

Bart, Rebecca 2017

## CURRICULUM VITAE

### **Rebecca Bart**

Assistant Member and Principal Investigator  
Danforth Plant Science Center  
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### **EDUCATION**

|           |                     |                        |                           |
|-----------|---------------------|------------------------|---------------------------|
| 2004-2009 | PhD Plant Pathology | Advisor: Pamela Ronald | UC Davis                  |
| 1999-2003 | B.A. Biology        | Advisor: Jay Mellies   | Reed College, Portland OR |

### **PROFESSIONAL EXPERIENCE**

|              |                           |                           |                     |
|--------------|---------------------------|---------------------------|---------------------|
| 2013-present | Assistant Member and P.I. |                           | DDPSC, St. Louis MO |
| 2010-2013    | Postdoctoral Research     | Advisor: Brian Staskawicz | UC Berkeley         |
| 2003-2004    | Research Assistant        | Advisor: Sarah Hake       | PGEC, Albany CA     |

### **PROFESSIONAL SOCIETIES**

American Phytopathological Society  
American Society of Plant Biologists  
The American Association for the Advancement of Science

### **HONORS, AWARDS and APPOINTMENTS**

ASPB Science Policy Committee (2016 – present)  
NIFA postdoctoral fellow (2011-2013)  
Mentor-initiated Sponsored Projects for Undergraduate Research (2010-2011)  
William G. and Kathleen Golden International Agriculture Fellowship (2007-2008)  
Consortium for Women in Research Fellowship (2007)  
D. Marlin Brandon Fellowship (2006)  
Henry A. Jastro and Peter J. Shields Graduate Research Scholarship (2005-2006)  
William G. and Kathleen Golden International Agriculture Fellowship (2005-2006)

### **INVITED PRESENTATIONS**

**Invited Speaker**, Annual Plant Sciences Symposium, University of Wisconsin-Madison, 2017  
**Invited Speaker**, Genomics-enabled Accelerated Crop Breeding, Banbury Conference, 2016  
**Selected Speaker**, ICM PMI, Portland, OR, 2016  
**Selected Speaker**, PAG, San Diego, CA, 2016  
**Selected Speaker**, ASPB, Minneapolis, MN, 2015  
**Selected Speaker**, 5th Xanthomonas Genomics Conference – XGC 2015, Colombia, 2015  
**Invited Speaker**, Plant Breeding and Genetics seminar, Cornell University, 2015  
**Invited Speaker**, AgBiome, Durham, North Carolina, 2014  
**Invited Speaker**, Donald Danforth Plant Science Center 16th Annual Fall Symposium, 2014  
**Invited Speaker**, University of Illinois, Department of Plant Biology, IL, 2014  
**Invited Speaker**, University of Missouri-St. Louis, Department of Biology, 2014  
**Invited Speaker**, Washington University Medical School, 2014

**Invited Speaker**, Plant and Animal Genome Conference, San Diego, CA 2014

## PUBLICATIONS

**Bart, R.**, Taylor, N. (2017) New opportunities and challenges to engineer disease resistance in cassava, a staple food of African small-holder farmers. *Accepted, PLOS Pathogens*.

Wilson, M.C., Mutka, A.M., Hummel, A.W., Berry, J., Chauhan, R.D., Vijayaraghavan, A., Taylor, N.J., Voytas, D.F., Chitwood, D.H., **Bart, R.S.** (2017) Gene expression analysis provides insight into the physiology of the important staple food crop cassava. *New Phytologist*, 213, no.4:1632-1641. doi:10.1111/nph.14443

Ramu, P., Esuma W., Kawuki R., Rabbi I.Y., Egesi, C., Bredeson J.V., **Bart, R.S.**, Buckler, E.S., Lu F. (2016) Cassava HapMap: Managing genetic load in a clonal crop species. *Accepted, Nature Genetics*. doi.org/10.1101/077123

Mutka, A.M., Fentress, S.J., Sher, J.W., Berry, J.C., Pretz, C., Nusinow, D.A., **Bart, R.S.** (2016) Quantitative, image-based phenotyping methods provide insight into spatial and temporal dimensions of plant disease. *Plant Physiology*, 172, no. 2: 650-660. dx.doi.org/10.1104/pp.16.00984

Bredeson, J.V., Lyons, J.B., Prochnik, S.E., Wu, G.A., Ha, C.M., Edsinger-Gonzales, E., Grimwood, J., Schmutz, J., Rabbi, I.Y., Egesi, C., Nauluvula, P., Lebot, V., Ndunguru, J., Mkamilo, G., **Bart, R. S.**, Setter, T.L., Gleadow, R.M., Kulakow, P., Ferguson, M.E., Rounsley, S., Rokhsar, D. S. (2016). Sequencing Wild and Cultivated Cassava and Related Species Reveals Extensive Interspecific Hybridization and Genetic Diversity. *Nat. Biotechnol.*, 34, no. 5: 562–570. doi:10.1038/nbt.3535

Chern, M., Xu Q, **Bart, R.S.**, Bai, W., Ruan, D., Sze-To, W.H., Canlas, P.E., Jain, R., Chen, X., Ronald, P.C. (2016) A Genetic Screen Identifies a Requirement for Cysteine-Rich–Receptor-Like Kinases in Rice NH1 (OsNPR1)-Mediated Immunity. *PLoS Genet.*, 12(5): e1006049. doi: 10.1371/journal.pgen.1006049

Wang, H., Beyene, G., Zhai, J., Feng, S., Fahlgren, N., Taylor, N., **Bart, R.**, Carrington, J.C., Jacobsen, S.E., Ausin, I. (2015). CG gene body DNA methylation changes and evolution of duplicated genes in cassava. *PNAS*, 112 (44) 13729-13734; published ahead of print October 19, 2015, doi:10.1073/pnas.1519067112

Schwartz, A.R., Potnis, N., Timilsina, S., Wilson, M., Patane, J., Martins, J., Minsavage, G.V., Dahlbeck, D., Akhunova, A., Almeida, N., Vallad, G.E., Barak, J.D., White, F.F., Miller, S.A., Ritchie, D., Goss, E., **Bart, R.S.**, Setubal, J.C., Jones, J.B., Staskawicz, B.J. (2015). Phylogenomics of *Xanthomonas* field strains infecting pepper and tomato reveals diversity in effector repertoires and identifies determinants of host specificity. *Front. Microbiol.*, 6:535. doi: 10.3389/fmicb.2015.00535

Mutka, A. & **Bart, R.** (2015). Image-based phenotyping of plant disease symptoms. *Front. Plant Sci.*, 5:734. doi: 10.3389/fpls.2014.00734

- Schwessinger, B., **Bart, R.**, Krasileva, K., Coaker, G. (2015). Focus issue on plant immunity: from model systems to crop species. *Front. Plant Sci.*, 6:195. doi: 10.3389/fpls.2015.00195
- Timilsina, S., Jibrin, M., Potnis, N., Minsavage, G., Kebede, M., Schwartz, A., **Bart, R.**, Staskawicz, B., Boyer, C., Vallad, G., Pruvost, O., Jones, J.B., Goss, E.M. (2014). Multilocus sequence analysis of xanthomonads causing bacterial spot of tomato and pepper reveals strains generated by recombination among species and recent global spread of *Xanthomonas gardneri*. *Appl. Environ. Microbiol.*, 81:1520-1529. doi: 10.1128/AEM.03000-14.
- Cohn, M. \*, **Bart, R. \***, Shybut, M., Dahlbeck, D., Gomez, M., Morbitzer, R., Hou, B. H., Frommer, W. B., Lahaye, T., Staskawicz, B. J. (2014). *Xanthomonas axonopodis* virulence is promoted by a transcription activator like (TAL) effector mediated induction of a SWEET sugar transporter in cassava. *Mol. Plant Microbe Interact.*, 27: 1186-1198.  
<http://dx.doi.org/10.1094/MPMI-06-14-0161-R>. \***Equal contribution.**
- Arrieta-Ortiz, M. L., Rodriguez-R, L. M., Perez-Quintero, A. L., Poulin, L., Díaz, A. C., Arias Rojas, N., Trujillo, C., Restrepo Benavides, M. **Bart, R.**, et al. (2013). Genomic Survey of Pathogenicity Determinants and VNTR Markers in the Cassava Bacterial Pathogen *Xanthomonas axonopodis* pv. *Manihotis* Strain CIO151. *PLoS One*, 8(11), e79704. doi:10.1371/journal.pone.0079704
- Bart, R.**, Cohn, M., Kassen, A., McCallum, E. J., Shybut, M., Petriello, A., Krasileva, K., Dahlbeck, D., Medina, C., Alicai, T., Kumar, L., Moreira, L.M., Rodrigues Neto, J., Verdier, V., Santana, M.A., Kositcharoenkul, N., Vanderschuren, H., Gruissem, W., Bernal, A. & Staskawicz, B. (2012). High-throughput genomic sequencing of cassava bacterial blight strains identifies conserved effectors to target for durable resistance. *PNAS*, 109(28), E1972–E1979. doi:10.1073/pnas.1208003109
- Bart, R. S.**, Chern, M., Vega-Sánchez, M. E., Canlas, P., & Ronald, P. C. (2010). Rice Snl6, a cinnamoyl-CoA reductase-like gene family member, is required for NH1-mediated immunity to *Xanthomonas oryzae* pv. *oryzae*. *PLoS Genetics*, 6(9), e1001123. doi:10.1371/journal.pgen.1001123
- Park, C.-J., **Bart, R.**, Chern, M., Canlas, P. E., Bai, W., & Ronald, P. C. (2010). Overexpression of the endoplasmic reticulum chaperone BiP3 regulates XA21-mediated innate immunity in rice. *PloS One*, 5(2), e9262. doi:10.1371/journal.pone.0009262
- Ding, X., Richter, T., Chen, M., Fujii, H., Seo, Y. S., Xie, M., et al. (2009). A rice kinase-protein interaction map. *Plant Physiol.*, 149(3), 1478–1492. doi:10.1104/pp.108.128298
- Park, C.-J., Peng, Y., Chen, X., Dardick, C., Ruan, D., **Bart, R.**, et al. (2008). Rice XB15, a protein phosphatase 2C, negatively regulates cell death and XA21-mediated innate immunity. *PLoS Biol.*, 6(9), e231. doi:10.1371/journal.pbio.0060231
- Bart, R.**, Chern, M., Park, C.-J., Bartley, L., & Ronald, P. C. (2006a). A novel system for gene silencing using siRNAs in rice leaf and stem-derived protoplasts. *Plant Methods*, 2(1), 13. doi:10.1186/1746-4811-2-13

**Bart, R.,** Ronald, P., & Hake, S. (2006b). Fertility versus disease resistance, a hard choice. *Genes & Develop.*, 20(10), 1215–1217. doi:10.1101/gad.1437706