

CURRICULUM VITAE

AEJAZ AHMAD DAR,

Lecturer

Government Degree College Women Pulwama, J&K, India

DOB: 01/02/1983

E-mail: aejazdbt.pbiot@gmail.com

Cell: +91-7889814572

OBJECTIVE

To encase my youth and ample capabilities in a secure and dedicated manner in your esteemed organization, which will help me to explore fully and realize my inner potential to fulfil my responsibilities and organizational goal. Culminate in higher position through the strength of curiosity, purpose, intellectual maturity and willingness to work hard in a challenging and creative environment in order to become a competent scientist and teaching faculty of International calibre so as to do something constructive for the welfare of mankind.

ACADEMIC CREDENTIALS

Degree	Subjects	%age Marks	Division	Year of Passing	Board/University
10th	General English, Mathematics, General Science, Social Science, Urdu	69	1 st	1999	JK BOSE
12th	General English, Physics, Chemistry, Biology	66	1 st	2001	JK BOSE
B. Sc	General English, Chemistry, Botany Zoology	60	1 st	2005	University of Kashmir
M. Sc	Biotechnology	62	1 st	2007	University of Kashmir
PG Diploma	Statistics and Research Methods	79	1 st	2011	Pondicherry Central University
Ph. D	Biotechnology	--	--	2015	Pondicherry Central University
Diploma	Computer Application	86	1 st	2021	Mahavir Group of Institutions

MASTERS PROJECT THESIS

Done my MSc project work entitled, “ The screening of bacterial strains for epoxide hydrolase activity” under Dr. SC Taneja at Department of Bioorganics and Microbiology, IIIM Jammu through University of Kashmir, Srinagar from 01/10/2006 to 01/03/2007 (5 Months).

PhD THESIS DETAILS

Done my PhD work entitled, “Assessment of Phenotypic, Genotypic and Metabolic Diversity in Germplasm of *Sesamum indicum* L” under Dr. N. Arumugam (Professor) at Department of Biotechnology, Pondicherry University, Pondicherry from 26/08/2009 to 11/09/2015 (6 Years).

POSTDOCTORAL RESEARCH EXPERIENCE (Total = 5 years)

1. Worked as a Senior Research Fellow in DBT research project entitled, “**SSR based germplasm characterization for resistance to powdery mildew in cucumber (*Cucumis sativus* L.)**” in school of biotechnology, SKUAST Jammu, under the supervision of Dr. Susheel Sharma, Assistant professor (**16 September 2015 to 31 March 2018 = 2 years, 6 months and 15 days**).
2. Worked as a NPDF on my DST SERB project entitled, “**Transcriptome analysis, gene .annotation and mining of a golden herb-garlic (*Allium sativum* L.) expressing resistance to destructive purple blotch (*Alternaria porri*)**”. in school of biotechnology, SKUAST Jammu, under the mentorship of Dr. Susheel Sharma, Assistant professor (**02 April 2018 to 01 October 2020 = 2 years and 6 months**)

. TEACHING EXPERIENCE

1. Worked as a Lecturer at Government Degree College Women Pulwama, J&K, India from 13/08/2021 to 26/12/2021

FELLOWSHIPS, AWARDS AND HONOURS

- **Qualified National Eligibility Test (NET)** in December-2008 conducted by **Council of Scientific and Industrial Research (CSIR)**, New Delhi, India.
- **Qualified GATE 2010** with all India rank of 209 and GATE score of 514, on behalf of the national Coordination Board, Graduate Aptitude Test in Engineering, Department of Higher Education, Ministry of Human Resource Development (MHRD), Government of India.
- **Qualified ICAR NET** in April 2014 conducted by ASRB, New Delhi India.
- Awarded with **CSIR- Junior Research Fellowship** from 9 August 2010 to November 2012
- Awarded with **University Grants Commission (UGC)** sponsored fellowship for entire Ph.D. project work from August-2009 to July 2010 and then December 2012 to August 2013.

- Awarded with **Appreciation Award for poster presentation** at the National seminar on “Innovations and Advances in Science and Technology 2014, in Department of Bioinformatics, Pondicherry University, India.
- Received award letter of my project as **National Post Doctorate Fellowship by DST SERB** in school of Biotechnology, SKUAST-Jammu, Chatha, Jammu (October 2017).
- Received **Best PhD thesis award** at annual meeting of Society for Integrated Development of Agriculture, Veterinary and Ecological Sciences (SIDAVES) in three day National Conference of, Innovative Technological Interventions for Doubling Farmers Income (NaCITI-2018) held at SKUAST-Jammu, J&K India (February 08-10, 2018).
- Received **Outstanding PhD thesis award** at three day International Conference on Worldwide Research Initiatives for Agriculture, Science and Technology (WRIAST-2018) held at University of Kashmir, Srinagar, J&K India (24-26 October 2018).
- Received **Young Scientist award** at three day International Conference on Global Research Initiatives for Sustainable Agriculture and Allied Sciences (GRISAAS-2018) held at Rajasthan Agriculture Research Institute, Jaipur Rajasthan India (28-30 October 2018).
- Received **Best Researcher award** at the two day National seminar on Smart Technologies to Boost Farm Profitability and Socio-Economic Status of Rural India organised by SKUAST-Jammu, Chatha, Jammu, J&K India (November 19-20, 2018).
- Received **Best Poster award** at the two day National seminar on Smart Technologies to Boost Farm Profitability and Socio-Economic Status of Rural India organised by SKUAST-Jammu, Chatha, Jammu, J&K India (November 19-20, 2018).
- Received **Best Poster award** at the two day International Web-Conference on Resource Management and Biodiversity Conservation to Achieve Sustainable Development Goals organised online by Academy of National resource Conservation and Management (ANRCM), Lucknow, UP, India (September 11-12, 2020).
- **Life time membership** of Society For Bioinformatics and Biological Sciences (SBBS).
- **Life time membership** of Society For Integrated Development of Agriculture, Veterinary and Ecological Sciences (SIDAVES).
- **Editorial board member** of the Journal of Botanical Research, Bilingual Publishing Singapore.
- **Reviewer** of Physiologia Plantarum Journal (Wiley Publishing house)
- **Review Editor** of Crop Biology and Sustainability (Frontiers in Sustainable Food Systems).

CONFERENCES AND SEMINARS

1. Attended **Three day National seminar on, “Recent trends in structural bioinformatics and computational biology”** organized by Pondicherry University, Centre of Excellence in Bioinformatics, sponsored by Department of Information Technology, Dept. of Biotechnology, New Delhi, India (September 2009).

2. Attended the National conference on **“Emerging trends in Biotechnology”** held in the Department of Biotechnology, School of Life Sciences, Pondicherry University, India (February 2010).
3. Participated in the **Quiz contest held as a part of National seminar on, “Emerging trends in Biotechnology”** at Department of Biotechnology, Pondicherry University, India (February 2010).
4. Participated in **Three day International Conference on, “Green Energy Technologies: Challenges in Research and Human Resource Development”** at Pondicherry University, India (March 2010).
5. Presented a **poster and was selected for Appreciation Award in the deliberation of symposium, “Innovations and Advances in Science and Technology”**, organised jointly by Department of Bioinformatics, Pondicherry University and ISCA-Pondicherry Chapter, India (February 2014).
6. Participated in the National Seminar on, **“Recent advances in Biotechnology”**, conducted by Department of Biotechnology, Pondicherry University, India (March 2014).
7. Presented a Poster at the International Conference, Theme: **“Recent Trends in Bioinformatics and Biotechnology for Sustainable Development”** organised at Faculty of Veterinary Sciences and Animal Husbandary, SKUAST-Jammu, RS Pura, Jammu (October 12–13, 2017).
8. Presented a Poster at the National Conference, Theme: **“Innovative Technological Interventions for Doubling Farmers Income (NaCITI-2018) (February 08-10, 2018)”** organised at Directorate of Research, SKUAST-Jammu, Chatha, Jammu (February 08–10, 2018).
9. Presented a paper at the International conference, Theme: **“Worldwide Research Initiatives for Agriculture, Science and Technology (WRIAST-2018)”** held at University of Kashmir, Srinagar, J&K India (24–26 October 2018).
10. Presented a paper at the International conference, Theme: **“Global Research Initiatives for Sustainable Agriculture & Allied Sciences (GRISAAS-2018)”** held at Rajasthan Agricultural Research Institute (SKNAU, Jobner), Durgapura, Jaipur, Rajasthan, India (28–30 October 2018).
11. Presented a poster at the 5th J&K Agriculture Science Congress, Theme: **Climate Change Management for Sustainable Agriculture, Livestock Farming and Ecological Development** held at SKUAST-Jammu, Chatha, Jammu (August 08–10, 2019).
12. Participated and presented a lab based demonstration on **Mass Spectrometry** at the **first National Students’ two day web conference on Spectroscopy** jointly organized by SciRox (Science Club), Guru Nanak Dev University, Amritsar and Chemical Research Society of India (Local Chapter Chandigarh/Amritsar) (16–17 October 2020).
13. Participated as a delegate in the two day International Web Conference on **‘BIOINVENTIYON’20-Advances in Biosciences’** jointly organized by National Institute of (NIPST) and School of Biosciences, Mahatma Gandhi University and Research Directorate and Internal Quality Assurance Cell (IQAC), SIAS on 5th and 6th November 2020.
14. Participated in the International E-Conference on **‘Advances and Future Outlook in Biotechnology and Crop Improvement for Sustainable Productivity’** organised by the

Department of Biotechnology and Crop Improvement, College of Horticulture, Bengaluru during 24–27th November, 2020.

TRAININGS AND WORKSHOPS

1. Successfully completed the Biotech Industrial Training Programme on, “**Detection and analysis of TB for extra-pulmonary samples using TB-PCR**” at Auroprobe laboratories Ltd., Ghaziabad, sponsored by DBT, Government of India, organised by Biotech Consortium India Limited, New Delhi, India (**From 26 November 2008 to 25 May 2009 = 6 Months**)
2. Participated in **Two day workshop on, “Barcoding: Identification of flora and fauna”** held at Department of Ecology and Environmental Sciences in collaboration with Department of Biotechnology, School of Life Sciences, Pondicherry University, India (February 2010)
3. Participated in **Two day National Workshop and Industry-Academica Interaction Meet on, “Drugs and Pharmaceuticals-Research and Development”** held at Department of Biotechnology, Pondicherry University, India, sponsored by Department of Science and Technology, Government of India (April 2013).
4. Participated in, “**Author workshop jointly organised by Springer and Ananda Rangapillai Library, Pondicherry University, India**” (February 2014).
5. Participated in **Workshop on, “Spectroscopic technique: NMR”** organised by Central Instrumentation Facility, Pondicherry University, sponsored by DST-PURSE, India (April 2014)
6. Attended 10 day National Training Programme on, “**Plant Tissue culture techniques in Quality Planting Material Production and Crop Improvement**” organised by the School of Biotechnology, SKUAST-Jammu, Chatha, Jammu (September 1–10, 2016).
7. Conducted and participated in 10 day ICAR Short Training Course on “**Advance Techniques and Tools for Functional Genomics in Crops**” organised by School of Biotechnology, SKUAST-Jammu, Chatha, Jammu (October 4–13, 2017).
8. Attended 10 day Online International Training Programme on, “**Climate Risk Assessment And Its Management Through Agrometeorological Approaches**”, organized by Dryland Agriculture Research Station, Rangreth SKUAST, Kashmir, w.e.f 21–30 Oct, 2020.
9. Participated in DTU-Sponsored one week international **E-workshop on Bioinformatics** at Department of Biotechnology, Delhi Technological University, Delhi, India from December 14–18, 2020.

RESEARCH PUBLICATIONS

International

1. **Dar AA, Arumugam N (2013) Lignans of sesame: Purification methods, biological activities and biosynthesis – A review. Bioorg Chem 50:1–10**
<http://dx.doi.org/10.1016/j.bioorg.2013.06.009> (**Impact Factor = 5.27**) (**ISSN: 0045-2068**) (**Indexed and Refereed**).

2. **Dar AA**, Verma NK, Arumugam N (2015) An updated method for isolation, purification and characterization of clinically important antioxidant lignans – Sesamin and sesamolin, from sesame oil. *Ind Crops Prod* 64:201–208 <http://dx.doi.org/10.1016/j.indcrop.2014.10.026> (**Impact Factor = 5.64**) (**ISSN: 0926-6690**) (**Indexed and Refereed**).
3. **Dar AA***, Mudigunda S, Mittal PK, Arumugam N (2017) Comparative assessment of genetic diversity in *Sesamum indicum* L. using RAPD and SSR markers. *3 Biotech* 7:10 DOI 10.1007/s13205-016-0578-4 (**Impact Factor = 2.40**) (**ISSN: 2190-5738**) (**Indexed and Refereed**).
4. **Dar AA**, Mahajan R, Lay P, Sharma S (2017) Genetic diversity and population structure of *Cucumis sativus* L. by using SSR markers. *3 Biotech* 7:307 DOI 10.1007/s13205-017-0944-x (**Impact Factor = 2.40**) (**ISSN: 2190-5738**) (**Indexed and Refereed**).
5. **Dar AA***, Choudhury AR, Kancharla PK, Arumugam N (2017) The FAD2 Gene in Plants: Occurrence, Regulation, and Role. *Front Plant Sci* 8:1789 doi: 10.3389/fpls.2017.01789 (**Impact Factor = 5.75**) (**ISSN: 1664-462X**) (**Indexed and Refereed**).
6. **Dar AA**, Kancharla PK, Chandra K, Sodhi YS, Arumugam N (2019) Assessment of variability in lignan and fatty acid content in the germplasm of *Sesamum indicum* L. *J Food Sci Technol* 56: 976–986 <https://doi.org/10.1007/s13197-018-03564-x> (**Impact Factor = 2.70**) (**ISSN: 0022-1155**) (**Indexed and Refereed**).
7. Sharma R, **Dar AA**, Mahajan R, Sharma S (2020) Molecular and biochemical characterisation of Indian germplasm of *Pisum sativum* L. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* 90: 103–111 <https://doi.org/10.1007/s40011-018-01069-3> (**ISSN: 0369-8211**) (**Indexed and Refereed**).
8. Mushtaq M, Mukhtar S, Sakina A, **Dar AA***, Bhat R et al. (2020) Tweaking genome-editing approaches for virus interference in crop plants. *Plant Physiol Biochem* 147: 242–250 <https://doi.org/10.1016/j.plaphy.2019.12.022> (**Impact Factor = 4.27**) (**ISSN: 0981-9428**) (**Indexed and Refereed**).
9. **Dar AA***, Sharma S, Mahajan R, Mushtaq M, Salathia A, Ahamad S, Sharma JP (2020) Overview of purple blotch disease and understanding its management through chemical, biological and genetic approaches. *Journal of Integrative Agriculture* 19: 3013–3024 doi: 10.1016/S2095-3119(20)63285-3 (**Impact Factor = 2.85**) (**ISSN: 2095-3119**) (**Indexed and Refereed**).
10. Rai GK, Bhat BA, Mushtaq M, Tariq L, Rai PK, Basu M, **Dar AA**, Islam ST, Dar TH, Bhat JA (2021) Insights into decontamination of soils by phytoremediation: a detailed account on heavy metal toxicity and mitigation strategies. *Physiol Plant* 173:287–304 DOI: 10.1111/ppl.13433 (**Impact factor 4.5**) (**ISSN: 1399-3054**) (**Indexed and Refereed**).
11. Mushtaq M[#], **Dar AA[#]**, Skalicky M, Tyagi A, Bhagat N, Basu U, Bhat BA, Zaid A, Ali S, Dar T, Rai GK, Wani SH, Habib-Ur-Rahman M, Brestic M, Sabagh AEL (2021) CRISPR-Based Genome Editing Tools: Insights into Technological Breakthroughs and Future Challenges. *Genes* 12:797 <https://doi.org/10.3390/genes12060797> (**Impact factor 4.10**) (**EISSN: 2073-4425**) (**Indexed and Refereed**).
12. Mushtaq M[#], **Dar AA[#]**, Basu U, Bhat BA, Mir RA et al. (2021) Integrating CRISPR-Cas and Next Generation Sequencing in Plant Virology. *Frontiers in Genetics* 12:735489. doi: 10.3389/fgene.2021.735489 (**Impact factor 4.6**) (**ISSN: 16648021**) (**Indexed and Refereed**).
13. Sharma S[#], **Dar AA[#]**, Gupta S, Singh R (2022) Evaluation of resistant genotypes and their characterization using molecular markers linked for powdery mildew resistance

in cucumber (*Cucumis sativus* L.). Plant Genetic Resources 1-10
DOI: <https://doi.org/10.1017/S1479262121000605> (Impact factor 1.06). (ISSN: 1479-2621) (Indexed and Refereed).

National

1. Sharma S, Pradhan S, Khajuria P, **Dar AA** (2017) Genetic diversity studies in cucumber (*Cucumis sativus* L.) using RAPD markers. Veg Sci 44:34–37 (ISSN: 0970-36585).
2. **Dar AA***, Mahajan R, Sharma S (2019) Molecular Markers for the Characterisation and Conservation of Plant Genetic Resources. Indian J Agri Sci 89: 1755–1763 (Impact Factor = 0.37) (ISSN: 0019-5022).

Book Chapters

1. Bagati S, Mahajan R, Nazir M, **Dar AA**, and Zargar SM (2018) “Omics”: A Gateway Towards Abiotic Stress Tolerance. S. M. Zargar, M. Y. Zargar (eds.), *Abiotic Stress-Mediated Sensing and Signaling in Plants: An Omics Perspective*, https://doi.org/10.1007/978-981-10-7479-0_1 (Springer, ISBN: 978-981-10-7479-0)
2. **Dar AA***, Mahajan R, Lay P, and Sharma S (2018) Biodiversity of Temperate Fruits. S. A. Mir et al. (eds.), *Postharvest Biology and Technology of Temperate Fruits*, https://doi.org/10.1007/978-3-319-76843-4_1 (Springer, ISBN: 978-3-319-76843-4)
3. Mahajan R, **Dar AA**, Sharma S (2018) *Pisum* improvement against biotic stress: current status and future prospects. S. H. Wani, M. Jain (eds.), *Pulse Improvement*, https://doi.org/10.1007/978-3-030-01743-9_6 (Springer, ISBN: 978-3-030-01743-9).
4. Mukhtar S, Raina M, Sudan J, **Dar AA**, Mustafiz A, Kumari S (2019) CRISPR-Based Tools for Crop Improvement: Understanding the Plant–Pathogen Interaction. In: Wani S. (eds) *Disease Resistance in Crop Plants*. Springer, Cham, https://doi.org/10.1007/978-3-030-20728-1_3 (Springer, ISBN: 978-3-030-20728-1)
5. Ayoub A, Mushtaq M, Mir ZA, **Dar AA** (2020) Biofortification in Fruits. In: Sharma T.R., Deshmukh R., Sonah H. (eds) *Advances in Agri-Food Biotechnology*. Springer, Singapore. https://doi.org/10.1007/978-981-15-2874-3_6 (Springer, ISBN: 978-981-15-2874-3)
6. Kancharla PK, **Dar AA***, Banik A, Dev S, Sharma S (2021) Nutritional and Medicinal Values of Neglected Spice Crops of Indian Himalayas. In: Zargar S.M., Masi A., Salgotra R.K. (eds) *Neglected and Underutilized Crops - Towards Nutritional Security and Sustainability*. Springer, Singapore. https://doi.org/10.1007/978-981-16-3876-3_5 (Springer, ISBN: 978-981-16-3876-3)

*Corresponding author; # Authors contributed equally

TECHNIQUES AND SKILLS

- Isolation and identification of bioactive molecules from medicinal, aromatic and oil seed plants using different separation techniques like TLC, column chromatography, preparative TLC, HPLC, preparative HPLC, LC-MS, GC-MS and NMR.
- Screening of single isolated compounds, plant extracts and essential oils for different *in-vitro* biological activities such as antimicrobial, anticancer and antioxidant activities.

- Microscopically examinations and observations of microorganisms, plant tissue cultures and crystal structures under compound and inverted microscopes.
- Transcriptomics, Genomics and Proteomics
- Culture techniques: Microbial culture and Plant tissue Culture.
- Computer: Fast and excellent usage of MS word, excel, power point for general documentation and presentation.
- Bio-Statistical data analysis of softwares like: SPSS, PAST, XLSTAT, NTSYS pc, POWER MARKER, GeneALEx and POPGENE.

RESEARCH INTERESTS

- Transcriptomics, Genomics and Proteomics of agricultural crops
- Tissue culture, Genetic engineering of crop plants
- Plant Physiology
- Abiotic and Biotic stress of crop plants
- Disease resistance
- Medicinal plant and natural product research
- CRISPR based genome editing in agricultural crops

REFERENCES

1. Dr. Susheel Sharma

Assistant Professor, School of Biotechnology,
SKUAST Jammu, Chatha Jammu, India-180009

Cell: +91-9797546592

E mail: drsusheelsharma@rediffmail.com

Field of specialisation: Vegetable crop research

2. Dr. N. Arumugam

Professor, Department of Biotechnology, School of Life Sciences
Pondicherry University, India- 605014.

Cell: +91-9944338491

E mail: arumugan.dbt@pondiuni.edu.in

Field of Specialisation: Genetic Manipulation of Crop plants, Molecular Plant Breeding.

3. Dr. R. K Salgotra

Professor & Co-ordinator, School of Biotechnology,
SKUAST Jammu, Chatha Jammu, India-180009

Cell: +91- 9419153813

E mail: rks_2959@rediffmail.com

Field of specialisation: Genetics and Plant Breeding

DECLARATION

I hereby declare that the details and information furnished above are true and correct to the best of my knowledge.



Place: Tral J&K, India

Signature