Fulton Crews, Ph.D.

Distinguished Professor, Department of Pharmacology at UNC-Chapel Hill
Raleigh-Durham, NC, US

Dr. Fulton Crews is Director of the Bowles Center for Alcohol Studies and Distinguished Professor at UNC-Chapel Hill.

As director of the UNC Bowles Center for Alcohol Studies, Dr. Crews has investigated how chronic ethanol induces structural and functional changes in the brain associated with binge drinking to determine if and how these changes contribute to behavioral changes that lead to addiction. His more recent studies follow changes in gene expression that contribute to a progressive degeneration with increasing impulsive-compulsive drug taking. He discovered that heavy alcohol use damages cortical brain regions involved in impulse control and planning capabilities. He was the first to discover that adult brain stem-progenetor cells are insulted by alcohol. Recently he discovered persistent brain neuroinflammatory gene induction secondary to systemic cytokines and identified reduced neurogenesis as factors in alcohol-related brain damage, difficulty with reversal learning tasks and inducing alcoholic depression-like behavior. Dr. Crews is among the few neuroscientists investigating the adolescent brain as a unique neurodevelopmental period that has considerable risk for future alcoholism. He was instrumental in developing and working with colleagues across the country to submit and administrate a consortium for the initiative which coordinates a diverse group of basic neuroscientists in a multidisciplinary research project to clearly define the persistent effects of adolescent alcohol exposure on adults, and to begin to explore the neurobiological mechanisms. The overarching hypothesis is that models of human underage drinking will impact brain maturation resulting in persistent changes in adult brain function and structure. Dr. Crews was instrumental in developing and working with colleagues across the country to submit and administrate a consortium for the initiative ?Neurobiology of Adolescent Drinking in Adulthood? (NADIA). The NADIA coordinates a diverse group of basic neuroscientists in a multidisciplinary research project to clearly define the persistent effects of adolescent alcohol exposure on adults, and to begin to explore the neurobiological mechanisms. The overarching hypothesis of this consortium is that models of human underage drinking will impact brain maturation resulting in persistent changes in adult brain function and structure that relate to changes in behavior.

Mental Health Care, Research, Education/Learning, Program Development

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Neurobiology, Brain, Alcoholism, Neurodegeneration, Addiction, Neuroscience, Multidisciplinary Research, Psychopathology

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Curriculum in Toxicology UNC-Chapel Hill : Member, American College of Neuropsychopharmacology : Associate Member, International Society for Neurochemistry : Member, International Society for Biomedical Research on Alcoholism : Member

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Mechanisms of Ethanol Activation of Neuroimmune Signaling and Neurodegeneration
Neuroimmune Mechanisms Contributing to Addiction Neurobiology

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Syracuse University
B.S. Physiology

University of Michigan
Ph.D. Pharmacology

Distinguished Investigator Award for Scientific Excellence
2007 Distinguished Investigator Award for Scientific Excellence, Research Society on Alcoholism, Chicago, Illinois

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