



POSTDOC POSITIONS: SIGNALING IN PLANT DEVELOPMENT ~RECEPTOR DYNAMICS/ENGINEERING AND AUXIN SYNTHETIC BIOLOGY

Keiko Torii Lab; Howard Hughes Medical Institute and University of Washington, Seattle

Up to five postdoctoral positions are available to study the forefront of plant hormone and receptor kinase signaling in development using cross-disciplinary approaches. The project will be in collaboration with international teams of synthetic chemists, proteomics experts, and structural biologists. The successful candidates will be actively participating in one of the following projects:

- 1: Dynamic behaviors of receptor kinase signaling in stomatal patterning using super-resolution imaging and synthetic chemistry.
- 2: Deciphering receptor-kinase phosphocodes and early signaling events using protein biochemistry/proteomics, developmental-genetics, and synthetic chemistry approaches.
- 3: Investigating cell-type specific plant hormone response and its impact on PTMs, developmental patterning and organ growth using our newly developed artificial, orthogonal auxin-TIR1 pairs (see: Uchida et al. 2018. Nature Chem Biol)
- 4: The structural basis of orthogonal artificial auxin-TIR1 pairs and further protein engineering through directed evolution (also see: Uchida et al. 2018. Nature Chem Biol)
- 5: The structure-guided synthetic re-wiring of positional-cue to plant epidermal cell fate at a single cell resolution.

Solid backgrounds in basic molecular biology/biochemistry/cell biology and a demonstrated record of scientific productivity (a first-authored research manuscript) are required. Candidates with strong quantitative skill, live imaging expertise, and proteomics and/or structural biology backgrounds are highly desired. Previous experience in growing and maintaining Arabidopsis/other crop plants is not a prerequisite. However, all Torii lab members are expected to grow their own plants for his/her own experiments and meticulously maintain transgenic/mutant lines, perform genetic analysis. A candidate must have strong communication and analytical skills, must be self-motivated and success-driven, and be able to work as a team as well as independently.

Salary is commensurate with qualifications and experience, and based on the HHMI scale. The positions will be initially available for one year, with yearly renewal, up to five years, based on the successful annual performance reviews and funding availability. The successful candidates are encouraged to apply for independent fellowships to gain independent programs for his/her future career path. A preference will be given to candidates within two years of postdoctoral experience.

Send a CV and a cover letter (1-2 pages) outlining your research program and career goals. Explain the specific project you would like to pursue from the above and propose the specific experiments, expected outcome, and timeline. Also, please names and contacts of three-four referees to:

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HHMI and University of Washington are Equal Opportunity Employer and encourage applications from diverse backgrounds.

