

**Rozalynne Samira, PhD**

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**EDUCATION**

2017	Ph.D.	North Carolina State University, USA (Plant Biology)
2011	M.Phil.	University of Dhaka, Bangladesh (Biochemistry and Molecular Bio)
2005	M.Sc.	Bangalore University, India (Biotechnology)
2003	B.Sc.	Bangalore University, India (Biotechnology)

**PROFESSIONAL EXPERIENCE**

2025- Present	Assistant Professor, Texas Tech University
2021-2025	Research Assistant Professor, Texas Tech University.
2019-2021	Postdoctoral Scholar, Texas Tech University.
2017-2019	Postdoctoral Scholar, North Carolina State University.
2005-2008	Lecturer, University of Science and Technology Chittagong.

**AREA OF EXPERTISE**

Plant Molecular Pathology, Molecular Biology, Molecular Genetics, Biotic and Abiotic Stress, Gene Regulatory Network, QTL mapping, Cellular and Molecular Imaging, Plant Biochemistry, Plant-Soil microbial interaction.

**TEACHING RESPONSIBILITIES**

**Texas Tech University**

PSS-4315: Introductory Plant Pathology  
PSS – 5425: Advance Plant Pathology

**North Carolina State University (2014– 2016)**

PB-250: Plant Biology- Laboratory (Fall semester)  
PB 321: Whole Plant Physiology (Spring semester)  
PB 200: Plant Life – Laboratory (Fall semester)

**University of Science and Technology Chittagong (2005-2007)**

BB-114: Introductory Biotechnology  
BB-124: Human Physiology-I  
BB-314: Basic Immunology  
BB-325: Plant Biochemistry  
BB-415: Environmental Biotechnology

**MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

2012-Present Member, American Society of Plant Biologists (ASPB)

2017-Present Member, American Phytopathological Society (APS).

## **PUBLICATIONS**

1. **R Samira**, M Monsur, N A Trina, 2025. How the Built Environment Shapes Children's Microbiome: A Systematic Review, *Microorganisms* 13 (4), [10.3390/microorganisms13040950](https://doi.org/10.3390/microorganisms13040950)
2. **R Samira**, R N Gonzalez, R A Chávez Montes, L Herrera-Estrella, Metabolic and transcriptomic responses of *Sorghum bicolor* to phosphate deficiency, *Manuscript under preparation*
3. **R Samira**, I Laadsi, M Fokar, Microbiome manipulation of *Sorghum bicolor* under nutrient deficiency, *Manuscript under preparation*.
4. **R Samira**, LFS Lopez, J Holland, PJ Balint-Kurti, 2023. Characterization of a host-specific toxic activity produced by *Bipolaris cookei*, causal agent of Target Leaf Spot of Sorghum, *Phytopathology* 113 (7), 1301-1306 <https://doi.org/10.1094/PHYTO-11-22-0427-R>
5. S Karre, SB Kim, **R Samira**, P Balint-Kurti, 2021. The maize ZmMIEL1 E3 ligase and ZmMYB83 transcription factor proteins interact and regulate the hypersensitive defense response, *Molecular Plant Pathology* 22 (6), 694-709, <https://doi.org/10.1111/mpp.13057>
6. **R Samira**, JA Kimball, LF Samayoa, JB Holland, TM Jamann, PJ Brown, G Stacey, P Balint-Kurti, 2020. Genome-wide association analysis of the strength of the MAMP-elicited defense response and resistance to target leaf spot in sorghum, *Scientific reports* 10 (1), 20817 <https://doi.org/10.1038/s41598-020-77684-w>
7. C Murphree, SB Kim, S Karre, **R Samira**, P Balint-Kurti, 2020. Use of virus-induced gene silencing to characterize genes involved in modulating hypersensitive cell death in maize, *Molecular Plant Pathology* 21 (12), 1662-1676, <https://doi.org/10.1111/mpp.12999>
8. **R Samira**, X Zhang, J Kimball, Y Cui, G Stacey, PJ Balint-Kurti, 2019. Quantifying MAMP-induced production of reactive oxygen species in sorghum and maize, *Bio-protocol*, e3304-e3304, [DOI:10.21769/BioProtoc.3304](https://doi.org/10.21769/BioProtoc.3304)
9. **R Samira**, B Li, D Kliebenstein, C Li, E Davis, JW Gillikin, TA Long, 2018. The bHLH transcription factor ILR3 modulates multiple stress responses in Arabidopsis, *Plant Molecular Biology*, *Plant Molecular Biology* 97, 297-309, <https://doi.org/10.1007/s11103-018-0735-8>
10. D Selote, R Samira, A Matthiadis, JW Gillikin, TA Long, 2015. Iron binding E3 ligase mediates iron response in plants by targeting bHLH transcription factors, *Plant Physiology* 167 (1), 273-286 <https://doi.org/10.1104/pp.114.250837>
11. **R Samira**, A Stallmann, LN Massenburg, TA Long, 2013. Ironing out the issues: Integrated approaches to understanding iron homeostasis in plants, Review Article, *Plant Science* 210, 250-259 <https://doi.org/10.1016/j.plantsci.2013.06.004>
12. **R Samira**, MM Moosa, MM Alam, SI Keka, H Khan, 2010. In silico analysis of jute SSR library and experimental verification of assembly. *Plant Omics* 3 (2), 57-65, <https://search.informit.org/doi/epdf/10.3316/informit.986566596546409>
13. S Ahmed, MZ Nabi, MM Alam, MS Islam, **R Samira**, MM Moosa, H Khan 2009. A computational and experimental approach for developing jute ESTs from genomic clones. *Australian Journal of Crop*

## **PRESENTATIONS AND LECTURES**

### **Invited Speaker-**

1. **R Samira\***, R N Gonzalez, R A Chávez Montes, L Herrera-Estrella, Metabolic and transcriptomic responses of *Sorghum bicolor* to phosphate deficiency, ASPB Plant Biology, 2023, Savannah, Georgia, USA.
2. **R Samira\***, T Long, Characterization of the role of an iron-binding protein in seed development, 30th Annual Plant Molecular Biology Retreat, 2016, Wrightsville, North Carolina, USA.
3. **R Samira\***, T Long, Characterization of the role of an iron-binding protein in seed development, ASPB Plant Biology 2016, Austin, Texas, USA.
4. **R Samira\***, D Selote, A Matthiadis, JW Gillikin, TA Long, Elucidation of an Iron deficiency response mechanism in *Arabidopsis thaliana*, 28th Annual Plant Molecular Biology Retreat, Wrightsville, NC, September 2014
5. **R Samira\*** and H Khan, Bioinformatic analysis of genomic DNA of Jute, Plant Tissue Culture and Biotechnology Conference 2008, Dhaka, Bangladesh.
6. **R Samira\*** and H Khan, Identification of a bacterial stress response regulating gene like sequence in the chloroplast genome of low-temperature tolerant variety of Jute, BAS-IAP-TWAS-NASIC International Conference on Gender Participation in the Development of Science, 2009 Dhaka, Bangladesh.

### **Poster Presentation-**

1. **R Samira\***, JA Kimball, LF Samayoa, JB Holland, TM Jamann, PJ Brown, G Stacey, P Balint-Kurti, Physiological and molecular -genetic characterization of basal resistance in Sorghum, ASPB Plant Biology 2019, San Jose, California, USA.
2. **R Samira\***, T Long, Characterization of the role of an iron-binding protein in seed development, 11th Graduate Student Research Symposium, 2016, NCSU, Raleigh, North Carolina, USA.
3. **R Samira\***, D Selote, A Matthiadis, JW Gillikin, TA Long, Elucidation of an Iron deficiency response mechanism in *Arabidopsis thaliana*, Poster presentation, 9th International Bio-metals Symposium, 2014, Durham, NC, USA.
4. **R Samira\***, D Selote, A Matthiadis, JW Gillikin, TA Long, Elucidation of an Iron deficiency response mechanism in *Arabidopsis thaliana*, BASF Open House Symposium, Research Triangle Park, NC, September 2013
5. **R Samira\*** and H Khan, Identification of a bacterial stress response-regulating gene like sequence in the chloroplast genome of low-temperature tolerant variety of jute. Poster presentation, 21st IUBMB and 12 FAOBMB International Conference, 2009, Shanghai, China.

## **HONORS AND AWARDS**

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| 2023 | Faculty Travel Grant Summer 2023 Travel   |
| 2023 | Women's Young Investigator Travel Award, American Society of Plant Biologists   |
| 2016 | Poster Award in 11 <sup>th</sup> Graduate Student Research Symposium, 2016, NCSU, Raleigh, North Carolina, USA in Life Sciences category. |
| 2014 | Travel Grant for participating American Society for Plant Biologist (ASPB) Symposium, Texas, USA.   |
| 2014 | Metallo Biochemistry of Plant Poster Award at the 9 <sup>th</sup> International Bio-metals Symposium,                                     |
| 2012 | Bangladesh-Sweden Trust Fund for Bangladeshi student traveling abroad   |

- 2009 National Science and Information & Communication Technology (NSICT) Fellowship Bangladesh for pursuing M. Phil research.
- 2009 Prime Minister Higher Education and Research Scholarship, Bangladesh,
- 2009 FAOBMB Travel Fellowship, for participating 21<sup>st</sup> IUBMB and 12<sup>th</sup> FAOBMB International Conference, Shanghai, China

### **SERVICE/ LEADERSHIP/VOLUNTEERING**

#### **Texas Tech University**

- 2024 Member, STEM Center for Outreach, Research & Education, TTU.
- 2024 Judge, Davis College Graduate Research Symposium, TTU
- 2024 Volunteer, the South Plains Food Bank's GRUB Farm.
- 2023 Judge, IGCAST Research Symposium, Plant and Soil Science.
- 2023 Judge, Graduate Student Research Symposium, Plant and Soil Science.
- 2023 Volunteer, the South Plains Food Bank's GRUB Farm.
- 2022 Judge, Graduate Student Research Symposium, Plant and Soil Science.

#### **North Carolina State University (2012– 2016)**

- 2017-2019 Member, Post Doctoral Association.
- 2015-2016 President, Plant Biology Graduate Student Association.
- 2014-2016 International Student Ambassador, Department of Plant and Microbial Biology.
- 2013-2014 Graduate Student Representative, Department of Plant and Microbial Biology.
- 2013-2015 Graduate student Volunteer, CAALS-3D program to train underrepresented minority student in plant biology.
- 2014-2015 Volunteer researcher, STEM learning for pre-school age, Natural Learning Initiative (NLI).

#### **Professional:**

- 2021 Reviewer of the journal Molecular Plant-Microbe Interaction (MPMI).
- 2020 Reviewer of the journal Genes.