

Student Seminar Series

9:45 a.m. Tuesday, October 29, 2013 • 331 Smith Hall

Professor

Anne Andrews

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University of California, Los Angeles

Serotonin: From Chemical Neurotransmission to Behavior

Website: <http://www.chemistry.ucla.edu/directory/andrews-anne-m>

Abstract

We develop and utilize state-of-the-art methods to investigate altered serotonin neurotransmission as it pertains to anxiety- and mood-related behavior. Using microdialysis with high temporal resolution, we have elucidated changes in brain extracellular serotonin levels in behaving mice not readily observed at conventional

resolution. To interrogate the effects of altered serotonin transporter function in humans where brain sampling is prohibitive, we have developed chronoamperometry and flow cytometry methods for use in peripheral blood cells. We also develop and utilize neurotransmitter-functionalized nanomaterials to understand molecular recognition and to design future nanoscale brain sensors.

Professor Anne Andrews earned her bachelor's degree in chemistry at Pennsylvania State University. She then went on to earn her doctorate as an Department of Education Fellow at the National Institute of Mental Health (NIMH) under the mentorship of Dennis Murphy. After finishing her doctorate, Andrews continued at the NIMH for a few years as a postdoctorate and later a senior staff fellow. Currently, she is a professor of Psychiatry and a member of the Department of Chemistry and Biochemistry at the University of California, Los Angeles (UCLA).

Work in the Andrews' lab has primarily focused on the role serotonin in behavior and learning. In addition the Andrews' lab is interested in applying nanoscience to fundamental studies of neurotransmitter binding and in the development of neurotransmitter sensors.

Professor Andrews is the recipient of many awards, including the NIH Fellows Award for Research Excellence and Eli Lilly Outstanding Young Analytical Chemist Award, and is a member of California NanoSystems Institute, the Society for Neuroscience, the Society for Electroanalytical Chemistry, and the American College of Neuropsychopharmacology. Currently she is the Richard Metzner Endowed Chair in Clinical Neuropharmacology and an Associate Editor for ACS Chemical Neuroscience.

