

FOR IMMEDIATE RELEASE

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PHIOGEN, Baylor College of Medicine, and LillixBio Launch AI-Driven Collaboration to Map Phage-Induced Immunomodulation and Long-Term Prevention

The collaboration will apply AI-driven antigen mapping to the mucosal and humoral immunity that follows bacteriophage therapy, evaluate phages that strengthen that response, and work to extend the durability of protection against recurrent antimicrobial-resistant infection.

HOUSTON, TX — October 8, 2026 — Phiogen Inc., a pre-clinical-stage biopharma developing bacteriophages as first-in-class immunizing therapeutics, today announced a collaboration with Baylor College of Medicine and LillixBio LLC, a global therapeutic design company, to integrate artificial intelligence-driven immune profiling into Phiogen's immunotherapy development pipeline, mapping the immune response that follows bacteriophage therapy and determining how that protection can be strengthened, extended, and expanded.

Under the collaboration, LillixBio's AI platform will identify immunomodulatory candidates predicted to amplify the immune response generated during phage-mediated bacterial lysis, beginning with *E. coli*, the pathogen targeted by Phiogen's lead program PHI-UI-01 for recurrent urinary tract infections. LillixBio has delivered the first comprehensive AI-predicted MHC antigen presentation map for *E. coli*, covering all microbial proteins across the global spectrum of immune diversity. This antigen map provides a systematic framework for understanding the immunological consequences of phage therapy; an area the field has not previously addressed at this scale.

Wet-lab validation of the AI-generated candidates will be conducted in collaboration at Baylor College of Medicine's TAILΦR (Tailored Antimicrobials and Innovative Laboratories for Phage Research) Labs, a phage biology research program with deep expertise in phage isolation, characterization, and therapeutic development. The collaboration brings computational discovery together with established laboratory capabilities in phage adjuvantation, serology, and immunological profiling across mucosal and systemic infection models.

The partnership represents a new model for phage therapy development as prevention becomes part of the treatment. Where recent academic demonstrations of AI-generated phage genomes have explored broad genomic design space, the Phiogen–LillixBio collaboration is directed at specific clinical targets within an established therapeutic program and the newly discovered phenomena of phage-induced immunity. The AI-generated candidates enter a pipeline that includes viability filtering, biosecurity screening, immunogenicity profiling, and a governance-sealed build list, designed to minimize the number of candidates that must be synthesized and tested to identify those that work.

About the Collaboration

"We are using phages in ways no one has explored before. For decades, phage therapy has focused on bacterial killing, while immune responses to phages were viewed as a limitation. We're turning this model on its head where those same immune interactions may hold the key to durable protection against recurrent infection. Baylor brings expertise in phage biology, LillixBio provides AI-driven immune analytics, and Phiogen provides the translational and clinical framework to turn these discoveries into dual-action therapeutics."

— Amanda Burkardt, CEO, Phiogen Inc.

“Stimulating the immune system in more controlled and desirable ways is the key to curing hundreds of problematic diseases. This science takes that first step.”

Anthony Maresso, Ph.D., Professor Baylor College of Medicine and Faculty Founder of Phiogen and TAILOR

“LillixBio exists to solve one problem: for any disease and any target, determine computationally which treatment candidates are worth building and provide a sealed, auditable record of why. This collaboration with Phiogen and Baylor College of Medicine is the first public demonstration of that capability. We designed and screened phage candidates using a comprehensive antigen prediction platform incorporating both microbial and human immune system architecture, all before a single dollar was spent in the lab. The measure of an AI platform in biology is not how many candidates it can generate. It is how few you have to build to find an ideal one that works.”

— Phillip Phan, M.D., Senior Director, LillixBio

About Phiogen Inc.

PHIOGEN is a preclinical-stage biotechnology company pioneering a next-generation phage platform to treat and prevent drug-resistant and recurrent bacterial infections. A spin-out from Baylor College of Medicine, PHIOGEN operates from its dedicated lab at Helix Park within the Texas Medical Center, the world’s largest medical complex. The company’s proprietary platform integrates advanced screening, human-relevant models, and evolutionary selection to develop dual-function bacteriophages that both eliminate bacterial pathogens and stimulate protective immunity. PHIOGEN is advancing a pipeline of targeted phage therapies designed to redefine infectious disease treatment where conventional antibiotics fail. To learn more please visit www.phiogenpharma.com

About TAILOR Labs

TAILOR Labs (Tailored Antibacterials and Innovative Laboratories for phage (Φ) Research) is a phage biology research program at Baylor College of Medicine led by Dr. Anthony Maresso. The program conducts research in phage isolation, characterization, host-range engineering, and translational development of phage-based therapeutics, with a focus on antimicrobial-resistant Gram-negative pathogens.

About LillixBio

LillixBio LLC is a global therapeutic design company that uses artificial intelligence to discover and develop treatments across every disease and every modality, from small molecules and engineered proteins to bacteriophage and gene therapies. The company’s AI engine integrates computational drug design, antigen discovery, immune response mapping, biosecurity screening, and governance-sealed candidate selection into a single auditable pipeline, drawing on a corpus of more than 240 million biological records. LillixBio is headquartered in Houston, Texas. For more information, visit lillixbio.com.