

Two Postdoctoral positions are available immediately in the lab of Professor Jean Baum in the Department of Chemistry and Chemical Biology at Rutgers University

Description

Two NIH funded postdoctoral positions are available immediately in the laboratory of Professor Jean Baum in the Dept. of Chemistry and Chemical Biology at Rutgers University. The first project focuses on biophysical studies of protein aggregation and fibril formation with particular emphasis on understanding the mechanisms of aggregation and inhibition of alpha-synuclein, the primary protein component in Parkinson's disease. Methods include NMR studies of protein-protein interactions involving intrinsically disordered proteins, biophysical and biological studies including atomic force microscopy and cell toxicity studies, and collaborations with computational chemists. The second project focuses on understanding the nature of interactions between collagen and its receptors with particular emphasis on integrin interactions involved in platelet aggregation and beta2-microglobulin interactions involved in dialysis related amyloidosis. Methods include NMR dynamics studies including relaxation dispersion, DEST, and CEST, biophysical studies and atomic force microscopy, and a collaboration with Dave Case on computational approaches to studying collagen fibrils and its receptors.

Requirements

Candidates should have a background in solution or solid-state bio-molecular NMR spectroscopy, protein biochemistry and a strong record of research accomplishments. The NMR facility, housed in the Center for Integrated Proteomics, is a newly upgraded state-of-the art facility with both solution and solid state capabilities. The NMR facility includes a newly upgraded Bruker AVANCE HD 800 MHz with 5 mm cryoprobe and 0.7 mm HCND fast-MAS probe, an AVANCE III 700 MHz with 5 mm cryoprobe and two 600 MHz NMRs, AVANCE III and AVANCE HD with 1.6mm HXYD MAS probe.

Applicants should e-mail a cover letter, CV and contact information for three letters of reference to Prof. Jean Baum at jean.baum@rutgers.edu. My postdoc Cody Hoop will be at poster 023 on Monday and Wednesday from 2-3.45pm if you are interested in talking to her.