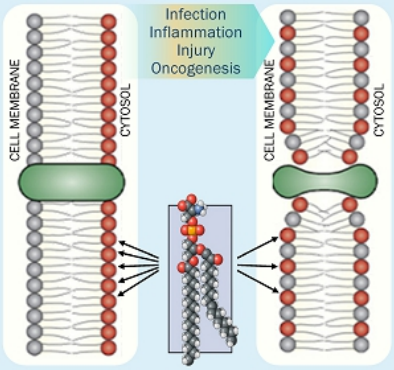
Phosphatidylserine Enables Cellular Targeting and Intracellular Delivery

Targeting

Stressed Cells Externalize PS

Normally, PS is confined to the inner layer (facing cytosol)

With injury, PS moves from the inner layer to the outer layer of the cell membrane



Delivery

With a wide variety of potential target cells

PROFESSIONAL PHAGOCYTES
- Macrophages/monocytes
- Neutrophils
- Dendritic cells

NON-PROFESSIONAL PHAGOCYTES
- Fibroblasts, epithelial cells, endothelial cells

INJURED/STRESSED CELLS
- Infection
- Inflammation
- Other physiologic stressors

TUMOR CELLS

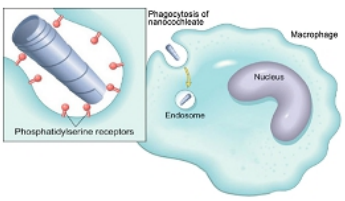
IMMUNE CELLS
- T-cells

OTHER ACTIVELY DIVIDING CELLS (including extracellular pathogens)

PS-containing LNCs deliver their cargo to the interior of cells by both phagocytosis and fusion

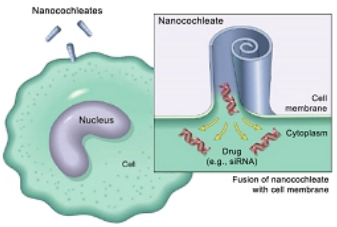
PHAGOCYTOSIS

PS on the outer layer of injured cells is an "eat-me" signal enabling recognition and uptake by professional phagocytes. Cargo-carrying LNCs can be taken up in a similar fashion, with subsequent endosomal escape of cargo.



FUSION

PS on the outer cell membrane is also a precursor for direct membrane-to-membrane fusion and more rapid direct cytosolic delivery by cargo-carrying LNCs to cells expressing PS on their outer membranes.



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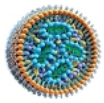
LNCs – Differentiated from Liposomes and LNPs

	 Liposome	 LNP	 LNC
Structure	• Aqueous interior surrounded by bilayer • Drug can be encapsulated in aqueous core or bilayer	• Ionizable lipid complexing with mRNA • Non-aqueous interior	• Non-aqueous bilayer • Highly stable
Formulation Strengths	• Enable IV administration of insoluble products	• Intracellular delivery (ASOs, siRNAs, mRNA) • Improve stability, half-life	• Efficient intracellular delivery – Small molecules – ASOs, miRNAs, siRNAs • Reduced toxicity • Oral delivery
Formulation Limitations	• Liposomes often "leak" causing side effects • IV Administration	• Cationic lipid toxicity not suitable for chronic use • Anti-PEG allergic response • Very limited shelf stability • Cold-chain requirements	• **Targeted, extra-hepatic delivery to desired cells and tissues**

MAT2203
Oral Amphotericin B

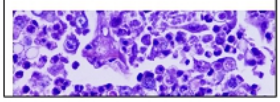
Clinical Validation of LNC Delivery

The Growing Threat of Invasive Fungal Infections (IFIs)

WIRED

The Battle Against the Fungal Apocalypse Is Just Beginning

Fungal infections are rising worldwide and climate change may be to blame. Medicine isn't ready.



Nature Reviews Microbiology **2022**

Tackling the emerging threat of antifungal resistance to human health

Matthew C. Fisher, Ana Alastruey-Izquierdo, Judith Berman, Tihana Bicanic, Elaine M. Bignell, Paul Bowyer, Michael Bromley, Rogier Bruggemann, Gary Garber, Oliver A. Cornely, Sarah J. Gurr, Thomas S. Harrison, Ed Kuijper, Johanna Rhodes, Donald C. Sheppard, Adilia Warris, P. Lewis White, Jianping Xu, Bas Zwaan and Paul E. Verweij

Abstract | Invasive fungal infections pose an important threat to public health and are an under-recognized component of antimicrobial resistance, an emerging crisis worldwide. Across a period of profound global environmental change and expanding at-risk populations, human-infecting pathogenic fungi are evolving resistance to all licensed systemic antifungal drugs. In this Review, we highlight the main mechanisms of antifungal resistance and explore the similarities and differences between bacterial and fungal resistance to antimicrobial control. We discuss the research and innovation topics that are needed for risk reduction strategies aimed at minimizing the emergence of resistance in pathogenic fungi. These topics include links between the environment and One Health, surveillance, diagnostics, routes of transmission, novel therapeutics and methods to mitigate hotspots for fungal adaptation. We emphasize the global efforts required to steward our existing antifungal armamentarium, and to direct the research and development of future therapies and interventions.

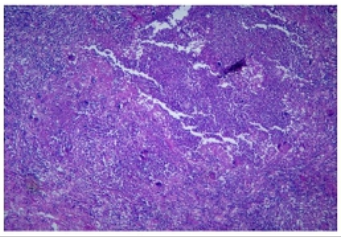
New York Times

Wall Street Journal

Dangerous Fungi Are Spreading Across U.S. as Temperatures Rise

Some fungi such as the type that causes Valley Fever might be adapting to endure more heat stress

By Dominique Mosbergen



WHO fungal priority pathogens list to guide research, development and public health action

World Health Organization

Scientific American

Deadly Fungi Are the Newest Emerging Microbe Threat All Over the World

Those pathogens already kill 1.6 million people every year, and we have few defenses against them

By Maryn McKenna

Wall Street Journal

Deadly Fungal Infections Confound Doctors—'It's Going to Get Worse'

Once a freak occurrence, fungi resistant to standard drugs now threaten millions of vulnerable Americans

By Dominique Mosbergen

NBC Nightly News

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MAT2203: Unlocking the Full Potential of Amphotericin B

Innate Amphotericin B Characteristics	IV Amphotericin B Limitations	Unlocked Potential
POTENT – broad-spectrum fungicidal	Only available through IV administration	Available systemically and orally (crosses BBB following oral administration)
Minimal drug-drug interactions	Significant toxicity and side effects	Well-tolerated and safe
Low propensity for resistance	High systemic exposure distributed throughout the body	Delivered directly into infected tissues
Active against susceptible and emerging drug-resistant fungal infections	Must be administered in hospital, increasing costs	Cost-effective with potential for significant health economic benefits

MAT2203 is a promising potential therapeutic option
for the treatment of MULTIPLE serious and life-threatening fungal infections

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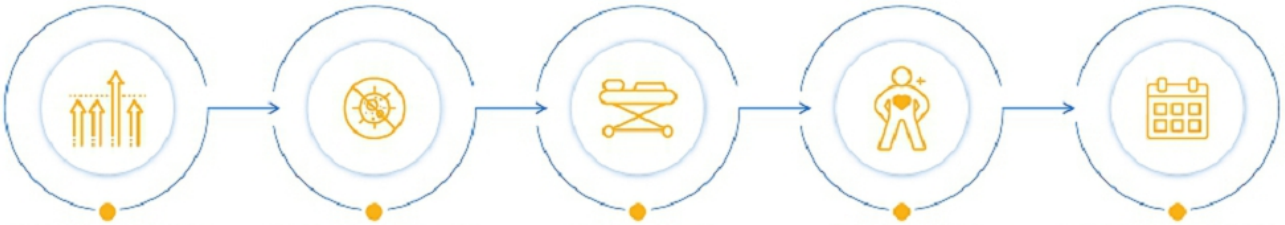
EnACT: Phase 2 Clinical Validation of Safety and Efficacy

EnACT Clinical Data in Cryptococcal Meningitis Validates the Use of the LNC Platform to Enable Oral Administration and Overcome Toxicity



Exceeded the primary endpoint threshold

- EFA for MAT2203 was 0.42 (95% CI 0.29 to 0.55)
  (primary endpoint threshold was 0.20)

All patients completing induction achieved CSF sterility

- 97% for patients receiving MAT2203
- 76% for patients receiving SOC

No breakthrough Infections

- Over 10 weeks, patients showed no breakthrough infections post-MAT2203 treatment

Survival at Day 30

- 98% for patients receiving MAT2203
- 88% for patients receiving IV AMPB (SOC)

MAT2203 was safe and well-tolerated over 6 weeks of treatment

- Repeat dosing showed no renal toxicity or electrolyte abnormalities
- No discontinuations due to AEs nor MAT2203-related SAEs

Results of EnACT Published in Highly-Regarded Peer-Reviewed Journal

Clinical Infectious Diseases

MAJOR ARTICLE

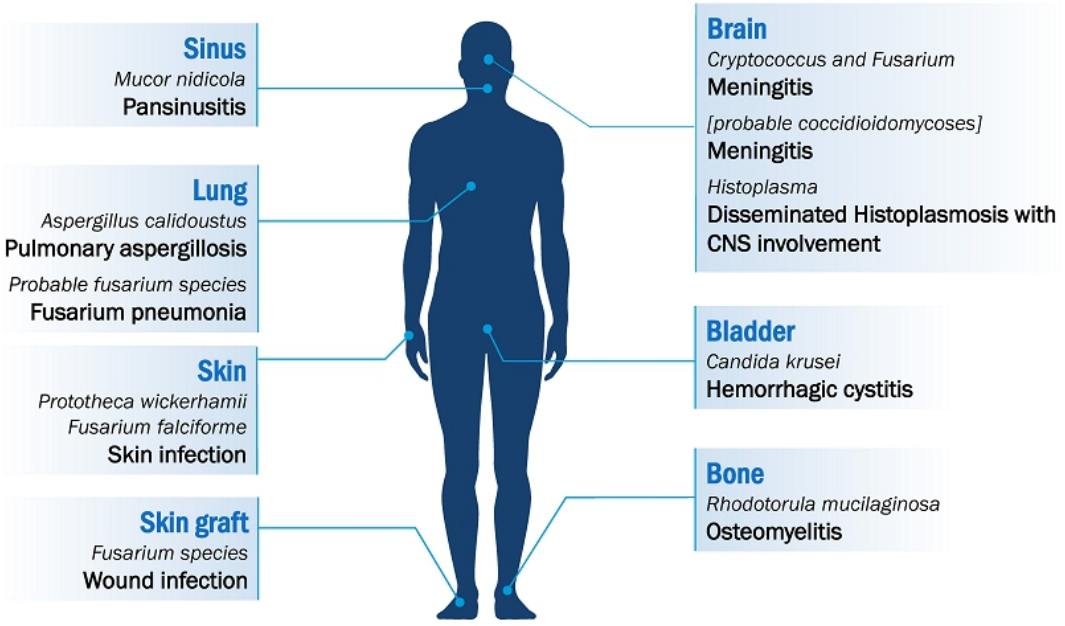
IDSA Infectious Diseases Society of America | hivma hiv medicine association | OXFORD

Oral Lipid Nanocrystal Amphotericin B for Cryptococcal Meningitis: A Randomized Clinical Trial

David R. Boulware,[1,a,©] Mucunguzi Atukunda,[2,a] Enock Kagimu,[2] Abdu K. Musubire,[2] Andrew Akampurira,[2] Lillian Tugume,[2] Kenneth Ssebambulidde,[2,3] John Kasibante,[2] Laura Nsangi,[2] Timothy Mugabi,[2] Jane Gakuru,[2] Sarah Kimuda,[2] Derrick Kasozi,[2] Suzan Namombwe,[2] Isaac Turyasingura,[2] Morris K. Rutakingirwa,[2] Edward Mpoza,[2] Enos Kigozi,[4] Conrad Muzoora,[4] Jayne Ellis,[2] Caleb P. Skipper,[1] Theresa Matkovits,[5] Peter R. Williamson,[3] Darlisha A. Williams,[1] Ann Fieberg,[6] Kathy H. Hullsiek,[6] Mahsa Abassi,[1] Biyue Dai,[6] and David B. Meya[1,2]

[1]Department of Medicine, University of Minnesota, Minneapolis, Minnesota, USA; [2]Infectious Diseases Institute, Makerere University, Kampala, Uganda; [3]Laboratory of Clinical Immunology and Microbiology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland, USA; [4]Department of Medicine, Mbarara University of Science and Technology, Mbarara, Uganda; [5]Matinas Biopharma Nanotechnologies, Bedminster, New Jersey, USA; and [6]Division of Biostatistics, School of Public Health, University of Minnesota, Minneapolis, Minnesota, USA

MAT2203 Expanded Access Program – Targeted Treatment of IFIs Throughout the Body



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MAT2203 Expanded Access/Compassionate Use Program

Demonstrated Efficacy in Treatment of Patients with Limited Treatment Options

- 13 patients with no other treatment options are currently receiving or have completed treatment with MAT2203
  - Notable Healthcare Institutions: NIH, University of Michigan, Johns Hopkins, City of Hope, Nationwide Children's Hospital, Vanderbilt University Medical Center
- Patients were not responding/resistant to, or unable to receive, azole therapy
- Patients were switched to treatment with IV AMB with clinical response but unable to tolerate treatment due renal toxicity
  - All patients hospitalized to monitor/manage renal safety and most received IV electrolyte supplementation
- Following oral MAT2203 initiation, patients were discharged to continue treatment at home
- Renal toxicity reversed and renal function returned to baseline
- All patients who received at least two weeks or more of treatment had positive clinical outcomes with significant success stories of full recovery in majority of patients

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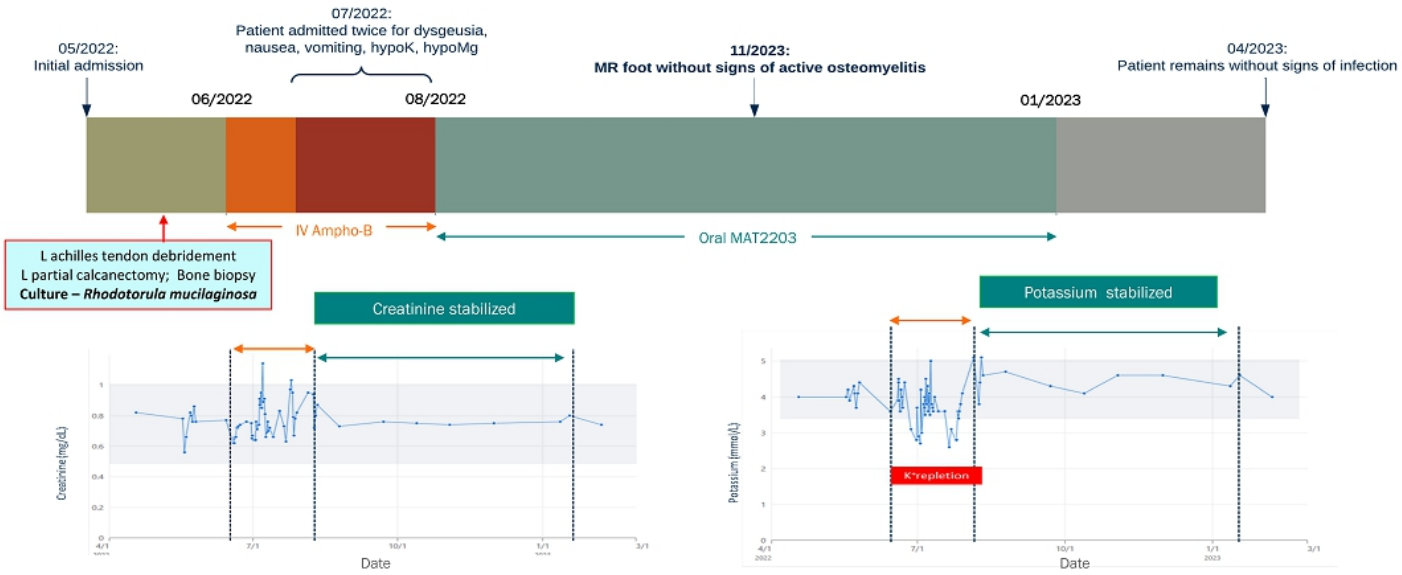
Compassionate Use - *Recovery from IV Ampho-B Kidney Toxicity with MAT2203*

A 38 y/o female with systemic lupus erythematosus on chronic hydroxychloroquine and prednisone presented with a progressively enlarging wound on her left foot.



High Unmet Medical Need in Treatment of Invasive Aspergillosis (IA)

- Invasive aspergillosis (IA) is a serious and life-threatening invasive fungal infection that occurs primarily in severely immunocompromised patients with hematological malignancies and transplant recipients
  - ~15,000 new cases per year in the U.S. alone
  - WHO, CDC, and FDA consider IA a ***critical priority*** and a global public health concern
- IDSA Guidelines recommend treatment with mold-active azoles as first-line treatment for 6-12 weeks
  - Azole use requires significant expertise to manage toxicities and significant drug-drug interactions that often limits duration of use
  - Resistance to azoles has been increasing globally
  - Recently, cases of breakthrough IA have been reported in patients receiving antifungal prophylaxis
    - Failures attributed to non-compliance, poor absorption, DDIs, or infection with a drug-resistant Aspergillus species
- Patients suffering from IA with little or no treatment options among the highest unmet medical need with approximately 3,000-5,000 cases per year (U.S. only)
  - Rare disease/orphan commercial opportunity

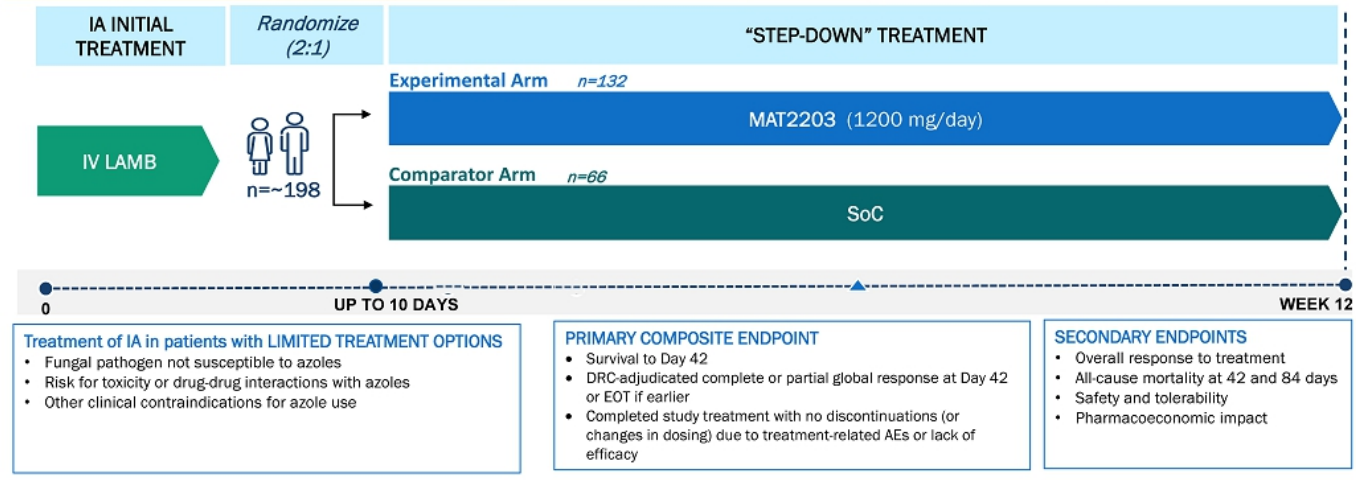
** Phase 3 trial dependent on securing partnership(s) or non-dilutive government funds*

MAT2203 Regulatory Strategy

- Near-term development strategy refined to narrow initial target indication: treatment of invasive aspergillosis in patients with limited treatment options (azole-intolerant, azole-resistant, or not effectively managed with an azole)
  - Register leveraging LPAD pathway
  - Other regulatory designations protected and maintained (QIDP, ODD, Fast-Track, potential for Breakthrough Therapy)
- Meeting held with FDA mid October to discuss revised registration strategy
  - FDA raised potential for **superiority trial** based upon new **composite endpoint**
  - Current proposed composite endpoint: "Therapeutic Success": Mortality/ partial or complete global response/completed study treatment without any treatment discontinuation or dose adjustment based on treatment-related adverse events or lack of efficacy
    - Endpoint supported by favorable safety profile for MAT2203 seen clinically compared with IV AMB
  - A superiority endpoint would optimally position MAT2203 for favorable regulatory and commercial outcome

Proposed Phase 3 Study Design in Invasive Aspergillosis (IA)

- To demonstrate that initial treatment with IV LAMB followed by step-down to oral MAT2203 is superior to IV LAMB followed by SoC treatment in adult patients with Invasive Aspergillosis (IA) who are unable to receive treatment with a mold-active azole and have limited alternative treatment options
- Patients will be randomized 2:1 to receive either oral MAT2203 (Experimental Arm) or continued IV LAMB followed by Standard of Care (Comparator Arm)



Treatment of IA in patients with LIMITED TREATMENT OPTIONS
- Fungal pathogen not susceptible to azoles
- Risk for toxicity or drug-drug interactions with azoles
- Other clinical contraindications for azole use

PRIMARY COMPOSITE ENDPOINT
- Survival to Day 42
- DRC-adjudicated complete or partial global response at Day 42 or EOT if earlier
- Completed study treatment with no discontinuations (or changes in dosing) due to treatment-related AEs or lack of efficacy

SECONDARY ENDPOINTS
- Overall response to treatment
- All-cause mortality at 42 and 84 days
- Safety and tolerability
- Pharmacoeconomic impact

MAT2203 Value Proposition

AMPHOTERICIN B + ORAL ADMINISTRATION + LACK OF NEPHROTOXICITY = Safe, long-term oral step-down Tx with a potent fungicidal agent

LIFE CYCLE MANAGEMENT

Phase 2
Cryptococcal Meningitis
(Proof of Concept)

Phase 3
Invasive Aspergillosis
Oral step-down therapy
(Limited- or no-treatment Option Patients)

LCM
- Treatment of Other IFIs
- Prophylaxis

VALUE

Near-Term Development Strategy:
Focused strategy on Phase 3 registration trial in Invasive Aspergillosis in patients with limited or no treatment options under the Limited Population Pathway for Antifungal Drugs (LPAD)*

* NDA review issue

LNCs Beyond MAT2203

Efficient and Safe Delivery of Small Oligos

LNC Experience to Date

Infection

Inflammation

Oncology

* new

In Vivo Animal Studies

Animal model	Molecule Cargo
Cystic fibrosis mouse model	Amikacin
BALB/c mouse flu model	ASO
	Flu protein
	siRNA
Mouse SARS-CoV-2 model	Remdesivir
CM mouse model	Amphotericin- B
Pneumocystis mouse model	Atovaquone
Rat footpad inflammation model	NSAID
GvHD Mouse model	ST1959
Psoriasis (IMQ) model*	ASO
Lymphocytic leukemia mouse model	ASO
Melanoma tumor model*	Docetaxel

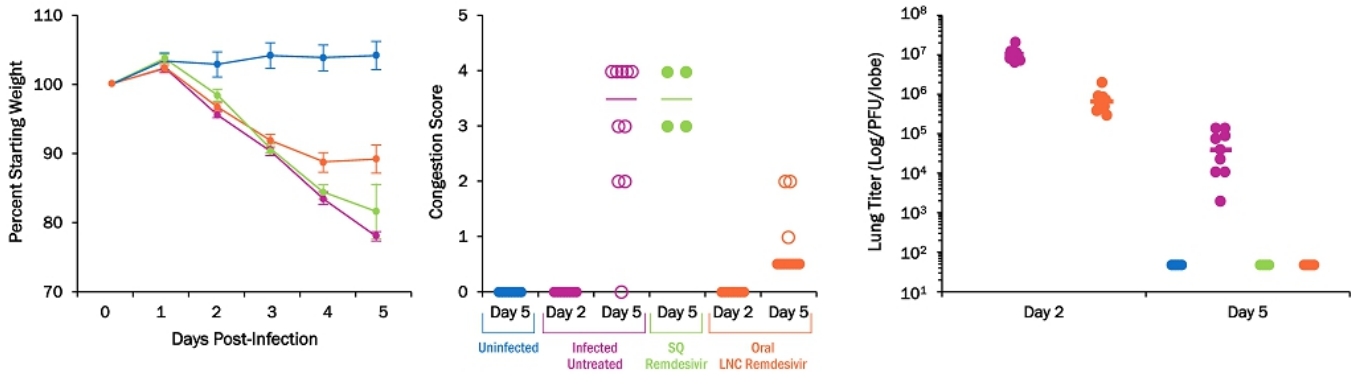
Human Clinical Trials

Indication	Molecule Cargo
Mucocutaneous candidiasis Job's syndrome, NIH	Amphotericin - B
Vulvovaginal Candidiasis (VVC) Phase 2	Amphotericin - B
HIV / cryptococcal meningitis, Phase 2	Amphotericin - B

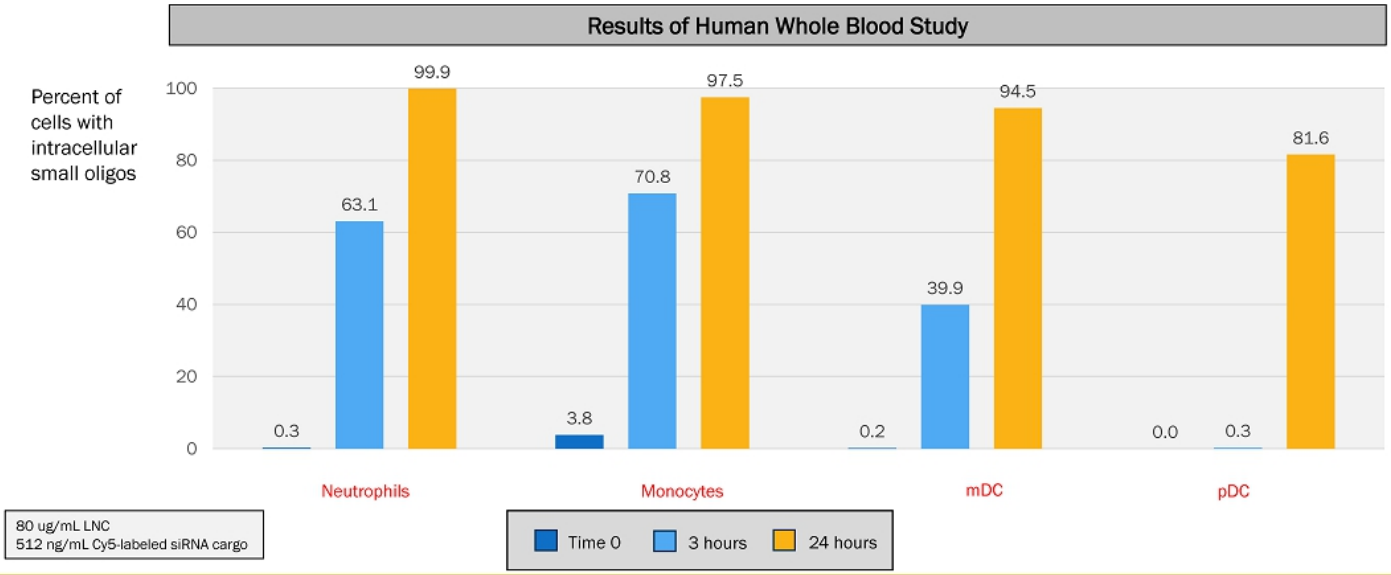
LNC-Remdesivir: *In vivo* Efficacy Against SARS-CoV-2

GILEAD

In Mice Infected With Sars-COV-2, Oral LNC-Remdesivir Mitigated Weight Loss, Improved Congestion Scores, and Reduced Viral Lung Titers (Beginning On Day 2)



LNC-formulated Small Oligos Show Strong Uptake in Phagocytes Support Role in Impacting Inflammation



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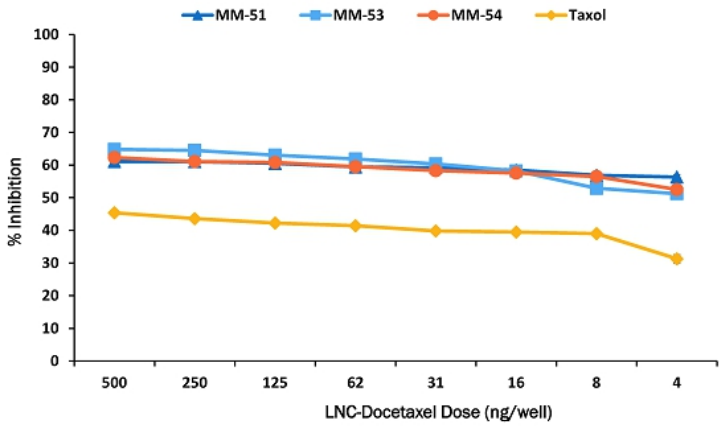
In vitro Tumor Cell Inhibition with LNC Docetaxel Formulations

RATIONALE AND NEXT STEPS

- LNC-Docetaxel program also provides insight into tumor uptake of LNCs
  - Foundation for subsequent small oligo work
- *In vitro* results demonstrate strong LNC efficacy in inhibiting tumor cell growth
- *In vivo* studies planned in multiple tumor models

3 LNC Formulations Demonstrated Significantly Better Tumor Cell Inhibition Than Unformulated Drug



MCF7 breast cancer cells

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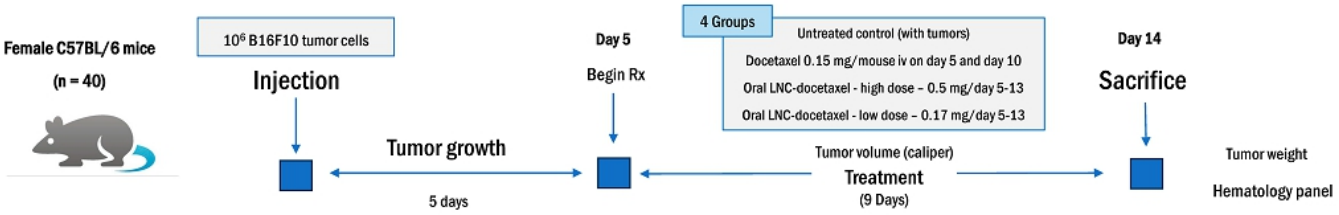
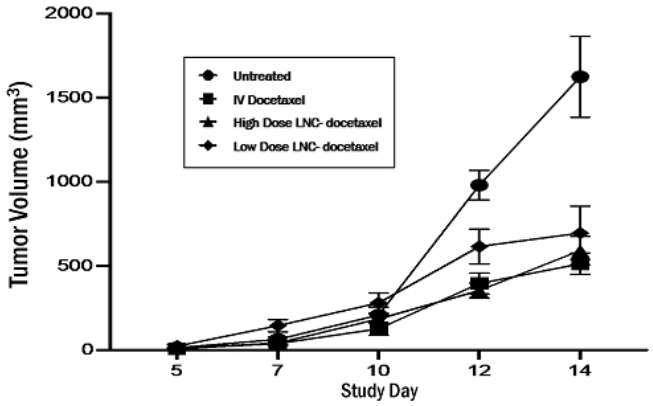
In-vivo Therapeutic Efficacy of Oral Docetaxel LNCs in a Murine Syngeneic Melanoma Model





Reductions in tumor volume and tumor weight comparable to that seen with IV docetaxel

No significant effect of daily oral docetaxel treatment on body weight or hematologic parameters

In vitro Dose-Dependent Knockdown of IL-17A in Murine T Cells

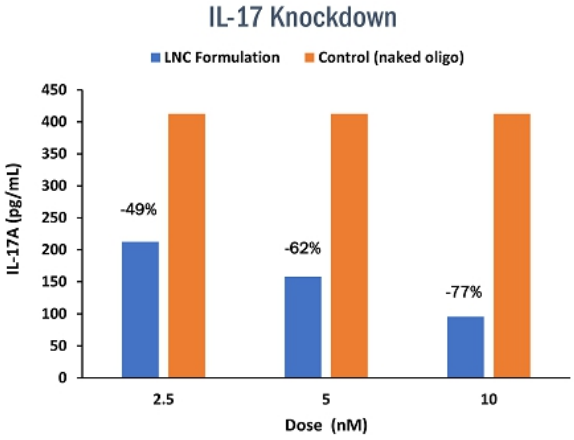
STUDY DESIGN

LNC Formulation of an RNAi

- Small oligo: 18-25 nucleotides
- EL4 cells: 200k/well
- IL-6 (0.3 ug/ml) stimulation
- Treat and evaluate @ 24 hrs

  looking at IL-17 protein production

KEY RESULTS



Unlocking the Full Potential of the LNC Platform

Matinas is working internally and with third parties to broaden its pipeline of LNC-based therapeutics

PROVEN

Oral Formulations of Anti-Infectives
- MAT2203
- Remdesivir
- MAT2501

Oral Formulations of Chemotherapeutics
- Docetaxel

UNDER EVALUATION

Intracellular Delivery of Nucleic Acids
- siRNA
- ASO

FUTURE

Potential Therapeutic Applications

INFECTION
- Anti-infectives
- Antivirals

*INFLAMMATION
- Autoimmune diseases
- Neuro-inflammatory diseases
- Acute/chronic Inflammatory diseases

*ONCOLOGY
- Hematologic & solid tumor malignancies

* Key Areas of Focus for Internal LNC Oral Small Oligonucleotides

Rapid Evolution of Platform Sets Stage for Active Q4

	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023
General Platform	Process enhancements (ongoing)				Oral delivery of small oligos
Infection	**EnACT** presentation (ID Week)	MAT2203 Expanded Access Program	Expended Access case presentations	**EnACT** publication	Pipeline Presentation and *Potential* Expanded Access Late Breaker Oral Abstract (ID week October 2023)
Inflammation	LNC uptake by innate immune cells *ex-vivo*	Small oligo LNCs; LNC uptake by T-cells *in vitro*	Biological activity of anti-inflammatory LNC-small oligo in vitro	Biological activity of **oral** anti-inflammatory LNC-small oligo *in vivo*	Biological activity of ***orally administered*** anti-inflammatory LNC-small oligos *in vitro* and *in vivo* (inflammation models); ***Therapeutic*** efficacy of **oral** anti-inflammatory LNC-small oligos *in vivo* (disease models)
Oncology		Small molecule LNCs	Biological activity of anti-tumor LNC-small molecule *in vitro*	Formulation optimization to prepare for *in vivo* studies	Small oligo LNCs; Small molecule LNCs; Delivery and activity of oral LNC formulations *in vivo* (tumor models)

Expanding LNC Intellectual Property Portfolio

Continuingly increasing our patent suite to increase protection and exclusivity

MAT2203 potentially entitled to **12+ years of exclusivity** (QIDP & Orphan status)

Global Platform IP base **protection out to 2037** with 20 patents issued in last 5 years

Recent patent applications **based on formulation work with small oligonucleotides**

Strong IP & Regulatory Designations

Experienced Leadership Team

EXECUTIVE TEAM

Jerome D. Jabbour, J.D.
Chief Executive Officer
Reliant

Thomas Hoover, MBA
Chief Business Officer
Millendo Therapeutics, Sunovion, GSK

Theresa Matkovits, Ph.D.
Chief Development Officer
NPS Pharmaceuticals, Novartis, The Medicines Company

James Ferguson, M.D.
Chief Medical Officer
Amgen, The Medicines Company, AstraZeneca

Keith Kucinski, CPA, MBA
Chief Financial Officer
Par Pharmaceutical, Barr

Hui Liu, Ph.D., MBA
Chief Technology Officer
Allergan, Alcon, Seqirus

BOARD OF DIRECTORS

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Natasha Giordano Director	PLX Pharma, Xanodyne
Matthew Wikler, M.D., MBA Director	The Medicines Company, FDA
Jerome D. Jabbour, J.D. CEO	Reliant

Matinas Investment Thesis

Financial Summary

Runway into Q3 2024

$18.2M[1] in Cash, Cash Equivalents and Marketable Securities

[1] as of 09/30/23

Non-Dilutive Financing Options

Near-Term Milestones– Setup for Strong Close to 2023

✓	Q4 – FDA Meeting and Feedback on MAT2203 Phase 3 Invasive Aspergillosis LPAD Study
✓	Q4 – ID Week MAT2203 Pipeline Presentation and Potential Compassionate Use Late Breaker Oral Abstract
✓	Q4 – *In vivo* Oral Delivery of a Functional Small Oligonucleotide (cytokine knockdown)
✓	Q4 – *In vivo* Oral Delivery with Therapeutic Impact from Internal ASO/siRNA Program
✓	Q4 – Oral Delivery of an Anti-Tumor LNC Small Molecule and Small Oligonucleotide
↻	Q4 – Potential MAT2203 Domestic/Regional/Global Partnership
↻	Q4 – Potential New Platform Collaboration
↻	2024 – Potential BARDA/ARPA-H Funding for MAT2203 and LNC Platform

Solid Value "Foundation"

MAT2203

- Clinically Validated
- Phase 3-ready asset
- Highest unmet need

Substantial UPSIDE

LNCs Facilitating ORAL Delivery of Small Oligonucleotides

And

Establishing Internal and External Pipelines