



Dr Harit Jha

Associate Professor

Department of Biotechnology

School of Interdisciplinary Education and Research

Guru Ghasidas Vishwavidyalaya, Bilaspur

(A Central University)

Email: harit74@yahoo.co.in, Contact: 6263627667

<https://scholar.google.co.in/citations?user=fOBhwL>

<https://www.researchgate.net/profile/Harit-Jha-2>

<https://www.scopus.com/authid/detail.uri?authorId=1044>

-
- **Qualifications:** M.Sc., Ph.D,
 - **Qualified:** MS SET, CSIR UGC NET
 - **Area of Interest/Specialization:** Biochemistry, Microbial Technology, Bioprocess and Bioproducts
 - **Experience:** Teaching: 18 years, Research: 24 years
 - **Awards and Honors:**
 - Best Research Paper 2019
 - Best Research Paper 2020
 - **Research Projects:**
 - Project Investigator, CCOST funded project worth 5.00 lakhs on “Lignocellulosic-poly (lactic acid) based composites for multifaceted applications” 2142/CCOST/MRP/2015. Two years
 - Project Investigator funded project worth Rs 11.26 lakhs/- on “Application of Accacia and rice husk lignin in the synthesis of biopolymers, biofilms and resins”. Three years
 - Group Leader, Microbial Technology, Under DBT BUILDER scheme, To Boost Interdisciplinary education & research in School of Life Sciences (Biotechnology, Botany, Zoology) DBT, Five years Rs 369.80 lakhs
 - UGC funded project worth Rs 10, 04, 000/- (Co-PI) “Process optimization of conditions for extraction and purification of lignin from agro and forest wastes using Physico-chemical and biological approaches” UGC, Three years,

- Deputy Coordinator, UGC SAP II DRS I, worth 87.50 lakhs for Department of Biotechnology, Guru Ghasidas Vishwavidyalaya.

➤ **International/National Collaboration/Consultancy:**

- Department of Biotechnology and Biomedicine, Technical University of Denmark
- Indian Institute of Chemical Technology, Hyderabad
- Centre for Separation Technology, Vellore Institute of Technology
- National Institute of Technology, Raipur.
- Meco Technologies Private Limited

➤ **Patents applied as Inventor: 04**

➤ **Research Supervision**

- PhD supervised : 04
- PhD students registered : 03
- PG dissertation supervised: 62

➤ **PhD supervised**

S.No	Topic	Name of Student	Awarded on
1	Characterization of biopolymers and Nanomaterials synthesized from lignocellulosic waste	Keshaw Ram Aadil	19.12. 2016
2	Microbial biotransformation of lignin for value added products and assessment for their Industrial application	Anand Barapatre	06.03.2017
3	Synthesis of Lignin-TEOS nanocomposites their characterization and application	Kumari Shweta	09.06.2017
4	Studies on therapeutic potential of secondary metabolites isolated from the Rhizospheric fungi of Achanakmar Biosphere reserve	Mahendra Kumar Sahu	06.08.2021

➤ **Major Publications (up-to 10)**

1. KR Aadil, D Prajapati, **H Jha** (2016) Improvement of physico-chemical and functional properties of alginate film by Acacia lignin *Food Packaging and Shelf Life* 10, 25-33 [**IF: 8.13**]
2. KR Aadil, N Pandey, SI Mussatto, **H Jha** (2018) Synthesis and characterization of silver nanoparticles loaded poly(vinylalcohol)-lignin electrospun nanofibers and their antimicrobial activity *International Journal of Biological Macromolecules* 120 763–767 [**IF: 8.02**]

3. Aadil KR, A Barapatre, AS Meena, **H Jha** (2016) Hydrogen peroxide sensing and cytotoxicity activity of Acacia lignin stabilized silver nanoparticles. *International Journal of Biological Macromolecules* 82, 39-47 [**IF: 8.02**]
4. Barapatre A, Meena AS, S Mekala, Das A, Jha H (2016) In vitro evaluation of antioxidant and cytotoxic activities of lignin fractions extracted from *Acacia nilotica* *International Journal of Biological Macromolecules* 86 (2016) 443–453 [**IF: 8.02**]
5. KR Aadil, N Pandey, SI Mussatto, **H Jha** (2019) Green synthesis of silver nanoparticles using acacia lignin, their cytotoxicity, catalytic, metal ion sensing capability and antibacterial activity *Journal of Environmental Chemical Engineering* 7 (5), 103296 [**IF: 7.96**]
6. MK Sahu, K Kaushik, A Das, **H Jha** (2020) In vitro and in silico antioxidant and antiproliferative activity of rhizospheric fungus *Talaromyces purpureogenus* isolate-ABRF2 *Bioresources and Bioprocessing* 7 (1), 1-16 [**IF: 4.98**]
7. Barapatre A, H Aadil, KR and **Jha H** (2016) Synergistic antibacterial and antibiofilm activity of silver nanoparticles biosynthesized by lignin-degrading fungus. *Bioresources and Bioprocessing* 3(8), DOI10.1186/s40643-016-0083-y [**IF: 4.98**]
8. A Chaubey, KR Aadil, **H Jha** (2021) Synthesis and characterization of lignin-poly lactic acid film as active food packaging material *Materials Technology*, 1-9 [**IF: 3.21**]
9. A Barapatre & **H Jha** (2017) Degradation of alkali lignin by two ascomycetes and free radical scavenging activity of the products, *Biocatalysis and Biotransformation*, DOI: 10.1080/10242422.2017.1327953 [**IF: 2.52**]
10. A Barapatre, KR Aadil, **H Jha** (2017) Biodegradation of Malachite Green by the Ligninolytic Fungus *Aspergillus flavus* *CLEAN–Soil, Air, Water* DOI: 10.1002/clen.201600045 [**IF: 2.30**]
11. KR Aadil, and **H Jha** (2016) Physico-chemical properties of lignin–alginate based films in the presence of different plasticizers. *Iranian Polymer Journal* DOI: 10.1007/s13726-016-0449-1 [**IF:1.89**]

➤ **Recent Books/Book Chapters/Monographs etc.**

Books

- **Jha, H.**, Barapatre, Anand (2016) Antioxidants: Source, Activity and Applications. ISBN 978-93-313-2823-6
- **Jha,H.**, Aadil, KR (2016) Lignocellulose based composites and biopolymers. ISBN 978-3-659-89712-2

Recent Book Chapters

- **Jha H.**, & Arora R., (2022) Cytotoxic and Chemopreventive Activity of Polyphenols and Their Derivatives in Colon Cancer In: Colon Cancer Diagnosis and Therapy Vol. 3, 241-275
- **Jha H.**, & Arora R., (2022) Microbial-Assisted Systems for Lignin-Based Product Generation In: Industrial Microbiology and Biotechnology, 555-587
- **Jha, H.**, & Namdeo, N. (2022). Water Hyacinth (*Eichhornia crassipes*): Novel Applications and Products Through Biotechnological Interventions. In Biotechnology for Waste Biomass Utilization (pp. 149-172). Apple Academic Press.
- **Jha, H.**, Mandal, V., Sen, K. K., Tandey, R., Chouhan, K. B. S., & Mehta, R. (2022). Environmental Biotechnology: Public Perception. In Emerging Trends in Environmental Biotechnology (pp. 265-273). CRC Press.
- **Jha H.**, (2020) Fungal diversity and enzymes involved in lignin degradation, In: Mycodegradation of Lignocelluloses, **Naraian**, Ram (Ed.) Springer 35-49 ISBN 978-3-030-23834-6_3
- Aadil KR., Awasthi S., Kumar R., Dutt S., & **Jha H.**, (2019) Advanced Functional Nanomaterials of Biopolymers: Structure, Properties and Applications In: Functional Materials from Carbon, Inorganic and Organic Sources: Methods and Advances. Elsevier ISBN No. 607286
- **Jha H.**, & Chandra V., (2019) Lignin-based Biocomposites and Biomaterials: A Review on Industrial Applications In: Biotechnology for Sustainable Energy and Products Prakash Kumar Sarangi and Sonil Nanda (Ed) I.K. International Publishing House Pvt. Ltd209 - 241

- Barapatre A., & **Jha H.**, (2019) Microbial Degradation of Malachite Green In: Malachite Green: Properties and Uses Rosa M. Laursen (Editor) Nova Science publishers
- **Jha H.** (2009) Tannin: Structure, Synthesis and biodegradation, In: Ehtnoforestry: The Future of Indian Forestry, Ed S.C. Tiwari, Published by Bishen Singh Mahendra Pal Singh, Dehradun, India, 355-369

➤ **No. of Invited lectures/Resource person/Paper presentation in seminar/Conferences: 33**

➤ **Administrative Responsibilities:**

- Warden, Swami Vivekanand Boys Hostel
- Coordinator, Equal Opportunity Cell
- Member- School Board, School of IER
- Member, Swavlambi Chhattisgarh Scheme, GGV
- Counselling Committee for admission to B.Sc. M.Sc. Courses & PhD,
- Member Discipline Committee
- Member, Advisory committee, Dr Ambedkar Centre for Excellence
- Member, IPR cell
- Member, Advisory Committee, DBT sponsored M.Sc Biotechnology program
- Member, Central Board of Studies, Biochemistry, Chhattisgarh
- Co-coordinator, Technology Enabling center
- Member, Internal Committee for Students with Disabilities,
- Member, Industry Interface Cell
- Member, Committee for Establishment of Tribal Students Chair
- Nodal Officer, MOU with State Planning Commission
- Member, University Software and Antivirus Technical Committee.
- Member, Departmental purchase committee
- Presiding officer for state legislative elections
- Presiding Officer, Student Council Election
- Chief Counting Officer, Student Council Election
- Assistant Superintendent, UTD Examination
- Assistant Superintendent, VET/VRET Examination

- Observer, VET/VRET Examination 2015
- Observer, CUET 202
- Member, Project Purchase Committee of various Research projects

Additional Information

Reviewer for various Journals such as; Material Science and Engineering (C), International Journal of Biological Macromolecules, Chemosphere, Romanian Journal of Biotechnology, Pharmaceutical Biology, Journal of Nanoparticle Research, Bioresources, Industrial Crops and Products, Frontiers in Microbiology, Access Microbiology etc. Organized various Seminars, conferences and workshops.