Fulton T. Crews, Ph.D.

Fulton T. Crews is a neuropsychopharmacologist who for many years has investigated how drugs change the brain and behavior. The overarching hypothesis of his research is that structural and functional changes in brain associated with binge drinking contribute to the cognitive changes that lead to addiction. His discoveries indicate the adolescent brain is uniquely altered by ethanol increasing risks of developing alcoholism. He leads the NADIA Consortium, e.g. The Neurobiology of Adolescent Drinking in Adulthood, a group of ten National Institute of Health funded studies. Persistent changes in brain and behavior appear to be due to cytokines and transcription factors that induce oxidative enzymes and proinflammatory proteins associated with alcohol induced brain damage and loss of neurogenesis. Drugs that block these processes protect against alcohol induced brain damage. Adolescent binge drinking models have found persistent changes in adult behavior as well as neurobiology. For example, cognitive assessments using reversal learning find loss of behavioral flexibility mimicking cognitive deficits in humans. Changes in adult anxiety, alcohol drinking and reward are also consistent with adolescent binge drinking increasing risk of alcoholism. These advances have helped clarify the mechanisms and complexities of how alcohol damages the brain, as well as how that damage itself contributes to addiction. Further, his studies on adult brain recovery during abstinence following alcohol dependence provided the basis for discoveries on persistent unique adolescent responses to binge drinking. His goal is to improve understanding and knowledge that promotes better prevention, diagnosis and treatment of addiction.

Dr. Crews has been the Director of the Bowles Center for Alcohol Studies since 1995. Under Dr. Crews' leadership, the Bowles Center has become a leading center in research on the molecular mechanisms of alcohol pathology, and on the testing of new therapies. Dr. Crews graduated from Syracuse University in New York and earned a doctorate in Pharmacology from the University of Michigan, Ann Arbor. He was an NIH Pharmacology Research Associate, working with Nobel Prize winner Julius Axelrod as his preceptor. He moved to the College of Medicine, University of Florida in 1980, started his own research laboratory and became co-director of the UF Center for Alcohol Research and UF Center for Neurobiology on Aging. He has received numerous lectureship awards, the Research Society on Alcoholism Distinguished Investigator Award, an NIH Merit Award and was recently appointed the John R. Andrews Distinguished Professor in the School of Medicine at UNC.