IMCB Invited Speaker

Speaker : **Prof. Suzanne Pfeffer**
Professor and Chairman of Department of Biochemistry
Stanford University School of Medicine, California, USA

Date : 25 February 2014, Tuesday

Time : 11:00AM - 12:00PM

Venue : IMCB Seminar Room 3-46, Level 3, Proteos, Biopolis

Host : Prof. Wanjin Hong

Seminar :

How vesicles find their targets at the Golgi

One third of the proteins encoded by the human genome pass through the Golgi complex, yet we still do not understand how this compartment functions. My lab is interested in how the Golgi works and how vesicles are delivered there. We study a class of proteins called Golgins that are predicted to form highly elongated structures. Golgins are needed to maintain Golgi structure and they also are needed to somehow catch vesicles that need to dock and fuse with the Golgi membrane surface. We have carried out structural studies of a protein named GCC185 that is C-terminally anchored at the Golgi by binding to 2 molecules of Rab6 GTPase and 2 molecules of Arl1 GTPase. We have created GCC185 mutants that either interfere with normal Golgi structure or are unable to help vesicles dock. This lecture will highlight the mechanism by which transport vesicles are able to recognize and deliver cargo to the correct membrane destination. Using atomic force microscopy of purified proteins, as well as rescue of siRNA depleted cells, we have come up with amodel for how GCC185 can tether transport vesicles inbound to the Golgi from endosomes.

About the Speaker :

Suzanne Pfeffer received her A.B. in biochemistry from the University of California, Berkeley, and her Ph.D. in biochemistry and biophysics from the University of California, San Francisco (UCSF). She did her postdoctoral training at UCSF and Stanford University before joining the Stanford faculty in 1986. Dr. Pfeffer served as Chairman of the Department of Biochemistry from 1998-2006, and was recently reappointed Chairman for 2013-2015. Dr. Pfeffer received a Merit Award from the National Institute of Health and is an elected fellow of the American Association for the Advancement of Science and the American Academy of Arts and Sciences. A former Presidential Young Investigator, Dr. Pfeffer served as president of the American Society for Cell Biology in 2003 and as president of the American Society for Biochemistry and Molecular Biology from 2010 to 2012. She is currently the Emma Pfeiffer Merner endowed Professor of Medical Sciences and Professor and Chairman of Biochemistry at Stanford University School of Medicine.

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