

Curriculum Vitae

RUMANA KEYANI (PhD)

H#201, Street #12, Phase 1,
Pakistan Town, Islamabad
Pakistan

Research Area

Molecular Plant Pathology, Plant stress physiology, Plant microbe interaction, Plant Protection, Plant Biotechnology & Molecular Biology.

Academic Qualification

- 2010-2014 PhD (Molecular Plant pathology) from university of Edinburgh, UK
- 09/2009-12/2009 Internship under prime minister national internship program in ministry of Food and agriculture, Pak secretariat Islamabad, Pakistan
- 2007-2008 M.Sc. (Hons) Agriculture, Plant Pathology from University of Arid Agriculture, Rawalpindi (UAAR). (84% with CGPA 3.94/4.00).
- 2002-2006 B.Sc (Hons), Agriculture, Plant pathology (4 years) from UAAR. (79 % with CGPA 3.70 / 4.00).
- 1999-2001 HSSC (Pre-Medical) from Govt. Viqar-un-Nissa College for Girls, Rawalpindi, Pakistan. (65 %).
- 1996-1998 SSC (Science) from Lahore Board, Pakistan. (74 %)

Theses Done:

- **Mphil:** Evaluation and Characterization of D-Genome Based Synthetic Hexaploid Wheat for Yellow Rust Resistance
- **PhD:** Role of *S* Nitrosoglutathione Reductase and Nucleoredoxins in Redox Mediated Plant Defence.

Laurels And Accolades

- **Gold Medal** for securing first position in M. Sc. (Hons) Agriculture, by the University of Arid Agriculture, Rawalpindi.
- Awarded **Fauji Foundation Academic distinction award** on the basis of highest position in M. Sc. (Hons) in the university.

- Awarded **10% overseas scholarship for PhD in the selected Fields Phase II Batch-IV (10% seats)** by HEC in 2009.
- Awarded **travel grant by SEB for 36th New Phytologist Symposium ‘Cell biology at the plant–microbe interface’** held at Eden Hotel Wolff, Munich, Germany from 29 Nov–01 Dec 2015

Research Supervision

BS completed: 3 BS in process: 2
 MS completed: 1 MS in process: 3
 PhD (co-supervision) in process: 2

Research Grants

Sr. #	Title	Donor Agency	Amount	Role as
1	Novel members of the Thioredoxin superfamily regulate plant immune responses	HEC, Pakistan	0.5millions (Rs)	PI
2	Enhancement of oxidative stress tolerance in wheat by exploiting antioxidant enzymes	IFS (International foundation for Science)	11992 USD	PI

Participation In International Conferences

- **UK PlantSci 2012**, 18-19th April, organized by **Society of experimental Biology (SEB)** held at **John Innes Conference Centre, Norwich, UK.**
- **SEB annual meeting 2012**, 29 June-2 July, **Salzburg, Austria.**
- Presented PhD work in **4th International Plant NO Club 2012, July 26-27, Edinburgh, Scotland, UK.**
- Oral presentation at **International conference of plant sciences 22-24th September, 2014** held at **GC University, Lahore.**
- **36th New Phytologist Symposium ‘Cell biology at the plant–microbe interface’** held at Eden Hotel Wolff, Munich, Germany from 29 Nov–01 Dec 2015
- Poster presentation at international conference of **Emerging trends in plant proteomics 2nd-4th October, 2017** held in **Quaid e Azam university, Islamabad, Pakistan**

International Publications (Published)

- Kneeshaw, S*, **Keyani, R***, Delorme-Hinoux, V., Imrie, L., Loake, G. J., Le Bihan, T., & Spoel, S. H. (2017). Nucleoredoxin guards against oxidative stress by protecting antioxidant enzymes. *Proceedings of the National Academy of Sciences*, 201703344. (*co-first authors) (IF: 9.661)
- Yasmin, H., Nosheen, A., Naz, R., Bano, A., & **Keyani, R.** (2017). 1-tryptophan-assisted PGPR-mediated induction of drought tolerance in maize (*Zea mays* L.). *Journal of Plant Interactions*, 12(1), 567-578 (IF: 1.682)
- Hayat, M., Abbas, M., Munir, F., Hayat, M., **Keyani, R.**, & Amir, R. 2017. Potential of plant flavonoids in pharmaceuticals and nutraceuticals. *J Biomol Biochem* 1(1): 11-16.
- Nosheen, A., Bano, A., Yasmin, H., **Keyani, R.**, Habib, R., Naz, R., Shah, S. T. A. (2016): Protein quantity and quality of safflower seed improved by NP fertilizer and rhizobacteria (*Azospirillum* and *Azotobacter* spp.). *Frontiers in Plant Sciences*. doi: 10.3389/fpls.2016.00104. (IF: 4.495)
- Nosheen, A., Yasmin, H., Naz, R., Bano, A., **Keyani, R.**, & Hussain, I. (2018). *Pseudomonas putida* improved soil enzyme activity and growth of kasumbha under low input of mineral fertilizers. *Soil Science and Plant Nutrition*, 1-6. (IF: 1.2)
- Naz, R., Nosheen, A., Yasmin, H., Bano, A., & **Keyani, R.** (2018). Botanical-chemical formulations enhanced yield and protection against *Bipolaris sorokiniana* in wheat by inducing the expression of pathogenesis-related proteins. *PlosOne*, 13(4), e0196194. (IF: 2.806)
- Nosheen, A., Naz, R., Tahir, A. T., Yasmin, H., **Keyani, R.**, Mitrevski, B., & Hussain, I. (2018). Improvement of safflower oil quality for biodiesel production by integrated application of PGPR under reduced amount of NP fertilizers. *PloS one*, 13(8), e0201738.
- Butt, U. R., Naz, R., Nosheen, A., Yasmin, H., **Keyani, R.**, Hussain, I., & Hassan, M. N. (2019). Changes in pathogenesis-related gene expression in response to bioformulations in the apoplast of maize leaves against *Fusarium oxysporum*. *Journal of Plant Interactions*, 14(1), 61-72.

Book Chapters

- Amir, R., Munir, F., **Keyani, R.**, Tahir, A., Noor, N., Nauman, I., & Taufiq, S. **Stress Signaling under metal and Metalloid toxicity** for “Plants under Metal and Metalloid stress: Adaptation and Antioxidant Defense Mechanism” 10.1007/978-981-13-2242-6
- Rabia Amir, Tooba Iqbal, Maryam Khan, Faiza Munir, Rumana Keyani. **Abiotic Stress Signaling in Plants as Affected by Phytoprotectants** (<https://bookshelf.vitalsource.com/#/books/9781351339933/cfi/6/20!/4/4/2/2/2@0:0>)

Experience

- Working as an Assistant Professor since 2014 in the department of Biosciences in COMSATS University, Islamabad (CU I), Pakistan.

Skills

- Worked with post translational protein modifications i.e. S-nitrosylation, Antioxidative plant defence, Plant-microbe interaction and salicylic acid plant defence signalling and other molecular techniques i.e. PCRs, Biotin Switch Assay, protein Assays (Redox activity assays), Cloning, bacterial pathogenicity assays.

References

- Dr. Steven Spoel
University of Edinburgh, UK
sspoel@staffmail.ed.ac.uk
- Prof. Luis A. J. Mur
Edward Llwyd Building, Penglais Campus
Aberystwyth
lum@aber.ac.uk