

## Curriculum Vitae

<b>Full Name:</b>	<b>Dr. MAMTA ARYA</b>			
<b>Designation:</b>	<b>Associate Professor</b>			
<b>Department:</b>	<b>Department of Biotechnology</b>			
<b>Campus:</b>	<b>Birla Campus, Srinagar</b>			
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<b>Education Qualification:</b>	Ph.D. Biotechnology from H.N.B. Garhwal University, Srinagar, M.Sc. Biotechnology from Kumaun University, Nainital, CSIR- UGC NET.			
<b>Teaching Experience:</b>	16 Years	<b>Research Experience:</b>	14 Years	
<b>Research Interest and Fields of Specialization</b>				
<ol style="list-style-type: none"> <li>1. Thermophilic bacterial diversity and biotechnological application.</li> <li>2. Lichen diversity and biotechnological application.</li> </ol>				
<b>Honours &amp; Awards</b>				
<ol style="list-style-type: none"> <li>1. Awarded Certificate of Appreciation for Contribution Towards Societal Development (2023) as NSS Programme Officer during COVID-19 Pandemic (2019-20 &amp; 2020-21).</li> <li>2. Awarded Certificate of Appreciation for Contribution Towards Societal Development (2021) as NSS Programme Officer by NSS Directorate Government of Uttarakhand.</li> <li>3. Sardar Patel Glocal Award for social Awareness (2020) organised by Glocal Environment and Social Association, New Delhi.</li> <li>4. Eminent Biotechnologist Award (2020) by Asian Biological Research Foundation, Prayagraj (India).</li> </ol>				
<b>Member of Academic Institutions – Nil</b>				
<b>Membership of Scientific Organizations</b>				
<ol style="list-style-type: none"> <li>1. Life member, The Indian Science Congress Association, Kolkata.</li> <li>2. Life member, Indian Lichenological Society.</li> <li>3. Life member, Asian Biological Research Foundation Prayagraj (India).</li> <li>4. Life member, Glocal Environment and Social Association.</li> </ol>				
<b>Research Supervision (No. of Ph.D. Degree Awarded/Submitted/Registered)</b>				
Ph.D. Awarded- 01				
Ph.D. Registered- 2, Co-supervisor-1				
M.Sc. Dissertation- 11				

**Research Projects/ MoU undertaken:** - UCB funded project of three years(2022-2025) entitled “Screening and evaluation of thermophilic bacteria for the bioremediation of heavy metals present in waste water of industrial area of Roshanabad, District Haridwar, Uttarakhand”.

**Administrative Experience**

1. **Assistant Dean Student Welfare** (from 2018 to till date).
2. **NSS Program Officer** (from Sep.2017 to March 2021).
3. **NSS Senior Program Officer** (from June 2019 to March 2021).
4. **Assistant Superintendent (AS Exam)** Examination 2018 onwards at Birla Campus, H.N.B. Garhwal University, Srinagar, Uttarakhand.
5. **Member, Board of Studies**, Department of Biotechnology, H.N.B. Garhwal University, Srinagar, Uttarakhand.
6. **Member Anti Ragging Squad**, Chauras Campus, H.N.B. Garhwal University, Srinagar.
7. **Member, Venue, Stage and Overall facilities Committee** in 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> Convocation at H.N.B. Garhwal University, Srinagar, Uttarakhand.
8. **Coordinator, Evaluation Committee** in weak long Science Festival 2023, organised in H.N.B. Garhwal University, Srinagar.

**Scientific Visits Abroad/ International Collaboration:** - Nil

**Conference/Symposium/Workshop Attended (in last five years)**

**International**

1. Delivered lecture on “Lichens *in- virto* culture: A Boon for Producing Natural Drugs” in International conference “Aerosols, Air Quality and Climate change Over Himalayan Region of Uttarakhand (AAC-2022) from November, 04-06, 2022 organised by Department of Physics, H.N.B. Garhwal University, Srinagar, Uttarakhand in collaboration with Aerosol, Air quality and Climate Change Research Society (AACCRS), Srinagar Uttarakhand Science Education and Research Centre (USERC), Dehradun.
2. Presented Poster entitled “Phytochemical Analysis and Antibacterial Properties of *Parmotrema reticulatum* and its Significance” in International conference “Multidisciplinary Approaches in Lichenology (Hybrid Mode) from September, 28-30, 2022 jointly organised by Indian Lichenological Society, Lucknow and CSIR-National Botanical Research Institute, Lucknow.
3. Presented Paper entitled “Evaluation of Secondary Metabolites and Natural Dye Production from Lichen Species (*Ramalina conduplicans*) of Pauri Garhwal region of Uttarakhand” in International conference on Environment and Society (ICES 2021), “ Interdisciplinary Approach in Education, Environment, Spirituality & Technology (IEST 2021)” from December, 23-24, 2021 organised by Faculty of Education, Nehru Gram Bharati (Deemed to be University), Kotwa- Jamunipur Dubawal, Dist. Prayagraj (U.P.) in Association with Glocal Environment & Social Association (GESA), New Dehli.
4. Presented Paper entitled “The Delta Variant of Covid-19: Virus of Concern” in International Web Conference on COVID-19 Second Wave: Challenges for Sustainable Development (CCSD 2021) from September, 13-15, 2021 jointly

organised by Asian Biological Research Foundation (ABRF), Prayagraj (U.P), India/ Samrat Prithviraj Chauhan Government College, Ajmer (Rajasthan)/ Govt. KRG Post Graduate (Autonomous) College, Gwalior (M.P.)/ Government Degree College Doda (J.K)/ Digambarrao Bindu ACS College, Bhokar, Nanded (M.S.).

5. Presented Paper entitled “ Heavy Metal Toxicity and the Role of Thermophiles in Bioremediation of Heavy Metals” in 4<sup>th</sup> International Virtual Conference “Agriculture & Biological Science Research” from January, 23-24, 2021 organised by Kalp Laboratories, Mathura.
6. Presented Paper entitled “Implementation of Vegetative Immunity Booster Approach to Restrict the SARS CoV 2 Infection” in 2<sup>nd</sup> International Conference on Environment and Society (ICES2020) “ Socio- economic and Environmental Issues: Challenges and Future Prospects in Current Pandemic Situation” from December, 26-28, 2020 organised by Glocal Environment and Social Association (GESA), New Delhi.
7. Presented Paper entitled “Applications of Bioremediation in Treatment of Waste and Future Prospect” in International Web Conference (IWC 2020) “Safe Water, Sanitation and Hygiene for Health” from November, 9-11, 2020 organised by Dr Rafiq Zakaria College for Women, Aurangabad (MH), India.
8. Participated in International Webinar on “Strategies Against the COVID-19 Pandemic” on June 18, 2020 organised by Department of Biotechnology, Sir J.C. Bose Technical Campus, Kumaun University, Nainital.
9. Participated in International Webinar Series on “Modern Analytical Methods in Chemistry” from June, 15-17, 2020 organised by Department of Chemistry College of Basic Sciences & Humanities Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, U.K., India.
10. Participated in Global Web Conference on “Pandemic Covid-19: Global Impact on Environment and Sustainable Development (PESD 2020)” from June, 5 -6 , 2020 organised by Internal Quality Assurance Cell (IQAC) DDU Govt. P.G College Saidabad, Prayagraj (U.P), India in association with Global Environment & Social Association (GESA), New Delhi.
11. Presented Paper entitled “Importance of Thermophilic Bacteria in Bioremediation” in “International Conference on Biotechnology and Applied Microbiology (ICBAM)-2020” from February, 7-8, 2020 organised by Department of Biotechnology in association with Department of Microbiology, Faculty of Life Sciences, Institute of Applied Medicines and Research, Ghaziabad, Uttar Pradesh, India.
12. Presented Poster entitled “Assessment of the Capability of Isolated Thermophilic Bacteria for Bioremediation of Heavy Metal ( $Hg^{2+}$ ) & Molecular Identification of Selected Isolates” in International Conference on “Aerosols, Air Quality & Climate Change on Himalayan region of Uttarakhand (AAC-2018)” from October, 21 -23, 2018 organized by the Department of Physics, H.N.B. Garhwal University (A Central University) Srinagar, Uttarakhand.
13. Presented Poster in the theme “Climate Change and Sustainability- Biodiversity & Environment” in “India International Science Festival (IISF) Young Scientists’ Conference from October, 05-08, 2018 organized by Ministry of Science & Technology India held at Indra Gandhi Pratishthan Lucknow, Uttar Pradesh.
14. Delivered lecture on “Science and Yoga” in 4<sup>th</sup> International Conference on “Developing Human Values Through Yoga” from February, 24-25, 2018 organised by Indian Association of Yoga New Delhi & Dept. Of Yogic Science, Uttarakhand

Sanskrit University, Haridwar.

### **National**

1. Participated in “Professional Advancement Programme for Indian Women Researchers in STEM” from June, 02-03, 2022 organised at School of Physical Sciences, Doon University, Dehradun Sponsored by Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Government of India.
2. Participated in Focus Group Discussion on Plastic Waste Management on the Ganga Basin in Uttarakhand, CounterMEASURE II, UNEP on November- 16, 2021 jointly organised by H.N.B. Garhwal University & Sustainable Development Forum of Uttaranchal.
3. Participated in Workshop on the topic “Towards an Integrated View of Adaptation: Bridging Science and National Issues” from August, 26-27, 2021 organised by Maharishi University of Information Technology, Noida, Uttar Pradesh.
4. Participated in National Virtual Workshop on “Disaster Management Techniques” from August, 10-11, 2021 organised by Radhey Hari Govt. P.G. College, Kashipur, U.S. Nagar, Uttarakhand.
5. Participated in National Webinar on “Exploring Interlinkages between the Idea of Self-Reliant India and the New Education Policy 2020” on September 5, 2020 organised by (IQAC) DDU Govt. PG College Saidabad, Prayagraj, Uttar Pradesh.
6. Participated in National Virtual Conference on “Recent Advances in Analytical Techniques” from August, 16 -17, 2020 organised by Dept. Of Chemistry & ADDP ShriVarshney College Aligarh, Dr. B.R Ambedkar University Agra, Uttar Pradesh, Centre of Bio-Medical Research Lucknow, Uttar Pradesh in Collaboration with Dept. of Chemistry, R.H. Govt. P.G. College, Kashipur, Uttarakhand, Dept. of Chemistry, H.N.B. Govt. P.G. College, Khatima, Uttarakhand & USERC DST Dehradun, Uttarakhand Govt.
7. Participated in National Webinar on “Gender Equality & Women’s Rights” on June- 9, 2020 jointly organized by Anti- Discrimination Cell, Women Study Centre and Cell for Combating Sexual Harassment of Women, H.N.B. Garhwal University, (A Central University) Srinagar Garhwal in Collaboration with University Grants Commission, New Delhi.
8. Participated in National workshop on “Field Based Hands-on Training on Lichen Systematics” from September, 28- October 5, 2019 jointly organized by Indian Lichenological Society and CSIR- National Botanical Research Institute, Lucknow, Uttar Pradesh.
9. Participated in Short Term Training Program on “Computational Techniques in Research Methodology for Science and Social Science” from July, 25-31, 2019 organized by Faculty Development Centre, H.N.B. Garhwal University, Srinagar, Uttarakhand under the PMMMNTT scheme of MHRD, Govt. Of India.
10. Participated in National workshop on “Research Methodology” from December, 10-16, 2018 organized by Faculty Development Centre, H.N.B. Garhwal University, Srinagar, Uttarakhand.
11. Participated in National workshop on “Intellectual Property Rights (IPR)” on November- 17, 2018 organized by the Department of Pharmaceutical Chemistry, H.N.B. Garhwal University (A Central University) Srinagar, Uttarakhand in collaboration with UCOST, Dehradun.
12. Presented Paper entitled “DNA Barcoding: A Boon for Biologist” in National

Conference on “Multidisciplinary Approaches of Plant Science & 28<sup>th</sup> APSI Scientist Meet” from October, 29 -31, 2018 organized by Dept of Botany, Dolphin (P.G.) Institute of Biomedical & Natural Sciences, Dehradun, Uttarakhand and Academy of Plant Sciences India, Muzaffarnagar, Uttar Pradesh.

### Conference/Symposium/Workshop Organized

1. Organized week long “Science Festival- 2023” at H.N.B. Garhwal University, Srinagar, Uttarakhand during February 28- March 04, 2023.
2. Organized 2 days workshop on “Entrepreneurship Development Programme in Biotechnology” at H.N.B. Garhwal University, Srinagar, Uttarakhand during February, 27-28, 2023 jointly organised by Uttarakhand Council for Biotechnology (UCB), Govt. of Uttarakhand, (Haldi) & Biotech Consortium India Limited (BCIL), New Delhi.
3. Organized 3 days event on “World DNA Day” held in the Department of Zoology and Biotechnology, H.N.B. Garhwal University, Srinagar, Uttarakhand during April, 23-25, 2017.

### Publications

#### Journals

1. Sethi, S., Prakash, O., Kumar, R., Dubey, S.K., **Arya, M.** and Pant, A.K., 2023. Phytochemical Analysis, Antioxidant and Antifungal Activity of Essential oil and Extracts of *Alpinia malaccensis* (Burm. f.) Roscoe flowers. *Brazilian Journal of Pharmaceutical Sciences*, 58 (2022) (ISSN: 2175-9790).
2. Naina Shrivastava and **Mamta Arya** “Inhibitory effect of some chemical preservative in metaphysics stage of faba beans.” *Journal of Phytological Research*, Phytol. Res. 34 (1), 2021; 45-48, (ISSN: 0970-5767).
3. Shailesh K. Vishwakarma, Anita Pandey and **Mamta Arya** “Biochemical and Molecular Characterization of Cultivable Bacterial Diversity of Suryakund HotSpring, Yamunotri, India” *Vidyabharti International Interdisciplinary Research Journal* 12(1), 436-446, 2021 (ISSN: 2319-4979).
4. **Mamta Arya**, Jasleen Kaur, Sachin Singh, Anjali Patil “Bioprospecting importance of certain Ramalina species and promising role of its biological active compounds” *Journal of Phytological Research*, Phytol. Res. 34 (1), 2021; 25-35, (ISSN: 0970-5767).
5. Babita Rana, Malini Bhattacharyya, Babita Patni, **Mamta Arya**, and Joshi, G. K. (2021). The Realm of Microbial Pigments in the Food Color Market. *Frontiers in Sustainable Food Systems*, 5, 54 (2021) (ISSN: 2571-581X).
6. Shailesh Kumar Vishwakarma, **Mamta Arya** and Sachin Singh “Potential of Thermophilic Bacteria in Bioremediation of Heavy Metals” *International Journal of Higher Education and Research* 10(2), 173-189, 2020 (ISSN: 2277 260X).
7. Daya Krishna\*, **Mamta Arya**, Shubham Agarwal “Relation Between Age, Mechanism of Injury and Radiological level of Vertebral Fracture in Children and Adolescents” *International Journal of Scientific Research* 9(6), 1-2, 2020 (ISSN No. 2277 - 8179).
8. Sachin Singh and **Mamta Arya** “Progression in Instrumentation for Phytochemical Analysis of Lichens” *Journal of Critical Reviews*, Vol 16, Issue 2, 2019 (ISSN: 2394-5125).

9. Shailesh Kumar Vishwakarma, **Mamta Arya** and Sachin Singh “Isolation, Screening and Characterization of Extracellular Enzyme Producing Thermophilic Bacteria from Suryakund Hot Spring” *Periodic Research* 7(4), 195-200, 2019 (E: ISSN No. 2349-9435).
10. Sachin Singh, **Mamta Arya** and Shailesh Kumar “Sustainable Bioprospecting of Himalayan Lichens for the Production of Natural Dyes” *Asian Resonance* 8(2), 407-412, 2019 (E: ISSN No. 2349-9443).
11. Sachin Singh, **Mamta Arya** and Shailesh Kumar Vishwakarma “Advancements in Methods Used for Identification of Lichens” *International Journal of Current Microbiology and Applied Sciences* 8(8), 1-11, 2019 (ISSN: 2319-7706).
12. Shailesh K. Vishwakarma **Mamta Arya** and Sachin Singh “Methods for Bacterial Identification: Traditional to Recent Trends” *HotFlora Research Spectrum* 8(1), 1-8, 2019 (ISSN 2250-2823).
13. Sachin Singh, **Mamta Arya** and Shailesh Kumar Vishwakarma “DNA Barcoding: A Significant Molecular Approach for Identification up to Species Level” *Remarking An Analisation* 3(3), 262-269, 2018 (E: ISSN NO.: 2455-0817).
14. **Mamta Arya**, Gopal k. Joshi, Atul Kumar Gupta, Anil Kumar, Aparna Raturi “Isolation and characterization of thermophilic bacterial strains from Soldhar (Tapovan) hot spring in Central Himalayan Region, India” *Annals of Microbiology* 65, 1457-1464, 2014 (ISSN 1590-4261).

### **Proceedings**

Books Chapters published in edited book

1. **Arya M.**, Singh S. and Vishwakarma S.K. 2020. Ch-15 “Lichens: Natural and Most Sensitive Biomonitors of Atmospheric Changes” in *Recent Advancements in Sciences with Special Reference to Himalaya* pp 144-154.
2. **Arya M.** 2019. Ch- 9 “Amino Acids and Peptides” In: *Physiology and Biochemistry* (eds. H.C. Tiwari), pp 229-246.
3. **Arya M.** 2019. Ch- 10 “Carbohydrates and Lipids” In: *Physiology and Biochemistry* (eds. H.C. Tiwari), pp 247-282.
4. **Arya M.** 2019. Ch- 12 “Proteins” In: *Physiology and Biochemistry* (eds. H.C. Tiwari), pp 322-344.

**Total Number of Research Publications: 20**