Narrative Biosketch for Peter Nemes

Peter Nemes is an Associate Professor of Chemistry and Biochemistry at the University of Maryland, College Park (UMD). He obtained a M.Sc. in Chemistry (*summa cum laude*) from the Eotvos Lorand University (Budapest, Hungary). He obtained his PhD in Chemistry with Prof. Dr. Akos Vertes at the George Washington University (Washington, DC), where he invented LAESI mass spectrometry. Dr. Nemes completed postdoctoral training in analytical neuroscience with Prof. Dr. Jonathan V. Sweedler at the University of Illinois at Urbana-Champaign, IL, where he developed high-sensitivity instruments for small and large biomolecules in single neurons. In 2011, he joined the US Food and Drug Administration as a Laboratory Leader and Staff Fellow. In 2013, Dr. Nemes returned to the George Washington University as an Assistant Professor of Chemistry. Prof. Dr. Nemes moved to UMD in early 2018.

Research in the Nemes Laboratory develops ultrasensitive and microanalytical platforms for high-resolution MS to study metabolic and proteomic processes with implications in cell and neurodevelopmental biology and health research. The group has uncovered metabolic and proteomic differences between single embryonic cells and discovered small molecules capable of altering normal cell fate specification. Recently, the group discovered long-range cell-by-cell metabolic communication between cells that coordinate patterning of the embryonic body plan. These results challenge basic understanding of molecular processes that are necessary for normal embryonic body and brain development and raise important implications for human health.

Prof. Dr. Nemes has published 48 peer-reviewed publications and 6 book chapters. Research in the group has been recognized by multiple honors, including a 2015–2019 *Beckman Young Investigator* award (Arnold and Mabel Beckman Foundation) and a 2017 Robert J. Cotter New Investigator Award (US HUPO) and an ASMS Research Award. Prof. Dr. Nemes is a recipient of an NSF CAREER award and an NIH Outstanding Research Award (R35).