

Case ID:M14-132L

Published: 9/29/2014

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Biomarkers for Irritable Bowel Syndrome (IBS)

Approximately 9% of the general population will report the onset of Irritable Bowel Syndrome (IBS) over a one year period. Unfortunately, at present, there is no standard and reliable diagnostic test for IBS. IBS is currently diagnosed using symptomatic criteria, but because symptoms of IBS can overlap with other GI diseases, there is considerable uncertainty among physicians during diagnosis. The absence of appropriate diagnostic and therapeutic approaches for IBS places a significant burden on the patient and the health care system. A clear and present need exists for a rapid and accurate diagnostic test for IBS.

Researchers at Arizona State University have identified a suite of genes with expression patterns that correlate with symptoms of irritable bowel syndrome. Using a limited number of patients with verified symptomatic diagnosis of IBS and healthy control patients, a signature gene expression pattern was developed that may be employed in diagnosing IBS. Samples from the patients include intestinal mucosal tissue samples as well as fecal and blood samples. The panel of genes includes 91 genes which showed a two-fold change in expression, 55 genes which showed a four-fold change in expression and 9 genes having an eight-fold change in expression between cases and controls, all with a 99% confidence.

This signature gene expression pattern that was identified may represent a foundation from which a reliable and standardized diagnostic test for IBS can be developed.

Potential Applications

- Differentially expressed genes as biomarkers for diagnosis of IBS

Benefits and Advantages

- Gene expression-based biomarkers -
 - does not rely solely on symptoms
 - Reduces uncertainty in diagnosis
 - Standardized
- Potentially increase accuracy of diagnosis

For more information about the inventor(s) and their research, please see [Dr. Sandrin's departmental webpage](#)

[Dr. Jurutka's departmental webpage](#)

