

# POOJA RANA

## ASSISTANT PROFESSOR



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**Name:** Dr Pooja Rana

**Designation:** Assistant Professor

**Qualification:** M.Sc.in Biochemistry, Ph.D in Biochemistry

**Experience:** 14 years Teaching & Research

## Academic Background

2002 - 2006

**Ph D Biochemistry (8.32 / 10)**

**Punjab Agriculture University, Ludhiana, Punjab**

Advanced Enzymology, Advanced Molecular Biochemistry, Proteins and Nucleic Acids, Fundamental of Toxicology, Toxicology of Agro chemicals, Molecular immunology, Chemistry of natural products, Organic Chemistry.

2000 - 2002

**M.Sc. Biochemistry (8.18 / 10)**

**Punjab Agriculture University, Ludhiana, Punjab**

General Biochemistry and Metabolism, Enzymology, Radiation Biology and Immunobiocemistry, Molecular Biochemistry, Plant Biochemistry

1997 - 2000

**B.Sc (76.85%)**

**Punjab University, Chandigarh**

Zoology, Biochemistry, Chemistry, English, Punjabi.

1995 - 1996

**XII<sup>th</sup> (79.88%)**

**Central Board of Secondary Education (CBSE)**

English, Biology, Physics, Chemistry.

## Academic Projects

### **Ph D:**

*In vivo* studies on the Antioxygenic Potential of some herbs.

### **M Sc:**

Studies on the Antioxygenic Potential of Rice bran oil in Albino rats.

## Achievements

- Qualified Agricultural Scientist recruitment board (**ARS**) – **National Eligibility Test (NET)** ( For Lectureship / Assistant Professorship) – 2005.
- Qualified Council of Scientific and Industrial research (**CSIR**) – **National Eligibility Test (NET)**- 2004
- Qualified Indian Council of Medical Research ( **ICMR - JRF**)-2004
- **Award of Honour** for securing highest OCPA in Ph D Biochemistry for the year 2005.
- **University Merit Scholarship** holder during M.Sc. and PhD programme.
- Recipient of **Award of Honour** (Academics /Research-2003) for best poster award (Satellite Seminar for Cropimprovement, Palampur-2003)

## Research Skills

### Hands on experienced in various lab techniques:

- Chromatographic techniques
- Separation of Proteins by SDS PAGE, Native PAGE
- Western Blotting
- Molecular Biology Techniques
- Immunological techniques
- Basic Microbiological techniques (Pour plating, inoculations etc)
- UV and visible spectrophotometry
- Techniques used in Proteomics
- Cell Biology Techniques
- Enzyme kinetics

In addition to these techniques, I am well versed in the techniques such as PCR , NMR, Mass Spectroscopy, IR, DNA sequencing techniques, Southern and Northern Analysis, cDNA and genomic library, DNA finger printing, molecular markers etc.

## Research Area

- Isolation and purification of compounds from natural products and exploring their potential in alleviation of various diseases.
- Drug Discovery
- Nanoparticles and their potential uses

## PROFESSIONAL CAREER OVERVIEW

Modern College of Art, Science and Commerce, Ganeshkhind, Pune

Assistant Professor

May 2009 till date

- Teaching expertise in Advanced Biochemistry, Advanced Enzymology, Metabolic Pathways, Immunology Genetic Engineering, Molecular Biochemistry, Biochemical and Biophysical techniques, Intellectual Property rights, Clinical Research(Theory and Practicals both)
- Seven times appointed as Chairman for the subject of Biotechnology at undergraduate and postgraduate level at Savitribai Phule Pune University.
- External Examiner for postgraduate and undergraduate course of Biotechnology by Savitribai Phule Pune University.
- Appointment as Paper-Setters and Moderators for postgraduate and undergraduate course of Biotechnology by Savitribai Phule Pune University.
- Appointed for the Central Assessment Program (CAP) by the Savitribai Phule Pune University.
- Worked in Examination department of the college for conducting internal exams.
- Worked as contributing faculty to the Chemistry department of Modern College for the subject of Biochemistry for post graduate students.
- Invited as guest speaker for Nanoscience Workshop in department of Physics at Modern College.

### Visiting Faculty

Visiting Faculty

May 2007 - May 2009

Worked as visiting faculty in various Institutes for preparing students for Competitive Examinations (CET, NEET, IIT JEE)

## Publications

- **Pooja Rana**, S.Vadhera and Giridhar Soni (2004) In vivo antioxygenic potential of Rice bran oil in albino rats. *Indian journal Physiology and pharmacology* 48(4):428-36.
- **Pooja Rana** and G Soni (2008) Antioxygenic potential of thyme: Alleviation of NDEA induced oxidative stress in “*Human and Experimental Toxicology*” 27: 215-221
- **Pooja Rana** and Giridhar Soni (2008) Role of cumin extract in alleviating NDEA induced oxidative stress in “*Toxicology International*” 15(1):7-1
- Akashdeep, **Pooja Rana** and Giridhar Soni (2012) Effect of cultural manipulations on antioxidant potential of tissue cultured *Mentha spicata* (SPR 8) *Journal pharmacy Research* 4(10),3368-3371
- Akashdeep, **Pooja Rana**, S S Gosal and Giridhar Soni (2013) Antioxidant potential of tissue cultured *Mentha spicata* in *Journal pharmacy Research* (1),90-96
- Akash Deep\*, **Pooja Rana**, S S Gosal and Giridhar Soni (2014) *In vitro* lipid peroxidation of tissue cultured, and tissue culture derived *Mentha* plant *Journal of Applied Pharmaceutical Science* Vol. 4 (06), pp. 079-083
- Akashdeep, **Pooja Rana** and Giridhar Soni (2017) Iron Chelation and Iron Reducing Activity of Tissue Cultured and Tissue Culture Derived *Mentha Spp.* *Journal of Applied Pharmaceutical Science* Vol. 7 (05), pp. 078-083

- Swarda Deo and **Pooja Rana** (2018) Isolation, screening, and characterization of Biosurfactant Producing Microorganisms from petroleum contaminated soil and further optimization of parameters for Biosurfactant production. *International Journal of Pharmaceutical and Biological Archives* 9(3):53-59

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## **Books:**

- Textbook of Bio-Analytical Techniques for S.Y Biotechnology, ISBN-978-93-90506-23-1 Nirali Prakashan
- Textbook of Metabolism for S.Y Biotechnology, , ISBN-978-93-90506-66-8 Nirali Prakashan

## **WorkShops & Conferences**

- Participated in **71<sup>st</sup> Annual meeting of Society of Biological Chemist India**, 14 to 16 Dec 2002 at Punjab Agriculture University, Ludhiana
- Participated in Two days National seminar on *Convergence of Law and Biotechnology* organized by DES Law College and Fergusson College, Pune on 17 and 18 Feb 2010
- Participated in one day workshop on discussion of revised **Syllabus S.Y. B.Sc (Biotechnology)** at Modern college Shivaji Nagar, Pune on 4<sup>th</sup> Dec 2009
- Participated in **National workshop** on Statistical Analysis and clinical trials 18-20 dec2010 organized by Modern college of Arts, Science and Commerce, Shivaji Nagar ,Pune
- Participated in *International conference on Current Trends in Medicinal Plants Research* 10-12 Jan 2012organized by department of Botany University .of Pune.
- Participated and presented a **poster** entitled “Isolation, screening, and optimization of parameters for biosurfactant production by the microorganisms isolated from contaminated soils” at international conference on “Advances in Biotechnology and Bioinformatics” ICAAB 2013
- Attended a Workshop on “Cancer Biology” at IISER Pune on Aug -13,2014
- Attended a UGC sponsored **National Conference** on “innovative ideas and Research in Life Sciences for Sustainable Development”organized by Department of zoology, Nowrosjee Wadia College of Arts Science 16<sup>th</sup> and 17<sup>th</sup> January 2015.
- Participatd in **faculty Quality Improvement programme** Biointegration 2015-“Integrating Chemistry and Physics in rediscovering Biotechnology” held at institute of Bioinformatics and Bitechnology. Savitribai Phule Pune University from 25<sup>th</sup> to 27<sup>th</sup> February 2015
- Attended and presented poster in “**National Conference on CHEMICAL SCIENCES:AN INTERDISCIPLINARY APPROACH(CSIA-2018)**” Jan 18-20,2018,sponsored by DBT, organized by department of chemistry, Modern College of Arts, Science and Commerce Ganeshkhind ,Pune.
- Participated in **International Conference on “Recent Trends In Life Sciences” ICRLTS-2018** sponsored by SPPU 2<sup>nd</sup> and 3<sup>rd</sup> February 2018, organized by department of Zoology, Modern College of Arts, Science and Commerce Ganeshkhind ,Pune.
- Participated in **National workshop** on “Use of appropriate softwares in Mathematical Modelling and Statistical Analysis” held on 9 and 10 february,2018 Organizedby department of

Mathematics and Statistics, , Modern College of Arts, Science and Commerce Ganeshkhind ,Pune.

- Attended 8 days **Faculty Development Programme on “National Seminar on Animal Cell Culture”** organized by HRDC at Guru Nanak Dev University, Amritsar, Punjab from 8 May-14 May,2018.
- Completed FDP on Teaching and planning organized by PES Modern BEd College on 11-13<sup>th</sup> of July, 2019.
- Participated and worked as committee member in one Day National seminar on Innovative and Best Practices in Higher Education organized by Modern College, Ganeshkhind in Collaboration with NAAC, Bangalore on 26 July 2019
- Participated in Science Popularization Program Science Fair-2019, sponsored by DBT, Govt of India on Aug 30,2019.
- Successfully completed **Orientation/refresher/ Induction** Programme for “Faculty in Universities/Colleges/Institutes of higher education” organized by Teaching -Learning centre Ramanujan College sponsored by PMMMNMTT), MHRD, Govt. of India from 4 June to 1 July, 2020 and obtained grade A.
- Attended **National Workshop** on “Learning Management System-Moodle” organised by SNDT Women’s University Mumbai(One week Online full time) from July 27 to August 1, 2020.
- e-content development for online teaching conducted by Modern college Ganeshkhind,Pune from
- Attended workshop on “ICT tools for Online Teaching” organised by Global Society for Basic and Applied Science (GSBAS), in Association with Sanjivani College of Engineering, Dept. of MBA, Kopargaon on 5/19/2020, with passing score of 90%
- Attended जागरूकता अभियान – “कोविड -१९ आणि मी” , organized by Golbal society for basic and Applied sciences,Thane Mumbai (MS) for the commitment to discharge services to the nation on 5/6/2020, with passing score of 70%.Advanced OBE-Identifying weaker students and remedial actions
- Attended International Conference on “Infectious diseases and Immunopathology” held on 22 -24 April 2021 organized by department of Biotechnology, Savitri Bai Phule Pune University.
- Participated in Proteomics Internship Program 2021 at Indian Institute of Technology, Bombay during May24-June 12, 2021.

### **Workshops/Conferences Organized**

- Organized one day workshop on “Advanced Techniques in Chromatography” **under board of Students'** Development programme of SPPU for undergraduate students on 27<sup>th</sup> January 2020.
- Organised two days **International Conference on “Biotechnology: Perspective & Challenges”** under SPPU Quality Improvement Program on 14<sup>th</sup> -15<sup>th</sup> February, 2020

### **Online Courses done under Swayam**

- Completed online course in Genetic Engineering: Theory & Application (4 credit course) AICTE- NPTEL Faculty Development program with score of 77%.
  - Completed online course under Swayam in Immunology (4 credit course) under Swayam with a consolidated score of 70%
  - Successfully completed Swayam-NPTEL Course on Experimental Biotechnology with score of 76%(Elite+silver)
  - Successfully completed Enzymology Course on July 15, 2020, under Udemy
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## **Key skills**

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- I have developed the right attitude and aptitude by doing PhD and MSc from the premiere institutes in India, which has helped me, explore my area of interest and make a significant contribution for contribution for satisfaction of organizational and individual excellence.
- My presentations in seminars and demonstrations to various concerned in extension have been well taken and appreciated with good communication and analytical skills.
- I have been able to put across my research findings, opinions, and other information at respective platform.
- Self – discipline has taught me time management skills; thus I end up completing assignments on /before deadlines with the required precision and quality. This approach has helped me in completing my MSc and PhD course in time.