

RASHMI, Ph.D, Post Doc.(Japan)

Professor and Head
Department of Basic Sciences
Sardar Vallabhbhai Patel University of Agriculture & Technology
Modipuram, Meerut- 250110 (U.P.), India
Tele: +91-9412318839
Email: sehrawat82@gmail.com

Education:

- **Post Doctoral Visiting Research Scientist**
College of Pharmacy, Kinjo Gakuin University, Nagoya, Japan, 2009. Research Director: Prof. Akito Nagatsu, Ph.D.
- **Ph.D. (Natural Product Chemistry)**
Chemistry Division, Forest Research Institute University, Dehradun, India, 2006. Supervisor: Dr. Rameshwar Dayal, Ph.D.
- **M.Sc. (Organic Chemistry)**
Chaudhary Charan Singh University, Meerut, India, 1997.
- **B.Sc. (Chemistry, Botany, Zoology)**
Chaudhary Charan Singh University, Meerut, India, 1995.

Honors and Awards:

- *Young Scientist Award* (2006): Awarded by Uttarakhand Council of Science and Technology, Dehradun, India.
- *Young Scientist Award* (2007): Awarded by Uttarakhand Council of Science and Technology, Dehradun, India.
- *Young Women Scientist Award* (2010): Awarded by Vijana Bharti, Odissa, India.
- *Innovator of the Year Award* (2012): Awarded by Uttarakhand Council of Science and Technology, Dehradun, India.
- *Young Scientist Award* (2014) : Awarded by Uttarakhand Council of Science and Technology, Dehradun, India.
- *Scientist Assistance Programme (SAP) Award* (2016, 2017): Three times, I have received SAP award by International Union of Forestry Research Organization, Vienna, Austria.

Professional Experience:

- 04/2003-03/2019: Scientist-E, Chemistry and Bioprospecting Division, Forest Research Institute, Dehradun, India.
- 03/2019-continued: Professor and Head, Department of Basic Sciences, SVBPUA&T Meerut.

Current Area of Research:

I have research experience of more than 19 years in value addition of forest biomass/non wood forest products for the benefit of farmers/rural people and society. My current areas of research are phytochemical Investigation of medicinal and aromatic plants, essential oils, fatty oils, biopesticides, value addition of waste biomass into biodegradable entities.

During the period, I have been instrumental in doing extensive and systematic phytochemical research work for enhanced productivity and improved quality of non wood forest produce. A brief account of the notable research contributions are as under:

Research Projects:

- Externally funded by international funding agency (Daiko Foundation), Japan, DBT, DST and NMPB, New Delhi (06no.)
- In-House funding by Indian Council of Forestry Research and Education (ICFRE), Dehradun (07).

Ph.D Students guiding: 04(02no. are ongoing)

TECHNOLOGY DEVELOPED:

- A NOVEL GREEN PRODUCT 'SAMRIDDHI' : An innovative herbal product developed for sericulture farming.
- DEVELOPMENT OF BIO-PESTICIDE: A Bio-pesticide was developed against major defoliators of poplar.
- A HERBAL PROCESS WAS DEVELOPED TO ISOLATE THE ESSENTIAL OIL FROM AROMATIC PLANTS: An innovative approach for enhanced yield and superior quality of essential oil from aromatic plants was evolved.

Bibliography:

A. Patent: A patent on 'A process for obtaining phytoecdysteroids from weeds of amaranthaceae for the synchronized maturation of mulberry silkworm' filed vide *Indian Patent Application No. 1401/DEL/2013*.

B. Books and Monographs

Book:

- Rashmi Ed. (2010). *Natural Products and Biodiversity: Chemistry and Utilization*, ICFRE Publication, Dehradun.
- **Rashmi**, Editor-in-Chief (2021). Published a *Handbook of Solid Waste Management: Sustainability through Circular Economy*, Publisher: Springer Nature, DOI-<https://doi.org/10.1007/978-981-15-7525-9>, eBook IBN: 978-981-15-7525-9.

• **Total Research papers published: (54)**

- a. *Research paper in Thomson routers referred international journals:* 22
- b. *Research paper in SCI referred national journals:* 21
- c. *Review article in referred journals/ Univ. journal/Book chapter/lead paper in seminar and symposium:* 11

C. Book manuals (published by publishers): Brochures:04 (02in Hindi ; 02 in English)

D. Popular articles in magazine/Abstract in published proceedings/ souvenir: 119 (international: 35; national: 84)

E. Book Chapters: 03

F. Scientific Study Reports: 06


G. TV/Radio Talks:

- A documentary and an interview on the product 'Samriddhi: A product for sericulture farmers' was telecasted on June 23, 2012 (5:30pm, 11:00am) in Hindi and English on Lokshabha channel under programme 'Science this week'.
- An interview on the product 'Samriddhi: A product for sericulture farmers' telecasted on March 25, 2018 (7.00PM) in Hindi on Akashvani Radio, Dehradun at 100.5MHz

frequency under the programme 'Krishi Jagat'

H. Publication in SCI Journals: (Last five years)

1. Sapna Bhardwaj and **Rashmi (2015)**. Phytochemical evaluation and antibacterial potential of *Trichosanthes tricuspidata* root extracts against human pathogenic bacteria, *International Journal of Life Science and Pharma Research*, 5(2), 30-35.
2. Ashwani Tapwal, Purnima Pandey, Suresh Chandra and **Rashmi (2015)**. Antimicrobial activity and phytochemical screening of endophytic fungi associated with *Cassia fistula*, *International Journal of Chemical and Biological Sciences*, 2 (7), 15-21.
3. **Rashmi** and Sapna Tyagi (2015). Phytochemical standardization of *Diploknema butyracea* seeds by HPTLC techniques, *Indian Journal of Natural Product Research*, 6 (4), 299-304.
4. **Rashmi** and Sapna Bhardwaj (2015). *Aleurites moluccana* Seeds: A rich source of Linolenic acid, *Journal of Natural Products*, 8, 123-126.
5. Anita Tomar, **Rashmi** and Anubha Srivastava (2015). General characteristics and Qualitative phytochemical screening of *Artocarpus lakoocha* fruit, *International Journal of Medicine and Pharmaceutical Research*, 3(6): 1231-1234.
6. A.Tapwal, P.Pandey, S. Chandra and **Rashmi (2015)**. Antimicrobial activity phytochemical screening of endophytic fungi and associated with *Cassia fistula*, *International Journal of Chemical and Biological Sciences*, 2 (7):15-21
7. **Rashmi**, Sapna Bhardwaj and A.K.Singh (2015). New Approach towards Tuning Of Essential Oil Properties by Different Grinding Methods in *Cymbopogon citratus* and *Eucalyptus globulus*, *World Journal of Pharmacy and Pharmaceutical Sciences*, 4 (11), 1646-1655.
8. Ashwani tapwal, Sweta Pradhan, Suresh Chandra, **Rashmi (2016)**. Antimycotic activity and phytochemical screening of fungal endophytes associated with *Santalum album*, *Nusantara Bioscience*, 8 (1), 14-17. DOI: 10.13057/nusbiosci/n080104.
9. **Rashmi**, S. Bhardwaj & P.K.Gupta (2017). A Comparative Study of *Cymbopogon citrates* Volatile Oil by Conventional Method Versus Enzyme Pre-Treatment, *Journal of Essential Oil Bearing Plants*, 20 (3): 744 – 751.
10. **Rashmi** and K.P.Singh (2017). Chemical intervention to reduce pest attack on poplar, *Journal of Salicaceae*, 356-364.
11. Baskar, S., **Rashmi**, Chinnappan, C. Baskar (2019). Bio-based Chemicals & Polymers from Biomass or Biowaste, *International J. of Health Medicine and Current Research*, 4(1), 1214-1217.
12. Bhardwaj, S., **Rashmi** and Parcha, V. (2019). Effect of Seasonal Variation on Chemical Composition and Physicochemical Properties of *Hedychium spicatum* Rhizomes Essential Oil, *Journal of Essential Oil Bearing Plants*, 22(6), 1593-1600 (NAAS rating:6.68).
13. Kumar, P., Kumar, D., **Rashmi** and Bhardwaj, S. (2020). Physico-Chemical studies of seed oil of *Prinsepia utilis* Royle (Bhekal) grown in Chakrata region and its comparison with conventional food oils, *Universities Journal of Phytochemistry, Ayurvedic Heights*, 2(29), 5-13 (NAAS rating: 2.69).
14. **Rashmi** and Shikha Baskar (2021). Chemical studies on Fatty oil of *Trewia nudiflora* kernels *Universities Journal of Phytochemistry, Ayurvedic Heights*, 2(31), 26-28.



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