

# Large-scale genetic study finds new link between IBS and the cardiovascular system

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New research [published](#) in the journal *Cellular and Molecular Gastroenterology and Hepatology* sheds light on disease mechanisms common to irritable bowel syndrome (IBS) and cardiovascular diseases (CVD).

Led by Dr. Leticia Camargo Tavares, a postdoctoral fellow at the Hypertension Research Laboratory within Monash University's School of Biological Sciences, the study reveals novel insights into the genetic underpinnings of IBS, offering potential avenues for therapeutic intervention.

IBS is one of the most prevalent gastrointestinal disorders globally, affecting up to 10% of the population, with a disproportionate impact on women.

It is characterized by a complex range of symptoms including [abdominal pain](#), bloating, diarrhea and constipation. IBS significantly compromises patients' quality of life. Despite its widespread prevalence, the cause of IBS remains unclear, thus limiting treatment options.

An international consortium of researchers, drawing expertise from Monash University (Australia), CIC bioGUNE (Spain), LUM University, IRGB-CNR, CEINGE, and the University of Naples Federico II (Italy), as well as the University of Groningen (Netherlands), embarked on a comprehensive investigation.

Analyzing data from two large European population cohorts—UK Biobank and Lifelines—the team scrutinized the genetic landscapes of 24,735 people with IBS and 77,149 symptom-free individuals.

Their analysis uncovered four genomic regions, including two previously

unidentified loci, associated with increased susceptibility to IBS.

These genetic hotspots implicate pathways central to gastrointestinal motility, intestinal mucosal integrity, and circadian rhythm regulation.

"Although we're yet to conclusively pinpoint [specific genes](#) and mechanisms, these findings provide novel insights into IBS pathophysiology, highlighting potential therapeutic targets. So, we expect follow-up research to build on these discoveries," Dr. Tavares said.

Moreover, the researchers found a remarkable link between IBS predisposition and various cardiovascular ailments, encompassing hypertension, [ischemic heart disease](#), and angina pectoris.

Professor Mauro D'Amato, senior author and study supervisor from CIC bioGUNE and LUM University, described this new evidence as the most exciting outcome, underscoring the potential for shared therapeutic modalities.

In another important finding, the study revealed that IBS heritability (the weight of genes in determining one's risk of disease), might be higher than previously thought. This, the authors say, may stem from their adherence to standardized classification criteria in delineating IBS phenotypes, notably the Rome Criteria from the Rome Foundation.

**More information:** Leticia Camargo Tavares et al, Rome III criteria capture higher irritable bowel syndrome SNP-heritability and highlight a novel genetic link with cardiovascular traits, *Cellular and Molecular Gastroenterology and Hepatology* (2024). [DOI: 10.1016/j.jcmgh.2024.04.002](#)

Provided by Monash University

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