Mechanism of G protein activation in plants (Abiotic and biotic stress responsiveness in plants)

**CELL BIOLOGY** postdoc positions are available to work on how signals such as glucose activate signaling in plants (http://labs.bio.unc.edu/Jones/CurrentlySeeking.htm).

Abiotic signals such as drought and salt and biotic signals such as microbe-associated molecular patterns are perceived by cell surface receptors that are coupled to unknown cytoplasmic targets via a heterotrimeric G protein complex. The activation mechanism differs in interesting ways from that known for animal cells.

While we focus on molecular and atomic resolution of G protein activation, we operate in a particular biological context. Using the genetic model Arabidopsis, that context is currently pathogen resistance. For rice, the biological context is currently salt resistance.

**SKILLS REQUIRED**

Most important are good communication skills, both written and oral *in English*.

Cell biology- advanced microscopy such as FRET, 2-photon, photoswitchable AFP, high resolution microscopy

**AND/OR**

Biochemistry skills such as GTP binding and GTPase activity, protein purification using different heterologous systems.

The models used are Arabidopsis and rice but no experience with these models is necessary.

Applicants with experience using animal model **WILL be considered** if they have a strong skill set in microscopy **AND/OR** biochemistry.

Other skills that can make the applicant competitive are: genetics, plant physiology, mathematical modeling, bioinformatics.

**ABOUT THE LOCATION**

We are located in a great place to live; the piedmont of NC is centrally located to the coast and the mountains. Chapel Hill is part of the famous Research Triangle Park and also boasts a vibrant culture of music and the performing and fine arts.

UNC-CH is ranked within the top 5 public universities in the US and has a strong research program ($1B/year). UNC is especially strong in the biomedical sciences.

While UNC does not have an Agriculture School on campus, it nonetheless has an exceptionally strong plant biology research program that focuses on fundamental questions in science.

UNC provides its postdoctoral fellows medical insurance at no extra cost.

Postdocs trained at UNC are among the best trained and most competitive for permanent positions in academia and industry.