

Dr. Nusrat Masood

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Department of Biotechnology
Government Degree College, Shopian, J&K, 192303

CURRENT POSITION

Government Degree College, Shopian, J & K -192303
Assistant Professor, Department of Biotechnology
May 2022 to Present

PREVIOUS POSITION

Department of Biotechnology, University of Kashmir
CSIR-Pool Scientist
April 21 to May 22

CSIR-Central Drug Research Institute, Lucknow
National Postdoctoral Fellow (DST)
April 17 to April 19

EDUCATION

Jawahar Lal Nehru University, Delhi
Ph.D. Life Sciences
Aug. 2016

Integral University, Lucknow
M.Sc. Biotechnology
Aug. 2010

GRANTS AND AWARDS

National Postdoctoral Fellowship
Department of science and technology-India
Mar.2017

Junior Research Fellowship
Council of Scientific and Industrial Research, New Delhi
Dec. 2009

Best Poster Award
International Conference on Medicinal Plants: Resource for Affordable
New Generation Healthcare, CSIR-CIMAP, Lucknow
Nov. 2015

Dr. P.D. Sethi Annual award

Best Research Papers, Certificate of Merit awarded to the research paper: Dec. 2012
Validated high performance thin layer chromatographic method for simultaneous quantification of major iridoids in Vitex trifolia and their antioxidant studies,
Journal of Pharmaceutical and Biomedical Analysis, 61:207– 214, 2012

Gold Medalist Award

University topper in M.Sc. Biotechnology, Integral University, Lucknow

Aug. 2010

RESEARCH EXPERIENCE

- University of Kashmir (Department of Biotechnology) 2021-22
“Exploring the role of ER stress response in chemotherapy induced anastasis in breast cancer.”
- CSIR-CDRI (Central Drug Research Institute) 2017-19
“Evaluation of stress dependent functional responses and gene expression in ras1Δ and allied mutants of Schizosaccharomyces pombe cells as a functional study for targeting Ras-Redox pathway in cancer therapy.”
- CSIR-CIMAP (Central Institute of Medicinal and Aromatic Plants) 2010-16
“Unveiling of the interventions through some terpenoids present in Nigella sativa for cancer chemoprevention.”

List of Publications

1. **Masood, N., S. Anjum, and S. Ahmed.** "Inactivation of Ras1 in Fission Yeast Aggravates the Oxidative Stress Response Induced by Tert Butyl Hydroperoxide (tBHP)." *Molecular Biology* (2023): 1-8.
2. Fatima, Kaneez, **Nusrat Masood**, Zahoor Ahmad Wani, Abha Meena, and Suaib Luqman. "Neomenthol prevents the proliferation of skin cancer cells by restraining tubulin polymerization and hyaluronidase activity." *Journal of advanced research* 34 (2021): 93-107.
3. **Masood, Nusrat**, Vijaya Dubey, and Suaib Luqman. "Activation of Caspase-3 by terpenoids and flavonoids in different types of cancer cells." *Current Topics in Medicinal Chemistry* 20, no. 21 (2020): 1876-1887.
4. Singh, Shilpi, Dhananjay Kumar Singh, Abha Meena, Vijaya Dubey, **Nusrat Masood**, and Suaib Luqman. "Rutin protects t-butyl hydroperoxide-induced oxidative impairment via modulating the Nrf2 and iNOS activity." *Phytomedicine* 55 (2019): 92-104.
5. **Masood, Nusrat**, Akhilesh Kumar Yadav, Naresh Kumar, Madan Mohan Gupta, and Suaib Luqman. "Density functional theory-based quantum rationalization of flavones from *Oroxylum indicum*, their correlation with redox effect, molecular interaction studies and osmotic hemolysis." *Current Science* 115, no. 11 (2018): 2085-2094

6. **Masood ,N**; Khan, S; Luqman, S and Ahmed, S, Thymoquinone disrupts the microtubule dynamics in fission yeast *Schizosaccharomyces pombe*, AIMS Genetics3(4):239-251, (2016)
7. **Masood, N**; Fatima, K and Luqman S. A Modified Method for Studying Behavioural Paradox of Antioxidants and Their Disproportionate Competitive Kinetic Effect to Scavenge the Peroxyl Radical Formation, The Scientific World Journal, article ID 931581, <http://dx.doi.org/10.1155/2014/931581> (2014).
8. **Masood, N** and Luqman S, A Method for Measuring Difference in Activity of Phenolic and Non-Phenolic Groups through 2, 2'-Azino-Bis-(3-Ethyl-Benzothiazoline-6-Sulphonate) Radical Cation, Combinatorial Chemistry & High Throughput Screening, 17: 000-000 (2014). (Impact Factor: 1.222)
9. Luqman, S.; Fatima, K.; **Masood, N**. A High Throughput Spectrophotometric Method for Singlet Oxygen Quenching. Nature Protocol Exchange (2016). DOI: 10.1038/protex.2016.054
10. Khan, A.; Luqman, S.; **Masood, N.**; Singh, D. K.; Saeed, S. T.; Samad, A. Eclipta Yellow Vein Virus Enhances Chlorophyll Destruction, Singlet Oxygen Production and Alters Endogenous Redox Status in *Andrographis Paniculata*. Plant Physiology and Biochemistry 104:165–173, (2016). (Impact Factor: 2.928)
11. Fatima, K.; **Masood, N.**; Luqman, S. Quenching of Singlet Oxygen by Natural and Synthetic Antioxidants and Assessment of Electronic UV / Visible Absorption Spectra for Alleviating or Enhancing the Efficacy of Photodynamic Therapy. Biomedical Research and Therapy, 3 (2):514–527 (2016)
12. Kumar, BS ; Singh A; Kumar, A; Singh J; Hasanain, M; Singh, A; **Masood, N**; Yadav, DK; Konwar, R; Mitra, K; Sarkar, J; Luqman, S; Pal, A; Khan, F; Chanda, D; Negi, AS. Synthesis of neolignans as microtubule stabilisers, Bioorganic & Medicinal Chemistry 22: 1342–1354 (2014). (Impact Factor: 2.793)
13. Luqman S; **Masood N**; Srivastava S and Dubey V, A Modified Spectrophotometric and Methodical Approach to Find Novel Inhibitors of Ornithine Decarboxylase Enzyme: A Path through the Maze, Nature Protocol [Protocol Exchange] Published online 22 April , 2013, doi: 10.1038/protex.2013.045 (2013).
14. Yadav D; **Masood N**; Luqman S; Brindha P, Gupta M.M, Antioxidant furofuran lignans from *Premna integrifolia*, Industrial Crops and Products, 41: 397–402 (2013). (Impact Factor: 2.837)
15. Hassan, SW; Verma,S; Srivastava, SK; Luqman,S; Gupta, U and **Masood, N**. Activity guided isolation and characterization of antioxidant and antibacterial agents from some local Nigerian plants, African Journal of Biotechnology, 12(44): 6315-6325 (2013).

16. Dubey, V; **Masood, N**; Negi AS and Luqman, S. Modulation of Ornithine Decarboxylase Activity by Phenolics Based Structurally Related Compounds Synthesized on Steroidal and Non-Steroidal Skeleton and their Radical Scavenging Action, *Current Bioactive Compounds*, 8(4): 345-352 (2012).
17. Verma P; Mathur A K; **Masood N**; Luqman S and Shankar K, Tryptophan over-producing cell suspensions of *Catharanthus roseus* (L) G. Don and their up-scaling in stirred tank bioreactor: detection of a phenolic compound with antioxidant potential, *Protoplasma*, DOI: 10.1007/s00709-012-0423-5(2012). (Impact Factor: 2.651)
18. Tiwari N; Luqman S; **Masood N** and Gupta M.M. Validated high performance thin layer chromatographic method for simultaneous quantification of major iridoids in *Vitex trifolia* and their antioxidant studies. *Journal of Pharmaceutical and Biomedical Analysis*, 61:207–214 (2012). (**Dr. P D Sethi Annual Awards-2012 Best Research Paper: Certificate of Merit Awarded**) (Impact Factor: 2.979)
19. Verma P; Mathur A K; Singh A; Srivastava A; **Masood N**; Luqman S; Upadhyaya M and Mathur A. Co-culturing of *Catharanthus roseus*, *Vinca major* and *Rauwolfia serpentina* cell suspensions in shake flask and bioreactor: Production of a novel alkaloid with antioxidant potential. *Journal of Medicinal Plant Research, Journal of Medicinal Plants Research*, 6: 23 (2012).
20. Priyanka Verma, Shamshad Ahmad Khan, **Masood N**, N.Manika, Abhishek Sharma, Neha Verma, Suaib Luqman and Ajay K.Mathur. Differential rubisco content and photosynthetic efficiency of rol gene integrated *Vinca minor* transgenic plant: Correlating factors associated with morpho-anatomical changes, gene expression and alkaloid productivity. *Journal of Plant Physiology*. 219 (2017).

Faculty Induction Program & Refresher Courses

- 📌 6th FIP (Faculty Induction Program) organised by University of Rajasthan (University with “A” grade and HRDC rank 2nd by NAAC, 2012) from 9th Jan 2023 to 7th Feb 2023 and obtain grade “A”
- 📌 Refresher Course on Contemporary Trends in Bio-Sciences (25th Feb to 10th March, 2025) organized by UGC-MMTTP, Kumaun University, Nainital and obtain grade “A+”
- 📌 NEP 2020 Orientation & Sensitization Programme (17th March to 25th March, 2025) organized by UGC-MMTTP, Kumaun University, Nainital

Symposia/Conferences/Workshops

1. **Masood N**; Khan, S; Ahmad, S and Luqman S. Thymoquinone disrupts the microtubule dynamics by inhibiting the polyamine biosynthesis and escalating superoxide dismutase activity in fission yeast *S. pombe*. In the Abstr. Of 34th Annual Convention of Indian

Association for Cancer Research (IACR) & International Symposium on 'Cancer Research : From Bench to the Bedside.' organized by RK Birla Cancer Center, SMS Medical College Hospital, Jaipur, Oral Award Paper presentation, page -78,(2015).

2. **Masood N**; Premanand A and Luqman S. 'Health restoration by *Nigella sativa*: Prominence of Cancer chemoprevention through known ancient path' presented in Theme II: Healing Herbs in Traditional Systems of Medicine of International Conference on Medicinal Plants: Resource for Affordable New Generation Healthcare, CSIR-CIMAP, Lucknow, [**Best Poster Award**] (2015).
3. Luqman S; Dubey V and **Masood N**, 'Structural specificity of genin flavonoids suppresses the commotion of aromatase and cathepsin D, pivotal targets for breast cancer' presented in Session No. 69 on "Natural Products in Cancer Drug Development" at the 9th International Conference of Anticancer Research on Thursday October 09, Sithonia, Greece, (2014).
4. Kumar BS, **Masood N**, Luqman S, Fatima K, Gautam Y, Hamid AA and Negi, AS. Synthesis and bioevaluation of lignans as anticancer agents. Current Trends in Drug Discovery Research, CTDDR-2013, 5th- International Symposium on Drug Development for Orphan/neglected Diseases. 26th-28th Feb, Page-74, (2013).
5. **Masood N**; Dubey V, and Luqman S. Ornithine decarboxylase activity, a clinical biomarker for evaluating cancer chemopreventive efficacy of phytomolecules. In 80th Annual Meeting of the Society of Biological Chemists: Metabolic Pathway Modulations-Applications in Health and Agriculture, Lucknow, pp-78, 12-15 November, (2011).
6. Dubey V; **Masood N**; Negi AS and Luqman S. Anticancer efficacy of phenolics based structurally related compounds and their radical scavenging action. In 80th Annual Meeting of the Society of Biological Chemists:Metabolic Pathway Modulations-Applications in Health and Agriculture, Lucknow, pp-148, 12-15 November, (2011).
7. Luqman, S; **Masood N**, Khan, S and Ahmad, S. *S*-(-)-Limonene derange the microtubule dynamics by augmenting the superoxide dismutase activity and impeding the polyamine biosynthesis in mad2 delete cells of *Schizosaccharomyces pombe*. In Global Cancer Summit: Frontiers In Oncology: Genetics, Diagnostics And Therapeutics, Indian Institute of Sciences Bengaluru, India, page 136, 18-20th November, (2015).
8. **Masood N**, Dubey V and Luqman, S. Activation of Caspase 3 by Terpenoids and Flavonoids in cancer cell lines. International Scholarly and Scientific Research and Innovation, World Academy of Science, Engineering and Technology, 4(6) 2017.
9. **Nusrat Masood**, Kaneez Fatima, Zahoor Ahmad. Wani, Suaib Luqman. and Shakil Ahmed. The Anticancer properties of Thymol and its positional isomer Carvacrol in photodynamic therapy using epidermoid carcinoma A431 cells and Murine tumor Model. 7th international conference on translational cancer research. Westin Hotel Chennai, India Feb. 8-11, 2018.

10. Participated and completed one month “6th Faculty Induction Program” as part of UGC sponsored Guru-Dakshita from University of Rajasthan (HRDC ranked 2nd by NAAC, 2012) from 9th Jan 2023 to 7th Feb 2023

11. Participated in Homology modeling workshop organized by Centre of Advanced Training & Research, Lucknow from 27th to 30th April 2024

Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To
1.	CSIR-JRF	CSIR-CIMAP	8 th Oct, 2010	7 th Oct, 2012
2.	CSIR-SRF	CSIR-CIMAP	8 th Oct, 2012	7 th Oct, 2015
3.	SERB-NPDF	CSIR-CDRI	7 th April 2017	6 th April 2019
4.	CSIR-SRA	University of Kashmir	29 th April 2021	18 th May 2022
5.	Assistant Professor	Govt. Degree College, Shopian, J&K	19 th May 2022	Continue

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received

SNo.	Name of Award	Awarding Agency	Year
1.	Best Poster Award	International Conference on Medicinal Plants: Resource for Affordable New Generation Healthcare,	2015
2.	Best Research Paper, Certificate of Merit	Dr. P.D. Sethi Annual award-2012	2012
3.	University topper in M.Sc. Biotechnology, Gold Medalist	Integral University, Lucknow	2010
4.	CSIR-JRF-NET in Life Science (Fellowship)	Council of Scientific and Industrial Research (CSIR-HRD)	2010
5.	39 th Annual All India Junior UN Information Test Certificate	Council of UN Information, awing of USO	1997

Any other Information

- 1. Animal handling, Parkinson disease animal model*
- 2. Cell culture (human cancer cell lines, yeast cultures, bacterial culture)*
- 3. Various molecular biology techniques: Real Time PCR, Western Blot, Immunofluorescence, FACS etc*
- 4. Various enzymatic and biochemical assays*
- 5. In silico techniques like docking, quantum chemical calculations etc*

DECLARATION

I hereby declare that the above mentioned information is true to the best of my knowledge.

A handwritten signature in blue ink that reads "Nusrat Masood". The signature is written in a cursive style with a horizontal line underlining the name.

(Nusrat Masood)