

Postdoctoral Research Associate, University of Wisconsin, Madison

Postdoctoral position available immediately in the Biochemistry Department, University of Wisconsin-Madison, to work on a project funded by the US National Institutes of Health on the biosynthesis of mitochondrial iron-sulfur proteins. The position can be for one or two years.

The studies involve a combination of NMR spectroscopy, X-ray crystallography, calorimetry, and other biochemical/biophysical approaches.

We collaborate with staff scientists at the National Magnetic Resonance facility at Madison (NMRFAM, <https://nmrfam.wisc.edu/>) and the Collaborative Crystallography Core (CCC, <https://resources.research.wisc.edu/Core/Details/981>).

Requirements

PhD in chemistry, biochemistry, biophysics, or related field.

Preference will be given to candidates with experience in biomolecular NMR spectroscopy and handling of protein samples.

Recent publications

Cai K, Frederick RO, Dashti H, Markley JL. Architectural Features of Human Mitochondrial Cysteine Desulfurase Complexes from Crosslinking Mass Spectrometry and Small-Angle X-Ray Scattering. *Structure*. 2018;26(8):1127-1136. doi: 10.1016/j.str.2018.05.017.

Cai K, Frederick RO, Tonelli M, Markley JL. Interactions of iron-bound frataxin with ISCU and ferredoxin on the cysteine desulfurase complex leading to Fe-S cluster assembly. *J Inorg Biochem*. 2018;183:107-116. doi: 10.1016/j.jinorgbio.2018.03.007.

Cai K, Frederick RO, Tonelli M, Markley JL. ISCU(M108I) and ISCU(D39V) Differ from Wild-Type ISCU in Their Failure To Form Cysteine Desulfurase Complexes Containing Both Frataxin and Ferredoxin. *Biochemistry*. 2018;57(9):1491-500. doi: 10.1021/acs.biochem.7b01234.

Tsvetkov P, Detappe A, Cai K, Keys HR, Brune Z, Ying W, Thiru P, Reidy M, Kugener G, Rossen J, Kocak M, Kory N, Tsherniak A, Santagata S, Whitesell L, Ghobrial IM, Markley JL, Lindquist S, Golub TR. Mitochondrial metabolism promotes adaptation to proteotoxic stress. *Nat Chem Biol*. 2019;15(7):681-689. doi: 10.1038/s41589-019-0291-9.

Cai K, Frederick RO, and Markley JL, ISCU interacts with Apo-NFU1 and ISCU[4Fe-4S] and transfers its Fe-S cluster to produce holo-NFU1, *Journal of Structural Biology*, 2020, in press.

Contact information

Interested candidates should contact Prof. John Markley (jmarkley@wisc.edu), attach a copy of their curriculum vitae, and arrange for two letters of reference to be sent.