



ENGINEERING FOR EXTREMES



Giovanni Traverso, MB, BChir, PhD

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HOST: Prof. Antonio D'Amore, PhD, Giovanna Frazziano, PhD, Prof. Gaetano Burriesci, PhD

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ED. 17, AULETTA -1/1
Viale delle Scienze, Palermo
Università degli Studi
di Palermo

ABSTRACT

Prof. Traverso will aim to review ongoing efforts towards the development of orally delivered therapies in the extreme gastrointestinal environment. Specifically, he will present advances in materials science, device development and translational efforts towards addressing medication non-adherence and the dosing of macromolecules.

BIOSKETCH

Prof. Giovanni Traverso is the Director of the Laboratory for Translational Engineering at MIT and Harvard. He is the Karl Van Tassel (1925) Professor in the Department of Mechanical Engineering at MIT, Associate Member of the Broad Institute and a gastroenterologist in the Division of Gastroenterology at Brigham and Women's Hospital, Harvard Medical School. Dr. Traverso grew up in Peru, Canada, and the United Kingdom. He earned his BA from Trinity College, University of Cambridge, and his PhD from Johns Hopkins University, before completing medical school at the University of Cambridge, internal medicine residency at Brigham and Women's Hospital and gastroenterology fellowship at the Massachusetts General Hospital.

Dr. Traverso's early research led to the development of Cologuard, the first FDA-approved non-invasive test for colon cancer screening. During his postdoctoral work at MIT, he advanced new technologies for drug delivery and physiological sensing via the gastrointestinal tract.

Dr. Traverso's contributions have been recognized with awards such as the Grand Prize of the Collegiate Inventors Competition, a Research Fellowship from Trinity College, inclusion in MIT Tech Review's TR35 list, and the 2023 Acta Biomaterialia Silver Medal. He is a member of the American Society for Clinical Investigation, the College of Fellows of the Controlled Release Society, the American Institute of Medical and Biological Engineering, the National Academy of Inventors and a foreign member of the Royal Academy of Medicine of Belgium.

His current research focuses on developing next-generation therapeutic delivery systems for the gastrointestinal tract and novel ingestible electronic devices for sensing a wide range of physiological and pathophysiological parameters.