CV and contact

bradford.condon@gmail.com

2015-12-05T03:02:17+00:00

Bradford Condon, PhD

Education

August 2013, PhD in Plant Pathology & Plant-Microbe Interactions, Cornell University, Ithaca, NY

May 2007, BA in Biology and Religion, Oberlin College, Oberlin, OH

Employment

February 2017 to present: Postdoctoral associate, Department of Entomology and Plant Pathology, University of Tennessee, Knoxville.

January 2016 to present: Postdoctoral associate, Department of Plant Pathology, University of Kentucky.

June 2014 to December 2015: Postdoctoral associate, Department of Ecology, Evolution, and Behavior, University of Minnesota.

August 2007 to June 2014: Graduate Student and Post-Doctoral fellow, Department of Plant Pathology & Plant-Microbe Interactions, Cornell University, advised by Dr. B Gillian Turgeon

Skills

Bioinformatics and programming

- Proficient with UNIX/LINUX systems, command-line programming, querying and managing big data/databases (SQL, JSON)
- Developer for cross-platform (iOS and Android) apps in React-Native, and genomics websites using Tripal and Drupal.
- Experience designing experiments and analyzing data for a wide variety of bioinformatic projects, including

  - Metagenomics
  - RNA-seq and transcriptomics
  - Genome assembly and annotation
  - Phylogenetics
- Programming languages: **R, Perl, swift, javascript, PHP, CSS, Ruby**
- Frameworks: **Laravel, Drupal, Wordpress, React Native**

Molecular biology

- Fungal and bacterial culture, transformation, and phenotyping
- Molecular bio bench skills include DNA extraction, PCR, southern/northern blotting, light and confocal microscopy
- Next-gen (illumina) library preparation
- Greenhouse management

Communication and mentorship

- Formed UK-BLAST, the undergraduate bioinformatics mentorship group at the University of Kentucky
  - Leading and designing workshops in bioinformatics
  - Co-mentoring and advising students on their bioinformatics projects
- Strong track record of supervising undergraduates in the laboratory and integrating their work into complex workflows
- Co-PI awardee for bringing Expanding Your Horizons, a STEM conference for young girls, to the University of Kentucky
- Community outreach and education on fungi includes presentations at Floracliff Nature Sanctuary and the Kentucky Food Retail Safety conference

Awards and honors

- 2006 Oberlin College Norman H Wright Prize for undergraduate research
- 2007-2008 Presidential Life Science Fellow
- 2009 NSF graduate research fellowship honorable mention
- 2010 NSF EAPSI fellow (New Zealand)
- 2011 Plant Sciences outstanding TA award
- 2012 McClintock Outstanding Plant Sciences Graduate Student Award
- 2011-2012 Center For Teaching Excellence Graduate Teaching Associate Fellow
- 2012-2013 Center For Teaching Excellence Graduate Teaching Associate Fellow
- 2017 NSF EPSCoR grant, Expanding Your Horizons
- 2017 UKY SOPS research symposium postdoc poster award (second place)

Teaching and leadership

KBRIN Next Generation Sequencing and Data Analysis Workshop, *University of Kentucky* 2017

Instructor and web developer. Implemented and maintained the (Drupal-based workshop website)[https://ngs.csr.uky.edu/] and REDCap registration/survey system.

UK-BLAST: *University of Kentucky* 2016

UK-BLAST is an extracurricular support group for undergraduates performing genomics research at the University of Kentucky. In addition to advising students on their projects, I designed and implemented workshops on topics in genomics.

Departmental teaching: *Cornell University* 2008-2013

- Spring 2008: PLPA 2010 TA: Magical Mushrooms & Mischievous Molds.
- Spring 2010: PLPA 2015 TA: Mushrooms, Molds and Molecules.
- Spring 2011 PLPA 2015 TA: Mushrooms, Molds, and Molecules.
- Spring 2012 PLPA 2015 TA: Mushrooms, Molds, and Molecules.
- Spring 2013 PLPA 2015 TA: Mushrooms, Molds, and Molecules.

Center for Teaching Excellence: *Cornell University* 2011-2013

workshops (1 hour) developed & implemented:

- Classical teaching models and the psychology of learning
- What do I want my students to learn? Identifying learning outcomes as the basis for instruction and assessment
- Using library resources to enhance student's research skills
- Creating effective questions for iClickers and online quizzes
- Establishing a professional electronic online identity

Full day workshops developed & implemented:

- 2012 Chemistry TA training instructor
- 2012 Teaching Excellence Practicum Instructor, CTE summer Institute

Presentations

Workshops

- Floracliff mushroom identification workshop Lexington, KY (2016)

Talks

- Joint Genome Institute Dothideomycete jamboree. Walnut Creek, CA (2008)
- Fungal Genetics Conference, secondary metabolism session. Asilomar, CA (2013)
- Kentucky Food Retail Safety Conference, invited speaker on wild mushroom safety. Frankfort, KY (2016)
- Slides

Posters

- American Society of Plant Biologists, Boston, MA (2006)
- Fungal Genetics Conference, Asilomar, CA (2009)
- Molecular Plant Microbe Biology, Quebec City, QC (2009)
- Fungal Genetics Conference, Asilomar, CA (2011)
- University of Kentucky Society of Postdoctoral Scholars Research Symposium, Lexington, KY (2017)

Publications

Pre-print

Gladieux, P., **Condon, B. J.,** Ravel, S., Soanes, D., Nunes Maciel, J. L., Nhani, A., Jr., Terauchi, R., Lebrun, M.-H., Tharreau, D., Mitchell, T., Pedley, K. F., Valent, B., Talbot, N., Farman, M., and Fournier, E. (2017). Gene flow between divergent cereal- and grass-specific lineages of the rice blast fungus *Magnaporthe oryzae*. bioRxiv. :161513

Peer-reviewed

Mohd Zainudin, N. A. I., **Condon, B. J.,** De Bruyne, L., Poucke, C. V., Bi, Q., Li, W., et al. (2015). Virulence, host selective toxin production, and development of three Cochliobolus phytopathogens lacking the Sfp-type 4 -phosphopantetheinyl transferase Ppt1. *MPMI* (digital preprint). doi:10.1094/MPMI-03-15-0068-R

Santana, M. F., Silva, J. C. F., Mizubuti, E. S. G., Araújo, E. F., **Condon, B. J.,** Turgeon, B. G., & Queiroz, M. V. (2014). Characterization and potential evolutionary impact of transposable elements in the genome of *Cochliobolus heterostrophus*. *BMC Genomics*, *15*(1), 536. doi:10.1186/1471-2164-15-536

Condon, B. J., Wu, D., Kraševec, N., Horwitz, B. A., & Turgeon, B. G. (2014). Comparative Genomics of *Cochliobolus* Phytopathogens. In R. A. Dean, A. Lichens-Park, & C. Kole, *Genomics of Plant-Associated Fungi:*

Monocot Pathogens (pp. 41–67). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-662-44053-7_2

Condon, B. J., Oide, S., Gibson, D. M., Krasnoff, S. B., & Turgeon, B. G. (2014). Reductive iron assimilation and intracellular siderophores assist extracellular siderophore-driven iron homeostasis and virulence. *Molecular Plant-Microbe Interactions : MPMI*, *27*(8), 793–808. doi:10.1094/MPMI-11-13-0328-R

Horwitz, B. A., **Condon, B.**, & Turgeon, B. G. (2013). Cochliobolus heterostrophus: A Dothideomycete Pathogen of Maize. In *Genomics of Soil-and Plant-associated Fungi* (Vol. 36, pp. 213–228). Berlin, Heidelberg: Springer Berlin Heidelberg. doi:10.1007/978-3-642-39339-6_9

Zhang, N., MohdZainudin, N. A. I., Scher, K., **Condon, B. J.,** Horwitz, B. A., & Turgeon, B. G. (2013). Iron, oxidative stress, and virulence: roles of iron-sensitive transcription factor Sre1 and the redox sensor ChAp1 in the maize pathogen *Cochliobolus heterostrophus*. *Molecular Plant-Microbe Interactions : MPMI*, *26*(12), 1473–1485. doi:10.1094/MPMI-02-13-0055-R

Condon, B. J., Leng, Y., Wu, D., Bushley, K. E., Ohm, R. A., Otillar, R., et al. (2013). Comparative genome structure, secondary metabolite, and effector coding capacity across *Cochliobolus* pathogens. *PLoS Genetics*, *9*(1), e1003233. doi:10.1371/journal.pgen.1003233

Xue, C., Wu, D., **Condon, B.**, Bi, Q., Wang, W., & Turgeon, B. G. (2013). Efficient gene knockout in the maize pathogen *Setosphaeria turcica* using *Agrobacterium tumefaciens*-mediated transformation. *Phytopathology*, *103*(6), 641–647. doi:10.1094/PHYTO-08-12-0199-R

Ohm, R. A., Feau, N., Henrissat, B., Schoch, C. L., Horwitz, B. A., Barry, K. W., **Condon, B. J.,** et al. (2012). Diverse lifestyles and strategies of plant pathogenesis encoded in the genomes of eighteen Dothideomycetes fungi. *PLoS Pathogens*, *8*(12), e1003037. doi:10.1371/journal.ppat.1003037

Turgeon, B. G., **Condon, B. J**., Liu, J., & Zhang, N. (2010). Protoplast transformation of filamentous fungi. *Methods in Molecular Biology (Clifton, N.J.)*, *638*(Chapter 1), 3–19. doi:10.1007/978-1-60761-611-5_1

Almeida, N. F., Yan, S., Lindeberg, M., Studholme, D. J., Schneider, D. J., **Condon, B. J.,** et al. (2009). A draft genome sequence of *Pseudomonas syringae* pv. tomato T1 reveals a type III effector repertoire significantly divergent from that *of Pseudomonas syringae* pv. tomato DC3000. *Molecular Plant-Microbe Interactions : MPMI*, *22*(1), 52–62. doi:10.1094/MPMI-22-1-0052