



**PRESS RELEASE  
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**ARCH BIOPARTNERS ANNOUNCES ISSUANCE OF U.S. PATENT FOR  
ITS NOVEL ANTIBACTERIAL DRUG AB569, DESIGNED TO TARGET  
CHRONIC INFECTION AND ANTIBIOTIC RESISTANCE**

Toronto, Canada - Arch Biopartners Inc., (Arch or the Company) (TSX Venture: ARCH and OTCBB: ACHFF), announced today that the U.S. Patent and Trademark Office has issued U.S. Patent 9,925,206 protecting the composition and methods of use of its lead anti-bacterial drug candidate, AB569. The new U.S. patent is titled, "Compositions and Methods for Treating Bacterial Infection" and has been issued to the University of Cincinnati, which previously granted an exclusive commercial license to Arch on all patents related to AB569.

The sole inventor of the patent is Dr. Daniel Hassett PhD, a Professor at the University of Cincinnati College Of Medicine in the Department of Molecular Genetics, Biochemistry and Microbiology. He is also a Principal Scientist at Arch.

**AB569 employs a completely new approach to the problem of chronic bacterial infection and antibiotic resistance. "AB569 has two active ingredients that produce a dramatic and synergistic effect at killing many antibiotic resistant bacteria including *Pseudomonas aeruginosa* (*P. aeruginosa*), which commonly causes severe chronic infections in the lungs of cystic fibrosis (CF) and chronic obstructive pulmonary disease (COPD) patients. AB569 has the potential to make a significant medical impact on treating infection where traditional antibiotics fail," said Dr. Hassett.**

"This patent issuance, which protects the composition of AB569, gives Arch a stronger commercial position to pursue treating not just CF patients, but also the millions of other patients that have chronic antibiotic resistant lung infections including those with COPD. It also opens the door for Arch to develop treatments for many other indications where antibiotic resistance is a problem, such as urinary tract infections and wound care," said Richard Muruve, CEO of Arch.

Worldwide, there are over 251 million people afflicted with COPD and over 70,000 people with CF. Arch received orphan drug designation for AB569 (active ingredients sodium nitrite and EDTA) from the U.S. Food and Drug Administration (FDA) for the treatment of CF patients with *P. aeruginosa* infections. Arch also received an orphan medicinal product designation for AB569 from the European Medicines Agency (EMA) for the general treatment of CF.

Bacterial infections cause approximately 50% of the acute exacerbations in COPD patients. AB569 is a candidate to treat bacterial respiratory infections caused by the most common pathogens found among COPD patients which include *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella*

*catarrhalis*, as well as treating *P. aeruginosa* infections which become the most prevalent in advanced COPD disease.

### ***AB569 Phase I Investigator Initiated Trial***

Cincinnati Veterans Affairs Medical Center (CVAMC) has started an investigator initiated Phase I human trial in up to twenty-five healthy volunteers to first evaluate the safety and pharmacokinetic profile of AB569. The first patients were recruited and enrolled in the trial in February.

Dr. Ralph Panos, Chief of Medicine at CVAMC and world-renowned COPD expert, is the lead investigator of the trial. Arch is funding the study, contributing the AB569 inhalation clinical drug kits and other materials to support the trial.

Dr. Panos's clinical team is evaluating single administration of nebulized AB569 in each participant. The Phase I trial has been designed to determine the pharmacokinetic profile of plasma nitrite and nitrate metabolites, exhaled nitric oxide and circulating hemoglobin after a single inhalation of AB569. In addition, the trial also aims to determine the tolerance of nebulized AB569 in three escalating doses of acidified sodium nitrite and EDTA.

Following the successful completion of the Phase I study, the clinical team at CVAMC, in association with the University of Cincinnati College of Medicine, plans to transition the AB569 program into a Phase II trial to test the drug treatment's efficacy in treating chronic lung infection caused by *P. aeruginosa* and other bacterial pathogens in COPD and/or CF patients.

### ***About AB569 and antibiotic resistant airway infections in CF, COPD***

AB569 is a bactericidal compound and constitutes an innovative potential treatment for dealing with pulmonary bacterial infection, which is a significant problem for patients with CF, COPD or ventilator associated pneumonia. In pre-clinical studies, AB569 has demonstrated significant ability to kill many types of Gram-negative and Gram-positive bacteria.

Antibiotics are increasingly being used to treat COPD and CF patients who have chronic bacterial respiratory infection. AB569 has the potential to be a treatment solution where antibiotic resistance strains are increasingly prevalent, since AB569 has a powerful bactericidal mechanism of action that differs from conventional antibiotics. In particular, AB569 inhibits DNA, protein and ATP synthesis, which are three vital constituents of the bacterial cell.

*P. aeruginosa* affects the majority of adult CF patients and often infects patients from childhood onward. CF patients are predisposed to bacterial lung infections due to abnormal mucus production in the lungs and airways. In particular, *P. aeruginosa* infects 40% of CF patients between the ages of 6 and 10 years of age. By the age of 17, the frequency of infection increases to ~50% and reaches approximately 60% of all CF patients between the ages of 25 and 34.

The mucoid form of *P. aeruginosa* is a very challenging infection to treat due to its high resistance to both conventional antibiotics and phagocyte-mediated killing. Once patients present with the mucoid form of *P. aeruginosa*, their overall lung function precipitously declines, resulting in a poor overall clinical prognosis.

Likewise, people with COPD have compromised innate immune systems and respiratory conditions that are vulnerable to chronic bacterial infections that are often resistant to conventional antibiotic regimens.

COPD is a major health problem worldwide and its prevalence is increasing, ranked by the World Health Organization as the third leading cause of death. COPD is a general term to describe progressive lung diseases which includes chronic bronchitis, emphysema, and non-reversible asthma. Most cases are caused by inhaling pollutants, predominantly from smoking or contaminated air in highly polluted cities or in the workplace.

### **About Arch Biopartners**

Arch Biopartners Inc. is focused on the development of innovative technologies that have the potential to make a significant medical or commercial impact. Arch works closely with the scientific community, universities and research institutions to advance and build the value of select preclinical technologies, develop the most promising intellectual property, and create value for its investors.

Arch has established a diverse portfolio that includes AB569, a potential new treatment for antibiotic resistant bacterial infections; Metablok, a potential treatment for inflammation, sepsis and cancer metastasis; MetaMx, which targets elusive brain tumor initiating cells; and, 'Borg' peptide coatings that increase corrosion resistance and decrease biofilm on various medical grade metals and plastics.

For more information on Arch Biopartners, its technologies and other public documents Arch has filed on SEDAR, please visit [www.archbiopartners.com](http://www.archbiopartners.com)

The Company has 57,799,679 common shares outstanding.

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### **Forward-Looking Statements**

All statements, other than statements of historical fact, in this news release are forward looking statements that involve various risks and uncertainties, including, without limitation, statements regarding the future plans and objectives of the Company. There can be no assurance that such statements will prove to be accurate. Actual results and future events could differ materially from those anticipated in such statements. These and all subsequent written and oral forward-looking statements are based on the estimates and opinions of management on the dates they are made and are expressly qualified in their entirety by this notice. The Company assumes no obligation to update forward-looking statements should circumstances or management's estimates or opinions change.

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