

Structural and Functional Studies of Large Macromolecular Assemblies

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The main goal of the research in my laboratory is to study structure and function of large macromolecular assemblies involved in central cellular processes. Although most of our work focuses on complexes involved in protein synthesis, recently we have expanded our studies to investigate structure and function of large eukaryotic multienzyme complexes such as the fatty acid synthase, a giant multifunctional enzyme that contains seven catalytic domains and catalyses all steps of fatty acid synthesis. We are using crystallography as the primary method in combination with electron microscopy and biochemical experiments.

Keywords: cellular processes, fatty acid synthesis, macromolecular assemblies