

Kent E. Vrana, PhD

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Prof. Dr. Kent Vrana has more than 30 years of research experience in molecular neuropharmacology. Notably, he has been actively involved in the neuroenzymology and molecular neurobiology since he was a graduate student in 1979. Over the years, his laboratory was the first to create a full-length cDNA clone for tyrosine hydroxylase and to characterize the role of catecholamine-derived quinones in neuronal toxicity. He is currently using next-generation sequencing technologies to explore the roles of naturally-occurring sequence variants in the progression and severity of Parkinson's disease and inflammatory bowel disease. In addition, he has a long history of studying the proteomics and transcriptomics of substance abuse (alcohol, cocaine and heroin).

Dr. Vrana's laboratory was part of a team that established a new mechanism for generating embryonic stem cells. He has published widely on stem cell biology and has also patented a method for using nanoliposomal delivery of the bioactive lipid ceramide to maintain human induced pluripotent and embryonic stem cells in their undifferentiated state. More recently, he has been investigating the role of synthetic cannabinoids in colon cancer, glioblastoma and neuroblastoma.

From a technical standpoint, Dr. Vrana's laboratory has been instrumental in developing and disseminating tools for analyzing gene and protein expression, as well as characterizing normal and pathological processes.

Website:

