**CURRICULUM VITAE**



 **Dr. Mahendra Rai**

 Basic Science Research Faculty Fellow (UGC)

 Sant Gadge Baba Amravati University

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**Personal**

Present Address **(Office)** : Department of Biotechnology

 SGB Amravati University, Amravati

 **PIN** -444602, Maharashtra, India

 **E-mail:** mahendrarai@sgbau.ac.in

 pmkrai@hotmail.com

**Education**

Ph.D. Mycology R D University, Jabalpur, M.P., India NA 1982

M.Sc. Botany (Spl-Microbiol) R D University, Jabalpur, M.P., India 69.6% 1978

 (First rank in University)

B.Sc. Biology Dr H S Gaur University, Sagar, M.P. 72.0% 1976

**National and International Visits**

* SERC visiting fellow, Jawaharlal Nehru University, New Delhi Oct. -Dec., 1996

 Awarded by Department of Science and Technology,

 Government of India

* INSA visiting fellow, Jawaharlal Nehru University, New Delhi Jan.-March, 1998

 Awarded by Indian National Science Academy,

 Government of India

* Visiting scientist, Dipartimento Di Colture Arboree, University of Turin,

 Italy provided financial assistance April-June, 1999

* Associateship from Third World Academy of Sciences -

 UNESCO May-July, 2003

* Visiting Scientist, Department of Bioenergetics, University of Geneva, Switzerland, May-June, 2004
* Visiting Scientist, Department of Plant Protection, Debrecen University, Hungary (October 2005-January 2006) and also in 2008, Scholarship awarded by Hungarian Scholarship Board, Hungary
* Visited Biological Chemistry Laboratory, State University of Campinas, Under Indo-Brazil collaborative Project sponsored by Department of Science and Technology, Government of India and CNPq, Brazil Government (Three visits :2009, 2011, 2012)
* **Visiting Professor, Department of Microbiology, Nicolaus Copernicus University, Torun Poland (May 20-June 20, 2012)**
* **Visiting Scientist, Biological Chemistry Laboratory, State University of Campinas in January 13, 2013 to January 14, 2014**
* **Visiting Scientist, Nanotechnology Center, VSB Technical University Ostrava, Czech Republic (October 02 to November 02, 2015)**
* **Visited Department of Pharmacognosy, University of Rosario, Argentina (November 25 to December 15, 2016)**

**Research Guidance**

* Ph.D. Awarded - 25, Registered -04;
* M.Phil-03; M.Sc. Dissertations- 65

**Managing positions**

* **Head of the Department of Biotechnology (2001- August 2017)**
* **Chairman, Board of studies in Biotechnology, SGB Amravati Univ (2001-2017)**
* **Chairman, Board of studies in Bio-diversity, SGB Amravati University 2006-2012**
* Member, Research and Recognition Committee, SGB Amravati University since 2001
* Member, Purchase Committee, Amravati University (2003-2005)
* Member, Board of University Teaching and Research, SGB Amravati University
* Member/Governer Nominee, Selection Committee of different Universities
* Member, National Science Day Committee since 2001
* Co-ordinator, National Science Day Committee, 2006, 2015
* Principal investigator in Major projects
* Member Xth Plan Committee (UGC)
* Member, Academic Council, SGB Amravati University, 2005
* Member, Senate, SGB Amravati University, Amravati since 2006
* Co-ordinator of “Biotech village programme: From lab to Field”
* Group Leader of Biotechnology (“Advantage Amravati”), Govt of India, 2005
* Course director of National level *Two-Week Training Course in Biotechnology,* sponsored by DBT, Govt of India, 2008.
* Co-ordinator, FIST (Funds For Infrastructure in Science and Technology), Department of Science and Technology, Govt of India
* Vice President, Society of Basic and Applied Mycology, Jabalpur (2009-2011)
* Organising secretary 2 seminars of national level in 1994 and 1998; Director of Workshop 1 (2001), In 2003 (2), 2004 (2), 2005 (1), 2007 (1), 2008-11
* Director, Internal Quality Assurance Cell, SGB Amravati University, Amravati 2009-2011
* Member, Academic Council of Jaypee University of Engineering and Technology, Guna, (M.P.)
* Co-ordinator, SAP (Special Assistance Programme), UGC., New Delhi since 2013
* Member Secretary, Institutional Biosafety Committee, SGB Amravati University, Amravati
* Chairman, Institutional Ethic Committee, Department of Biotechnology, SGB Amravati University, Amravati

**Foreign Collaboration (Academic)**

* Indo-Argentina: collaboration with Dr Susanna Zaccino of Argentina in the field of Nanoantimicrobials (DST-MINCyT)
* Indo-Swiss: collaboration with Professor Reto J. Strasser in the field of plant vitality in crop plants for sustainable development
* Indo-Italian: collaboration with Professor Massimiliano in the field of nanotechnology.
* Indo-German: collaboration with Dr Clements Posten, Karlsruhe Institute of Technology Germany in the field of nanotechnology
* Indo-Brazil: collaboration with Professor Nelson Duran, Chemical Biology, Institute of Chemistry, University of Campinas, Brazil. in the field of Nanotechnology
* Indo-US: Collaboration with Professor Ravi Pandey, Head and Chair, Michigan Tech, USA, in the field of nanotechnology
* Indo-Poland: Collaboration with Professor Hanna Dahm, Nicolaus Copernicus University, Torun, Poland.
* Indo-Czech Republic: Collaboration with Professor Gabriela Kratosova, Nanotechnology Center, VSB Technical University of Ostrava, Czech Republic

**Memberships of Scientific Societies**

* Life-member Academy of Environmental Biology, Muzaffarnagar, U.P.
* Life member, Biotechnological Associations of India
* Life-member Indian Science Congress Association, Calcutta.
* Life-member Society of Mushroom Research, Himachal Pradesh.
* Life member Society of Basic and Applied Mycology
* In advisory board of “International Medicinal Mushroom Conference” in Slovania in 2007 and Croatia 2011
* In advisory board of International Conference on Medicinal Plants in 2006 at Cuba.
* Fellow of Academy of Environmental Biology
* Fellow of Society of Biotechnology and Pharmacy

**Awards and Fellowships**

* Obtained merit scholarship upto HSSC
* National Scholar for 5-years
* Obtained Junior, Senior and PDF, CSIR, New-Delhi
* Father T.A. Mathias award, 1989 by All India Association for Christian Higher Education, New Delhi.
* Satpuda Award in the field of Environment Conservation by Y.M.C.A., 1992.
* Fellow of Academy of Environmental Biology
* Elected Fellow of Maharashtra Academy of Sciences, 2016
* Awarded SERC visiting fellowship by DST, New Delhi, 1996
* Honorary research associateship for 1-year, Sydney, Australia, 1997
* INSA visiting fellowship, 1998
* Visiting scientist award (from April-June, 1999), Turin, Italy
* Medini Award for book on *Herbal Medicines*, by Govt of India, June 5, 2001
* Associateship for 3-years by TWAS, Trieste, Italy to work on AM fungi in Brazil, 2003
* Visiting Scientist, Department of Bioenergetics, University of Geneva, Switzerland, May-June, 2004
* Hungarian Scholarship by Hungarian Scholarship Board, to visit Department of Plant Protection, Debrecen University, Hungary (October 2005-January 2006).
* Awarded by IDVL for yeoman services in Microbiology 2005
* Awarded Austrian Scholarship for 2006
* Hungarian Scholarship by Hungarian Scholarship Board, to visit Department of Plant Protection, Debrecen University, Hungary, 2008
* In advisory board of “International Medicinal Mushroom Conference” held in Croatia in 2011

**Research Publications**

<http://scholar.google.com/citations?user=8rykdvYAAAAJ&hl=en>

<http://www.amazon.com/Mahendra-Rai/e/B001JP7S5A>

Research papers - 380

h-index - 49

Popular articles - l00

Books - 45

Patents - 07

**LIST OF PUBLICATIONS (Last 10 years)**

**2018**

Mitri F.F., Ingle, A.P. an**d Mahendra Rai** (2018) Nanotechnology in the Management of Bone Diseases and as Regenerative Medicine, *Current Nanoscience,*  14 :1-9 **(IF 1.062).**

Wypij M., Joanna Czarneck, Magdalena Świecimska, Hanna Dahm, **Mahendra Rai** and Patrycja Golinska (2018). Synthesis, characterization and evaluation of antimicrobial and cytotoxic activities of biogenic silver nanoparticles synthesized from *Streptomyces xinghaiensis* OF1 strain, World Journal of Microbiology and Biotechnology 34:23 https://doi.org/10.1007/s11274-017-2406-3 **(IF-1.658)**

**Book Chapters:**

Ingle AP, Shende S, Gupta I, Nagaonkar D, Pandit R, Paralikar P, **Rai M** (2018). Metal nanoparticles in management of diseases of central nervous system. The Microbiology of Central Nervous System Infections, Volume 3 (Eds. Kon K and Rai M), Academic Press, Elsevier, UK. pp. 81-98.

**2017**

Jogee PS,Ingle AP and Rai M (2017). Isolation and identification of toxigenic fungi in infected peanuts and efficacy of silver nanoparticles against them. *Food Control* 71: 143-151 **(IF- 3.38**).

Rai M, Paralikar P, Jogee P, Agarkar G, Ingle AP, Derita M, Zacchino S (2017). Synergistic antimicrobial potential of essential oils in combination with nanoparticles: Emerging trends and future perspectives. *International Journal of Pharmaceutics*, 519 (1-2): 67-78 **(IF- 3.99**).

Sonar H, Nagaonkar D, Ingle AP, Rai M (2017). Mycosynthesized silver nanoparticles as potent growth inhibitory agents against selected waterborne human pathogens. *CLEAN Soil, Air Water*, 45(4): 1600247; DOI: 10.1002/clen.201600247 **(IF- 1.71**).

Ingle AP and Rai M (2017). Copper nanoflowers as effective antifungal agents for plant pathogenic fungi. *IET Nanobiotechnology* 11(5):546-551, DOI:  [10.1049/iet-nbt.2016.0170](http://dx.doi.org/10.1049/iet-nbt.2016.0170) (IF 1.71).

Rajak J, BawskarM, Rathod D, Agarkar G, Nagaonkar D, Gade A, Rai(2017). Interaction of copper nanoparticles and an endophytic growth promoter *Piriformospora indica* with *Cajanus cajan****.*** *J. Sci Food Agri* DOI 10.1002/jsfa.8324 **(IF- 2.463**).

Pandit R, Gaikwad S, Rai M (2016) Biogenic fabrication of copper nanoparticles, Copper bioconjugates and its in vitro assessment of antimicrobial and antioxidant activity, *IET Nanobiotechnology* 15(3): 443–452; DOI:  10.1049/iet-nbt.2016.0165 (**IF- 1.7**).

Rai M, Ingle AP, Paralikar P, Gupta I, Medici S; Santos CA (2017). Recent advances in use of silver nanoparticles as antimalarial agents. International Journal of Pharmaceutics, 526: 254-270 **(Impact Factor-3.99).**

Pandit R., Rai, M. and Santos CA (2017). Enhanced antimicrobial activity of the food-protecting nisin peptide by bioconjugation with silver nanoparticles. *Environ. Chem Lett*. 15(3):443-452. (**IF 3.49**)

Suryavanshi P, Pandit R, Gade A, Derita M, Zachino S and Rai M (2017) *Colletotrichum* sp. mediated synthesis of sulphur and aluminium oxide nanoparticles  and its *in vitro* activity against selected food-borne pathogens. *LWT-Food Science and Technol.* 81:188-194<http://dx.doi.org/10.1016/j.lwt.2017.03.038>**(IF 2.292).**

Biswas JK, Mondal M, Rinklebe J, Sarkar SK, Chaudhuri P, Rai M, Shaheen SM, Song H, Rizwan M (2017). Multi-metal resistance and plant growth promotion potential of a wastewater bacterium *Pseudomonas aeruginosa* and its synergistic benefits. [Environ Geochem Health.](https://www.ncbi.nlm.nih.gov/pubmed/?term=Multi-metal+resistance+and+plant+growth+promotion+potential+of+a+wastewater+bacterium+Pseudomonas+aeruginosa+and+its+synergistic+benefits) doi: 10.1007/s10653-017-9950-5**(IF-2.079)**

Dar M, Rai M, 2017. First report of *Diplodia seriata* causing canker on *Castanea sativa* in India. *New Disease Reports* **35**, 19.

Składanowski M, Wypij M, Laskowski D, Golińska P, Dahm H, Rai M (2017). Silver and gold nanoparticles synthesized from *Streptomyces* sp. isolated from acid forest soil with special reference to its antibacterial activity against pathogens*. J. Cluster Sci*, 28(1): 59-79 **(IF-1.471).**

M Wypij, J Czarnecka, H Dahm, M Rai, P Golinska (2017). Silver nanoparticles from *Pilimelia columellifera* subsp. pallida SL19 strain demonstrated antifungal activity against fungi causing superficial mycoses. *J Basic Microbiol*, doi: 10.1002/jobm.201700121 **(IF 1.438)**.

Alves TF, Chaud MV, Grotto D, Jozala AF, Pandit R, Rai M, dos Santos CA (2017). Association of silver nanoparticles and curcumin solid dispersion: Antimicrobial and antioxidant properties*. AAPS PharmSciTech* , doi: 10.1208/s12249-017-0832-z.**(IF 2.451)**

Lachmapure M, Paralikar P, Palanisamy M, Alves M, Rai M (2017). Efficacy of biogenic silver nanoparticles against clinical isolates of fungi causing mycotitic keratitis in humans*. IET Nanobiotechnol*. , doi:  10.1049/iet-nbt.2017.0003**.(IF 1.463)**

Shende S, Rathod D, Gade A, Rai M (2017). [Biogenic copper nanoparticles promote the growth of pigeon pea (*Cajanus cajan* L.)](https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=8rykdvYAAAAJ&sortby=pubdate&citation_for_view=8rykdvYAAAAJ:sJK75vZXtG0C). *IET Nanobiotechnol*. (in press), doi: 10.1049/iet-nbt.2016.0179. **(IF 1.463)**

[Shende](https://link.springer.com/search?facet-creator=%22Sudhir+Shende%22), S.,  [Gade](https://link.springer.com/search?facet-creator=%22Aniket+Gade%22) A K,  [M. Rai](https://link.springer.com/search?facet-creator=%22Mahendra+Rai%22) (2017). [Large-scale synthesis and antibacterial activity of fungal-derived silver nanoparticles](https://link.springer.com/article/10.1007/s10311-016-0599-6)*. Environmental Chemistry*  15 (3):427-434  **(IF-3.594)**

Paralikar, P. and Mahendra Rai (2017). Bio-inspired synthesis of sulphur nanoparticles using leaf extract of four medicinal plants with special reference to their antibacterial activity, *IET Nanobiotechnology,* doi: 10.1049/iet-nbt.2017.0079 **(IF 1.463)**

Rai, Mahendra, Avinash P. Ingle, Raksha Pandit, Priti Paralikar, Indarchand Gupta, Marco V. Chaud, Carolina Alves dos Santos (2017). Broadening the spectrum of small-molecule antibacterials by metallic nanoparticles to overcome microbial resistance,[*International Journal of Pharmaceutics*](http://www.sciencedirect.com/science/journal/03785173), [532 (1](http://www.sciencedirect.com/science/journal/03785173/532/1)):  139-148 **(IF-3.649)**

Ingle, Avinash P., Jyoti Rathod, Raksha Pandit, Silvio Silverio da Silva & Mahendra Rai (2017). Comparative evaluation of free and immobilized cellulase for enzymatic hydrolysis of lignocellulosic biomass for sustainable bioethanol production, *Cellulose,* DOI 10.1007/s10570-017-1517-1**(IF 3.417)**

Ataide J.A., de Carvalho N.M., Rebelo M.A., Chaud M.V., Grotto D., Gerenutti M., **Rai M.**, Mazzola P.G., Jozala A.F. (2017). Bacterial Nanocellulose Loaded with Bromelain: Assessment of Antimicrobial, Antioxidant and Physical-Chemical Properties,[*Sci Rep.*](https://www.ncbi.nlm.nih.gov/pubmed/?term=Bacterial+Nanocellulose+Loaded+with+Bromelain%3A+Assessment+of+Antimicrobial%2C+Antioxidant+and+Physical-Chemical+Properties)  7(1): 18031. doi: 10.1038/s41598-017-18271-4. **(IF-4.8)**

**Book chapters**

Ingle A, Rathod D, Verma A, Rai M (2017). Understanding the Mycorrhiza-Nanoparticles Interaction. In: Mycorrhiza- Eco-Physiology, Secondary Metabolites, Nanomaterials (Eds. Varma A, Prasad R, and Tuteja N), Springer International Publishing AG, Switzerland, pp 311-314.

Rai M, Pandit R, Paralikar P, Shende S, Gaikwad S, Ingle AP, Gupta I (2017). Nanoparticles as therapeutic agent for treatment of bacterial infections. In: Essential Oils and Nanotechnology for Treatment of Microbial Diseases (Eds. Rai M, Zacchino S, Derita M), CRC Press, New York, USA, pp. 191-208.

RaiM, Ingle AP, Gaikwad S, Dussan KJ, da Silva SS (2017). Role of nanoparticles in enzymatic hydrolysis of lignocellulose in ethanol. In: Nanotechnology for Bioenergy and Biofuel Production: Green Chemistry and Sustainable Technology (Eds. Rai M and Da Silva SS), Springer International Publishing, Switzerland. pp. 153-171.

Rai M, Ingle AP, Pandit R, Paralikar P, Gupta I, Anasane N, Dolenc-Voljc M (2017). Nanotechnology for the treatment of fungal infections on human skin. In: The Microbiology of Skin, Soft Tissue, Bone and Joint Infections (Eds. Kon K and Rai M), **Elsevier publisher, UK, pp. 169-184.**

Ingle AP, Rathod D, Brestic M, Kalaji HM, Rai M (2017). Biophysical phenotyping as an essential tool for understanding host-microbe interaction. In: Modern Tools and Techniques to Understand Microbes (Eds. Varma A and Sharma AK), Springer International Publishing AG, Cham, Switzerland. pp. 65-80.

Ingle AP, Gupta I, Duran N, Rai M (2017). Nanotherapy: A next generation hallmark for combating cancer. In: Nanostructures for Cancer Therapy (Eds. Ficai A and Grumezescu AM), **Elsevier,** Amsterdam Netherlands, pp. 811-830.

Ingle AP, Paralikar P, Pandit R, Anasane N, Gupta I**, Rai M,** Chaud MV, Santos CAD (2017). Nanoformulations for Wound Infections. In: Nanotechnology Applied To Pharmaceutical Technology (Eds. Rai M and Santos CAD), Springer International Publishing, Cham, Switzerland. pp. 223-246.

Ingle AP, Paralikar P, Grupenmacher A, Padovani FH, Ferrer MT**, Rai M**, Alves M (2017). Nanotechnological interventions for drug delivery in eye diseases. In: Nanotechnology Applied To Pharmaceutical Technology (Eds. Rai M and Santos CAD), Springer International Publishing, Cham, Switzerland. pp. 279-306.

Rai, Mahendra, Raksha Pandit, Priti Paralikar, Dipali Nagaonkar, Farkhanda Rehman and Carolina Alves dos Santos (2017). Pharmaceutical Applications of Curcumin-Loaded Nanoparticles, In: Nanotechnology Applied To Pharmaceutical Technology (Eds. Rai M and Santos CAD), Springer International Publishing, Cham, Switzerland. pp. 139-154.

Martins, Luiza Helena da Silva, **Mahendra Rai,** João Moreira Neto, Johnatt Allan Rocha de Oliveira, Júlia Helena da Silva Martins, Andrea Komesu, Debora Kono Taketa Moreira and Paulo Weslem Portal Gomes (2017). Nanomaterials: Properties, Toxicity, Safety, and Drug Delivery, In: Nanotechnology Applied To Pharmaceutical Technology (Eds. Rai M and Santos CAD), Springer International Publishing, Cham, Switzerland. pp. 363-381.

Gupta I, **Ingle A**, Paralikar P, Pandit R, da Silva SS, Rai MK (2017). Bio-distribution and toxicity of noble metal nanoparticles in humans. In: Metal Nanoparticles in Pharma (Eds. Rai M and Shegokar R), Springer International Publishing AG, Switzerland, pp. 469-482.

Rai M, Nagaonkar D, **Ingle AP** (2017) Metal nanoparticles as therapeutic agents: a paradigm shift in medicine. In: Metal Nanoparticles: Synthesis and Applications in Pharmaceutical Sciences, First Edition (Eds. Thota S and Crans DC), Wiley-VCH Verlag GmbH & Co. KgaA, Germany, pp. 33-48

**2016**

Pinjarkar H., Swapnil Gaikwad, Avinash P. Ingle, Aniket Gade, Mahendra Rai (2016). Phycofabrication of silver nanoparticles and their antibacterial activity against human pathogens, *Adv. Mater. Lett*. 7(12): 1010-1014 **(IF-1.253)**

Golinska P., Rathod D., Wypij M., Gupta I., Składanowski M., Paralikar P., Dahm H., Rai M. (2016). Mycoendophytes as efficient synthesizers of bionanoparticles: nanoantimicrobials, mechanism and cytotoxicity. *Critical Reviews in Biotechnology*, 37(6): 765-778. 10.1080/07388551.2016.1235011 (**IF 7.510)**

[Składanowski M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Sk%C5%82adanowski%20M%5BAuthor%5D&cauthor=true&cauthor_uid=27620485)., [Golinska P](http://www.ncbi.nlm.nih.gov/pubmed/?term=Golinska%20P%5BAuthor%5D&cauthor=true&cauthor_uid=27620485)., [Rudnicka K](http://www.ncbi.nlm.nih.gov/pubmed/?term=Rudnicka%20K%5BAuthor%5D&cauthor=true&cauthor_uid=27620485)., [Dahm H](http://www.ncbi.nlm.nih.gov/pubmed/?term=Dahm%20H%5BAuthor%5D&cauthor=true&cauthor_uid=27620485)., [Rai M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Rai%20M%5BAuthor%5D&cauthor=true&cauthor_uid=27620485). (2016). Evaluation

of  cytotoxicity, immune compatibility and antibacterial activity of biogenic silver nanoparticles, 205 (6):603-613. DOI 10.1007/s00430-016-0477-7 **(IF 3.16)**

Składanowski M., Wypij M., Laskowski D., Golińska P., Dahm H., Rai M. (2016). Silver and gold nanoparticles synthesized from *Streptomyces* sp. isolated from acid forest soil with special reference to its antibacterial activity against pathogens*. Journal of Cluster Science*.,28(1):59-79 DOI: 10.1007/s10876-016-1043-6 **(IF 1.664)**

Rai, Mahendra, Raksha Pandit, Swapnil Gaikwad, Gyorgy Kovics (2016). Antimicrobial peptides as natural bio-preservative to enhance the shelf-life of food, J*. Food Sci. Technol.,* 53(9):3381-3394; DOI 10.1007/s13197-016-2318-5 **(IF 1.24)**

Jogee, P., Avinash P. Ingle, Mahendra Rai (2017).Isolation and identification of toxigenic fungi from infected peanuts and efficacy of silver nanoparticles against them, *Food Control 71* 143-151 **(IF 3.496)**

Rai, Mahendra, Avinash P. Ingle & Priti Paralikar (2016).Sulfur and sulfur nanoparticles as potential antimicrobials: from traditional medicine to Nanomedicine, *Expert Review of Anti-infective Therapy*, 10:969-978; DOI: 10.1080/14787210.2016.1221340 **(IF-3.542)**

Wypij M., Patrycja Golinska, Hanna Dahm, Mahendra Rai (2016). Actinobacterial-mediated synthesis of silver nanoparticles and their activity against pathogenic bacteria, *IET Nanobiotechnology* 11(3):336-342, doi: 10.1049/iet-nbt.2016.0112 **(IF-1.5)**

Tiwari,N., Raksha Pandit, Swapnil Gaikwad, Aniket Gade, and Mahendra Rai (2016). Biosynthesis of zinc oxide nanoparticles by petals extract of *Rosa indica* L., its formulation as nail paint and evaluation of antifungal activity against fungi causing onychomycosis, *IET Nanobiotechnology*, 11(2):205-211 doi: 10.1049/iet-nbt.2016.0003 **(IF-1.5)**

Gabriela, K.; Konvičková, Zuzana; Vávra, Ivo; Zapomělová, Eliška; Mahendra Rai; Schröfel, Adam (2016). Noble Metal Nanoparticles Synthesis Mediated by the Genus *Dolichospermum*: Perspective of Green Approach in the Nanoparticles Preparation,  *[Advanced Science Letters](http://www.ingentaconnect.com/content/asp/asl)*, 22 (3): 637-641 **(IF-1.253)**

Rathod, D., Patrycja Golinska, Magdalena Wypij, Hanna Dahm,and Mahendra Rai (2016). A new report of *Nocardiopsis valliformis* strain OT1 from alkaline Lonar crater of India and its use in synthesis of silver nanoparticles with special reference to evaluation of antibacterial activity and cytotoxicity, *Med Microbiol Immunol* 205:435–447; DOI 10.1007/s00430-016-0462-1 **(IF-3.038)**

[Mbarki, S., Artemi Cerdà, Marian Brestic, Rai Mahendra, Chedly Abdelly and Jose Antonio Pascual (2016) . Vineyard compost supplemented with *Trichoderma harzianum* t78 improve saline soil quality](http://onlinelibrary.wiley.com/doi/10.1002/ldr.2554/abstract), *Land degradation and Development*, 28(3):1028-1037, DOI: 10.1002/ldr.2554 **(IF 8.145)**

Bramhanwade, K., S. Shende, S. Bonde, A. Gade and Rai, M. (2016). Fungicidal activity of Cu nanoparticles against *Fusarium* causing crop diseases, *Environ Chem Lett,* 14:229–235 DOI 10.1007/s10311-015-0543-1**(IF 2.573)**

Bhople S., Swapnil Gaikwad, Swapna Deshmukh, Shital Bonde, Aniket Gade, Sanjib Sen, Anna Brezinska, Hanna Dahm, Mahendra Rai (2016). Myxobacteria-mediated synthesis of silver nanoparticles and their impregnation in wrapping paper used for enhancing shelf life of apples, IET Nanobiotechnology, 10(6):389-394, doi: 10.1049/iet-nbt.2015.0111 **(IF-1.72)**

Rai, M., Júlio César dos Santos, Matheus Francisco Soler, Paulo Ricardo Franco Marcelino, Larissa Pereira Brumano, Avinash P Ingle, Swapnil Gaikwad, Aniket Gade, Silvio Silvério da Silva. (2016). Strategic role of nanotechnology for production of bioethanol and biodiesel. Nanotechnology Reviews. ; 5(2): 231–250, 10.1515/ntrev-2015-0069 (**IF-1.273)**

Soares, L.C. S. R., Anuj K. Chandel, Fernando C. Pagnocca, Swapnil C. Gaikwad, Mahendra Rai and Silvio S. da Silva (2016). Screening of Yeasts for Selection of Potential Strains and Their Utilization for In Situ Microbial Detoxification (ISMD) of Sugarcane Bagasse Hemicellulosic Hydrolysate, Indian J Microbiol, 56(2):172–181 DOI 10.1007/s12088-016-0573-9 **(IF-1.143)**

Patil, S.D., Pankaj P. Maknikar, Sushilkumar J. Wankhade, Chandrakiran S. Ukesh , Mahendra Rai (2016). Chemical composition, antimicrobial and antioxidant activity of essential oils from cumin and ajowan. Nusantara Bioscience, 8(1):60-65; doi: 10.13057/nusbiosci/n080111

**Book chapters**

Rai, M. Avinash Ingle, Swapnil Gaikwad, Indarchand Gupta, Alka Yadav,Aniket Gade and Nelson Duran (2016). Fungi: Myconanofactory, Mycoremediation and Medicine, In: FUNGI: Applications and Management Strategies (Eds: S.K. Deshmukh, J.K. Mishra, J.P. Tiwari and Tamás Papp), CRC Press, Taylor and Francis, Boca Raton, Florida, USA pp 201-219.

Rai M, Kon K, Gade A, Ingle A, Nagaonkar D, Paralikar P, S S da Silva (2016)

Antibiotic resistance: Can nanoparticles tackle the problem? In:Antibiotic Resistance: Mechanism and new antimicrobial approaches (Eds: kon, K. and Rai M.), pp 121-135, Elsevier, Netherlands.

Ingle A, Shende S, Pandit R, Paralikar P, Tikar S, Kon K and Rai M (2016) Nanotechnological applications for the control of pulmonary infections, In: [The Microbiology of Respiratory System Infections](http://www.sciencedirect.com/science/book/9780128045435), (Eds: Kon, K. and Rai M.), pp 223-235, Elsevier, Netherlands.

Qureshi S, Paralikar P, Pandit R, [Razzaghi-Abyaneh](http://www.sciencedirect.com/science/article/pii/B9780128045435000129) M, Kon K, and Rai M (2016) Pulmonary aspergillosis: diagnosis and treatment, In: [The Microbiology of Respiratory System Infections](http://www.sciencedirect.com/science/book/9780128045435) (Eds: Kon, K. and Rai M.), pp 167-183, Elsevier, Netherlands.

**2015**

Santos, Carolina Alves Dos, Seckler, M.M., Ingle A.P., and Rai,M. (2015). Comparative antibacterial activity of silver nanoparticles synthesised by biological and chemical routes with pluronic F68 as a stabilising agent, IET Nanobiotechnology, doi: 10.1049/iet-nbt.2015.0055 **(IF-1.72)**

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