

Our Company We are an early-stage biotechnology company focused on developing first in class antimicrobial therapeutics by exploiting millions of years of phage-bacteria evolution. Our focus is on targeting infectious diseases caused by multidrug-resistant (MDR) Gram-negative bacteria, especially nosocomial infections, which are the fourth leading cause of death in the United States. Antibiotics have had a profound impact on human society by enabling the eradication of otherwise deadly infections. Unfortunately, antibiotic use and overuse has led to the rapid spread of acquired antibiotic resistance in many deadly pathogens, creating a major threat to public health.

Our Platform Novel therapeutic agents called lysins is the solution to the world-wide epidemic of antibiotic resistance. Lysins are a class of enzymes, isolated from bacteriophages that are capable of cleaving bonds in the bacterial cell wall, resulting in the death of the bacteria within seconds after contact. Through evolutionary selection, these lysins target a critical component in the cell wall making resistance to these molecules orders of magnitude less likely than conventional antibiotics. Such properties make lysins uniquely suitable for the treatment of MDR *Acinetobacter baumannii* (MDR-AB) (80% of strains are resistant to at least three classes of antibiotics), one of the leading causes of skin infections associated with burns and wounds. Our lead product candidate, BHo1, is a fast-acting, biofilm-disrupting topical antimicrobial for the control of MDR-AB. MDR-AB leads WHO's list of 12 "priority" pathogens that pose the greatest threat to human health. This technology is licensed from Dr. Vincent Fischetti's Laboratory of Bacterial Pathogenesis and Immunology at Rockefeller University.

Our Market Opportunity MDR-AB infections are becoming increasingly more common in burn patients (4,000/year), in wounds (6,000/year) and is found in skin and soft tissue infections (150,000/year). Surgical site infections are very common (more than 35% of all surgeries) with MDR-AB causing infections in 5-10% of these patients. MDR-AB is a severe unmet medical need in soldiers who suffer from complicated wounds, with more than 20% of wounded soldiers having an infection with MDR-AB. The estimate for the number of MDR-AB infections is about 500,000/year currently. Patients infected with MDR-AB have an average of \$60,913 in additional patient charges due to the infection, and they stay in the hospital for an average of 13 days longer than a patient without an MDR-AB infection. Controlling an outbreak costs between \$400,000-\$600,000.

MDR-AB and *K. pneumoniae* (KP) are the leading causes of pneumonia (30,000-60,000 infections/year) with mortality greater than 30%. The 2nd lead product, BHo2, is a fast-acting biofilm-disrupting peptide lysin formulated for the local administration to the lungs of patients. MDR-AB, KP and *E. coli* are the leading cause of catheter-associated urinary tract infection (CAUTI). 500,000 to 1,000,000 patients require indwelling catheters leading to CAUTI, the leading cause of secondary bloodstream infections. Treatment failure in these patients is associated with drug resistance and biofilm formation. 25% of *E. coli*, 21% of MDR-AB and 9% of KP associated with CAUTI are multidrug-resistant. The 3rd lead product, BHo3, is a lysin peptide for CAUTI.

Our Strategy We plan to pursue commercialization of therapeutic products that aim at lowering the bacterial dose at the site of infection, i.e. skin, lungs, bladder, before these infections become systemic. Given the topical administration of the products in conditions with a clear unmet medical need, we plan on expediting our clinical efforts.

Our Team

Founder & CEO - Chandrabali Ghose, PhD, Infectious Diseases expert with more than 15 years of translational research experience. Previously held leadership roles in biotech startups in the NYC area. PhD from NYU Langone. Harvard and Rockefeller trained.

Business Advisor, Chariman of the Board - Chris Garabedian, Biotech Executive with 30 years of experience. Deep expertise in the Orphan Drug Space. Previously held leadership roles in Sarepta, Celgene, Gilead.

Scientific Advisor - Vincent A. Fischetti, PhD, Head of Laboratory at The Rockefeller University. Leading expert and discoverer of lysins.

Medical Advisor - Bohdan Pomahac, MD, Director, Burn Center, Brigham and Women's Hospital. Deep knowledge and experience in care and running clinical trials in burn patients.

Regulatory Advisor - Raghav Chari PhD, President, Promius Pharma, a company focused on bringing innovative therapeutics to the medical dermatology space. PhD from Princeton in Theoretical Physics.

Academic Partner – Rockefeller University