

Dr. Neetu thakur

Associate Professor, Department of Biotechnology

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Orcid Id: 0000-0002-6559-4554

Educational qualifications:

Ph.D Biotechnology (2006): Department of Biotechnology, Dr.Y.S.Parmar university of horticulture and forestry Nauni, Solan, Himachal Pradesh

Title of Ph.D. Thesis:

“Studies on Genetic divergence and *in vitro* conservation of *Dactylorhiza hatagirea* (D. Don) Soo.”

M.Sc. Biotechnology (2001): Department of Biotechnology, Dr.Y.S. Parmar university of horticulture and forestry Nauni, Solan, Himachal Pradesh

Title of M.Sc. Thesis “Cost-effective micropropagation of *Lilium* cv. Toscana.

Bachelor of Science in Medical (1999): GCG sector 11 Chandigarh

Expertise: Plant tissue culture, and molecular biology

Teaching experience/ Research Experience and Research Project handled:

- 18 years of experience in teaching and research at Goswami Ganesh Dutta Sanatan Dharma College As an Assistant Professor of the Department of Biotechnology sec32 Chandigarh
- Guided 55 students of **M.Sc.** And many students **B.Sc. Biotechnology** student

Research projects handled

- **DST funded project entitled “Proteomics and Biochemical studies on Guava fruit ripening”**

Role: **co-pi**

Year 2012,

Amount 100000

- **Funded with UGC major project entitled “Studies on genetic stability and *in vitro* conservation of *Tinospora cordifolia*.**

Role: Project- in-charge

Year 2009,

Amount:832000

- **DBT Builder-GGDS College Interdisciplinary Life Science Programme for Advance Research and Education**

Role: Co-Pi

Year 2021

Amount: 1 crore 96 lakh

List of Publications

- Gautam H., Kaur R., **Thakur N.**, and Sharma D.R.2001. *Bacillus Thuringiensis*: Recombinant pesticide. Science and Culture.67, 362-364
- **Thakur N.**, Kaur R., and Sharma D. R.2002.Effect of certain chemicals and sucrose on the enhancement of *in vitro* bublet size of Liliun Sp.(Asiatic hybrid) cv. Toscana. Plant Cell Biotechnology & Molecular Biology.Vol.3 No.1&2. 69-72

- Gautam H., Kaur R., **Thakur N.**, and Sharma D.R.2002. A Comparative study on in vitro & ex vitro rooting of micro propagated shoots of Strawberry. Plant Cell Biotechnology & Molecular Biology. Vol.2 No. 3&4: 149-152.
- Kaur R and **Thakur N.**2007. Low-Cost Strategy of Micropropagation of Lilium cv.Toscana. Journal Of Horticultural Science.Vol 1.No1.24-27.
- **Neetu thakur**, Nancy, Sakshi chawla R.pathak and A.pathak. 2012 *in-vitro* antioxidant potential studies of plant extract of *Tinospora cordifolia*. International Journal of Applied Microbiology Science; 1; 15-20.
- **Neetu thakur** and R. Kaur. 2013.Molecular Characterization of *Dactylorhiza hatagirea* (D. DON) Soo - A Critically Endangered Medicinal Orchid. International journal of medicinal and aromatic plants.Vol 3, no. 2 , 184-90.
- **Neetu Thakur**, Niketa Sareen ,Bansuli Shama & Kritika Jagota.2013.Studies on *in vitro* antifungal activity of *Foeniculum vulgare* mill, against spoilage fungi. Global Journal of Biosciences and Biotechnology, Vol.2 (3) 427-430.
- **Neetu thakur** and bansuli shama.2015 Studies on in Vitro Antifungal Activity of *Berberis aristata* Against Phytopathogenic Fungi . Indian journal of applied science 5 (6), 382-384
- **Neetu Thakur** and Kritika Jagota.2015 Evaluation of in vitro antifungal potential of *Rauwolfia serpentina* benth. ex kurz. against phytopathogenic fungi. International journal science and nature 6 (2), 165-169
- **Neetu thakur**, Rohit Sharma and Pritpal Kaur 2017 Molecular analysis for genetic diversity of mango GJBB ISSN 2278 – 9103 6 (4), 604-606

- **Neetu thakur**, Ishita Khanna, Navneet kaur and Bhuvnesh sareen.2017 Studies on phytochemical screening and antifungal activity of *Tinospora cordifolia*. IOSR Journal of Biotechnology and Biochemistry 3 (5), 34-38
- **Neetu Thakur**, Shaifali Gautam, Nancy, Ashima Pathak.2018. Low-cost *in vitro* multiplication of *Capsicum annuum*. International Journal for Research in Applied Science& Engineering Technology. 6(2), 1473-1475
- A Pathak, Arshia Kaur Virk, Shivani Sharma, Pancy Garg, Suman, **Neetu Thakur.2018**. Studies on Seed Germination in Capsicum Seeds (Solan Bharpur) under Abiotic Stress. International Journal for Research in Applied Science& Engineering Technology 6(3), 27-34
- A. Pathak *, Rajwinder Kaur and **Neetu Thakur**.2021. Germination studies and biochemical profile in seeds of wheat exposed to magnesium nanoparticles International Journal of Pharmaceutical Sciences and Research, Volume, Year 2021, Pages 6638-6641
- **N Thakur**, S Chrungoo, S Rana, S Kaur, S Kaur, A Pathak. Effect of copper nanoparticles on *in-vitro* seed germination of wheat (*Triticum Aestivum* L.) Varieties. IJPSR, Volume 12, Year 2021, Pages 4307-4313
- Pathak, Ashima, Pathak, Rajiv, **Thakur, Neetu**, Deborah, Sherly , Isyraqiah, Faizatul PY .2021. COVID-19 And Lifestyle Challenges: A Rapid Review Research Journal of Pharmaceutical, Biological and Chemical Sciences, Volume 15

- **Neetu thakur**, Sheetal Rana and Ashima Pathak.2022. Impact of Cu nanoparticles on growth and biochemical profiling of wheat. International Journal of Biology, Pharmacy and Allied Sciences IJBPAS, Volume, Pages
- Ashima Pathak, T Mehta, **N Thakur**. 2023. In vitro seed germination studies in barley exposed to zinc oxide nanoparticles. Agricultural Reviews. doi 10.18805/ag.R-2637
- **Neetu thakur***, Diksha Kanwar, Mansi Kataria, Mansi Gupta, Harmanpreet Kaur and Ashima Pathak Determination of the antimicrobial activity of ZnO nanoparticles synthesized from plant extracts. international Journal of Biology, Pharmacy and Allied Sciences IJBPAS, Volume, Year 2025, Pages

Book chapters

- Role of Biotechnology: Perspective in Higher Education. Challenges in Higher Education: An Inclusive Perspective Neha publisher.
ISBN :978-93-83316-03-8
- Conservation of environment in Environment, road, safety education, and violence against women and children. Mahindra Publishing House.
ISBN 978-93-82068-29-7
- Conservation of environment in Environment, road, safety education, and violence against women and children. Mahindra Publishing House.
ISBN 978-93-82068-29-8
- Nanotechnology: an emerging technology and its various industrial applications sustainable materials and technologies, Volume, Year 2024 Saprishi publications

Seminar//symposium attended

- National Seminar on Goods and Services Tax (GST) College Development Council, Panjab University organized by GGSDS College, Sector 32, Chandigarh on January 20, 2018
- Chemistry Sensitization organized by the Department of Chemistry, GGSDS College, Sector 32, Chandigarh on March 16, 2017
- IPR Seminar on A Global Outlook on Biotech & Pharma Patents organized by PG Department of Biotechnology, Sector 32, Chandigarh on Feb 24, 2015
- Emerging Trends in Information Technology, organized by SD College, Chandigarh Jan 31, 2014
- Business Growth and Corporate Sustainability” organized by the Department of Commerce, GGSDS College, Sector 32, Chandigarh January 17th, 2014
- Recent Advances in Material Science and Nanotechnology organized by Department of Physics, GGSDS College, Sector 32, Chandigarh February 1, 2014
- Emerging Trends in Plant Sciences organized by Dept of Botany, SD College, Chandigarh Feb 8, 2014
- Educational Reforms: Challenges and Strategies organized by GGSDS College, Sector 32, Chandigarh February 9th, 2013
- On Being a Scientist; Legal & Ethical aspects organized by” Department of Chemistry, GGSDS College, Sector 32, Chandigarh January 30th, 2013

- Changing Trends in Media- Opportunities, Concerns & Challenges organized by Department of Journalism and Mass Communication, GGSDS College, Sector 32, Chandigarh February 5th, 2011
- Translational Research in Molecular Oncology organized by Department of Biophysics, Panjab University 6th Dec 2008
- Global Economic Crisis with Special Reference to Impact on India organized by GGSDS College, Chandigarh November 8, 2008

Symposium attended

- A one-day symposium on “New horizons in biomedical sciences organized by GGSDS College sector 32 Chandigarh in collaboration with the Indian National Science Academy (Chandigarh chapter) and Punjab Academy of Sciences on 23rd November 2024
- International Symposium on “Recent Advances in Biophysics” organized by Department of Biophysics, Panjab University, Chandigarh from November 3-5, 2014
- National Biophysics Symposium on “Recent Perspectives in Biophysics” organized by PGIMER, Chandigarh on May 11, 2013
- National Symposium on Biotechnology: Research and Development. organized by the Department of Biotechnology, GGSDS College, Sector 32, Chandigarh on Feb 4, 2012

- UGC- SAP sponsored National Symposium on “Molecular Pathogenesis of Neurodegenerative Diseases organized by ” the Department of Biophysics, Panjab University, Chandigarh on Feb 22nd, 2011
- National Symposium on Frontiers in Biotechnology organized by Department of Biotechnology, Panjab University Chandigarh on 17th Feb 2011
- National Symposium on “Biotechnology: Expanding Horizons” organized by Department of Biotechnology and Microbiology, GGSD College, Sector 32, Chandigarh on February 5th, 2011
- National Symposium on “Biotechnology: Innovations and Challenges” organized by the Department of Biotechnology, GGSD College, Sector 32, Chandigarh on February 6th, 2010
- National Symposium on “Potential of Biological Sciences in Making India a Developed Country” organized by Govt. College for Girls, Sector 42, Chandigarh on February 4th, 2008
- National Symposium on “Pharmaceutical Sciences and Pharmacoinformatic” organized by Department of Biotechnology and Bioinformatics, GGSD College, Sector 32, Chandigarh on February 10th, 2007

Workshops attended

- One Day Workshop on Instrumentation ion Techniques in Chemistry organized by Resonance Club, Department of Chemistry, GGSDS College, Chandigarh on March 14, 2019
- One Day Workshop on Instrumentation ion Techniques in Chemistry Resonance Club, organized by Department of Chemistry, GGSDS College, Chandigarh March 15, 2017
- 2 day Bilateral workshop on Thalassemia and Sickle Cell Disease “Time for a New Optimism” organized by the Department of Haematology, PGIMER, Chandigarh, and University of California San Fransisco Benioff Children’s Hospital Oakland, USA on Nov 5 and 6, 2016
- 1-day Workshop on College Automation System in Education Sector, Under RUSA Experts from TCS and EBSCO organized by GGSDS College Chandigarh on Feb 18-20, 2016
- Two-day Workshop on “Instrumentation Techniques in Chemistry” organized by the Department of Chemistry, GGSDS College Chandigarh on January 17-18, 2014
- Two days workshop on Patents: Empowering Biotech Industry organized by P.G. Department of Biotechnology, GGSDS College, Chandigarh on November 15 and 16th, 2013
- Workshop on “Role of e-resources in Scientific Research “organized by Department of Biotechnology and College Library, GGSDS College, Chandigarh on February 20 and 21, 2013

- Workshop on “Applications of Radioisotopes in Molecular Imaging “organized by Centre for Nuclear Medicine, Panjab University, Chandigarh on Nov 11, 2011
- 2 Day Workshop on “Techniques in Chemistry” organized by the Department of Chemistry, GGSDS College, Chandigarh on March 24 and 25,2011
- 2 day Workshop on “Molecular Biology Techniques “by Department of Biosciences, GGSDS College, Sector 32, Chandigarh on June 18th and 19th , 2008

Latest conferences and seminar organized

- Core team member of Organizing Committee in Shri Upkar Krishan Memorial International Seminar on **Lab-to-field: Need for Translational Research** organized by Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh, and Indian Science Congress Association Chandigarh Chapter on January 9, 2024
- Core Team Member of the Organizing Committee in an On-site Flow Cytometry Workshop on **Flow Cytometry and its Applications in Biosciences** organized by Goswami Ganesh Dutta Sanatan Dharma College, Chandigarh in collaboration with Flow Cytometry Solutions Pvt. Ltd., India, Trust for Education and Training in Cytometry (TETC) India & Indian Science Congress Association Chandigarh Chapter from January 10th - 12th, 2024.

Oral / Poster presentations

- Oral presentation on Transgenics: Prospects and Concerns Emerging Trends in Life Sciences (2016) national seminar organized by the Department of Biotechnology JCDAV College Dasuya Punjab
- **Neetu Thakur**, Shubhangi Jha and A.Pathak .*in vitro* propagation of *Dactylorhiza hatagirea* (d.don) soo.13th Chandigarh Science Congress “Science and Technology for New India” March13-15, 2019
- **Neetu thakur**, Swati and APathak.*in vitro* conservation of critically endangered medicinal plant: *Dactylorhiza hatagirea* (d.don) soo 13th Chandigarh Science Congress “Science and Technology for New India” March13-15, 2019
- A Pathak*, Hardeep Kaur*, **Neetu Thakur*** Zinc phytotoxicity induces oxidative stress in okra seeds 13th Chandigarh Science Congress “Science and Technology for New India” March13-15, 2019
- A Pathak*, Girisha Sehrawat*, **Neetu Thakur**. Antioxidant enzymes and curtailed growth under nickel toxicity. 13th Chandigarh Science Congress “Science and Technology for New India” March13-15, 2019
- A Pathak, Arshia Kaur Virk, Shivani Sharma, Pancy Garg, Suman, **Neetu Thakur** Influence of Abiotic Stress on Seedling Germination and Antioxidative Status of Capsicum 12th Chandigarh Science Congress CHASCON 2018 February 12-14, 2018

- **Neetu Thakur**, Shefali Gautam, Nancy and A.pathak. Cost-effective micropropagation of *Capsicum annuum in vitro*.12th Chandigarh Science Congress CHASCON 2018 February 12-14, 2018
- A Pathak, Ayushi Garg, Tania, **Neetu Thakur**. *In vitro* germination and antioxidative studies on fenugreek seeds: effect of zinc and copper.9th Chandigarh Science Congress Organized by Panjab University, Chandigarh CHASCON- 2015 February 25-27, 2015.
- **Neetu Thakur**, Rohit Sharma, Pooja, Ashima Pathak. Study of cost-effective micropropagation of carnation. Chascon 2015 February 25-27, 2015.
- Pathak A, Maninder Kaur Rehal, Navjot Sandhu, **Neetu Thakur**. Heavy metal toxicity in seeds of *Coriandrum sativum*. 8th Chandigarh Science Congress CHASCON- 2014. Organized by Panjab University, Chandigarh February 26-28, 2014
- **Neetu Thakur**, Kritika Jagota, Niketa Sareen, A Pathak.*In vitro* antifungal activity of *Rauwolfia serpentina L.* against phytopathogenic fungi. CHASCON 2014 February 26-28, 2014
- A Pathak, Gursimran Bedi, Supriya Salaria, Yukti Sharma, **Neetu Thakur** .Role of Zinc on pesticide-induced changes in Seed Germination and antioxidant potential of Rye. National Conference on Perspectives & Trends in Plant Sciences and Biotechnology Organized by the Department of Botany, Panjab University, Chandigarh February 21-23, 2014

- **Neetu Thakur**, Vinayak Sharma, Priya, Kritika Jagota and Ashima Pathak. *In vitro* antifungal activity of peel extract of fruits against phytopathogenic fungi
8th Chandigarh Science Congress, CHASCON-2014
- A Pathak, R Pathak, Gursimran Bedi, Harpreet Kaur Deo, **Neetu Thakur**. Role of zinc on pesticides-induced oxidative damage and seed germination on Brassica species in vitro. Poster Presentation at National Conference on “Plant & Microbial Biodiversity, Present Scenario, threats & Conservation Strategies” organized by Department of Botany, Panjab University, Chandigarh March 1-2, 2012.
- **Neetu Thakur**, Priyanka Fimal, Rajvinder Kaur, Paramveer Kaur, A Pathak. Allelopathic effect of *Tinospora* plant extract on in vitro seed germination of mustard. National Conference on “Plant & Microbial Biodiversity, Present Scenario, threats & Conservation Strategies”. Department of Botany, Panjab University, Chandigarh. March 1-2, 2012
- **Neetu Thakur**, Priyanka Fimal, Paramveer Kaur, Guriqbal Singh, A Pathak. Allelopathic effect of plant extract of *Tinospora cordifolia* on seed germination. Deptt of Botany, PU, Chandigarh. March 1-2, 2011

Conferences attended

- National conference on “Indigenous technologies for viksit Bharat” Chascon 2024 from 7th Nov to 9th Nov, 2024

- International Congress on Nutrition and Health held at Chandigarh Society for Education April 7-8, 2019
- Recent Trends in Advanced Biology, health and Environmental Sciences-2018 Carmel College of Arts, Science Commerce for Women, Goa, in collaboration with International Multidisciplinary Research Foundation Dec 28-29, 2018
- Role of Biophysics in Academia and Industry. organized by the Department of Biophysics, Panjab University, Chandigarh. October 12-13, 2017
- National Conference on Emerging Trends in Life Sciences/ Department of Biotechnology, Jagdish Chandra DAV College, Dasuya. March 12, 2016
- National Conference on Perspectives & Trends in Plant Sciences and Biotechnology Department of Botany, Panjab University, Chandigarh February 21-23, 2014
- International Conference on “Nanotechnology in the Service of Health, Environment and Society” NanoSciTech 2014 Panjab University, Chandigarh February 13-15, 2014
- International Conference on Biological, Chemical, and Environmental Societies.BCES-2014.International Institute of Chemical, Biological and Environmental Engineering, Penang, Malaysia. June 14,15, 2014
- 8th Chandigarh Science Congress CHASCON- 2014. Panjab University, Chandigarh February 26-28, 2014

- National Conference on “Plant and Microbial Diversity, Present Scenario, Threats and Conservation Strategies”. Department of Botany, Panjab University, Chandigarh March 1,2, 2012
- 32nd Annual Conference of Indian Association of Biomedical Scientists on “Phytochemicals and radiation in Health and Disease “Centre for Nuclear Medicine, Panjab University, Chandigarh. November 11-, 13, 2011
- Punjab State Cardiology Summit 2011 Adesh Institute of Medical Sciences and Research, Bathinda 6th March 2011
- 5th Chandigarh Science Congress on “Building Gateways to Sustainable Green Communities” Panjab University, Chandigarh 26th - 28th Feb 2011
- 13th Punjab Science Congress titled “Climate Change: Concerns and Solutions” Panjab University, Chandigarh 7th - 9th Feb 2010
- 3rd Chandigarh Science Congress on “Science Education and Attraction of Talent for Excellence in Research” Panjab University, Chandigarh 26th - 28th Feb 2009
- Theoretical and Experimental Techniques In Nanoscience and Nanotechnology, Department of Physics, Panjab University, Chandigarh March 29-30, 2007
- International Industry-Academia Meet GGDS College, Sector 32, Chandigarh Dec 2nd, 2006

Orientation/ Refresher programme

- 92nd orientation programme organized by Academic Staff College, Panjab University, Chandigarh sponsored by UGC
- Winter School Course in “Higher education: inclusive and exclusive approach” Academic Staff College, Panjab University, Chandigarh sponsored by UGC
- Refresher course in biosciences at HRDC, Panjab university Chandigarh from 18 .12. 2019 to 31.12.2019

Faculty development program

- NEP 2020 Orientation and Sensitization Programme organized by UGC MMTTC Panjab University, sector 25, Chandigarh from 1st February 2024 to 14th January 2024
- FDP on “Subject-specific benchmarking of Learning outcome: outcome-based education” organized by GGSDS college sector 32 Chandigarh from 26 October 2023 to 1 November 2023
- Faculty Development Program organized by the University of Fraser Valley and GGSDS from April 29th to May 3rd, 2013
- FDP organized by the Association of Microbiologists of India (Chandigarh Unit) and GGSDS College, Sector 32, Chandigarh on 8-9-2016
- FDP organized by the University of Fraser Valley and GGSDS College, Instructional Skills Workshop (ISW) on May 22 to May 28, 2017
- FDP on Data Science using Python organized by Jeppiaar Institute of Technology from 18 May to 22 May 2020

- FDP on Biological Sciences organized by PG and Research, Department of Botany, NGM College Pollachi, Coimbatore, Tamil Nadu. On 25th May to 31st May 2020
- FDP on Virtual Teaching-Learning MOODLE the Efficient Way organized by Dr MGR Education and Research Institute from 29 May to 30 May 2020
- FDP on Biological Data Analysis and Data Science organized by the Department of Bioinformatics and Biochemistry, GGSDS College, Chandigarh from 27 Feb to 4th March 2020

Administrative experiences:

- Member of the **Board of Postgraduate Studies** in Biotechnology at PU Chandigarh, 2023
- Successfully held Panjab University examination as deputy superintendent and superintendent
- Actively participating as Examiner and Paper setter of the PU examination
- Core committee member of the team organizing national and international level seminars, FDP, workshops, and conferences
- Member of various administrative committees at the department and college level

Membership In Professional Bodies

1. The Orchid Society of India, 2018 lifetime membership

2. Lifetime membership of the Association of Biology Teachers (colleges), 2007

lifetime membership