

# The Fascinating World of Proteins: Molecular Machines of Biology

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**DATE:** Monday, October 17, 2016

**TIME:** 7:00 PM

**PLACE:** IIC-2001

There will be a reception following the talk in the atrium of the Bruneau Centre.

**ABSTRACT:** Protein molecules perform an astonishing range of functions in all forms of life: from the digestion of food and the replication of genes to the propagation of signals in cells and the nervous system.

This public lecture with Dr. Ben Schuler, professor of molecular biophysics at the University of Zurich, Switzerland and the 2016 Dr. and Mrs. Satti Paddi and Parvati Reddy Memorial Lecturer, will illustrate examples of these versatile molecular machines, how they are generated, and how they exert their functions.

A particularly remarkable aspect of proteins, which are produced as chains of monomeric building blocks, the amino acids, is that their molecular three-dimensional structure is encoded within their amino acid sequence. This process of protein folding is understood at an increasingly detailed level thanks to advanced experimental methods and physical concepts. Protein folding also has wide-ranging implications for health and disease – if the folding process fails, misfolding diseases such as Alzheimer's or Parkinson's disease can emerge. Joining the forces of physics, chemistry, and biology will thus continue to be essential for understanding protein molecules and for treating or preventing such debilitating diseases.

**ALL ARE WELCOME!**