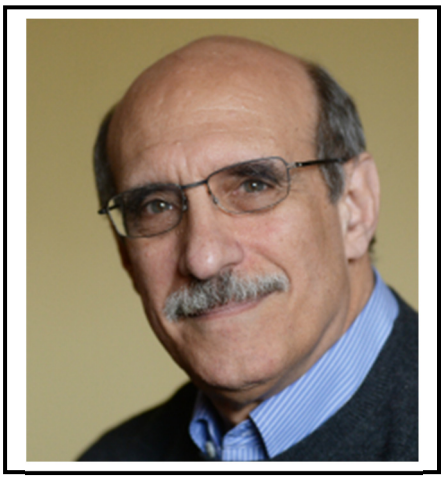
Fall 2018 CMMB ResearchOne Seminar Series
Location: Interdisciplinary Sciences Building (ISA) 1061
Date: Friday, November 9th, 2018, 9:30 am – 10:30 am

DEPARTMENT OF CELL BIOLOGY, MICROBIOLOGY & MOLECULAR BIOLOGY (CMMB)
Present

MARTIN CHALFIE, Ph.D.

Winner of the 2008 Nobel Prize in Chemistry
University Professor in Developmental Biology, Neurobiology, and Genetics and Genomics
Department of Biological Sciences
Columbia University, New York
Faculty page: https://biology.columbia.edu/people/chalfie
Lab website: https://biology.columbia.edu/freeform/chalfie-lab

Seminar Title: "GFP: LIGHTING UP LIFE"



Abstract: Yogi Berra once said, "You can observe a lot by watching." Unfortunately, before the early 1990s observations in the biological sciences were usually done on dead specimens that were specially prepared to allow entry of reagents that stained cell components. These methods allowed a glimpse of what cells were doing, but they gave a necessarily static view of life. GFP and other fluorescent proteins revolutionized the biological sciences because they allowed scientists to look at the inner workings of living cells. The story of the discovery and development of GFP also provides a very nice example of how scientific progress is often made: through accidental discoveries, the willingness to ignore previous assumptions, and the combined efforts of many people. The story of GFP also shows the importance of basic research on non-traditional organisms.

Biography: Dr. Martin Chalfie is a Professor in Biological Sciences at Columbia University, New York. He earned his Ph.D in Neurobiology from Harvard University and conducted his postdoctoral work at the Medical Research Council Laboratory of Molecular Biology in Cambridge, England working with Sidney Brenner and John Sulston where he studied the neural circuits for touch sensitivity in the nematode model *C. elegans*. Dr. Chalfie joined the faculty of Columbia University in 1982 continuing to research neuronal differentiation and mechanosensation.

Dr. Chalfie, is a co-recipient of the 2008 Nobel Prize in Chemistry for his contributions to demonstrating how Green Fluorescent Protein (GFP) can be incorporated and expressed in the genomes of other animals principally by labeling six individual cells in *C. elegans* that could be visually tracked. Additionally, in 2004 Dr. Chalfie was elected to serve as a member of the National Academy of Sciences. In 2014, he chaired the Committee of Human Rights of the National Academies of Sciences, Engineering, and Medicine.

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