Dr. Leary is Professor Emeritus/scientist/engineer/inventor/invited lecturer/and consultant to government, businesses and foundations. He headed 25 years of NIH-funded R01 research grants as well as many other research grants from NASA, NSF, DOD, and private foundations. As a scientist and engineer he has extensive experience prototyping or beta testing new technologies in the areas of high-throughput flow cytometry/cell separation technologies, rare-event analysis/data mining techniques relevant to stem/progenitor cells for regenerative medicine, minimal residual disease monitoring or circulating tumors cells (CTCs) and cancer stem cell targeting; developer of new nanomedical systems and other bionanotechnology technologies for nanomedicine. He has served on more than 130 NIH Study sections over the past 35 years, continuing on that mode for 3 or 4 Study Sections per year, and has served on a variety of other national and international review bodies. He has given over 240 invited talks and presentations at national and international meetings and he and his students and collaborators have published more than 160 publications and 9 issued US Patents. He has extensive experience in research proposal writing/reviewing, including more than 30 years’ experience writing and reviewing SBIR grants, as a scientific consultant to a number of companies and has been a member of several scientific advisory boards for companies and foundations. He has served as a consultant for many companies over the past 35 years.

After obtaining dual undergraduate degrees (Aerospace Engineering and Philosophy) from MIT, he pursued his PhD in Biophysics at Penn State University where he quickly became a visiting graduate student at Los Alamos National Lab (LANL) for a significant portion of his dissertation work before subsequently becoming a postdoctoral fellow there. He then entered academia where he spent the next 37 years of his career. After 27 years as a Professor of Pathology and Laboratory Medicine at the University of Rochester Medical School and the University of Texas Medical Branch in Galveston, Professor Leary moved to Purdue in 2005 and became the SVM (School of Veterinary Medicine) Endowed Professor of Nanomedicine and a tenured full professor in the Department of Basic Medical Sciences and the Weldon School of Biomedical Engineering. He was also a Member of the Bindley Biosciences Center, Birck Nanotechnology Center, and the Oncological Science at Discovery Park where his laboratories were located. He was also a Member of the Purdue Cancer Center where he also served as Director of the Cancer Center Flow Cytometry Core Facility. In 2007 he was elected a Fellow of the AIMBE (American Institute for Medical and Biological Engineering), the highest honorary for biomedical engineers in the United States, for his pioneering work in the invention of high-speed flow cytometry and rare-event analysis as well as his more recent work in the design of bionanomedical systems. Since 2010 he has received a number of national and international awards for his pioneering research, including: the 2010 National Awardee of the $ 25,000 Chairmen's Distinguished Life Scientist Award by the Christopher Columbus Foundation and the U.S. Chamber of Commerce; the 2011 International Journal Nanomedicine Distinguished Scientist Award; a 2012 Elected Fellow of SPIE (Int. Society for Optical Engineering) one of approximately SPIE 1000 fellows elected world-wide since 1955; a 2012 Elected Fellow of the Biomedical Engineering Society (BMES); the 2013 International Society for Advancement of Cytometry Distinguished Service Award for eminence as scientist and inventor in the field of cytometry, microfluidics, and nanomedicine; the 2013 Leon Wheeless Innovation in Cytometry Award.

Dr. Leary retired from Purdue in August, 2015 and became Professor Emeritus. He and his wife (a native from Los Alamos) subsequently moved back to Santa Fe, New Mexico in September, 2015 where he continues to write and review manuscripts as an editorial board member for a number of scientific journals and to serve regularly on NIH Study Sections and scientific advisory boards. He has also recently started his own consulting/prototyping company in the areas of biomedical instrumentation and applications, particularly in the area of point-of-care diagnostic devices using micro- and nanotechnologies. His company, Aurora Life Technologies LLC, is now a Client company in the Santa Fe Business Incubator.