

## CURRICULUM VITAE

**Name:** *Dr Nazima Rasool*

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### **Educational qualification:**

#### **Ph. D (Botany)**

#### **Field of Specialization:**

- *Ecology, Soil Microbiology Biology and Soil Biochemistry*

#### **Title of Ph. D Thesis:**

- Effect of Some Alien Invasive Plant Species on Soil Microbial Structure and Function

#### **Title of M. Phil Dissertation**

- Effect of Some Pesticides on Soil Microbiological and Biochemical Characteristics of Agricultural Soils of Kashmir

### **Work Experience:**

- About 11 years teaching experience in the Department of Higher Education- more than three years as contractual lecturer and about 8 years on substantive basis.
- Joined as Assistant Professor in the Department of Botany, Kashmir University, (Kargil Campus) on 31-03-2016.
- E-lectures for **Consortium for Educational Communication** sponsored by **Ministry of Human Resource Department, Govt. of India**

### **Technical Skills**

#### **Molecular Biology**

- DNA fingerprinting techniques (Denaturing Gradient Gel Electrophoresis (DGGE))
- DNA extraction from soil and plant samples
- Agarose Gel Electrophoresis
- Polyacrylamide Gel Electrophoresis
- PCR
- DNA extraction from DGGE Gel

#### **Microbiology**

- Well versed in culturing soil microbes (sterilization, preparation of culture media, isolation of microbes, laminar airflow and autoclaving etc.)

- Soil microbial biomass
- Soil microbial activity assays: Dehydrogenase FDase etc.

### **Biochemistry**

- Enzyme assays like phosphatase, urease, amidase, asparaginase, invertase, protease invertase etc.
- Extraction of allelopathic compounds from plant material.
- Soil organic carbon, Nitrogen etc.

### **Achievements**

- Scholarship awarded by the Department Foreign Affairs and International Trade, Canada (DFAIT) through **Canadian Bureau of International Education**.
- Scholarship awarded by the University Laval, Quebec, Canada,
- Merit scholarship awarded at Ph. D level by the Department of Botany, University of Kashmir.
- Merit scholarship awarded at M. Phil level by the Department of Botany, University of Kashmir.
- Merit scholarship awarded at M. Sc. level by the Department of Botany, University of Kashmir.

### **Symposia Seminars Conferences Congresses etc. with paper presentation**

#### **International**

1. 9<sup>th</sup> Annual conference of **American Council of Medicinally Active Plants (ACMAP)** on “**Medicinal, Aromatic and Nutraceutical Plants from Mountainous Areas**” from 14-16 February, 2019, at Graphic Era University, Dehradun, Uttarakhand, India. (full theme: International conference on Medicinal, Aromatic and Nutraceutical Plants from Mountainous Areas)  
**Oral presentation on:** An Ethno-botanical Survey in Gurez Valley of Jammu and Kashmir State
2. Annual Meet of the Ecological Society of America (6 – 11 August, 2017), held in Portland, Oregon, USA.  
**Poster presentation on:** Effect of the fungicide Mancozeb at different application rates on enzyme activities in a silt loam soil of the Kashmir Himalaya, India
3. The First Global Soil Biodiversity Conference on “Assessing soil biodiversity and its role for ecosystem system services”, Dijon, France 2-5 December, 2014

**Poster presentation on:** Invasion by *Conyza canadensis* (L.) Cronq. alters activity of soil enzymes in Kashmir Himalaya, India

## National

1. One Day seminar to celebrate National Science Day, 2024 organized by the Department of Botany, North Campus, University of Kashmir on 28<sup>th</sup> Feb, 2028.  
Presentation on: Bryophytes: the lesser-known part of the biodiversity
2. Two-day multidisciplinary conference on “Recent innovations in Sciences, Social Sciences, humanities and Arts” Organized by Govt. Degree College, Poonch, Jammu from 23-24 March, 2021  
Oral presentation on: Invasion by *Conyza sumatreinsis* (Retz.) E. Walker alters soil enzyme activity in Kashmir Himalayan soils
3. 10<sup>th</sup> JK Science Congress: Science and Technology for Inclusive Development – a Way Forward. 14<sup>th</sup> to 16<sup>th</sup> March, 2015 University of Jammu, Jammu & Kashmir, India.  
**Oral presentation on:** *Conyza canadensis* alters soil microbial community structure
4. National Seminar on Himalayan Biodiversity characterization, bioprospection, for sustainable utilization, organized by Centre for Kashmir Himalayan biodiversity: Documentation, bioprospection and conservation, Department of Botany, University of Kashmir, from 18<sup>th</sup> to 19<sup>th</sup> September 2017  
**Oral presentation on:** Soil microbial functions differ in range expanding vs native plants
5. 7<sup>th</sup> Young Investigators Meet 2015 27/3/2015 to 1/4/2015, organized by India Bioscience Gulmarg, Kashmir  
**Poster presented on:** Invasion by *Conyza canadensis* (L.) Cronq. alters soil microbial structure and function
6. National Conference on Biodiversity: Present Status and Future Challenges 10 session IV University of Kashmir Srinagar 26-28 March 2009. Organized by Department of Botany, University of Kashmir  
**Oral presentation on:** Effect of exotic plant invasion on activity of soil enzyme activity
7. 2nd J&K Science Congress, University of Kashmir Srinagar 25-27 July, 2006. Organized by Faculty of Science, University of Kashmir  
**Oral presentation on:** Effect of butachlor (G) on activity of soil enzymes under flooded conditions
8. National Seminar on Recent Advances in Plant Science Research, University of Kashmir Srinagar 12-14 Oct. 2003, Organized by Department of Botany, University of Kashmir.  
**Oral presentation on:** Effect of Butachlor G on microbial activity in clay-loam soils of Kashmir Himalaya, India

### **Seminars organized**

1. Co-organizing secretary for 2- Day capacity building programme on 'Cultivation, processing and Marketing of Medicinal and Aromatic Plants' for North Kashmir, organized by the Department of Botany, North Campus, University of Kashmir, 22-23 March, 2024
2. Member Organizing Committee for conduct of One Day National Seminar to celebrate National Science Day on the theme Indigenous Technologies for viksit Bharat, on 28<sup>th</sup> February, 2024, at North Campus, University of Kashmir.
3. Member of national advisory committee for conduct of 3-Day International Conference on 'impact of climate change on global food, livestock, livelihood and environmental security: advanced approaches and mitigation strategies. Jointly organized by Navsari Agricultural university, Navsari Gujarat and NADCL Baramulla, ICAR-NAHP, Centre for advanced agricultural science and technology from 28-30 December, 2023
4. Two-day Regional Young Investigators Meeting – 2023 on the theme "Igniting Curiosity and Training Young Minds of J & K for Sustainable Future" and addendum workshop on Craft Your Career (CYC) from 19/09/2023 to 21/09/2023 sponsored by India bioscience and JK ST & IC
5. Webinar: Life Skill Enhancement: Need of 21<sup>st</sup> Century, 11-23-2020 (Organizing Secretary)
6. Our Environment and US, on world Environment Day in 2017

### **Seminars/conferences participated in**

1. Monitoring Plant Phenology in an Era of Climate Change, from 4-5 March, 2024, organized by the Department of Botany, University of Kashmir, sponsored by SERB under SSR
2. National Level Webinar on Investor Awareness Program conducted by University of Ladakh in association with Ambition Learning Solutions held on 13<sup>th</sup> August, 2022
3. One day Webinar on "Life Skill Enhancement: Need of 21<sup>st</sup> Century", organized by the Kargil Satellite Campus of the University of Kashmir on 23/11/2020
4. One day online national conference on Biodiversity Conservation and Sustainable Future (BCSF) 2020. Organized by Govt. SAM Degree College Budgam and Govt. Degree College Pulwama 6/6/2020
5. Symposium on Biodiversity, Biology and Bioprospecting organized by the University of Kashmir from 1<sup>st</sup> - 2<sup>nd</sup> April, 2015.
6. Two Day National Seminar on Natural Resources of North-western Himalaya: Threats, Evaluation and Conservation, S. P College Srinagar, 26-27<sup>th</sup> March, 2014

7. NAAC – Sponsored 2 Day National Seminar On “IQAC As a Vehicle for Institutional Excellence” 24-25, September, 2009. sponsored by NAAC, Organized by Govt. College for Women, Nawakadal, Srinagar, Kashmir.

### **Workshops/ Orientation/ Refresher Courses/FDP**

1. Refresher course in human Rights (interdisciplinary)organised by Malviya Mission teacher training centre, University of Kashmir, in online mode, from 31-01-2024 to 13-02-2024.
2. One Day Workshop on IPR-Patent Filing organized by the DIQA, University of Kashmir, on 23-11-2023
3. One day workshop on, ‘Understanding Quality Benchmarks for Academics and Research’ organized by the DIQA, University of Kashmir, on 08-11-2023
4. Short term faculty development on Indian Knowledge Systems from 11-09-2023 to 16-09-2023, organized by Malviya Mission teacher training centre, University of Kashmir in collaboration with UGC and IKS division Ministry of Education, govt. of India
5. Refresher course in information technology (interdisciplinary)organised by the Human Resource centre, University of Kashmir from 18-07-2023 to 02-8-2023.
6. Virtual short term training programme on Chemistry from Computational tools for beginners from 1-5 March, 2022, Organized by Department of Chemistry SVNIT, Surat, Gujarat.
7. Faculty development programme on “Emerging Trends and Challenges in Higher Education” organized by the University of Ladakh from 15<sup>th</sup> October to 21<sup>st</sup> October, 2021.
8. Workshop-cum-brain storming session organized by the principal investigators of the projects ‘*Invasive Alien Plants in Himalayas: Status, Ecological Impact and Management*’ and “*Ecology, monitoring, recovery and bio-prospection of some threatened plant species of Jammu, Kashmir and Ladakh in relation to regional socio-economic development*” sponsored by the Ministry of Environment, Forests & Climate Change, Govt. of India under its National Himalayan Mission, on 16<sup>th</sup> March, 2019.
9. Refresher Course on “Multiomic Applications in Medicinal Plant Research”, organised by Trans-disciplinary University Bengaluru from

19<sup>th</sup> Feb, 2018 to 3<sup>rd</sup> March, 2018. Sponsored by Indian Academy of Science, Bangalore, Indian National Science Academy, New Delhi and The National Academy of Sciences, Allahabad.

10. National Training Workshop on Plant Taxonomy: Principles and Practices organised by the Centre for Biodiversity & Taxonomy (CBT), Department of Botany, University of Kashmir from 27-29 March, 2017.
11. National Workshop on Scholarly Writing, Reference Management, & Deterring Plagiarism, organised by Allama Iqbal Library, University of Kashmir, from 22-23 March, 2017.
12. 74<sup>th</sup> General Orientation Course organized by the Human Resource Development Centre, University of Kashmir from 27/02/2017 to 27/03/2017

#### **Member (International Associations/ Unions)**

- Mountain invasions research network (MIRN)
- The International Association for Ecology (INTECOL)
- Global Soil Biodiversity Initiative
- Eco-Ethics International Union (EEIU)

#### **Projects/ Grants awarded**

Grant on the project “*Diversity and role of arbuscular mycorrhizal fungi in promotion of agricultural productivity of some economically important crops in the Trans-Himalayan Region of Kargil, Ladakh*” awarded by the UGC.

Sanctioned via order No. F. 30-357/2017(BSR); FD Dairy No. 5328; dated 18/09/2017 to 18/09/2019 Amount sanctioned 1,000,000

Sustainable Markets Foundation, on behalf of the Society for Protection of Underground Networks (SPUN) project, funds in the amount of \$10,500. Granted on 15 September, 2023 Co-PI

#### **Distinguished Assignments**

- Coordinator, New Evaluation Policy (for the entire Kargil region), Satellite Campus, Kargil, University of Kashmir (17/11/2017 to 22/11/2018)

#### **Administrative assignments**

- Coordinator Department of Botany, Kargil Campus, University of Kashmir (17/12/2020 till date).
- Warden Girls hostel, Kargil Campus, University of Kashmir (2/11/2020 till date)
- Chairperson Board of Studies, University of Ladakh (from 16/12/2021 till date)
- Coordinator examinations for the Kargil Campus, University of Kashmir (17/11/2017 to 22/11/2018)

## **Publications:**

**Total Citations = 310**

**h index= 8**

**i10 index= 7**

1. Rehman, I., Sheergojri, I. A., War, A. I., Nazir, A., Rasool, N., Rashid, I. 2023. Silicon Supplementation as an Ameliorant of Stresses in Sorghum, Silicon <https://doi.org/10.1007/s12633-023-02500-9>
2. **Nazima Rasool**, Aijaz H. Ganie, Mohd. Sadiq Lone and G. A. Mir. Economic and ethano-medicinal uses of *Prunus armeniaca* L. in trans-Himalayan zone of Ladakh. (2017). Date of publication online 01-01-2017. Journal of Pharmaceutical and Biological Sciences 5(1): 27-30. **ISSN: 2320-1924;**
3. **Nazima Rasool**, Zafar A. Reshi, Damase P. Khasa, Mudasir Roshan and Manzoor A. Shah (2016). Invasion by *Conyza sumatrensis* alters soil microbial community structure in urban ecosystems. Ecological Processes 5: 1-10. Date of publication online: 29-06-2016, **ISSN:2192-1709**
4. **Nazima Rasool**, Zafar A. Reshi and Manzoor A. Shah. Effect of butachor G on soil enzyme activity (2014). European Journal of Soil Biology 61: 94-100.ISSN: 1164-5563
5. Liyaqat Ali, Anzar Ahmad Khuroo, Aijaz Hassan Ganie and Nazima Rasool. 2023. Artemisia dracunculus subsp. Ladakhensis (Asteraceae), A new subspecies from Ladakh, India
6. Ganie, A. H., Butt, T. A., Khuroo, A. A., Rasool, N., Ahmad, R., Basharat, S., & Reshi, Z. A. (2022). Taxonomy and threat assessment of Lagotis kunawurensis Rupr. (Plantaginaceae), an endemic medicinal plant species of the Himalaya, India. *Journal of Threatened Taxa*, 14(6), 21239-21245.
7. Tariq Ahmad Butt, Aijaz Hassan Ganie, Anzar A. Khuroo, Rameez Ahmad, Nazima Rasool, Syed Basharat (2021). New distributional record of *Primula atrodentata* W. W. Sm. from Ladakh region and assessment of its threat status across the Himalaya: 183-188 41(3). Acta Ecologica Sinica
8. Aijaz H. Ganie; **Nazima Rasool**; Z. A. Reshi (2018). Verbascum songaricum (Scrophulariaceae): An addition to the flora of India, Rheedeia. Published online 08-12-2018 Vol. 28(2): 111–113 ISSN: 0971-2313
9. Gowher Guna and **Nazima Rasool**. An Ethno-Pharmacobotanical Survey in Gurais Valley Kashmir. (2017). International Journal of

Recent Scientific Research, published online 28-12-2017 vol. 8 (12): 22502-22507 ISSN 0976-3031 doi: 10.24327/IJRSR

10. Zafar A Reshi, Manzoor A. Shah and **Nazima Rasool**. (2015). Microbial Diversity in Kashmir Himalaya: Present Status and Future Prospects. ENVIS Bulletin Himalayan Ecology vol. 23: 15-19 ISSN 2455-6815
11. Mureil Da silva Folli-Pereira, Lydice Sant' Anna Meira-Haddad, **Nazima Rasool**, Wagner Campos Otoni and Maria Catarina Megumi Kasuya. (2012). Development of mycorrhized vitro plants of *Jatropha curcas* L. at different rooting stages. Plant Biotechnology Reports. 6: 355-362. ISSN: 1863-5466 (print version), 1863-5474 (electronic version) Springer
12. **Nazima Rasool** and Zafar A. Reshi. Effect of fungicide Mancozeb at different application rates on enzyme activities in a slit loam soil of Kashmir Himalaya. (2010) Tropical Ecology 51 (2): 199-205. ISSN: 0564-3295
13. Manzoor A. Shah, Zafar A. Reshi and **Nazima Rasool**. (2010) Plant invasions induce shift in Glomalean spore diversity, Tropical Ecology 51 (2S): 317-323. ISSN: 0564-3295

### Book chapters

1. Rasool N and Reshi, ZA. 2024. Plant Phenolics: Role in Biotic Stress Alleviation and Plant Microbe Interactions. In: Lone, R., Khan, S., & Al-Sadi, A. M. (Eds.). Plant Phenolics in Biotic Stress Management, 95-119, Springer
2. Rasool, N., 2023. Role of Plant Hormones in Mitigating Abiotic Stress. In: Abiotic Stress in Plants - Adaptations to Climate Change (Manuel T. T. Oliveira and Prof. Anabela Afonso A. Fernandes Silva); Intechopen DOI: 10.5772/intechopen.109983
3. Rasool, N. (2022). Plant Hormones: Role in Alleviating Biotic Stress. *Plant Hormones: Recent Advances, New Perspectives and Applications*, (Christophe F.E. Hano) 17.
4. Rasool, N. 2021. New plant breeding techniques: problems and prospects. In Mutagenesis Cytotoxicity and crop improvement: revolutionizing food science (ed. Tariq Bhat) pp 66-97 Published by Cambridge Scholars press ISBN 978-1-5275-6296-7
5. Amanda Azevedo Bertolazi, Muriel da Silva Folli-Pereira, Gustavo Caione, Lucas Zanchetta Passamani, Carlos Moacir Colodete, Sávio Bastos de Souza, Alessandro Coutinho Ramos, Nazima Rasool, Getúlio de Freitas Seben Júnior, Evandro Luiz Schoninger, **Linking Plant Nutritional Status to Plant-AMF Interactions** In: Egamberdieva D., Ahmad P. (eds) Plant Microbiome: Stress Response. Microorganisms for Sustainability,



6. Muriel da Silva Folli-Pereira, Alessandro Coutinho Ramos, Amanda Azevedo Bertolazi, Lucas Zanchetta Passamani, Frederico Jacob Eutropio, Juliana Melo da Conceicao, and **Nazima Rasool** (2016). **Water stress and higher plants: An overview**. In: Water Stress and Crop Plants: A Sustainable Approach, Volume 2, First Edition. Edited by Parvaiz Ahmad. 29 pages (422-451) John Wiley & Sons, Ltd. Published by John Wiley & Sons, Ltd. Published 25-06-2016 **ISBN 978-1-119-05436-8**.
7. Muriel da Silva Folli-Pereira, Alessandro Coutinho Ramos, Gabriela Chaves Canton, Juliana Melo da Conceição, Sávio Bastos de Souza, Antônio Jesus Dorighetto Cogo, Frederico Firme Figueira, Frederico Jacob Eutrópio, and **Nazima Rasool** (2016). **Foliar application of trace elements in alleviating the drought stress**. In: Water Stress in Crop Plants: A Sustainable Approach. Volume 2, First Edition (Parvaiz Ahmad Ed.) Pages 13 (669-681), John Willey and Sons, Ltd. **ISBN 978-1-119-05436-8**
8. Frederico Jacob Eutrópio, Alessandro Coutinho Ramos, Muriel da Silva Folli-Pereira, Natália de Aquino Portela, Janaina Biral dos Santos, Juliana Melo da Conceição, Amanda Azevedo Bertolazi, Frederico Figueira Firme, Sávio Bastos de Souza, Antônio Jesus Dorighetto Cogo, **Nazima Rasool** (2016). **Heavy metal stress and molecular approaches in plants**. In: Plant Metal Interaction – Emerging Remediation Techniques (Parvaiz Ahmad ed.) pages (531-543) Elsevier Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK, 225 Wyman Street, Waltham, MA 02451, USA. **ISBN: 978-0-12-803158-2**
9. Zafar A. Reshi, **Nazima Rasool**, Pervaiz A. Dar, Waheeda Rehman and Manzoor A. Shah. (2013). Impact of invasive alien plant species on aboveground and belowground plant species diversity in the Kashmir Himalaya, India. In: Invasive Plant Ecology (Shibo Jose, Harminder Pal Singh, Daizy Rani Batish, Ravinder Kumar Kohli, Eds.) pp 145-158.

CRC Press Taylor and Francis Group broken sound parkway NW, Suite 3000 Boca Raton, FL, 33487-2742. **ISBN: 978-1-4398-8126-2 (Hardback)**

10. Reshi, Zafar A. Manzoor A Shah, Irfan Rashid and **Nazima Rasool**. 2011. *Anthemis cotula* L. – A highly invasive species in the Kashmir Himalaya, India. In: Invasive Alien Plants: An Ecological Appraisal for the Indian Subcontinent. (Eds. J. R. Bhatt, J. S. Singh, R.S. Tripathi, S. P. Singh and R.K. Kohli) pp 108-125. CABI International, United Kingdom.  
**ISBN: 978-1-84593- 907-6**

**Reviewer: Tropical ecology (Springer)**  
**Trees, forests and people (Elsevier)**  
**Frontiers in pharmacology**  
**Canadian journal of forest research**

#### **Newspaper articles**

1. Kargil: An Alternative Area in the State of Jammu and Kashmir for Cultivation of the Rosaceous Fruits (Rising Kashmir; 09/09/2016) Aijaz Hassan Ganie and Nazima Rasool
2. Kargil shows potential of fruit cultivation Aijaz Hassan Ganie and Nazima Rasool 10-9-2016 Rising Kashmir
3. Untapped natural resources of Kargil (Rising Kashmir; 15/01/2017)
4. Why it is not advisable to plant exotic varieties of poplar in Kargil (Rising Kashmir; 24/06/2017) Aijaz Hassan Ganie and Nazima Rasool
5. Lower Ladakh: A region with rich floristic diversity. Aijaz Hassan Ganie and Nazima Rasool 19-10-2017 Rising Kashmir.

#### **References**

1. Professor Zafar A Reshi, Department of Botany, University of Kashmir; J&K, India [zreshi@gmail.com](mailto:zreshi@gmail.com); 91-9419043173
2. Dr. Manzoor A shah, Associate Professor, Department of Botany, University of Kashmir, J&K India [mashah75@gmail.com](mailto:mashah75@gmail.com); 778080601
3. Professor Damase P Khasa, Insitut de Biologie Integratice et des Systemes, Pavillion Charles Eugene Marchand, university Laval, Qubec, Canada [Damase.Khasa@ibis.ulaval.ca](mailto:Damase.Khasa@ibis.ulaval.ca)