

Postdoctoral Position: Structural Studies of Membrane Proteins Using EPR

Location: National High Magnetic Field Laboratory, Tallahassee, FL

Start Date: Fall 2017 or early 2018

Application Deadline: Open until filled

A postdoctoral position is available in the Electron Magnetic Resonance (EMR) group at the National High Magnetic Field Laboratory (NHMFL). The position will be focused on structural characterization of membrane proteins and protein-lipid interactions using multi-frequency EPR techniques. The goal of a major project is to dissect the interactions between the HIV membrane and surface protein gp41 during viral infection, and to elucidate how anti-HIV antibodies disrupt gp41-membrane interactions. This project is a collaboration between the laboratories of Likai Song at the NHMFL, Ellis Reinherz at Dana-Farber Cancer Institute, and Gerhard Wagner at Harvard Medical School. The project will involve site-directed spin labeling and EPR spectroscopy (SDSL-EPR), with contributions from other spectroscopic tools and biochemical techniques.

The position will provide excellent opportunities to explore the state-of-the-art EPR spectrometers at the NHMFL. The EMR facility boasts a wide range of CW and pulsed EPR instruments spanning the range from 9 GHz to 2.5 THz, including a Bruker X-/W-band EPR spectrometer and a recently acquired 94 GHz quasi-optical EPR spectrometer (HiPER). The HiPER instrument provides kilowatt powers, high time resolution, and low deadtime. HiPER also offers exceptional concentration sensitivity for continuous wave and pulsed EPR (including DEER) measurements, eliminating the bottleneck to study low-yield biological samples. The EMR group in Tallahassee comprises five faculty-level researchers, as well as a large cohort of graduate students and postdocs. The EMR group also has strong interactions with EPR groups at both Florida State University and the University of Florida.

Minimum qualifications include a Ph.D. in Biology, Chemistry, Physics or a related discipline. Experience in the following areas is preferred, but not essential: EPR spectroscopy; protein chemistry; structural biology. To apply, please send a CV and the contact information for three references to Likai Song at song@magnet.fsu.edu.

