

Ioannis Drygiannakis, MD PhD FEBGH

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Biosketch

Dr Ioannis Drygiannakis, MD, PhD serves as a Gastroenterologist at the Department of Gastroenterology, University Hospital of Heraklion, Greece since 2020 and as a Postdoctoral Research Scientist at the Gastroenterology Research Laboratory, University of Crete, Greece since 2015. He received his MD at the School of Medicine of the University of Crete in 2002. He had a 2-year training in Internal Medicine in 2008 and completed his 4-year fellowship in Gastroenterology in 2019 at the University Hospital of Heraklion. He received his PhD in Mucosal Immunology from the University of Crete in 2012.

During his doctoral dissertation, conducted in consultation with professors E. A. Kouroumalis and G. Kolios, he studied the crosstalk between intestinal epithelial cells and underlying subepithelial myofibroblasts, focusing on pro-fibrotic signaling as a result of chronic inflammation in Inflammatory Bowel Disease. He found out that epithelial cells exposed to an inflammatory milieu increased baseline collagen production and induced Matrix Metalloproteinase (MMP)–9 by subepithelial myofibroblasts, establishing the hypothesis of epithelial-derived signaling in intestinal fibrosis and ulceration.

Mentored by professor P. B. Ernst, he had his postdoctoral training from 2010 to 2015 at the Digestive Health Center of Excellence, University of Virginia and at the Department of Pathology, University of California – San Diego, USA. He studied the effect of adenosine on the crosstalk between regulatory (Treg) and effector T (Teff) cells both in vitro and in vivo by employing immune cell-triggered enterocolitis models. Adenosine was identified as crucial for the maintenance of Treg phenotype and Th17 polarization of Teff in the intestinal lamina propria. Moreover, he demonstrated that adenosine production by cells of both adaptive and innate immunity is prerequisite for the effective crosstalk between Treg and Teff. Further, he documented that innate lymphoid cells also have a crucial role on T cell crosstalk.

He now proudly serves as a tutor of Pathophysiology and Internal Medicine to medical students of the University of Crete, Greece and as an ad hoc reviewer for several journals. He currently works on integrating host–microbiome interactions in complicated Crohn's disease by first demonstrating distinct microbial signatures in stenotic and fistulizing Crohn's disease and subsequently identifying mediators and immune cells involved. As far as clinical medicine is concerned, he focuses on the care of patients with Inflammatory Bowel Disease and liver diseases.