

## Dr. Vinita Hooda

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### Education

<b>Ph.D.</b>	M.D. University, Rohtak
<b>Master of Science (Bio-informatics)</b>	Sikkim Manipal University
<b>Master of Science (Plant Science)</b>	Banasthali Vidyapith , Rajasthan
<b>Postdoctoral training</b>	University of Massachusetts, U.S.A.

### Career Profile

Designation	Mode	Institution served	Duration
Professor	Regular	M.D.University, Rohtak	2018-Continue
Associate Professor	Regular	M.D.University, Rohtak	2015-2018
Assistant Professor	Regular	M.D.University, Rohtak	2008- 2015
Lecturer	Regular	Govt. College for Women, Rohtak	2003-2008
Lecturer	Contractual	M.D.University, Rohtak	2000-2003

### Awards, Distinctions and Assignments

Head, Department of Botany since June, 2020  
NAAC peer team member  
Coordinator SPARC (MHRD program)  
Awarded Raman fellowship by UGC for Post Doctoral work in USA  
Reviewer recognition for Elsevier Journals  
Women achiever award given by “Amar Ujala”  
Recipient of Gold Medal during M.Sc.  
Qualified NET (Life Sciences) conducted by CSIR-UGC  
Invited as subject expert by various Universities

### Mentoring Experience

Number of Master’s students supervised: 35  
Number of registered Ph.D scholars: 08  
No. of Ph.D thesis submitted: 03 (Two students have been given the “Best Thesis Award” by Maharshi Dayanand University, Rohtak)

## Research Projects Completed

S.No.	Title of the Project	Duration	Funding Agency	Amount
1.	Effect of changing the nanoscale environment on the activity and stability of nitrate reductase	2011-14	UGC, New Delhi	7,02,000/-
2.	“Effect of nanoparticles on germination and growth of <i>Vigna radiata</i> ”	2012-13	M.D. University	10,000/-
3.	Fabrication of photometric sensing strip for polyamine determination	2013-16	SERB-DST	22,50,000/-
4.	Development of biosensors for pathogen detection	2012-17	DBT	5,00,000/-
5.	Fabrication of silver nanoparticles loaded epoxy membrane and its use for defluoridation of contaminated water	2015-18	HSCST, Panchkula	8,00,000/-

## Research Projects Ongoing

S.No.	Title of the Project	Duration	Funding Agency	Amount
1.	“Composite Hydrogels for Enhanced Water and Fertilizer Use Efficiency” (No. HSCSIT/R&D/2020/474)	2020-23	HSCSIT, Panchkula	20,00,000/-

## Reviewer for

- i) Applied Biochemistry and Biotechnology, Springer.
- ii) Environmental Pollution, Elsevier
- iii) International Journal of Biological Macromolecules, Elsevier
- iv) Analytical Biochemistry, Elsevier
- v) Applied Surface Science, Elsevier
- vi) International Journal of Nanomedicine, Dove press
- vii) Science of Advanced Materials, American Scientific Publishers
- viii) Advanced Materials Reviews, VBRI Press
- ix) Canadian Journal of Microbiology, NRC Research Press

## **List of Publications (Last five years)**

1. A. P. Singh, S. Balyan, **V. Hooda**, R. K. Sarin, N. Chauhan, Nano-interface driven electrochemical sensor for pesticides detection based on the acetylcholinesterase enzyme inhibition. *International Journal of Biological Macromolecules*, 164 (2020) 3943-52. [I.F.-5.1]
2. Preety, N. Chauhan, S. Sharma, **V. Hooda**, Improved protein determination assays obtained after substitution of copper sulfate by copper oxide nanoparticles. *Analytical Biochemistry*, 13 (2018) 19-25. [I.F.- 2.334]
3. S. Sharma, **V. Hooda**, Identification of coding sequence and its use for functional and structural characterization of catalase from *Phyllanthus emblica*. *Bioinformation*, 14 (2018) 008-014.
4. Preety, S. Sharma, **V. Hooda**, Purification and analytical application of *Vigna mungo* chitinase for determination of total fungal load of stored cereals. *Applied Biochemistry and Biotechnology*, 186 (2018) 12-26. [I. F.- 1.751]
5. **V. Hooda**, Archita, Enzymes loaded chitosan/coconut fibre/zinc oxide nanoparticles strip for polyamine determination. *Food Chemistry*, 239 (2018) 1100-1109. [I.F.- 6.1]
6. Preety, **V. Hooda**, A novel polyurethane/nano ZnO matrix for immobilization of chitinolytic enzymes and optical sensing of chitin. *International Journal of Biological Macromolecules*, 106 (2018) 1173-1183. [I.F.- 5.1]
7. Preety, **V. Hooda**, Increasing the efficiency of immobilization and chitin determination using copper oxide nanoparticles. *Talanta*, 168 (2017) 246-256. [I.F.- 4.162]
8. N. Chauhan, U. Jain, R. Gandotra, **V. Hooda**, Zeolites-AuNPs assembled interface towards amperometric biosensing of spermidine. *Electrochimica Acta*, 230 (2017) 106-115. [I.F.- 4.798]
9. V. Sachdeva, **V. Hooda**, Effect of changing the nanoscale environment on activity and stability of nitrate reductase. *Enzyme and Microbial Technology*, 89 (2016) 52-62. [I.F.- 2.502]
10. N. Chauhan, R. Rawal, **V. Hooda**, U. Jain, Electrochemical biosensor with graphene oxide nanoparticles and polypyrrole interface for the detection of bilirubin. *RSC Advances*, 6 (2016) 63624-33. [I.F.- 3.108]
11. **V. Hooda**, V. Sachdeva, N. Chauhan, Nitrate quantification: recent insights into enzyme based methods. *Reviews in Analytical Chemistry*, 35 (2016) Issue 3. [I.F.- 1.917]
12. V. Sachdeva, **V. Hooda**, Immobilization of nitrate reductase onto epoxy affixed silver nanoparticles for determination of soil nitrates. *International Journal of Biological Macromolecules*, 79 (2015) 240-247. [I.F.- 5.1]
13. **V. Hooda**, N. Chauhan, Preety, A novel eco-friendly approach for synthesis of silver nanoparticles using glucose oxidase in immobilized form. *Nanoscience & Nanotechnology-Asia*, 6 (2016).
14. Preety and **V. Hooda**, Immobilization and Kinetics of Catalase on Calcium Carbonate Nanoparticles Attached Epoxy Support. *Applied Biochemistry and Biotechnology*, 172 (2014), Issue 1, 115-130. [I.F.- 1.751]

15. V. Sachdeva and V. Hooda, A new immobilization and sensing platform for nitrate quantification. *Talanta*, 124 (2014) 52–59. [I.F.- 4.162]
16. N. Chauhan, V. Hooda, C.S. Pundir, *In vitro* effects of metal oxide nanoparticles on barley oxalate oxidase. *Journal of Nanoparticle Research*, 15 (2013) 1493-1505. [I.F.- 2.020]

#### **Books/Reports/Chapters/General articles etc:**

1. Vinita Hooda, Nidhi Chauhan and Shringika Soni. Biosensor for fruit quality monitoring, In: 'Biosensors in Agriculture: Recent Trends and Future Perspectives', ed. Ramesh N Pudake/ Utkarsh Jain / Chittaranjan Kole, Publisher: Springer-Nature.
2. Archeka, Nidhi Chauhan, Neelam, Kusum and Vinita Hooda, Nanobiosensors for monitoring Soil and Water Health. In: "Agricultural and Environmental Nanotechnologies: Innovations and Perspectives". Cambridge Scholars Publishing.

#### **Invited Lectures/ talks**

- i) Delivered an invited lecture on “ Ethics in Research and Publication” in a training program organized by Directorate of Human Resource Management, CCSHAU, Hisar on Oct. 07, 2020
- ii) Delivered an invited lecture on “Applications of Nanotechnology in Agriculture” in a webinar series at Amity Institute of Nanotechnology, Amity University, Noida on May 27, 2020.
- iii) Delivered an extension lecture on “Enzyme Technology: Current Trends to Future Directions” at Government College for Women on February 22, 2019.
- iv) Delivered short invited talk/plenary lecture on “Harnessing the Power of Nano to Ensure Food Security and Sustainable Agriculture” in first national conference of Indian Science Congress Association-Rohtak Chapter on “Science & Technology for Sustainable Development” on February 12, 2019
- v) Delivered invited lecture on “Agriculture Nanotechnology: Prospects and Possibilities” in a short term course on ‘Recent Advancements in the field of Healthcare, Biotechnology and Environmental Sciences’ organized by Department of BioMedical Engineering, DCRUST, Murthal of 11.02.19.
- vi) Invited talk on the topic “Plants and Human Welfare”at DST Inspire Science Camp held at Ch. Bansi Lal University Bhiwani from 25<sup>th</sup> to 29<sup>th</sup> October, 2016
- vii) Extension lecture delivered at Ch. Bansi Lal University Bhiwani on the topic “Protein Structure Prediction”on 22<sup>nd</sup> October, 2016.
- viii) Lecture delivered on the topic “Factors affecting personality” at the Lecture Series on “Carrier Opportunities and Competencies for Global Job market” organized by the Institute of Management Studies and Research, M.D.University, Rohtak on 11<sup>th</sup> November, 2016
- ix) Extension lecture on “Disaster Management” at NSS camp organized by NSS unit, M.D.University in November, 2016

- x) Delivered a lecture on “Protection of Environment” at Kanya Mahavidyalaya Kharkhoda on 24.10.2013
- xi) “ Food Security in the Twenty First Century” at Government College, Julana on 20.08.2011
- xii) “Origin of Life on Earth” at Government College, Julana on 20.08.2011
- xiii) “Climate Change: Environmental and Health Effects” at Government College Julana on 01.12.2010
- xiv) “Role of Youth in Environment Preservation” at Government College Julana on 01.12.201
- xv) Delivered Radio talk on Özone Parat: Dharti ka suraksha kawach:, recorded on 07.09.2016 and broadcasted on 13.09.2016 at 7: 30 A.M.
- xvi) “Ikkiswi sadi mei Khad Suraksha (Food Security in the 21<sup>st</sup> Century) at All India Radio, Rohtak.
- xvii) “Antariksh mein Bharat” at All India Radio, Rohtak.
- xviii) “Pradushan ka Prayay – Global Warming” at All India Radio, Rohtak.
- xix) “Stem Cell Therapy” at All India Radio, Rohtak.
- xx) “Jal, Vayu tatha Saur Urja” at All India Radio, Rohtak.
- xxi) “Vilupt Hote Vanya Jeevon Se Prabhavit Hota Jan-Jeevan” at All India Radio, Rohtak.

### **Participation in some recent conferences/ seminars/ training programmes**

- i) Attended one day Assessors Orientation Programme organized by NAAC at Kurukshetra University on Feb 15, 2019.
- ii) Co-ordinated a technical session in first national conference of Indian Science Congress Association-Rohtak Chapter on “Science & Technology for Sustainable Development” on February 12, 2019.
- iii) Oral presentation on the topic “Use of copper oxide nanoparticles for improved protein determination” at Second International Conference on Nanobiotechnology for Agriculture: Detection, Conservation and Responsible Use of Natural Resources” organized by TERI-Deakin Nanobiotechnology Centre at TERI, Gwal Pahari, Gurugram from December 13-14, 2019.
- iv) Oral presentation on the topic “Defluoridation of water using epoxy/silver nanoparticles conjugates” at the Swarna Jayanti National Conference on Biodiversity & Sustainable Utilization of Plant Resources organized by Department of Botany, Kurukshetra University from February 17-18, 2017
- v) Oral presentation on the topic “Polyamine sensing using amine oxidases/chitosan/zinc oxide nanoparticles conjugated strip” at National Conference on TRENDS IN NANOBIO TECHNOLOGY held at CCS Haryana Agricultural University, Hisar from 29-30<sup>th</sup> November, 2016
- vi) Poster presentation on the topic “Diverse enzyme based methods for nitrate quantification” at National Conference on “Genetic Diversity and Therapeutic Potential of Natural Products”organized by the Dept. of Genetics, M.D.University, Rohtak on September 17, 2016

- vii) Attended one week training program on “E-content development for Higher Education” organized by UGC, Academic Staff College, B.P.S. Mahila Vishwavidyalaya, Khanpur Kalan (Sonapat) from July 21- 26 July, 2014
- viii) Co-chaired a session on ‘Sustainable development’ in the ‘National Seminar on Law and Social Justice in India’ held on March 8-9, 2014 organized by Department of Law, M.D.University
- ix) Presented two posters on the topics “In vitro effects of metal oxide nanoparticles on barley oxalate oxidase” and “Immobilization and kinetics of catalase on calcium carbonate nanoparticles attached epoxy support” at the TechConnect World 2013 conference held at Washington DC, U.S.A. from May 12-16, 2013.
- x) Attended fifth UGC-Networking Resource Centre Workshop in Biological Sciences from 1<sup>st</sup>-25<sup>th</sup> May, 2012 at Indian Institute of Science, Bangalore.
- xi) Presented Paper in International Seminar on “Emerging Threats and Challenges to Biodiversity: Policy Framework for Sustainable Management” at S. V. University, Tirupati from 2<sup>nd</sup>- 4<sup>th</sup> March, 2012.
- xii) Attended National Seminar on “Challenges in Combating Diseases: Cause to Cure” organized by Department of Zoology, M.D.University on 23<sup>rd</sup> March, 2012.
- xiii) Attended one day National Seminar on “Recent Advances in Application of Genetics” organized by Department of Genetics, M.D.University on 20<sup>th</sup> March, 2012.
- xiv) Presented Paper in “International Conference on Nanomaterials and Nanotechnology” organized at University of Delhi from 18<sup>th</sup> December – 21<sup>st</sup> December, 2011.
- xv) Successfully completed the Summer School on “Comparative Genomics and Proteomics in Drug Discovery” from 30<sup>th</sup> May – 13<sup>th</sup> June, 2011 at UGC-Networking Resource Centre in Biological Sciences, School of Biological Sciences, Madurai Kamraj University, Madurai – 625021.
- xvi) Presented Poster at a workshop on Nanoscience and Nanotechnology, “Aligarh Nano 1” organized by the Dept. of Applied Physics, from 26<sup>th</sup>-27<sup>th</sup> March, 2011 at A.M.U., Aligarh .
- xvii) Attended the refresher course in Life sciences from 15<sup>th</sup> Feb- 9<sup>th</sup> March, 2011 organized by CPDHE at Delhi University.
- xviii) Attended one-day India-Japan Seminar on “Nanomaterials for Diagnostics and Therapeutics” organized by the Dept. of Biochemistry on Oct 30, 2010 at M.D.University, Rohtak.
- xix) Successfully completed the three days National Workshop on Bioinformatics organized by the Dept. of Biotechnology from 14-16 Sept, 2010 at M.D.University, Rohtak