

# Saeed Ahmad ASAD

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## Qualifications

- 2007-2011**                      **PhD Environmental Science** University of Nottingham, UK.  
Funded by Overseas Research Student (ORS) Scholarship.  
(**Thesis title** “Interactions between heavy metals and glucosinolates as defense mechanisms in *Thlaspi caerulescens*”)
- 2001-2003**                      **MPhil in Plant Physiology (1<sup>st</sup> class)** Quaid-i-Azam University Islamabad, Pakistan. Funded by a University Post-graduate Scholarship.  
(**Thesis title** “Comparative study of the effects of biofertilizers on nodulation and yield characteristics of *Phaseolus vulgaris*”)
- 1996-2000**                      **BSc (Hons) in Agronomy (1<sup>st</sup> class)** University of Agriculture Faisalabad, Pakistan.

## Employment

- Mar. 2014 - Present**            **Assistant Professor.** Centre for Climate Research and Development, COMSATS University Islamabad, Pakistan (**Islamabad campus**). Responsibilities include; writing grant applications and conducting independent research.
- Aug. 2012- Feb.2014**        **Assistant Professor.** Department of environmental Sciences, COMSATS University Islamabad, Pakistan (**Abbottabad campus**). During this employment my assignments included lecturing to undergraduate and postgraduate students, supervision of research students. Writing grant applications and conducting student’s tutorials.
- Mar. 2012- Aug. 2012**        **Assistant Professor.** Department of Environmental Sciences, Faculty of Biological Sciences Quaid-i-Azam University Islamabad, Pakistan. Responsibilities included the teaching and research supervision of graduate students. Along with administrative tasks, I was also responsible to revise curricula for undergraduate and master degree program in environmental sciences.

- Sep.2011- Mar. 2012**      **Post Doctorate.** School of Biosciences, University of Nottingham, UK. I started this job immediately after completing my PhD in September 2011. Worked on elemental analysis of soil and *Brassica* plant samples on ICPMS in a project funded by Biotechnology and Biological Sciences Research Council (BBSRC) UK grant and the remit was to study the molecular genetics of *Brassica* nutrition. Experience in writing grant application, Supervision of students at master and doctorate level.
- Jun. 2003- Jun. 2005**      **Research Fellow.** Institute of Natural Resources and Environmental Sciences (INRES), National Agricultural Research Centre (NARC), Islamabad, Pakistan. I worked on a national project developing biofertilizers for sugarcane, maize and wheat. I was responsible for maintaining laboratory records and writing project reports for the funding organization. I assisted the group leader in writing grant proposals.
- Sep. 2001-May. 2003**      **Junior Research Assistant.** Plant Physiology Laboratory, Biological Sciences, Quaid-i-Azam University, Islamabad, Pakistan. I developed methods for the extraction and quantification of plant growth hormones in legumes and carried out field work to collect legume samples for isolation and characterization of *Rhizobium* strains.

### Scientific Techniques and Instruments Used

- ICPMS (Inductively Coupled Plasma Mass Spectrophotometry) for soil and plant elemental analysis.
- Mass Spectrophotometer and HPLC for the identification and quantification of glucosinolates/Plant secondary metabolites.
- Spectrophotometry.
- CNS Analyser.
- Proficient in statistical analyses and experimental design.

### Membership/Travel grants

- Member of the Society for Experimental Biology (SEB) London, UK (since 2007).
- **Travel grant** awarded by the School of Biosciences for training at the Institute of Food Research (IFR) Norwich, United Kingdom (2010).
- **Travel grant** awarded by the Society for Experimental Biology to present my work at an international conference held in Glasgow United Kingdom, July 1-4, 2011. (Annual main meeting Society for Experimental Biology).
- **Travel grant** awarded by Higher Education Commission (HEC) of Pakistan and Society for Experimental Biology, UK to present my work in an international conference held in Valencia, Spain July 3-6, 2013.

## Publications

1. **Asad, SA.** Young, S. and West, H. (2015) Effect of zinc and glucosinolates on nutritional quality of *Noccaea caerulescens* and infestation by *Aleyrodes proletella*. *Science of the Total Environment*. **511**: 21–27.
2. **Asad SA.** Muhammad, S. Farooq, M. Afzal, A. Broadley, M. Young, S and West, H. (2015). Anthocyanin production in the hyperaccumulator plant *Noccaea caerulescens* in response to herbivory and zinc stress. *Acta Physiologiae Plantarum*. **37** (1): 1715.
3. Shah, TM. Ara, J. Muhammad, S. Khan, S. **Asad, SA** and Liaqat Ali. (2014). Potential heavy metal accumulation of indigenous plant species along the mafic and ultramafic terrain in the mohmand agency, Pakistan. *CLEAN Soil Air Water*. **42**: 339–346.
4. Shah, FA. Mahmood, Q. Shah, MM. Pervez, A and **Asad, SA.** (2014). Microbial ecology of anaerobic digesters: The key players of anaerobiosis. *The Scientific World Journal*. 183752. (DOI:10.1155/2014/183752).
5. **Asad, SA.** Ali, N. Hameed, A. Khan, SA. Ahmad, R. Bilal, M. Shahzad, M and Tabassum, A. (2014). Biocontrol efficacy of different isolates of *Trichoderma* against soil borne pathogen *Rhizoctonia solani*. *Polish journal of Microbiology*. **63**: 95–103.
6. Afzal, A. Saleem, S. Iqbal, Z. Jan, G. Malik, MF and **Asad SA.** (2014). Interactions of *Rhizobium* and *Pseudomonas* with wheat (*Triticum aestivum* L.) in potted soil with or without P<sub>2</sub>O<sub>5</sub>. *Journal of Plant Nutrition*. **37**: 2144–2156.
7. **Asad, SA.** Young SD and West HM. (2013). Effect of Ni and Cd on glucosinolate production in *Thlaspi caerulescens*. *Pakistan Journal of Botany*. **45**: 495–500.
8. Alia, Jabeen B. Khokhar SN. Afzal A and **Asad SA.** (2013). Phosphate solubilizing bacteria associated with vegetables roots in different ecologies. *Pakistan Journal of Botany*. **45**: 535–544.
9. Farooq, M. Wahid, A. Ahmad, N and **Asad, SA.** (2010). Comparative efficacy of surface drying and re-drying seed priming in rice: changes in emergence, seedling growth and associated metabolic events. *Paddy Water Environment*. **8**:15–22.
10. Farooq, M. Basra, SMA and **Asad, SA.** (2008). Comparison of conventional puddling and dry tillage in rice-wheat system. *Paddy Water Environment*. **6**:397–404.
11. Afzal, A. Ashraf, M. **Asad, SA** and Farooq, M. (2005). Effect of phosphate solubilizing microorganisms on phosphorus uptake, yield and yield traits of wheat (*Triticum aestivum* l.) in rain fed area. *International Journal of Agriculture and Biology*. **7**:207-209.
12. **Asad, SA.** Bano, A. Farooq, M. Aslam, M and Afzal, A. (2004). Comparative study of the effects of biofertilizers on nodulation and yield characteristics of Mung bean (*Phaseolus vulgaris* L.). *International Journal of Agriculture and Biology*. **6**: 837-843.

### **Books/Book Chapters**

1. Khan SA. Ahmad, R. **Asad, SA.** Shahzad, M. (2014). Citrus flavonoids: their biosynthesis, functions and genetic improvement. In Citrus: Molecular Phylogeny, Antioxidant Properties and Medicinal Uses. PP.31-50. Hayat, K. (edn.) Nova Science Publishers INC, New York.

### **Conference proceedings**

1. **Asad, SA.** Young, SD. West, HM and Broadley, M. Heavy metal hyper accumulators- their defence strategy. Society for Experimental Biology, Valencia Spain. July 3-6, 2013. Pp. 254.
2. **Asad, SA.** Young, SD. West, HM. Effective defence for *Noccaea caerulescens* against *Brassica* specialist herbivores – zinc or glucosinolates? SEB, Salzburg, Austria. July, 2012. Pp.180.
3. **Asad, SA.** Young, SD. West, HM and Broadley, M. Heavy metal hyper accumulation in *Thlaspi caerulescens* and “trade off” hypothesis. International conference “crop management in changing climate. University of agriculture, Faisalabad, Pakistan. February, 2013. Pp.32.

### **Popular Article**

1. **Asad SA.** Cancer – fighters in your kitchen. Daily Dawn Islamabad, 12<sup>th</sup> May 2013.