UCLA Inventors Identify Specific Molecular Diagnostic Markers For Ulcerative Colitis

Tech ID: 25600

BRIEF DESCRIPTION
UCLA researchers in the Division of Digestive Disease in the Department of Medicine at the David Geffen School of Medicine, led by Drs. Charalabos Pothoulakis and Dimitrios Iliopoulos, have identified several biomolecules that are potential diagnostic markers for ulcerative colitis. These markers can be used singularly or combined, depending on the diagnostic testing need. There is increased flexibility for testing as a positive correlation is related to increased marker levels or the presence of the molecule, depending on the biomarker. Researchers have also identified a marker that can distinguish ulcerative colitis from Crohn’s Disease.

ADVANTAGES
▶ Small biomolecular markers easily identified in tissue samples
▶ Advanced, FDA-approved diagnostic equipment can be used to measure microRNAs
▶ Increased levels and presence of biomarkers correlated to disease
▶ Can be used to distinguish between ulcerative colitis and Crohn’s Disease
▶ Markers include microRNAs 133a, 214, 221-5p, 4454, 223-3p, 23-3p, and 320e, and PTEN and LL-37

FULL DESCRIPTION
Diagnosing the severity of ulcerative colitis (UC) and determining a patient’s risk for developing colitis-associated colon cancer has been challenging due to the lack of specific biomarkers. Many biomarkers for inflammatory bowel diseases are not highly specific to just UC, but are also biomarkers for Crohn’s Disease and many other gastrointestinal diseases. The identification of a biomarker that is specific to UC will be highly useful to develop of diagnostic and prognostic tests.

RELATED MATERIALS
▶ Cathelicidin as novel inflammatory bowel disease marker and therapy for colitis-associated intestinal fibrosis. PCT/US2013/074034
▶ MIR-133alpha as a marker and therapeutic target for colitis and inflammatory bowel disease. PCT/US2014/055493

OTHER INFORMATION

Pothoulakis Group: http://gastro.ucla.edu/body.cfm?id=131
Iliopoulos Group: http://gastro.ucla.edu/body.cfm?id=157
Additional technologies available from the Pothoulakis group: http://bit.ly/1WXT3Q6

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