

## **RESEARCH BIOGRAPHY:**

Professor Dr. Dr. (h.c.) Marilyn A. Huestis recently retired as a tenured senior investigator and Chief, Chemistry and Drug Metabolism Section, IRP, National Institute on Drug Abuse, National Institutes of Health, after 23 years of conducting controlled drug administration studies. She is an Adjunct Professor in the Department of Epidemiology and Preventive Medicine, School of Medicine, University of Maryland Baltimore. She thoroughly enjoys mentoring doctoral students in Toxicology, has to date directly overseen the research of 16 distinguished new toxicologists, and currently has 2 students pursuing their dissertation research. Her research program focused on discovering mechanisms of action of cannabinoid agonists and antagonists, effects of *in utero* drug exposure, and the neurobiology and pharmacokinetics of novel psychoactive substances, the emerging face of drug abuse. Professor Huestis' research also explored new medication targets for cannabis dependence, including oral tetrahydrocannabinol (THC) and Sativex, a 1:1 ratio of tetrahydrocannabinol and cannabidiol. She is interested in the disposition of drugs and metabolites in a wide variety of biological fluids and tissues following controlled drug administration; data that provide a scientific database for interpreting drug concentrations in alternative matrices. Recently, Professor Huestis and colleagues documented that CB1-cannabinoid receptors are significantly down regulated in specific brain regions in chronic daily cannabis smokers, but these receptors significantly increased with sustained cannabis abstinence. Residual active cannabinoids could be quantified for up to 30 days in some chronic smokers during sustained abstinence and, furthermore, psychomotor impairment was documented in these same subjects for at least 21 days. An area of special interest for Professor Huestis is investigating the effects of *in utero* drug exposure on child development and whether concentrations of drugs and/or metabolites in meconium predict adverse outcomes of *in utero* drug exposure. She has published 408 peer-reviewed manuscripts and book chapters and more than 490 abstracts were presented at national and international meetings. Professor Huestis received a bachelor's degree in biochemistry from Mount Holyoke College (cum laude), a master's degree in clinical chemistry from the University of New Mexico (with honors), and a doctoral degree in toxicology from the University of Maryland (with honors). Professor Huestis received a Doctor Honoris Causa from the Faculty of Medicine, University of Helsinki in Finland in 2010. Other important awards

include, 2016 Marian W. Fischman Lectureship Award from the College on Problems of Drug Dependence, 2016 Saferstein Memorial Distinguished Lecturer at Northeastern University to be awarded April 2016, Excellence in Scientific Research, Women Scientist Advisory NIDA Investigator Award March 27, 2015, Norman P. Kubasik Lectureship Award, AACC Upstate New York Section May 7, 2015, Distinguished Fellow Award from the American Academy of Forensic Sciences (AAFS) in 2015, The International Association of Forensic Toxicologists (TIAFT) Alan Curry Award in 2010, the American Association for Clinical Chemistry Outstanding Contributions in a Selected Area of Research Award in 2008, the International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT) Irving Sunshine Award in 2007, the AAFS Rolla N. Harger Award in 2005, and the Irving Sunshine Award for Outstanding Research in Forensic Toxicology in 1992. The journal *Clinical Chemistry* featured her as an “Inspiring Mind”. She currently serves on the new National Commission on Forensic Sciences, and the Organization of Scientific Area Committee on Toxicology, World Anti-doping Agency’s Prohibited List Committee, the Scientific Working Group on Toxicology (SWG-TOX), Transportation Research Board Committee on Alcohol and Other Drugs, and the National Safety Council’s Alcohol, Drugs and Impairment Division Executive Board. Professor Huestis is past president of the Society of Forensic Toxicologists, past Chair of the Toxicology Section of the American Academy of Forensic Sciences, and the first woman president of The International Association of Forensic Toxicologists.