

Novel therapeutic targets ulcerative colitis

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Biologics to modulate the migration and activation of specific innate immune cells, called neutrophils, discovered in the lab of Beth McCormick, Ph.D., at UMass Medical School, have been licensed by Bacainn Therapeutics, Inc., to develop treatments for various acute medical conditions, including ulcerative colitis. The Massachusetts

company received FDA clearance for a Phase I clinical trial of its compound to address uncontrolled inflammation in the gut.

"The collaboration with Bacainn has been fundamentally critical in advancing our biological discoveries in GI pathophysiology towards the development of novel therapeutics to treat patients with [ulcerative colitis](#)—and perhaps other [chronic inflammatory diseases](#), as well," said Dr. McCormick, the Worcester Foundation for Biomedical Research Chair, vice chair and professor of microbiology & physiological systems, and founding director of the UMass Center for Microbiome Research. "The Bacainn team shared our vision of how to bring a drug of this unique class into this phase of clinical testing while at the same time the my lab was ideally poised to understand how to obtain results to move the development forward quickly and effectively."

Ulcerative colitis is the most common form of inflammatory bowel disease worldwide. A chronic debilitating disease with no cure, it requires lifelong management, and ultimately takes a significant toll on both the physical and mental health of the patient. In the United States, nearly 1 million people suffer from the disease, about 5 percent of whom will go on to develop colorectal cancer.

"The quest for new treatment options, despite the backdrop of rapidly developing new therapies, is essential and highlights the complexity of this disease given there remains many unanswered questions regarding the causes and course of the [disease](#), its management and treatment," said McCormick.

Bacainn will begin enrolling healthy volunteers in the coming months to evaluate various dose levels of its compounds for safety, tolerability and pharmacokinetics in a double-blind, placebo-controlled study. The advancement of the biologic was based on its favorable profile exhibited in preclinical safety testing, along with its GI tract-restricted distribution

and demonstration of potent and selective activity against human primary neutrophils in a model of inflammation.

"We are thrilled by the remarkable progress made by the Bacainn team and excited about the advancement of this clinical development," said Bacainn CEO Ronnie Farquhar. "Our collaboration with the University of Massachusetts Medical School provided access to decades' worth of experience around neutrophil biology, as well as sophisticated assay systems, which greatly enabled our discovery process."

Chris Stevens, MD, Bacainn's chief medical officer added, "As an oral, gut-restricted anti-inflammatory agent, this novel therapeutic approach is well positioned for patients with moderate to severe ulcerative colitis."

Provided by University of Massachusetts Medical School

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