A postdoctoral research associate position in plant metal transporters is immediately available at the Department of Biochemistry & Molecular Biology, Michigan State University. The position is available under a collaborative project between Dr. Jian Hu’s laboratory (https://bmb.natsci.msu.edu/faculty/jian-hu/) and Dr. Hideki Takahashi’s laboratory (https://bmb.natsci.msu.edu/faculty/hideki-takahashi/). Based on recent work by Hu laboratory, which establishes the structural framework of the ZIP metal transporters (Nature Communications, 2016; Science Advances, 2017), we apply the obtained structural knowledge and our strong expertise in biology of membrane transporters to be integrated for molecular engineering of the plant ZIPs with a perspective on building a strategy for prevention of cadmium contamination in food. The plant ZIPs are critical for uptake of essential transition metals (zinc, iron, and manganese) but also involved in absorption of toxic cadmium. The postdoctoral research associate will work closely with both laboratories to biochemically and functionally characterize a panel of wild type and engineered plant ZIPs by using yeast and Arabidopsis thaliana as model systems. Our goal is to generate genetically modified plants expressing the ZIP variants, for which we expect reduction of cadmium accumulation with little or no negative impact on uptake of the essential metal ions. This postdoctoral position can be initially supported for two years with a possible renewal based on mutual satisfaction and depending on availability of additional funding.

The prospective candidate must hold a Ph.D. degree in molecular biology and biochemistry or related fields at the time of the employment, and be highly self-motivated to pursue the collaborative research project. We strongly encourage candidates at early stages of their career to apply, while highly accomplished senior candidates may also be considered for this opportunity. Hands-on experience in molecular biology and genetics of yeast and/or Arabidopsis thaliana is required. Understanding of protein biochemistry and protein structure is desirable, but not necessary. Interested individuals should submit a brief cover letter, CV, and the names and the contact information of three referees to Dr. Jian Hu (hujian1@msu.edu<mailto:hujian1@msu.edu>) and Dr. Hideki Takahashi (htakaha@msu.edu<mailto:htakaha@msu.edu>).

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