

**DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
FALL 2017 GRAD SEMINAR SERIES**

OPEN TO THE PUBLIC

DATE: WEDNESDAY, OCTOBER 25, 2017

WHERE: CENTRAL KING BUILDING - 204

TIME: 2:30 PM

Refreshments at 2:30 pm – Seminar at 2:45 pm

GUEST SPEAKER

Federico Sesti, Ph.D.

Department of Neuroscience & Cell Biology

Robert Wood Johnson Medical School

Rutgers University

Piscataway, NJ

TOPIC

Oxidation of K⁺ channels in traumatic brain injury and Alzheimer's disease

ABSTRACT

Oxidative modification of potassium (K⁺) channels is emerging as a mechanism of neuronal vulnerability affecting several conditions associated with oxidative stress, from normal aging to neurodegenerative disease. In this talk Dr. Sesti will illustrate the effects of oxidation of the voltage-gated K⁺ channel subfamily B member 1 (KCNB1, Kv2.1) on the pathology of Traumatic Brain Injury (TBI) and Alzheimer's disease (AD).

BIOGRAPHY

Dr. Federico Sesti is a Professor of Neuroscience and Cell Biology, at Robert Wood Johnson Medical School, Rutgers University (<http://sestilab.rwjms.rutgers.edu>). He received his *Laurea* and Ph.D. degree in Physics from the University of Genova, Italy. He was a postdoctoral fellow in the laboratory of Benjamin Kaupp, Institut für Biologische Informationsverarbeitung, Forschungszentrum Jülich (Germany) and in the laboratory of Steve Goldstein at Yale University (USA). He joined the Robert Wood Johnson Medical School in 2001. The research of the Sesti's laboratory revolves around the molecular basis of neuronal aging in both vertebrates and invertebrates and in particular, how excess oxidants modify K⁺ channels and how this mechanism - which the lab has been the first to demonstrate - contributes to the progressive decline in neuronal function which is part of the normal aging process and of neurodegenerative disease. Prof. Sesti is a Fulbrigh Scholar, and member of several scientific societies. He serves in the editorial board of several journals and in international, federal and private funding agencies.

Keywords for research interest: Ion channel, potassium channel, aging, oxidative stress, reactive oxygen species, ROS, Src tyrosine kinases, *C. elegans*, cell signaling.

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