

Richard M. Caprioli

Richard M. Caprioli is the Stanley Cohen Professor of Biochemistry and Director of the Mass Spectrometry Research Center at Vanderbilt University School of Medicine. He is also currently Professor in the Departments of Chemistry, Medicine and Pharmacology at Vanderbilt University. Dr. Caprioli received his B.S. in 1965 from Columbia University in New York, N.Y., his Ph.D. in 1969 in Biochemistry, also at Columbia University with Professor David Rittenberg. After a one-year postdoctoral fellowship at Purdue University with Professor John H. Beynon, he was appointed as Assistant Professor of Biochemistry at Purdue in 1970. Dr. Caprioli moved to the University of Texas Medical School in Houston in 1975 where he was Professor of Biochemistry and Molecular Biology and Director of the Analytical Chemistry Center. He moved to Vanderbilt University in 1998 where he is currently Professor in the Departments of Biochemistry, Chemistry, Pharmacology and Internal Medicine.

Professor Caprioli's general research interests lie in discovery of temporal and spatial processes in biological systems using mass spectrometry. This work has included technology developments in the areas of electrospray and laser desorption ionization mass spectrometry and their applications to intact tissues as well as other biological samples. Applications have focused on achieving ultra-high sensitivity detection of endogenous compounds (e.g., neuropeptides) in intact tissues and in live animal systems. Recent work involves the development of Imaging Mass Spectrometry, a technology whereby molecular images of peptides, proteins, drugs and other compounds are localized in tissue sections with molecular weight specificity. Investigations to specific research areas involve elucidation of spatial distributions of molecules in both health and disease. Of special interest is the molecular distributions, spatial rearrangement, and alterations in expression levels of biological molecules in cancer tissues including human glioblastomas, breast cancer, colorectal cancer, prostate cancer and lung cancer.

Dr. Caprioli has been a member of the American Society for Mass Spectrometry since 1975; he served two years each as President of the Society and Vice-President for Programs. He is a member of the American Society for Biochemistry and Molecular Biology, the American Association for Cancer Research, and the American Chemical Society. Professor Caprioli has been the Editor-in-Chief of the *Journal of Mass Spectrometry* since 1990. He is currently Series Editor of *The Encyclopedia of Mass Spectrometry* and additionally has edited several volumes in this encyclopedia. He has published over 300 scientific papers, including three books and holds 12 US patents involving mass spectrometry technologies. Dr. Caprioli is currently serving a 3-year term on the Board of Directors of the HUPO and has been a member of the Board of Directors of the US HUPO since its inception.

In 2003, Dr. Caprioli received the Thomson Medal Award from the International Mass Spectrometry Society for "for outstanding achievements in mass spectrometry and for distinguished service to international mass spectrometry." He was named one of the "Pioneers in Proteomics" by the National Institutes of Health and received the Donald H. Coffey Award from the Society for Basic Urologic Research in 2005. He received the Field and Franklin Award from the American Chemical Society in April, 2006 for Outstanding Achievement in Mass Spectrometry, the Eastern Analytical Society 2010 Award for Achievements in Mass Spectrometry and the HUPO Distinguished Achievement Award in Proteomic Sciences for 2010.

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