

Jeff Dangl, Ph.D.
Investigator

September 2, 2017

Post-doctoral positions

Are you fascinated with how molecular machines function?

Does the evolution of receptors to build innate immune systems keep you awake at night?

Are you keen to work with a diverse, international group of dedicated scientists on project that can alter how we deploy the immune system in crops?

My lab will likely recruit two to three post-docs in the first half of 2018. Successful candidates will have expertise and success in one of the relevant areas noted below, as demonstrated by *first author* papers in highly ranked international journals. *Priority* for post-docs will be given to candidates who have identified independent funding sources for which they are eligible, and to which they are prepared to apply. **Send CV**, brief letter of introduction, and the names and contact information of three references to:

dangl@email.unc.edu

Structure and function of plant innate immune receptors and the pathogen virulence effectors that trigger their action. Plants, like animals, deploy specific intracellular receptors to recognize intracellular microbial molecules of 'damaged' host proteins that are the targets of pathogen virulence factors, or decoys of true targets. The receptors are called NLR proteins. We study NLRs in several contexts in the plant immune system using the highly developed Arabidopsis model system and various bacterial and fungal pathogens. **Skills required:** This project will focus on techniques to understand protein localization and function and requires both fascination and experience with: cell biology, receptor function, immunology, plant-microbe interactions and protein structure. Selected recent publications that are the basis of our ongoing NLR work are:

JDG Jones*, RE Vance* and JL Dangl* (2016) Intracellular innate immune surveillance devices in plants and animals. *Science* **354**, aaf6395. doi: 10.1126/science.aaf6395. **PR** (*equal contribution) PMID 27934708.

Bonardi, V, S Tang, A Stallmann, M Roberts, K Cherkis and JL Dangl (2011) Expanded functions for a family of plant intracellular immune receptors beyond specific recognition of pathogen effectors. *Proc. Natl. Acad. Sci., USA*. **108**, 16463-1646. doi: 10.1073/pnas.1113726108. **PR** PMID 21911370.

Chung, E-H, F El-Kasmi, Y He, A Loehr and JL Dangl (2014) A plant phosphoswitch platform repeatedly targeted by type III effector proteins regulates the output of both tiers of plant immune receptors. *Cell Host & Microbe* **16**, 484-494. doi: 10.1016/j.chom.2014.09.004 **PR** PMID 25299334.

Dong, OX, V Woloshen, M Tong, V Bonardi, JL Dangl and Xin Li (2016) Loss of *ADR1-L1* leads to enhanced autoimmunity through transcriptional over-compensation by its redundant paralogs *ADR1* and *ADR1-L2*. *New Phytologist* **210**, 960-973. doi: 10.1111/nph.13821 published online January 4, 2016. **PR** PMID 27074399.

Nishimura, MT, RG Anderson, KA Cherkis, TF Law, Q Liu, M Machius, Z Nimchuk, L Yang, E-H Chung, F El-Kasmi, M Hyunh, EO Nishimura, J Sondek and JL Dangl (2017) The TIR-only protein RBA1 recognizes a pathogen effector to regulate cell death in *Arabidopsis*. *Proc. Natl. Acad. Sci., USA*. doi: 10.1073/pnas.1620973114 published online January 30, 2017 **PR** PMID 28137883.

El Kasmi, E-H Chung, RG Anderson, Jinyue Li, L Wan, TK Eitas, Z Gao and JL Dangl (2017) Signaling from the plasma-membrane localized plant immune receptor RPM1 requires self-association of the full-length protein. *Proc. Natl. Acad. Sci., USA* **114**, E7385-E7394. doi: 10.1073/pnas.1708288114 Published online August 14, 2017. **PR** PMID 28808003.

For all lab publications see:

<http://labs.bio.unc.edu/dangl/pub/index.htm>

See also:

<http://labs.bio.unc.edu/dangl/>

<http://www.hhmi.org/scientists/jeffery-l-dangl>

Dept. of Biology, CB#3280, UNC Chapel Hill, Chapel Hill, NC 27599-3280
919-962-4469 (tel) 919-962-1625 (fax) dangl@email.unc.edu (e-mail)

<http://bio.unc.edu/people/faculty/dangl/>

http://www.hhmi.org/research/hhmi-gbmf/dangl_bio.html