Gut Study May Lead to New Treatments for IBS

Cells that influence gut function could yield new therapies for irritable bowel syndrome and other gastrointestinal conditions.

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Recent findings published online in the Proceedings of the National Academy of Sciences reveal that glia cells, one of two types of specialized cells that constitute the gut, regulate the nervous system signals conducted by neurons, the second type of specialized cells. This discovery may help in the development of therapies for irritable bowel syndrome (IBS) and other intestinal disorders, reports Michigan State University (MSU) in a press release.

IBS is a chronic disorder that causes abdominal pain and discomfort and affects 10% to 15% of people in the United States. Currently, there's no known cure for the condition. (Other gastrointestinal conditions possibly influenced by glia cells include constipation and chronic intestinal pseudo-obstruction, a rare condition that causes a section of the gut to malfunction in the absence of an actual obstruction.)

"Thinking of this second brain [the gut] as a computer, the glia [cells] are the chips working in the periphery," explained Brian Gulbransen, PhD, an MSU Foundation professor in the College of Natural Science's Department of Physiology and an author of the study. "They're an active part of the signaling network but not like neurons. The glia are modulating or modifying the signal."

These findings show a more comprehensive view of how the gastrointestinal system functions and demonstrate that glial cells facilitate proper gut function to a greater degree than researchers previously thought.

"This is a ways down the line, but now we can start to ask if there's a way to target a specific type or set of glia and change their function in some way," Gulbransen said. "Drug companies are already interested in this."

Scientists cautioned, however, that although they believe the results of the inquiry will generate new ways to treat illnesses of the gastrointestinal tract, much more work must be done before therapies are developed.

To learn more about IBS, read "What You Need to Know About Irritable Bowel Syndrome."

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