

Robin Choudhury

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Education

2013 – 2016, Doctor of Philosophy, Plant Pathology, University of California, Davis, CA

2010 – 2013, Master of Science, Plant Pathology, University of California, Davis, CA

2006 – 2009, Bachelor of Science, Plant Sciences, University of Maryland, College Park, MD

Research Experience

August 2016 – Present, Post-Doctoral Researcher, Garrett Lab, University of Florida

- Use impact network analysis to study epidemiology of laurel wilt disease in agricultural and natural systems.

March 2013 – August 2016, Graduate Student Researcher, McRoberts Lab, University of California – Davis

- Study the epidemiology and control of spinach downy mildew (*Peronospora effusa*).
- Study effects of disease and biopesticides on phyllosphere microbiology.

June 2010 – February 2013, Graduate Student Researcher, Gubler Lab, University of California – Davis

- Study the effects of multiple exposures of extreme temperatures on colony growth of grape powdery mildew (*Erysiphe necator*).
- Created model to predict disease onset and severity under field conditions.

September 2009 – May 2010, Biological Science Technician, Stommel Lab, USDA ARS GIFVL

- Assist in solanaceous plant breeding by maintaining greenhouse and field experiments.

June 2009 – July 2009, Undergraduate Student Researcher, Wilcox Lab, Cornell University

- Study of the combined effects of heat and UV radiation on grape powdery mildew (*Erysiphe necator*) growth and germination.
- Maintaining uninfected grapes in a greenhouse, collecting, inoculating and staining leaf tissue, and analyzing germination rates of grape powdery mildew on leaf tissue.

Teaching Experience

Teaching Assistant

2016 Spring – UCD – GDB101, Epidemiology with Dr. Neil McRoberts

- Led laboratory classes, presented lectures “Spinach Downy Mildew”, “Ethics in Epidemiology”, “ R_0 and Vaccination”, and “SIR Models”
- Overall student review score of 4.7/5 (n=10).

2016 Winter – UCD – SAS013, Disease and Society with Dr. Johan Leveau

- Presented lecture “Diseases of Plants and Animals”
- Overall student review score of 4.4/5 (n=74).

2015 Fall – UCD – SAS030, Mushrooms, Molds and Society with Dr. Thomas Gordon

- Presented lecture “History of Late Blight”
- Overall student review score of 4.4/5 (n=115).

2015 Winter – UCD – SAS013, Disease and Society with Dr. Johan Leveau

- Presented lecture “History of Insurance in the US”
- Overall student review score of 4.1/5 (n=181).

2014 Fall – UCD – PLP148, Introduction to Mycology with Dr. David Rizzo

- Presented lecture “Endophytes and Animal Symbioses”
- Overall student review score of 4.4/5 (n=36).

2014 Fall – UCD – SAS030, Mushrooms, Molds and Society with Dr. Thomas Gordon

- Presented lecture “Fungi in Agriculture”
- Overall student review score of 4.0/5 (n=239).

2014 Winter – UCD – SAS013, Disease and Society with Dr. Johan Leveau

- Presented lecture “History of Insurance in the US”
- Overall student review score of 4.1/5 (n=103).

2012 Fall – UCD – SAS030, Mushrooms, Molds and Society with Dr. Thomas Gordon

- Presented lecture “Fungi in Food Production”
- Overall student review score of 4.7/5 (n=163).

2011 Fall – UCD – PLP148, Introduction to Mycology with Dr. David Rizzo

- Presented lecture “Symbiosis – Parasitism”
- Overall student review score of 4.3/5 (n=35).

2010 Spring – UMD – PLSC100, Introduction to Horticulture with Dr. Christopher Walsh

Co-Organizer

2015 Spring – UCD – PLP295, Seminar in Mycology with Dr. David Rizzo

- Co-organizer of series, led discussions and organized schedule.

Guest Lecturer

2016 Fall – UF – PLP4905/6905, Networks in Agricultural Systems with Dr. Karen Garrett

- Presented lecture “Networks and meta-populations in landscapes”

Publications, Reports, and Presentations

Peer Reviewed Publications

Choudhury, R.A., Koike, S.T., Fox, A.D., Anchieta, A., Subbarao, K.V., Klosterman, S.J., and McRoberts, N. 2016. Season-long dynamics of spinach downy mildew determined by spore trapping and disease incidence. *Phytopathology*. doi: 10.1094/PHYTO-12-15-0333-R

Choudhury, R.A., Koike, S.T., Fox, A.D., Anchieta, A., Subbarao, K.V., Klosterman, S.J., and McRoberts, N. 2017. Spatio-temporal patterns in the airborne dispersal of spinach downy mildew. *Phytopathology*. doi: 10.1094/PHYTO-04-16-0162-R

Choudhury, R. A., McRoberts, N, and W. D. Gubler. 2014. Effects of punctuated heat stress on the grapevine powdery mildew pathogen, *Erysiphe necator*. *Phytopathologia Mediterranea* 53: 148-158.

Other Peer Reviewed Reports

Choudhury, R. A., N. McRoberts, and W. D. Gubler. 2017. First report of powdery mildew caused by *Podosphaera* sp. on *Triadica sebifera* in California. *Plant Disease*.

- Choudhury, R. A.,** N. McRoberts, S. T. Koike. 2016. Evaluation of mixed seed lines for control of downy mildew on spinach, 2013. Plant Disease Management Reports. doi:10.1094/PDMR10:ST008.
- Choudhury, R. A.,** N. McRoberts, K. Kammeijer, S. T. Koike. 2015. Evaluation of mixed biofungicides for control of downy mildew on spinach, 2015. Plant Disease Management Reports. doi:10.1094/PDMR10:V016.
- Choudhury, R. A.,** A. C. Erickson, W. D. Gubler, and N. McRoberts. 2015. First Report of Powdery Mildew of *Erodium moschatum* Caused by *Podosphaera* cf. *erodii* in California. Plant Disease 99:1866.
- Choudhury, R. A.,** N. McRoberts, K. Kammeijer, S. T. Koike. 2015. Evaluation of biofungicides for control of downy mildew on spinach, 2014. Plant Disease Management Reports. doi:10.1094/PDMR09:V022.
- Choudhury, R. A.,** N. McRoberts, W. D. Gubler, D. Marcum. 2015. Cultivar evaluation for resistance to grape powdery mildew in commercial wine grapes, 2011. Plant Disease Management Reports. doi:10.1094/PDMR09:SMF018.
- Peduto Hand, F, **Choudhury, R. A.,** and W. D. Gubler. 2014. First report of *Cytospora punicea* causing wood canker and branch dieback of pomegranate (*Punica granatum*) in the United States. Plant Disease 98:853.
- Choudhury, R. A.,** Modi, P., Hanstad, J., Elkins, R., and W. D. Gubler. 2013. First Report of *Diplodia seriata* Causing Pear Branch Canker Dieback in California. Plant Disease 98: 688.

Publications in Preparation (available upon request)

- Choudhury, R.A.,** Mahaffee, W.F., McRoberts, N., and Gubler, W.D. 201x. Modeling uncertainty in grapevine powdery mildew epidemiology.
- Choudhury, R.A.,** Koike, S.T., and McRoberts, N. 201x. Temperature and light effects on germination of *Peronospora effusa*.
- Choudhury, R.A.,** Koike, S.T., and McRoberts, N. 201x. Potential impacts of downy mildew Oospore infestation in spinach seedlots.

Non-Peer Reviewed Outreach Reports

- Choudhury, R. A.,** McRoberts, N., and S. T. Koike. 2015. Field evaluation of materials for controlling spinach downy mildew in organic systems. UCCE Monterey Crop Notes Jan/Feb 2015.
- Bay, I. S., Doody, R. W., Nguyen, T. N., **Choudhury, R. A.,** and W. D. Gubler. 2011. Evaluation of fungicide programs for management of Botrytis bunch rot of grapes: 2011 field trial.

Presentations

Oral Presentations

- 2016 – American Phytopathological Society Annual Meeting
Choudhury, R.A., Koike, S.T., and McRoberts, N. “Temperature and light effects on germination of *Peronospora effusa*.”
- 2015 – American Phytopathological Society Annual Meeting – Melhus Symposium
Choudhury, R. A., Koike, S. T., Fox, A., Subbarao, K., Klosterman, S., and N. McRoberts. “Epidemiology of spinach downy mildew in coastal California.”
- 2014 – American Phytopathological Society Pacific Division Meeting
Choudhury, R. A., Koike, S. T., Subbarao, K., Klosterman, S., and N. McRoberts. “Epidemiology of spinach downy mildew in coastal California.”
- 2012 – American Phytopathological Society Pacific Division Meeting
Choudhury, R. A., McRoberts, N., Mahaffee, W., and W. D. Gubler. “Modeling uncertainty in grapevine powdery mildew.”

Poster Presentations

- 2015 – Phytobiomes: Designing a New Paradigm for Crop Improvement
Choudhury, R. A., Koike, S. T., Maharaj, N., Leveau, J., and N. McRoberts. “Effect of downy mildew and biofungicides on the phyllosphere of spinach.”
- 2013 – American Phytopathological Society Annual Meeting
Choudhury, R. A. and N. McRoberts. “Modeling control strategies for maize streak disease.”
- 2012 – American Phytopathological Society Annual Meeting
Choudhury, R. A., McRoberts, N., and W. D. Gubler. “Adaptation to heat stress in grapevine powdery mildew.”
- 2012 – American Phytopathological Society Annual Meeting
Choudhury, R. A., McRoberts, N., Mahaffee, W., and W. D. Gubler. “Addressing uncertainty in powdery mildew epidemiology.”

Grants and Awards

Grant Proposals Funded

- 2015 – Henry A. Jastro Research Award (\$2500)
2014 – IR4 Biopesticide Grant (\$4202)
2013 – Henry A. Jastro Research Award 2013 (\$850)
2012 – Henry A. Jastro Research Award 2012 (\$1350)

Awards and Recognitions

- 2016 – William Moller Student Travel Award (APS)
2015 – Henry A. Jastro Research Award (UCD)
2015 – James and Mary DeVay Travel Award (UCD)
2015 – I.E. Melhus Graduate Student Symposium Award (APS)
2014 – APS Pacific Division Student Travel Award (APS)
2014 – Erna and Orville Thompson Travel Award (UCD)
2013 – Henry A. Jastro Research Award (UCD)
2013 – William Boright Hewitt GSR Award (UCD)
2013 – Robert W. Fulton Student Travel Award (APS)
2013 – Kyung Soo Kim Student Travel Award (APS)
2012 – Leach Memorial Travel Award (UCD)
2012 – William J. Moller GSR Award (UCD)
2012 – Henry A. Jastro Research Award (UCD)

Professional Activity and Service

Professional Society Membership

- American Phytopathological Society (APS)
Mycological Society of America (MSA)
American Society for Microbiology (ASM)

Professional Activity and Service

- 2012 – Present, APS Epidemiology Committee Member
2012 – Present, APS Phyllosphere Microbiology Committee Member
2015 – Present, APS Crop Loss and Risk Evaluation Committee
2016 – Chair, APS Crop Loss and Risk Evaluation Committee
2016 – Acting Chair, APS Phyllosphere Microbiology Committee
2015 – Reviewer, APS Raymond J. Tarleton Student Fellowship Award
2013 – Co-Organizer, APS-MSA 2013 Special Session “Interactions and Mechanisms of Symptomless Plant Symbioses”, 250 attendees

Articles Reviewed

California Agriculture (1)
Crop Protection (1)

Plant Disease (10)
Scientia Agricola (1)

SpringerPlus (1)

Professional Workshops

2016 – “Introduction to Network Models in R”, K. Garrett, APS National Meeting

2015 – “Analysis of Population Genetic Data in R”, N. Grunwald and Z. Kamvar, APS National Meeting

2015 – “Introduction to Multivariate Statistics in R”, N. McRoberts and P. Esker, APS National Meeting

2014 – “Genotyping-by-Sequencing”, L. Cadle-Davidson, APS National Meeting

2012 – “The Evolution of Real-time PCR (with Lab)”, Emir Hodzig, UCD Genome Center