

**DEPARTMENT OF ZOOLOGY**  
**M.D. UNIVERSITY, ROHTAK**



**Faculty profile**

1. Name of the Faculty Member : **Dr. Minakshi Sharma**  
2. Designation : **Professor**  
3. Contact : Ph.01262 393065; 09996211189  
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**1. Educational qualifications**

Degree	Year of passing	University/Institution
Ph.D	2005	M.D.University
PG	1994	M.D.University
UG	1992	M.D.University
Others -NET qualified		

**Gold Medalist in PG & CSIR NET qualified (1995)**

**PhD Title-** “Development of an enzymic sensor for Triglycerides determination”

**2. Career Profile**

Designation	Institution	Duration
Asstt. Professor	University, college, M.D.University, Rohtak	1996 to 2009

Reader	Deptt. of Zoology, M.D.University, Rohtak	2009 to 2012
Associate professor	M.D.University, Rohtak	2012 to 2015
Professor	M.D.University, Rohtak	2015 to till date

**Specialization: Animal Biochemistry, Enzymology, Nano Biosensors, Nanotoxicology, Biosensor technology & Green nanotechnology**

**3. Research advisory.**

	<b>Ph.D</b>		
<b>No. of students supervised</b>	<b>Awarded</b>	<b>Registered</b>	<b>M.Phil</b>
	01	03	-

**4. Projects undertaken**

<b>Title of projects</b>	<b>Duration</b>	<b>Funding agency</b>	<b>Status</b>	
			<b>Completed</b>	<b>In progress</b>
Preparation of triglyceride biosensor	3 years	DBT, N Delhi	<b>Completed</b>	-
CNT based potentiometric biosensor for nitrate determination	3 years	UGC, N. Delhi	<b>Completed</b>	-

**5. As Convener & Head of the Zoology Department (w.e.f. June 2012 to June 2015) published proceedings of National Seminars with ISBN Number ;**

Title of the Book	Publisher	ISBN No.	Year of Publication
Proceedings of national Seminar, "Promising Trends in Science Galaxy"	Department of Zoology	978-81-920945-3-3.	2013
Proceedings of national Seminar, "Next Generation Sciences: vision 2020 and beyond"	Department of Zoology	978-81-920945-4-0	2014
Proceedings of national Seminar "Innovative research in Life Sciences"	Department of Zoology	978-81-920945-5-7	2015

## 6. Invitations from abroad

- i. To join group of authors with Nova Science Publishers Inc, New York
- ii. To present research paper at de Montreal, Montreal University (Canada), (August, 2009).

## 7. Other contributions

- a) Assignments of MD University, Rohtak
- **Chairperson**, Zoology Deptt ( **June 2012 to June 2015**)
- **Chairperson**, UG Board of Zoology
- **Chairperson**, PG Board of Zoology
- **Chairperson**, DRC Zoology

### Acted as:

- Superintendent in –Chief for P.G Examination
- Centre Superintendent for P.G Examination
- Member of Committee for Entrance Examination for various M.Sc courses in Faculty of Life Sciences.
- External Practical Examiner for UG Classes
- Member of screening committee for Faculty positions in Life Sciences
- Member Academic Council of University
- Vice Chancellor nominee for appointments of Asstt.Prof.and for Teacher fellowship
- Convenor and member of Inspection committees for various Universities maintained colleges

- b) Assignments outside MD University, Rohtak

- Member of PG Board of Zoology in other Universities
- External Practical Examiner for PG Practicals in various Universities
- Judge in District, Inter District, State level Science Exhibition by various colleges.

**Refresher Course: 03**

**National Conferences: 50**

**International Conferences/Seminars: 20**

## 9. Publications:

### NCBI Gene sequences:

1. Sandip K Dash, Shashi Khare, **Minakshi, Sharma**, Ashok Kumar, *Neisseria meningitidis*, strain MC58 outer membrane protein (ompM) gene partial cds. NCBI GenBank, 2010, HQ712170.
2. Sandip K Dash, Shashi Khare, **Minakshi, Sharma**, Ashok Kumar, *Neisseria meningitidis*, strain MC58 outer membrane protein (*Omp85*) gene partial cds. NCBI GenBank, 2010, HQ712171

### Research Papers

1. **Minakshi** & C.S. Pundir. Preparation of reusable enzyme strip for determination of serum triglyceride, *Indian Journal of Chemical Technology*, Vol. 12; 539-542, **2005**.
2. M. Bhambi, **Minakshi** & C.S. Pundir. Preparation of oxygen meter based biosensor for determination of triglyceride in serum, *Sensors & Transducers*; Vol. 67: 561-567, **2006**.
3. **Minakshi** & C.S. Pundir. Co-immobilization of lipase, glycerol kinase, glycerol-3-phosphate oxidase and peroxidase on to aryl amine glass beads affixed on plastic strip for determination of triglycerides in serum, *Indian Journal of Biochemistry and Biophysics*, Vol. 45: 111-115. **2008**
4. **Minakshi** & C.S. Pundir. Construction of an amperometric enzymic sensor for triglyceride determination, *sensor and actuators B: Chemical*, Vol. 133: 251-255. **2008**.
5. Narang J. **Minakshi**, Bhambi M. & Pundir C.S. Fabrication of an Amperometric Triglyceride biosensor based on PVC membrane, *Analytical letters*, Vol. 43: 1-11, **2010**
6. **Minakshi** and Meenu:. Biosensors for nitrate determination in drinking water and biological fluid. *Natl. Seminar on Computing Life: Raw to Refined*, Volume- 1 Pp-69-74, **2010**
7. **Minakshi Sharma** and Meenu. Role of biosensors in clinical diagnosis of diseases. *Internet: Application in Research (2011)* 168-174 [ISBN: 978-81-920945-1-9].
8. **Minakshi Sharma**, Sandip K Das, Meenu, Ashok Kumar. Application of carbon nanotubes for development of genosensor. *Internet: Application in Research (2011)* 19-23. [ISBN: 978-81-920945-1-9].
9. **Minakshi Sharma** and Meenu. Enzyme based biosensors for aspartate determination in soft drinks and fruit juices. *Internet: Application in Research (2011)* 146-148 [ISBN: 978-81-920945-1-9].
10. Dash SK, **Sharma M**, Kumar A, Diagnostic techniques and treatment of meningitis. In *Meningitis: Causes, Diagnosis and Treatment*. Houllis G, Karachalios M, Eds. Nova Science Publishers Inc, New York, **2012**, pp 203-223.

11. Sandip K Dash, **Minakshi Sharma**, Shashi Khare, Ashok Kumar. *rmpM* Gene as a genetic marker for human bacterial meningitis. *Cellular and Molecular Biology*. Volume 58, 26-30 (2012).
12. Dash SK, Sharma M, Khare S, Kumar A, *rmpM* gene as a genetic marker for human bacterial meningitis. *Cell Mol Biol (Noisy-le-Grand, France)* 2012, 58:26-30.
13. **Sharma M**, Yadav S, Dash SK, Kumar A, Nanotechnology in enzyme sensors: A review. *Proceedings of National Seminar on Challenges in Combating Diseases: Cause to Cure*, 2012.
14. **Minakshi Sharma**, Meenu, Sandeep Yadav. A review on biosensors. *Reviewed proceedings of National seminar on "challenges in combating diseases: Cause to cure"* (2012) 230-241. [ISBN: 978-81-920945-2-6].
15. **Minakshi Sharma**, Sandeep Yadav, Sandip K Dash, Ashok Kumar. Nanotechnology in enzyme sensors: A review. *Reviewed proceedings of National seminar on "challenges in combating diseases: Cause to cure"* (2012) 261-266. [ISBN: 978-81-920945-2-6].
16. Sandip K Dash, **Minakshi Sharma**, Ashok Kumar, Diagnostic techniques and treatment of meningitis. In: Houllis G, Karachalios M (ed) *Meningitis: Causes, diagnosis and treatment*, Nova Science Publishers Inc, New York, USA, 2012, pp 203-223
17. Dash SK, **Sharma M**, Khare S, Kumar A, Quick diagnosis of human brain meningitis using *Omp85* gene amplicon as a genetic marker. *Ind J Microbiol* 2013, 53(2):238-240.
18. Dash SK, **Sharma M**, Khare S, Kumar A, *Omp85* genosensor for detection of human brain bacterial meningitis. *Biotechnol Lett* 2013, 35:929-935.
19. Dash SK, **Sharma M**, Khare S, Kumar A, *rmpM* genosensor for detection of human brain bacterial meningitis in cerebrospinal fluid. *Appl Biochem Biotechnol* 2013, doi: 10.1007/s12010-013-0339-3.
20. **Sharma M**. Concept of Triglycerides Biosensor--.. *In Proc –"Promising Trends in Science Galaxy": 168/2013/ISBN: 978-81-920945-3-3,( August 2013)*
21. **Minakshi Sharma**, Mamta sharma and C.S.Pundir :Nitrate determination in drinking water by nitrate Reductase Based Biosensor, *Journal of Basic and Applied Engg. Res.* 2014:1(14); 107-112.
22. **Sharma M**. Purification of nitrate reductase from Zea Mays by affinity chromatography - *- In Proc –Promising Trends in Science Galaxy: 130/2013/ISBN: 978-81-920945-3-3, (August 2013).*
23. **Sharma M**. Amperometric Biosensor For Nitrate Determination In Drinking Water :A Review—*In Proc.Advances in applied Physical and Chemical Science—A sustainable Apporoach:122/2014/ISBN:978-93-83083-72-5,(19-20<sup>th</sup> August, 2014)*
24. Mamta sharma & **Minakshi Sharma**: Physiological Analysis of Drinking Water of Faridabad city, Haryana, *J.Chemical Biological and Physical Sci.* 2015:5(2):2230-2235.
25. **Minakshi Sharma**, Mamta sharma and C.S.Pundir: Nitrate Reductase-NADH/cMWCNT based electrochemical sensor for nitrate determination , *Int. J. of Res. in Advent Tech.* 2015:3(5)5-14.
26. Ritu, Mamta Sharma, Shelly & **Minakshi Sharma**: Aspartame determination in soft drinks, *Int.J. of Res. in Emerging Sci. & Tech.* 2015:2(4) 41-44.
27. Mamta sharma & **Minakshi Sharma**: Microbial Analysis of water at Bhiwani City, Haryana. *Int.J.of Advanced Multidisciplinary Res.* 2015:3(4) 159-166.
28. Mamta sharma & **Minakshi Sharma**: Biosensor for clinical diagnosis, *Int.J.of Advanced Multidisciplinary Res*, 2015:3(4) 329-343.

29. Mamta Sharma, **Minakshi Sharma** & C.S.Pundir: Further Purification And Characterization of Nitrate Reductase from Corn Leaves (*Zea mays* HQPM-4) *In.J. of Recent Scientific Research*, **2015**:6(4) 3755-3759.
30. Ritu Hooda, Mamta Sharma, Renu Rani and **Minakshi Sharma**: Physicochemical analysis of water samples of RO purifiers and simple water filters of Rohtak city (Haryana), *proceedings of national seminar on "innovative research in life sciences" 2015*, 75-78, ISBN:978-81-920945-5-7.
31. Mamta Sharma and **Minakshi Sharma**: Galactose oxidase nanoaggregates: Preparation and characterization, *Oriental J. of Chemistry*, 2016, Vol. 32, No (1), 509-513. (Impact factor - **0.5**)
32. Mamta Sharma and **Minakshi Sharma**: Galactose oxidase nanoparticles based nanosensor for amperometric determination of galactose, *Int. J Pharma Bio Sci.* **2016**, 7 (3): 872-879. (Impact factor – **5.1**)
33. Mamta Sharma and **Minakshi Sharma**: Amperometric galactose biosensor based on silver nanoparticles/carboxylated multiwalled carbon nanotubes/polyaniline composite film, *Int. J of Recent Scientific Research*, **2017**, 8 (8) :18976-18983.
34. Mamta Sharma, Versha Gatum and **Minakshi Sharma**: Design and characterization of GALOx/PbONPs/GE based galactose biosensor, *Advanced Science Letter*, feb **2018**,(24): 853-858.

#### List of conferences/seminar /workshops :

- Refresher Course from 17/09/2007 to 06/10/2007 at Academic Staff College, Kurukshetra University, Kurukshetra.
- Workshop on Patent Awareness on 21/12/2005 at Deptt. of Bio-Sciences, M.D.University, Rohtak.
- Workshop attended on 25/10/2007 at Department of Environmental Sciences and Engg. G.J.U, Hisar.
- Workshop attended from 21/08/2007 to 22/08/2007 at Advance centre for Biotechnology M.D.University Rohtak
- Water risks life, 2007 at Deptt. of Bio-Sciences, M.D. University, Rohtak.
- DST sponsored National Workshop on "Immobilized enzyme technology for Sensors" organized by Dept of Biochemistry and Genetics, M. D. University, Rohtak from Aug. 24 to Sept. 2, 2007.
- Biological Science-A Current Perspective" March 12 -13, 2008, Dept of Botany and Zoology, Pt. NRS Govt College, Rohtak
- International conference on biosensor from June 14-17, 2009 at De Montreal University, Montreal- Canada.
- India-Japan Seminar on October 30, 2010 at Department of Biochemistry M.D.University, Rohtak.
- National Seminar on "Environmental and Health Issues": In a changing climatic Scenario on October 14-15, 2011 at Department of Environmental Sciences, M.D.University, Rohtak.
- National Conference on "Biodiversity: Challenges and Opportunities "on February, 18-19, 2011 at Department of Botany, M.D.University, Rohtak

- National Seminar on “Internet: its application in research” on March 26, 2011. at Department of Zoology, M.D.University, Rohtak
- Science Conclave-2011, Interaction of innovative young minds with eminent scientists. December 2-3, 2011. M. D. University, Rohtak.
- National workshop on Bioinformatics on September 14-16, 2010 at Centre for Biotechnology, MDU, Rohtak
- National Seminar on “Combating Diseases: Cause to Cure “March 23, 2012 at Department of Zoology, M.D.University, Rohtak
- 2nd National Seminars on “Microbes in Human Welfare”. March 24<sup>th</sup>, 2012 by Association of Microbiologists of India-Rohtak unit, M.D. University, Rohtak
- National Seminar on “Recent Advancements in Application of Genetics”. March, 20<sup>th</sup>, 2012. Department of Biochemistry. M. D. University, Rohtak.
- National Seminar on “Entrepreneurship Development in Food Processing Sector” 25<sup>th</sup> March, 2015
- National Conference cum Workshop on “Molecular Modeling and Drug Design” 20-21 March, 2015
- National Conference on Therapeutic Potential of Natural Products : Current Innovations & Future Trends 19<sup>th</sup> March, 2015
- National Conference on “Applied Physics and Material Science” Feb. 5-6, 2015
- 3<sup>rd</sup> International conference on” Applied Science, Environ. Engg. and Clean tech. for Sustainable, Development. 25<sup>th</sup> -26<sup>th</sup> April, 2015
- 54<sup>th</sup> Annual Conference of Association of Microbiologists of India (AMI) Nov. 17-20, 2013.
- 7<sup>th</sup> Annual Convention of ABAP & International Conference on “Plant Biotech., Molecular medicine & Human Health, Oct. 18-20, 2013.
- National Workshop on “Genomics in Crop Improvement, Feb. 27-28, 2014.
- National conference on “Pollution mitigation for a sustainable future” Feb. 27-28, 2014.
- National conference on “Genetics Diversity and Therapeutic Potential of Natural Products” organized by Deptt. of Genetics, MDU Rohtak on 17<sup>th</sup> September 2016.
- International conference on “Recent Advances in Nanoscience & Nanotechnology-2016” organized by Special Centre for Nanoscience, Jawaharlal Nehru University, New Delhi, India on December 19-20, 2016.
- International conference on “Emerging Area of Environmental Science and Engineering” organized by Dept of Environmental Science & Engineering, Guru Jambheshwar University of Science & Technology, Hisar on February 16-18, 2017.
- National conference on “Biodiversity: Status and Significance” organized by Dept. of Botany, MDU Rohtak on March 21, 2017.
- National seminar on “Current Scenario in Forensic Investigative Techniques” organized by Deptt. of Genetics, MDU Rohtak on 7<sup>th</sup> September 2017.
- National conference on “Emerging Trends in Biochemistry” organized by Dept. of Biochemistry, MDU Rohtak on September 15-16, 2017.
- International Conference On “Sustainable Agriculture, Energy, Environment And Technology (Icsaet-2018)” February 24-25, 2018