

Unnati Sonawala

CONTACT INFORMATION

us275@cam.ac.uk

EDUCATION

Virginia Tech, Virginia, USA

PhD, Plant Pathology and Physiology 2014-2019

University of Warwick, Coventry, United Kingdom

M.Sc. Food Security (Distinction) 2012-2013

SRM University, Chennai, India

B.Tech Biotechnology (Distinction) 2009-2013

RESEARCH EXPERIENCE

University of Cambridge

Postdoctoral Researcher

2023-

Project: Identifying and characterizing the immune receptor network against root-knot nematodes in sweet potato.

Supervisor: Dr. Lida Derevnina

Postdoctoral Researcher

2019-2023

Project: The juxtaposition of variability and stability in the HYP effectors of potato cyst nematodes.

Supervisor: Dr. Sebastian Eves-van den Akker

Virginia Tech

Research Assistant

2015-2019

Project: Understanding the role of host amino acid transporters in nutrient acquisition by oomycete pathogens.

Supervisors: The late Dr. John M. McDowell and Dr. Guillaume Pilot

University of Warwick

Graduate Researcher

2013

Project: Innate immunity in *Arabidopsis thaliana* for future control of black rot resistance in vegetable brassicas

Supervisor: Dr. Eric Holub

TEACHING EXPERIENCE

University of Cambridge

Undergraduate and Research Scholar Mentor

2023-2026

Supervised four undergraduate researchers and a visiting scholar in the laboratory.

Undergraduate Supervisor

Spring 2022

Supervised small-group sessions for the Plant and Microbial Sciences course.

Virginia Tech

Teaching Assistant

Fall 2017

Organized plant science project for high school students.

Teaching Assistant

Fall 2016

Taught plant pathology lab.

Undergraduate Mentor

2016-2018

Supervised two undergraduate researchers.

HONORS AND AWARDS

- ESN Medal for co-founding Young Nematologists' Network, 35th European Society of Nematologists (2024), Cordoba, Spain.
- Postdoctoral Affiliate (2023-present), Trinity College, Cambridge, UK
- Arthur J. Weber Graduate Student of the Year Award (2018), Department of Plant Pathology, Physiology and Weed Science, Virginia Tech
- Bruce W. Perry Tuition Scholarship (2015), Department of Plant Pathology, Physiology and Weed Science, Virginia Tech

LEADERSHIP AND MEMBERSHIPS

- Assistant Feature Editor, Molecular Plant-Microbe Interactions (Sep 2025 -)

- Co-chair of ‘Spatial & Temporal Resolution of the Interaction Interface’ concurrent session at MPMI (2025), Cologne, Germany
- Co-organizer of ‘Symposium on Plant-Parasitic Nematodes’ at Parasitic Helminths: New Perspectives in Biology and Infection (2025), Hydra, Greece
- Ambassador to The British Society for Plant Pathology (2023 - 2025)
- Co-founder and co-organizer of Young Nematologists’ Network (May 2022 -)
 - International early-career nematology network; co-organized quarterly seminars, workshops & Virtual Nematology Conference 2023, 2025.
- Member of Virtual Nematology Conference organization committee (May 2021), European Society of Nematology
 - Co-organized a three day virtual symposium for PhD students and postdoctoral researchers in Nematology.
- Student Recruitment Chair of Graduate Student Organization (2017-18), Translational Plant Science, Virginia Tech
 - Co-organized recruitment weekend for incoming graduate students.
- President of Graduate Student Organization (2017), Department of Plant Pathology, Physiology and Weed Science, Virginia Tech
 - Organized departmental mini-symposium.
 - Arranged student activities and gatherings.

**GRANTS
AND
COMPETITIONS**

- Postdoc Innovation Awards, Department of Plant Sciences, University of Cambridge (2024)
- British Society for Plant Pathology Travel Grant (2024)
- BBSRC Flexibility Talent Mobility Account Award (2023)
- International Congress of Nematology Travel Award, Antibes, France (2022)
- Best Elevator Talk, Translational Plant Science Symposium, Virginia Tech (2018)
- Travel Award, North American Mass Spectrometry Summer School, University of Wisconsin, Madison (2018)
- Best Basic Science Poster Award, Plant Pathology, Physiology and Weed Science mini-symposium (2017)
- Research Grant, Translational Plant Science Grant Competition, Virginia Tech (2016, 2017)
- Travel Grant, Translational Plant Science Grant Competition, Virginia Tech (2015)
- Life Science Scholarship for MSc taught courses, University of Warwick (2012)

PUBLICATIONS

- Moura de Souza, V.H.; Pellegrin, C.; Hanlon, V.C., Xia, C.; Kranse, O.P.; **Sonawala, U.**; Desikan, P.; Senatori, B.; Danchin, E.G.; Derevnina, L; and Eves-van den Akker, S. The host range paradox of *Meloidogyne incognita*: a physiological and transcriptomic analysis of nine susceptible interactions across six plant orders. (*bioRxiv*, 2025-09).
- Sonawala, U.**; Busidan, A.; Haak, D. and Pilot, G. Characterization and whole genome sequencing of *Saccharomyces cerevisiae* strains lacking several amino acid transporters: Tools for studying amino acid transport. (*PLoS One*, 2025)
- Moura de Souza, V. H.; **Sonawala, U.**; Healey, R.; Derevnina, L. and Eves-van den Akker, S. Report of *Pratylenchus penetrans* on quince (*Cydonia oblonga*) in England. (*Plant Disease*, 2025).
- Sonawala, U.**, Beasley, H., Thorpe, P., Varypatakis, K., Senatori, B., Jones, J.T., Derevnina, L. and Eves-van den Akker, S. A gene with a thousand alleles: The hyper-variable effectors of plant-parasitic nematodes. (*Cell Genomics*, 2024).
- Sonawala, U.**; Derevnina, L. and Eves-van den Akker, S. Protocol for Cas9-targeted long-read sequencing in *Globodera pallida* and *Globodera rostochiensis*. (*STAR Protocols*, 2024).
- de Souza, V. H. M.; Philadelphi, S. M.; Galbieri, R.; **Sonawala, U.** and Eves-van den Akker, S. An Emergent Plant-Parasitic Nematode in Brazil: *Aphelenchoides Besseyi*. Current Status and Research Perspectives. (*Plant Pathology*, 2023).
- Garcia, K.; Cloghessy, K.; Cooney, D. R.; Shelley, B.; Chakraborty, S.; Kafle, A.; Busidan, A.; **Sonawala, U.**; Collier, R.; Jayaraman, D.; Ané, J.-M. and Pilot, G.

The Putative Transporter MtUMAMIT14 Participates in Nodule Formation in *Medicago Truncatula*. (*Scientific Reports*, 2023).

Siddique, S.; Radakovic, Z. S.; Hiltl, C.; Pellegrin, C.; Baum, T. J.; Beasley, H.; Bent, A. F.; Chitambo, O.; Chopra, D.; Danchin, E. G. J.; Grenier, E.; Habash, S. S.; Hasan, M. S.; Helder, J.; Hewezi, T.; Holbein, J.; Holterman, M.; Janakowski, S.; Koutsovoulos, G. D.; Kranse, O. P.; Lozano-Torres, J. L.; Maier, T. R.; Masonbrink, R. E.; Mendy, B.; Riemer, E.; Sobczak, M.; **Sonawala, U.**; Sterken, M. G.; Thorpe, P.; van Steenbrugge, J. J. M.; Zahid, N.; Grundler, F. and Eves-van den Akker, S. The genome and lifestage-specific transcriptomes of a plant-parasitic nematode and its host reveal susceptibility genes involved in trans-kingdom synthesis of vitamin B5. (*Nature Communications*, 2022).

Kranse, O. P.; Ko, I.; Healey, R.; **Sonawala, U.**; Wei, S.; Senatori, B.; De Batté, F.; Zhou, J. and Eves-van den Akker, S. A low-cost and open-source solution to automate imaging and analysis of cyst nematode infection assays for *Arabidopsis thaliana*. (*Plant Methods*, 2022).

Besnard, J., **Sonawala, U.**; Maharjan, B.; Collakova, E.; Finlayson, S. A.; Pilot, G. and Okumoto, S. Increased expression of UMAMIT amino acid transporters results in activation of salicylic acid dependent stress response. (*Frontiers in Plant Science*, 2021).

Sonawala, U.; Dinkeloo, K.; Danna, C. H.; McDowell, J. M. and Pilot, G. Functional linkages between amino acid transporters and plant responses to pathogens. (*Plant Science*, 2018).

Besnard, J.; Pratelli, R.; Zhao, C.; **Sonawala, U.**; Collakova, E. and Pilot, G.; Okumoto, S. UMAMIT14 is an amino acid exporter involved in phloem unloading in *Arabidopsis* roots. (*Journal of Experimental Botany*, 2016).

COMMENTARIES

Sonawala, Unnati. Shared shapes, shared signals: structural similarity underlies both multimerization and NLR recognition of a powdery mildew effector family. (*Molecular Plant-Microbe Interactions*, 2026).

PRESENTATIONS (SELECTED)

Talks

Rooting for resistance: Identifying and characterizing the immune receptor network against root-knot nematodes in sweet potato

2025 · Parasitic Helminths: New Perspectives in Biology and Infection, Hydra, Greece

2025 · Residential talks for outreach, Trinity College, Cambridge, UK

2024 · 35th Symposium of the European Society of Nematologists, Córdoba, Spain

Juxtaposition of extreme genomic variability and stability in HYP effectors of potato cyst nematodes

2023 · Parasitic Helminths: New Perspectives in Biology and Infection, Hydra, Greece

2022 · Advances in Nematology, AAB, London, UK.

2022 · International Conference of Nematology, Antibes, France.

2021 · Virtual Nematology Conference, European Society of Nematologists.

Engineering a yeast strain used to characterize plant amino acid transporters

2019 · Plant Pathology, Physiology and Weed Science (PPWS) Seminar Series, Virginia Tech, Blacksburg, USA

What role do host amino acid transporters play in nutrient acquisition by biotrophic pathogens?

2018 · Translational Plant Science Symposium, Virginia Tech, Blacksburg, USA.

2016 · Plant Pathology, Physiology and Weed Science (PPWS) Seminar Series, Virginia Tech, Blacksburg, USA.

Posters

Identifying and characterizing the immune receptor network against root-knot nematodes in sweet potato

2025 · International Society for Molecular Plant-Microbe Interactions, Cologne, Germany

Juxtaposition of extreme genomic variability and stability in HYP effectors of potato cyst nematodes

2023 · International Society for Molecular Plant-Microbe Interactions, Providence, USA.

2023 · International Congress of Plant Pathology, Lyon, France.

Toward understanding how biotrophic pathogens manipulate plant amino acid transporters to acquire nutrients.

2018 · North American Mass Spectrometry Summer School, Madison, USA.

2018 · Oomycete Molecular Genetics Network (OMGN) Annual Meeting, Tai'an, China.

2017 · Oomycete Molecular Genetics Network (OMGN) Annual Meeting, Asilomar, USA.

2016 · International Workshop on Plant Membrane Biology (2016), Annapolis, USA.

2016 · Oomycete Molecular Genetics Network (OMGN) Annual Meeting, Malmö, Sweden