



PHIOGEN™

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EXECUTIVE SUMMARY

PHIOGEN was spun off from Baylor College of Medicine in June 2023, headquartered at the world-renowned Texas Medical Center (TMC) in Houston, Texas, with a company mission of creating next generation anti-bacterials to combat the most critical bacterial infections facing human health. Our purpose is to combat pathogenic bacteria with their natural enemies, bacterial viruses known as bacteriophage which have been developed and de-risked over 10 years of research pioneered by the country’s leading bacteriophage biologists.

PROBLEM: Antimicrobial resistance (AMR) in bacteria poses an urgent global health threat, undermining the effectiveness of modern-day medicine and leaving patients suffering with drug-resistant infections with no treatment options. According to the World Health Organization, at least 1.3 million people die each year due to drug-resistant infections. This super-bug problem is only expected to get worse by 2050 where it will be responsible for over 10 million deaths costing \$100 trillion in damages. Currently, no antibiotic alternatives exist that are natural, effective, low-cost, and readily available to conquer this looming global health crisis.

TECHNOLOGY AND PRODUCT: PHIOGEN is commercializing proprietary, groundbreaking research developed by acclaimed phage researcher, Dr. Anthony Maresso, and his lab at the prestigious Baylor College of Medicine. Built on these innovations, PHIOGEN has developed the world’s first 6-step high-throughput phage technology platform that is underpinned by novel and IP protected technology and devices that is ushering in a new generation of bacteriophage solutions that allow us to treat patients in mass versus one patient at a time – a new business model for phage therapy. The proprietary platform is completely customizable in a “plug and play” like manner, consolidating state-of-the-art technologies inside a single structured research and development process resulting in high performing phage products for populations of patients suffering with hard-to-treat infections, such as recurrent urinary tract infections or bacteremia. By utilizing our exclusive commercial methods, we can simulate "real-world" physiological conditions to selectively target and eliminate bacteria, while patent-pending techniques drive biological changes to counteract bacterial resistance. This translates into top-tier phage products that are primed to effectively address more than 90% of strains associated with our primary product. Our robust pipeline of phage products spans various indications and targets the most critical offenders classified under the “ESKAPE” pathogen list.

TARGET MARKET: The global antibiotic market in 2021 was valued at \$42.3 billion and is predicted to reach \$52.6 billion by 2028. However, antibiotics are losing their efficacy and so an urgent demand is being placed on alternatives to antibiotics; a category which bacteriophages fall into. The global alternative to antibiotics market was valued at \$5.5 billion in 2020 and is expected to grow at a CAGR of a staggering 13.3%. Our initial indication target market is the urinary tract infection therapeutics market, which was \$9 billion in 2023 and is expected to grow at a rate of 2.8%

BUSINESS MODEL: Our business model is based on the commercial development of the de-risked research assets the lab currently has which have already been used to successfully treat over 20 patients in FDA approved compassionate use case scenarios. We plan to further develop these bacteriophage products independently and in partnership with collaborators and through sublicensing agreements. We are in the process of finalizing our IND-enabling pre-clinical studies to complete our data package to submit to the FDA and aim start clinical trials mid-2025.

👥 6 Team Members

📄 4 Pending Patents

💰 Seed funding secured

✓ Natural & non-GMO

✓ Kills superbugs

🐭 8 Animal Studies

🏠 11 emergency use cases

📄 16 Publications

✓ No adverse events

✓ Not an antibiotic



For illustrative purposes only