



The Hebrew University Center
for Nanoscience & Nanotechnology



Nano Seminar

In situ structural biology: challenges and results

Prof. Ohad Medalia

*University of Zurich, Switzerland
Ben-Gurion University, Israel*

Abstract:

Reconstructing the molecular architecture of cells is a long standing challenge in cellular and structural biology. For high resolution structural analysis, biological materials must be physically fixed, preferably by vitrification, and imaged by a non-invasive technique such as by cryo-electron tomography. Using this technique, one can acquire 3D information about the macromolecular architecture of cells, depict unique cellular states, and reconstruct molecular networks. Technical advances over the last few years, such as improved sample preparation and electron detection methods, have been instrumental in obtaining data with unprecedented structural details. This presents an exciting opportunity to explore the molecular architecture of both individual cells and multicellular organisms at nanometer to subnanometer resolution. Here, I will discuss recent developments and *in situ* applications of cryo-electron tomography to cells and structural biology.

Gathering & Refreshments at 10:50

Please contact Alexandra Bannykh at 6584919 if you are interested in meeting the lecturer.

Monday, Dec 26th 2016, 11:00 at the Seminar Hall
Los Angeles Building, entrance floor.