

# Accelerating Innovations into CarE – Validate Program (AICE-Validate)



## Innovative Novel Antimicrobial Wound Treatment (ComBatic)

### PROJECT FAST FACTS

**RECIPIENT:** MHCombiotic Inc.

**AWARD:** \$300,000

**AWARD DATE:** June 27, 2023

**PROJECT DURATION:** 24 months

## THE PROBLEM

A major obstacle in the treatment of deep or chronic wounds is the presence of biofilms. These communities of bacteria that form in and on the wound surface are resistant to conventional antibiotics, making them difficult to eradicate. Current wound care products have limitations in preventing and treating wound infections. Antibiotics are commonly used to control wound infection, but their overuse can lead to antibiotic resistance, which poses a significant threat to global health. Silver is one of the most commonly used topical antimicrobial substances, but recent studies have shown that many clinical isolates are resistant to it. Mixed infection wounds are another complication exacerbating the challenge of treatment. With 20-40 per cent of infected wounds identified as having mixed infections, the treatment process becomes even more difficult. Most wound care products are designed to treat small or superficial wounds, while deeper, chronic and complex, non-healing wounds require innovative solutions.

## THE SOLUTION

MHCombiotic's antimicrobial wound treatment, ComBatic, is a novel solution for preventing and treating wound infections, including those caused by biofilms and mixed infections. ComBatic is a composition of >98 per cent pure herbal metabolites and metal/metalloid-based antimicrobials. The cream is a combination of novel antimicrobial agents that work synergistically to kill bacteria and prevent the formation of biofilms. ComBatic has demonstrated effectiveness against the 17 wound-related strains (12 bacteria and 5 fungi) and 38 different clinical antibiotic-resistant strains, as well as the issue of mixed-infection, representing a significant advantage over other available products.

### PROJECT OBJECTIVES

*MHCombiotic is working to reach the following objectives:*

- 1. Complete the pre-clinical studies based on FDA guidelines to establish the safety and efficacy of the technology and obtain regulatory approval for its commercialization.*
- 2. Optimize the formulation to achieve the desired potency, safety and stability.*
- 3. Establish a manufacturing process for the product that meets Good Manufacturing Practices (GMP) and includes quality control and quality assurance measures.*

## ABOUT THE AICE-VALIDATE PROGRAM

*AICE-Validate is an opportunity for Alberta's health-tech innovators to accelerate commercialization of digital and data-enabled health technologies through the early validation phase. If you'd like to learn more, please check out [AICE Validate on the Alberta Innovates website](#).*

*Learn how*

**albertainnovates.ca**