

# Unnati Sonawala

---

CONTACT INFORMATION	<a href="mailto:us275@cam.ac.uk">us275@cam.ac.uk</a>
EDUCATION	<b>Virginia Tech, Virginia, USA</b> PhD, Plant Pathology and Physiology 2014-2019 <b>University of Warwick, Coventry, United Kingdom</b> M.Sc. Food Security (Distinction) 2012-2013 <b>SRM University, Chennai, India</b> B.Tech Biotechnology (Distinction) 2009-2013
RESEARCH EXPERIENCE	<b>University of Cambridge</b> 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  <b>Virginia Tech</b> 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  <b>University of Warwick</b> Graduate Researcher 2013 Project: Innate immunity in <i>Arabidopsis thaliana</i> for future control of black rot resistance in vegetable brassicas Supervisor: Dr. Eric Holub
TEACHING AND EXPERIENCE	<b>University of Cambridge</b> 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.  <b>Virginia Tech</b> 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	<ul style="list-style-type: none"><li>· ESN Medal for co-founding Young Nematologists' Network, 35<sup>th</sup> European Society of Nematologists (2024), Cordoba, Spain.</li><li>· Postdoctoral Affiliate (2023-present), Trinity College, Cambridge, UK</li><li>· Arthur J. Weber Graduate Student of the Year Award (2018), Department of Plant Pathology, Physiology and Weed Science, Virginia Tech</li><li>· Bruce W. Perry Tuition Scholarship (2015), Department of Plant Pathology, Physiology and Weed Science, Virginia Tech</li></ul>
LEADERSHIP AND MEMBERSHIPS	<ul style="list-style-type: none"><li>· Assistant Feature Editor, Molecular Plant-Microbe Interactions (Sep 2025 -)</li></ul>

- 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.; Kifle, 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 · 35<sup>th</sup> 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