

## Short bio

Emmanuel (Manolis) Tzanakakis is a Professor of Chemical and Biological Engineering at Tufts University. He is also a faculty member of the Department of Cell, Molecular and Developmental Biology at the Tufts School of Medicine and the Clinical and Translational Science Institute of the Tufts Medical Center. Professor Tzanakakis earned his PhD in Chemical Engineering from the University of Minnesota (UMN). He received post-doctoral training at the UMN Stem Cell Institute and subsequently at the Diabetes Center of the University of California-San Francisco (UCSF). Research in the Tzanakakis group focuses on stem cell engineering and bioprocessing with emphasis on the development of cellular therapies for diabetes. Optogenetic engineering of pancreatic tissue equivalents is also a major of research activity along with a long-standing interest in the expression and function of Regenerating islet-derived (Reg) proteins in normal and disease states of the pancreas.

Professor Tzanakakis has trained more than 30 advanced bioengineering professionals including nine PhDs and three postdoctoral fellows. Dr. Tzanakakis has strived for the inclusion of minority students in STEM through several programs including the Collegiate Science and Technology Entry Program for minority undergraduates, Buffalo-Area Engineering Awareness for Minority high school students, NSF REUs, and McNair and GEM scholarship programs. In recognition of his outstanding mentoring, he was awarded the Tufts Award for Outstanding Faculty Contribution to Graduate Studies in 2019.

He is a devoted member of several professional societies and a regular fixture in program organization of their annual meetings, including the American Institute of Chemical Engineers, coordinating programming for stem cell and tissue engineering sessions for over a decade, and the American Chemical Society, serving in various roles including as the coordinator for the area of Stem Cells, Tissue Engineering and Regenerative Medicine. Dr. Tzanakakis organized and chaired the first international conference on Optogenetic Technologies and Applications in December of 2019 sponsored by the Society for Biological Engineering. He also helped securing a grant from the National Science Foundation for participation of students particularly from underrepresented backgrounds.

Prof. Tzanakakis has co-authored over fifty-five peer-reviewed articles and book chapters. In addition to the James D. Watson Investigator Award, his research has received continuous funding support in the past fifteen years by the National Science Foundation, National Institutes of Health, New York State Stem Cell Science agency and the US Department of Defense.