High-resolution 3D electron microscopy: Progress and new opportunities

S. Subramaniam

National Institute of Health, Laboratory of Cell Biollogy, 50 South Drive, US - 20892 BETHESDA, USA, ss1@nih.gov

Recent breakthroughs in the field of cryo-electron microscopy provide new opportunities for determination of the structures of a variety of macromolecular assemblies and small dynamic protein complexes at high resolution. In addition, advances in technologies for imaging viruses, cells and tissues in 3D at high resolution have created new avenues for structural imaging in 3D. I will review emerging prospects in molecular and cellular imaging that are enabled with these developments, and discuss their applications to cancer and infectious disease research in the coming decade.