Abdominal pain, cramping, bloating, constipation, diarrhoea are all very common clinical symptoms that generate more than 70 million physician visits annually in Europe and over 94 million in the United States. Usually, patients suffering from these symptoms consult at the primary care, where physicians will need to discriminate patients with a benign functional GI disorder, typically irritable bowel syndrome from those suffering from an organic disorder either with inflammatory etiology, autoimmune etiology (celiac disease), infectious or oncology etiology. Today, good predictors of the severity of digestive disorders and their outcome are still lacking in current medical practice. The state-of-the-art is still based on endoscopic procedures and several publications have demonstrated increasing evidence that endoscopy parameters are better predictors to help identifying patients who should be treated with more aggressive therapies. The most recent advances are in the field of confocal laser endomicroscopy, a technique that allows real time in vivo histology of 1000-fold magnification during on-going endoscopy. Endomicroscopy requires the application of fluorescent agents either systemically or topically. However, the fluorescent agents currently used are non-specific, thereby limiting the ability to discriminate the different disorders. Therefore, there is a need for diagnostic agents which are non-toxic and which are not hydrolysable or absorbable by the organism. In particular, when the diagnostic agent is to be in contact with a mucous membrane, it is of importance that this agent does not present a non-specific adhesion to the mucous membrane, so that the entire administered dose reaches the target area.

Biography

Cécile Besson Duvanel was awarded a fellowship from the Roche Research Foundation to conduct her MD-PhD thesis in the field of Immunochemistry in 2002 at the University of Lausanne, Switzerland. She has then completed her MD training at the Pediatric Department of the University Hospital in Lausanne. She has been awarded several international distinctions for her research including the Milupa Neonatology Award and the Professor Combe Award and she has authored more than 20 scientific publications in international, peer-reviewed journals. She co-founded Augurix SA in 2007, a start-up active in the development of companion diagnostics in the field of gastroenterology.

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