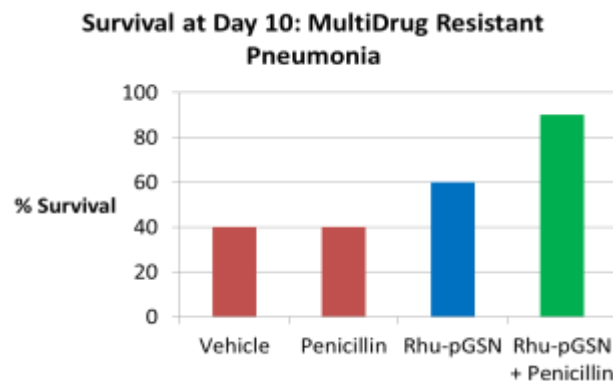




BioAegis Therapeutics Announces Publication in the *Journal of Infectious Diseases*: “Delayed Administration of Recombinant Plasma Gelsolin Improves Survival in a Murine Model of Penicillin-Sensitive and Resistant Pneumococcal Pneumonia”*

MORRISTOWN, NJ, (August 22, 2019) BioAegis Therapeutics, Inc., a clinical stage company developing technology to control inflammation while protecting immune function and vital organs in diseases driven by inflammation and infection, announces publication of research results in the **Journal of Infectious Diseases** demonstrating that recombinant human plasma gelsolin therapy dramatically improves survival in a multidrug-resistant pneumonia animal model. Furthermore, it works synergistically with previously ineffective antibiotics, making them work again.



Studies conducted in collaboration with investigators at **the T.H. Chan Harvard School of Public Health** demonstrated clinical improvement in mice infected with pneumococcal organisms even in the absence of antibiotic treatment and after delaying gelsolin administration. Plasma gelsolin supplementation also improved survival of animals challenged with penicillin-resistant microorganisms. In a novel and unexpected finding in mice infected with penicillin-resistant organisms, although penicillin therapy alone predictably had no benefit against highly penicillin-resistant bacteria, plasma gelsolin supplementation enabled penicillin to improve survival suggesting synergy between gelsolin and antibiotics.

The Importance of Demonstrating Efficacy with Delayed Treatment

Most models of infectious disease do not reflect clinical reality in that **treatment is initiated coincident with inoculation of the infecting organisms**. This study **delayed administration of plasma gelsolin for up to several days after bacterial challenge, at which time visible signs of illness were evident**. Despite the delay, gelsolin supplementation produced a dramatic improvement in survival.

Benefits Can Be Explained by Plasma Gelsolin Enhancing the Host Inflammatory Response to Infection

Plasma gelsolin is an abundant circulating protein with at least three beneficial functions. 1) It stimulates macrophage antimicrobial activity by enhancing phagocytosis and killing of Gram positive and Gram-negative

bacteria. 2) It dissolves the biofilm created by leakage of the intracellular contents of damaged cells that interferes with host defenses. 3) It counters harmful excess inflammation both locally and systemically, thereby limiting tissue injury and preventing potentially lethal damage to distant vital organs. Unlike other strong anti-inflammatory agents such as corticosteroids and many current biologics, plasma gelsolin does not suppress the immune response. A recently completed Phase 1b/2a safety study in pneumonia patients demonstrated favorable safety (even at supra-physiologic levels) and pharmacokinetic results allowing once-daily dosing.

BioAegis' Treatment Paradigm is Based on an Ancient Defense System

Plasma gelsolin represents an ancient inflammatory defense system that was designed by evolution to protect organisms from infection before antibiotics and other anti-infective therapies existed. Supplementing depleted systemic levels of the protein can address diverse infectious, inflammatory and degenerative diseases.

The Findings Suggest That Plasma Gelsolin Supplementation Can Improve Pneumonia Mortality That Has Not Changed Since the Discovery of Antibiotics

Pneumonia is a leading cause of morbidity and death around the world. According to the **American Thoracic Society**, pneumonia mortality in the USA has remained essentially unchanged since antibiotics first became widely available more than a half a century ago. Significant numbers of patients develop short-term and long-term complications, placing a significant burden on the healthcare system. Survivors often require long-term care for lingering cardiopulmonary, neurocognitive, and other functional disabilities after hospital discharge.

Susan Levinson, PhD, Chief Executive Officer of BioAegis Therapeutics stated, "Each time we extend our studies with plasma gelsolin, we become even more persuaded of its potential to address serious medical needs where current therapy fails. Gelsolin's multiple roles in innate immunity hold much promise for clinical care."

Lead investigator, Lester Kobzik, MD commented, "By augmenting innate immunity, rhu-pGSN serves to enhance the beneficial effects of ineffective or suboptimal antibiotics against multidrug-resistant microbes, and thus offers a widely applicable strategy in the war against resistance."

About BioAegis Therapeutics

BioAegis Therapeutics Inc. is a clinical stage, private company whose mission is to exploit a key component of the body's innate immune system to prevent adverse outcomes in diseases driven by inflammation and infection. BioAegis' platform of opportunities exploits the multifunctional role of plasma gelsolin, a highly conserved, endogenous human protein.

* [Link to JID publication](#)

This press release contains express or implied forward-looking statements, which are based on current expectations of management. These statements relate to, among other things, our expectations regarding management's plans, objectives, and strategies. These statements are neither promises nor guarantees but are subject to a variety of risks and uncertainties, many of which are beyond our control, and which could cause actual results to differ materially from those contemplated in these forward-looking statements. BioAegis assumes no obligation to update any forward-looking statements appearing in this press release in the event of changing circumstances or otherwise, and such statements are current only as of the date they are made.

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