

CURRICULUM VITAE



Name: Dr. Rajendra Mehta
Present Address : Associate Professor, Department of Rural Technology & Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)
Nationality – Indian
Educational Qualification: M.Sc. , Ph.D.
Teaching Experience: UG 28 Years PG 20 Years
Field of Specialization: Molecular Biology and Medicinal Plant Biotechnology, Drug formulation and Extraction.
Publications: List of Publications attached
Patent : 2 Filed (1 Published)

1. Filed a patent wide application no. 201721008553 dated 11th March 2017. Entitled A microwave assisted process for extraction of total phenolic contents from *Taraxacum officinale*. Date of publication: 14th Sep. 2018
2. Filed a patent wide application no. TEMP/E1/41555/2018MUM Reference no. 201821038243 entitled, " A solvent free microwave assisted extraction of volatile oil from *Mentha spicata* leaves."

Research Guidance

- M. Phill dissertation –04 Awarded
- Ph.D. Thesis - 02 Awarded

Academic and professional Responsibilities:

- Working as **Associate Professor**, Department of Rural Technology & Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)
- Member, Board of studies in Microbiology from 1998-2003 at Barkatullah University, Bhopal
- Member, Animal Ethics committee of Rajiv Gandhi Prodhogiki Vishwavidyalaya, Bhopal 2003-2005
- Member Board of Studies of Ruarl Technology from 2005 onwards
- Member, Board of Studies of Ruaral Technology, Baster Vishwavidyalaya, Jagdalpur from 2009 on wards
- Chairman, Board of Studies of Rural Technology, Guru Ghasidas Vishwavidyalaya from 2012 to 27 Feb. 2017.
- Chairman, Board of Studies of Rural Technology, Baster Vishwavidyalaya, Jagdalpur from 2012 27 Feb.2017.
- Member, Academic Council of GGV from 18 Sept. 2012 to 27 th Feb. 2017.
- Member, Academic Council of Baster Vishwavidyalaya, Jagdalpur.
- Member of Board of Studies of Rural Technology , C.V. Raman University Kota, Bilaspur.
- Member of Board of Studies of Microbiology , E. Raghavendra Rao PG College, Bilaspur.
- Member of Board of Studies of PGDRD, Pt. Sunderlal Sharma Open University, Bilaspur.

- Coordinator Youth Parliament (A programme of Ministry Of Parliamentary Affairs) of Guru Ghasidas Vishwavidyalaya from 2017.
- Coordinator Ek Bharat Shreshtha Bharat (A programme of Ministry Human Resource Development) of Guru Ghasidas Vishwavidyalaya from 2017.

Projects: Sanctioned/ Completed

1. Entitled- "Effect of herbicides and heavy metals on nodulation and nitrogen assimilation activity of Rhizobia." **Funded by UGC Ref. No. 4-60(10)/97 (MRP/CRO) Dated 23/12/1997.**
2. Entitle:"Promotion of medicinal plant cultivation for livelihood of rural poor of Bilaspur District, Chhattisgarh". **Funded by CGCOSTRef No. 591/CCOST/08 Dated 24/10/2008 , Rs 1,80,000/-**
3. Entitle: "Studies on terrestrial ecology and aquatic ecology at NTPC Sipat STPP area, Bilaspur (CG). **Funded by NTPC Ref. No. SIPAT/CS/2013-14/13172/1369269 Dated 21/08/2013, Rs 13,06,800/-**

PATENT Filed/ Awarded:

1. **Filed a patent wide application no. 201721008553 dated 11th March 2017. Entitled A microwave assisted process for extraction of total phenolic contents from *Taraxacum officinale*. Date of publication: 14th Sep. 2018**
2. **Filed a patent wide application no. TEMP/E1/41555/2018MUM Reference no. 201821038243 entitled," A solvent free microwave assisted extraction of volatile oil from *Mentha spicata* leaves."**

Invited Talks/ Lectures

1. Delivered a **guest talk** in National Seminar on "Recent trends in Biomedical Sciences" organized by School of Biotechnology, Guru Ghasidas University, Bilaspur (CG) on **March 30, 2006**.
2. Delivered invited talk entitled, " Extraction technique of medicinal plants," on **September 26, 2009** at Unique College, Bhopal.
3. Delivered invited talk entitled, " Alkaloidal drugs, their extraction and medicinal uses," on **May 8, 2010** at Unique College, Bhopal.
4. Delivered invited talk entitled, " Herbal Therapy," on **November 13, 2010** at Unique College, Bhopal.
5. Delivered invited talk entitled, " Medicinal Plants and Their Indigenous uses," on **November 20, 2010** at Christ College, Jagdalpur.
6. Delivered invited talk entitled, " Sustainable Rural Technology for Livelihood Improvement," on **January 8, 2011** at Christ College, Jagdalpur.
7. Delivered invited talk entitled, " Traditional Drugs and their impact on human health," on **April 9, 2011** at Unique College, Bhopal.
8. Delivered invited talk entitled, " Sustainable Rural Technology for Livelihood Improvement," on **January 8, 2011** at Christ College, Jagdalpur.
9. Delivered a invited talk entitled, ' Microbial diversity in aquatic habitat' as a Resource Person on National Conference on, "Microbial Diversity: Exploration, Conservation & Application" organized by Govt. E. Raghendra Rao Post Graduate Science College, Bilaspur (C.G.) on **February 16-17, 2013**.
10. Delivered a lecture on Microbial Diversity in 5th Orientation Programme organized by Academic Staff College, Guru Ghasidas Vishwavidyalaya on **March 13, 2013**.
11. Delivered a lecture on Herbal Drugs in 5th Orientation Programme organized by Academic Staff College, Guru Ghasidas Vishwavidyalaya on **March 21, 2013**.
12. Delivered a lecture on Herbal Drugs in 6th Orientation Programme organized by Academic Staff College, Guru Ghasidas Vishwavidyalaya on **June 13, 2013**.
13. Delivered a lecture on Extraction Technique in 9th Orientation Programme organized by Academic Staff College, Guru Ghasidas Vishwavidyalaya on **December 23, 2013**.

14. Delivered a lecture on Extraction Techniques in 10thOrientation Programme organized byUGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 6, 2014.**
15. Delivered a lecture on Herbal Drug Remedies in 14thOrientation Programme organized byUGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **May 27, 2015.**
16. Delivered a lecture on Herbal Drug Remedies in 16thOrientation Programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 8, 2016.**
17. Delivered a lecture on Herbal Drug Remedies in Refresher course on Botany organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **May 31, 2016.**
18. Delivered a invited talk entitled, ‘Eco-friendly synthesis of Silver nano-particles : A step ahead in reducing pollution ’ as a Resource Person on National Conference on, “Climatic changes and its impact on Agriculture in Chhattisgarh State” organized by Department of Geography, Chaitanya College , Palmgarh on **January 23-24, 1016.**
19. Delivered a lecture on Herbal Drug Remedies in 17thOrientation Programme organized byUGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **January 17, 2017.**
20. Delivered a lecture on Herbal Drug Remedies in 18thOrientation Programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **May 15, 2017.**
21. Delivered a lecture on Herbal Drug Remedies and Food adulteration and its effect on Indian society in Refresher course on Changes in Indian Society organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **May 23, 2017.**
22. Delivered a lecture on Herbal Drug Remedies in 19th Orientation Programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **November 29, 2017.**
23. Delivered a lecture on Adulteration in Herbal Drugs and Preservation and Extraction: A technique in Refresher course on Botany organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **May 23, 2017.**
24. Delivered a lecture on “Traditional Knowledge System ” on State level Training Workshop organized by CCOST, Raipur on **July 29, 2017.**
25. Delivered a lecture on Herbal Drug Remedies in 20thOrientation Programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **March 08, 2018.**
26. Delivered a lecture on Food adulteration in 21stOrientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 8, 2018.**
27. Delivered a lecture on Herbal remedies in 21stOrientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 8, 2018.**
28. Delivered a lecture on Medicinal system in 22ndOrientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **August 14, 2018.**
29. Delivered a lecture on Medicinal system in 22ndOrientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **August 14, 2018.**

30. Delivered an Invited Talk entitled, "process of Extraction of herbal drug" in the **International conference** on Water, Energy and Environment for Sustainable Development Goal organized by C.V. Raman University, Kota, Bilaspur (C.G.) during **September 25-26, 2018**.
31. Delivered an Invited Talk entitled, "Investigation on rare indigenous medicinal plants of some selected districts of Chhattisgarh" in an **International conference** on Emerging Researches in Bioscience (ICERB_2018), Organized by Department of Zoology, School of Life Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur during **October 28-30, 2018**.
32. Delivered a lecture on Medicinal system in the Refresher course on "Social Work and Social Development in Era of Post Modernization", organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **December 13, 2018**.
33. Delivered an Invited Talk entitled, "Role of Mushroom Cultivation in Rural Area" in a National interdisciplinary research seminar cum conference on recent trends and development in science for humanity at Govt. E. Raghvendra Rao Postgraduate science college Bilaspur (C.G.) during **January 13– 14, 2019**.
34. Delivered a lecture on Herbal Remedies in 23rd Orientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **January 2, 2019**.
35. Delivered a lecture on Food Adulteration in 24rd Orientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 13, 2019**.
36. Delivered a lecture on Herbal Remedies in 24rd Orientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **June 13, 2019**.
37. Delivered a lecture on Herbal Therapies in 24rd Orientation programme organized by UGC Human Resource Development Centre, Guru Ghasidas Vishwavidyalaya on **July 18, 2019**.

LIST OF PUBLICATIONS

1. **Rajendra Mehta** H.D. Shukla and P.S. Bisen (1992) Physiological and genetical characterization of novel *Synechococcus* sp. Isolate, showing resistance against cyanide, heavy metals and drugs. Environmental Technology Letters; 13:253-258. (IF- 1.666)
2. Priya Budhani, S.A. Iquba & **Rajendra Mehta** (2005), "Antitubercular activity of Pyrazinamide and its metal complexes". Indian J. Applied & Pure Bio. Vol. 20(2), 189-192.
3. **Rajendra Mehta** And Yasmeen Khan (2005), "Medicinal value of some common herbs." Biosciences, Biotechnology Research Asia; Vol. 3 (2), 209-211.
4. **Rajendra Mehta** and Abhay Mishra (2006), "Adaptive response of *Rhizobium leguminosarum* to DCMU and 2,4-D" Biosciences, Biotechnology Research Asia; Vol. 3 (1a), 221-226.
5. Yasmeen Khan, A.S. Thakur, **R. Mehta**, Rakesh Kundu (2010) " Haematological profile of Sickel cell disease: A hospital based study at CIMS, Bilaspur, Chhattisgarh. International Journal of Applied Biology and Pharmaceutical technology. Vol.2, PP. 717. (IF-1.70)
6. Yasmeen Khan, **Rajendra Mehta**, Rakesh Kundu, Sharmila Kumar (2010) "Askin Tumor Presenting with Paraplegia". Journals of Engineering, Science & Management Education. Vol.2, 26-28.
7. D.K.Patel & **R. Mehta** (2012), "Diversity of Aquatic Plants in Some Pounds of Ratanpur Dist. Bilaspur, (Chhattisgarh) in Central India" Flora and Fauna vol.18; 191-200
8. Anupam Kumar Tiwari and **Rajendra Mehta**(2013), "Medicinal Plantsused by traditional healers in Jashpur District of Chhattisgarh, India". Life Sciences leaflets 1: 31-41.
9. **Mehta, R.** and Tiwari, A. (2013)," Ethno phytoremedies used for the treatment of various gynecological problems by the Baigas of North Bastar, Chhattisgarh, India". International Journal of Biology, Pharmacy and Allied Sciences,2 (2): 354-361.

10. **R. Mehta** and Naureen S. Khan (2014), "Medicinal plants and Cow's excrement: An estimable wealth of nature." *Journal of Pharmaceutical and Biological Research* Vol 2(2); 156-159.
11. Harneet Kaur and **Rajendra Mehta** (2014), "Medicinal Plants as a source of alternative medicine in birth control: A Review." *World journal of Pharmaceutical Research* Vol 3 (10): 306-322.
12. **Rajendra Mehta**, Pushpraj Singh and Ajay Singh (2015), "Medicinal Plant Diversity, its Traditional and Phyto- Chemistry at Dugli forest area of Chhattisgarh, India." *Global Journal of Multidisciplinary Studies*, Vol. 4 (7): 184-189.
13. **Rajendra Mehta**, Raj Kumar Singh Tiwari and Naureen Shaba Khan (2015), "Effect of Seed Mycoflora on seed germination of some Medicinal Plants." *World Journal of Pharmacy and Pharmaceutical Sciences*, Vol. 4 (09): 1069-1076.
14. Naureen Shaba Khan, Ashwani Kumar Dixit and **Rajendra Mehta** (2015), "Verdure synthesis of AGNPS from *Bacopa monnieri* L. and its Antibacterial efficacy." *World Journal of Pharmacy and Pharmaceutical Sciences*, Vol. 4 (09): 1122-1132.
15. A. K. Dixit, S. K. Pandey, **R. Mehta**, Niyaz Ahmad, Gunjan and Jyoti Pandey (2015), "Study of physico-chemical parameters of different pond water of Bilaspur District, Chhattisgarh, India." *Environmental Skeptics and Critics* Vol. 4 (3): 89-95.
16. Raj Kumar Singh Tiwari, **Rajendra Mehta** and Sanjeev Kumar (2015), "Effect of hormonal pre-treatment on sprouting and survival of different medicinal plant species." *Nusantara Bioscience*, Vol. 7 (2): 77-89.
17. Naureen Shaba Khan, Ashwani Kumar Dixit and **Rajendra Mehta** (2015), "Biofabrication of Silver Nanoparticles using aqueous extract of *Ocimum sanctum* L." *World Journal of Pharmaceutical Research*, Vol. 4 (10): 1330-1340.
18. Kala H. K. , **Mehta R.**, Sen K. K., Tandey R., and Mandal V., (2016), "Critical analysis of research trends of phenolics: Have we really done enough." *Trends in Analytical Chemistry*, Vol. 85: 140-152. (IF- 7.034)
19. Kala H. K. , **Mehta R.**, Sen K. K., Tandey R., and Mandal V., (2016), "Ten years of research on phenolics(2005-2015): A status report," *Pacific Science Review A: Natural Science and Engineering* Vol. 18 (01):1-4.
20. Kala H. K. , **Mehta R.** Sen K. K., Tandey R., and Mandal V., (2017), "Strategizing method optimization of microwave-assisted extraction of plant phenolics by developing standard working principles for universal robust optimization, *Analytical Methods*, Vol. 09: 2089-2103. (IF- 2.073)
21. **Rajendra Mehta**, Raj Kumar, Roshni Tandey and Vivekananda Mandal (2017), "Innovating Botanical Extraction through Application of Microwaves for the Efficient Extraction of Ursolic Acid from *Ocimum sanctum* Leaves". *Chiang Mai J. Sci.* ,Vol 44(3) : 869-880. (IF-0.420)
22. Kamal Kumar Sen, **Rajendra Mehta**, Harneet Kaur Kala, Roshni Tandey, Kavi Bhushan Singh Chouhan and Vivekananda Mandal, (2017), "Ten Years of Research on *Centella asiatica*: A Consolidated Review through Data Mining from Scopus." *Research & Reviews: A Journal of Pharmacognosy*, Volume 4, Issue 3: 13-18.
23. Vivekananda Mandal, Kavi bhushan singh chouhan, Roshni Tandey, Kamal Kumar Sen, Harneet Kaur Kala, **Rajendra Mehta**(2018), "Critical analysis and mapping of research trends and impact assessment of Polyaromatic Hydrocarbons accumulation in Leaves: Let History Tell the Future". *Environmental Science and Pollution Research*, Volume 25: 22464-22474. (IF-2.8)
24. Kavi bhushan singh chouhan, Roshni Tandey, Kamal Kumar Sen, **Rajendra Mehta**, Vivekananda Mandal(2018), "Extraction of phenolic principles: value addition through effective sample pretreatment and operational improvement." *Journal of Food Measurement and Characterization*. Volume 12, 177-186. (IF-1.8)
25. Harneet Kaur Kala, **Rajendra Mehta**, Kamal Kumar Sen, Roshni Tandey, Kavi Bhushan Singh Chouhan, S. Kitchlu and Vivekananda Mandal, (2019), "Developing Microwave Based Extraction as a Tool to Valorize Extraction of Phenolics to Boost Nutraceutical Industries: A Case Study on *Taraxacum officinale*." *Current Bioactive Compounds*, Vol. 15, Issue 2: 249-256.
26. Kavi bhushan singh chouhan, Roshni Tandey, Kamal Kumar Sen, **Rajendra Mehta**, Vivekananda Mandal(2019), "A unique model of gravity assisted solvent free microwave based extraction of

essential oil from mentha leaves ensuring biorefinery of leftover waste biomass for extraction of nutraceuticals: Towards cleaner and greener technology." *Journal of Cleaner Production*, Vol. 225, 587-598.(**IF-5.6**)

27. Kavi bhushan singh chouhan, Roshni Tandey, Kamal Kumar Sen, **Rajendra Mehta**, Vivekananda Mandal(2019)," Critical analysis of microwave hydrodiffusion and gravity as a green tool for extraction of essential oils: Time to replace traditional distillation." *Trends in Food Science & Technology* 92 (2019) 12–21.(**IF-8.5**)
28. Kamal Kumar Sen¹, Kavi Bhushan Singh Chouhan², Roshni Tandey², **Rajendra Mehta**¹, Vivekananda Mandal² (2019), "Impact of Microwaves on the Extraction Yield of Phenolics, Flavonoids, and Triterpenoids from Centella Leaves: An Approach toward Digitized Robust Botanical Extraction." *Pharmacognosy Magazine*, Volume 15, Issue 64, July-September 2019 (Supplement 2) **S267-S273. (IF-1.26)**

Proceedings

1. P.S. Bisen and **Rajendra Mehta** (1992). Root nodulation during infection by Rhizobia in :New Frontiers in Microbial Technology, Ed. Prof. P.S. Bisen, Dept. of Microbiology, Barkatullah University, Bhopal.
2. Anupam Kumar Tiwari, Rajendra Mehta, Nema and Sajiwan Kumar(2012)," Ethno-Medicinal Plants used by Baigas in Uttar Bastar(Kanker) District of Chhattisgarh." Proceedings in International conference entitled "Non timber products and medicinal plants conservation, improvement and sustainable utilization" held at Ranchi.

Book Chapter:

1. Khan N. S., Dixit A.K. and Mehta R. (2016), "Nanoparticle toxicity in water, soil, microbes, plants and animals". *Nanoscience in Food and Agriculture* 2. **Springer International Publishing**, Vol. 21: 277-309. DOI 10.1007/978-3-319-39306-3-9.