

# Crohn's disease study uses patients' own bone marrow cells for personalized treatment

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An innovative clinical trial using the science of "personalized" cellular therapy is treating older adolescents and adults suffering from Crohn's disease.

Physician-researchers at Emory University and Children's Healthcare of Atlanta are harvesting [bone marrow cells](#) from older adolescents and adults (18 to 65 years old) with Crohn's – an [inflammatory bowel disease](#) – and manufacturing personalized cells to target the disease's inflammatory mechanisms, potentially reducing intestinal flare-ups and limiting long-term damage.

Subra Kugathasan, MD, Marcus Professor of pediatric gastroenterology at Emory School of Medicine and a physician with Children's Healthcare of Atlanta, is leading the clinical trial, which is supported by the Crohn's and Colitis Foundation of America and the Atlanta Clinical and Translational Science Institute. This study currently is offered only in Atlanta.

Symptoms of Crohn's disease include severe abdominal pain, diarrhea, fever, weight loss, and the inability for a child to properly grow, resulting in bouts of inflammation that may also affect the entire digestive tract, including the mouth, esophagus and stomach. Available therapies designed to suppress the inflammation do not work in everyone, and bowel resection may eventually be needed. The recurrence of Crohn's disease after bowel resection is very high, highlighting the need for new therapies.

"There is no current answer for what specifically causes Crohn's disease, nor is there a cure," says Kugathasan. "But we hope that through our clinical research, we will be able to significantly improve the course of this disease."

Blood and [bone marrow](#) cells have been used for more than a quarter century to treat life-threatening hematological conditions and are now established therapies worldwide. The current clinical trial uses the patients' own mesenchymal stromal cells from the bone marrow. These cells have been studied by Emory investigators for treatment of autoimmune diseases.

The Crohn's disease clinical trial is the first study launched in partnership with the new Emory Personalized Immunotherapy Center (EPIC) at Emory University Hospital and School of Medicine. No other study has so far combined the technologically innovative and FDA-regulated elements of the Emory and Children's study, says EPIC director Jacques Galipeau, MD.

The personalized cells are derived from the patient's own bone [marrow cells](#), as opposed to cells derived from an anonymous donor; the process of preparing the cells involves the use of animal-free products; and the [cells](#) are delivered fresh shortly after harvest. The manufacturing of the cell product is performed on site in a dedicated pharmaceutical grade facility within Emory University Hospital.

Provided by Emory University

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