CURRICULUM VITAE

Dr. Keshaw Ram Aadil (Ph.D.)
Assistant Professor
Department of Botany
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Field of Research: Biotechnology: Lignin-based value-added products, Antioxidant compounds, Valorization of lignin, Biomaterials, Nanomaterials, Nanofibers.

Examination	Year	Main Subject (s)	Division/ %	Board/University
Ph.D.	2016	Biotechnology	Awarded (19/12/2016)	Guru Ghasidas Vishwavidyalaya, (Central University), Bilaspur, Chhattisgarh, India.
CSIR NET	Dec., 2018	Life Sciences	Qualified LS	CSIR-UGC
CSIR NET	June, 2019	Life Sciences	Qualified LS	CSIR-UGC
CG-SET	2018	Life Sciences	Qualified	CG VYAPAM Raipur (CGSET)
M.Sc.	2010	Biotechnology	First	Pt. RSSU, Raipur
B.Sc.	2008	Botany, Chemistry, Biotechnology	First	Pt. RSSU, Raipur

Ph.D. title: "Characterization of biopolymers and nanomaterials synthesized from lignocellulosic wastes".

Supervisor: Dr. Harit Jha, Professor & Head, Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India.

Professional Experience: (Total Teaching and Research experience: ~ 9 years)

1. **Assistant Professor (Level 10),** Department of Botany, Govt. Digvijay Autonomous PG College, Rajnandgaon, Chhattisgarh. (04/04/2022 to present).
2. **Scientist (Level 11) (Selected),** CSIR-Central Food Technological Research Institute (CFTRI) December 2023 (Not Joined)
3. **Senior Scientist,** (Contract), Virus Research and Diagnostic Lab (VRDL), Department of Microbiology, Govt. Medical College Rajnandgaon, Chhattisgarh, India. **28 /09/2020 to 03/04/2022. (Experience: 1 year 6 months) (Working on COVID-19 Diagnosis: RT-PCR). Front line worker.**
4. **Assistant Professor** (Contract): Center for Basic Sciences, Pt. Ravi Shankar Shukla University, Raipur, Chhattisgarh, India. 01 September 2018 to 30 April 2020. **(Experience: 1 years 8 months)**
5. **Assistant Professor** (Temporary): Department of Biotechnology, Guru Ghasidas Vishwavidyalaya (Central University), Bilaspur, Chhattisgarh, India, 06-31st August 2018.

6. **SERB National Post-Doctoral Fellow** (PDF/2016/001156/LS), August, 2016-August, 2018 at National Institute of Technology-Raipur, Raipur, Chhattisgarh, India**. (Experience: 2 years)**

Title: ***"Polysaccharides based electrospun nanofibers for neural tissue engineering".***

Mentor: Dr. (Mrs.) Pratima Gupta, Assistant Professor, Department of Biotechnology, National Institute of Technology-Raipur, Raipur, Chhattisgarh, India. In collaboration with Dr. Chandra Shekar Sharma, Associate Professor, Department of Chemical Technology, IIT Hyderabad and Dr. Lenka Nibedita, Stem Cell Research, NCCS. Pune.

7. **Project Fellow:** UGC-MRP (41-543/2012, SR) entitled: ***'Application of acacia and rice husk lignin for the synthesis of biopolymers, biofilm and resin'*** under the supervision of Dr. Harit Jha, Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, Chhattisgarh, India. From: 01/10/2012 to 31/12/2015.

Subject Taught: UG/CBCS syllabus: Plant Physiology (B603); BE-II(X): Nanotechnology in Biology; B802: Biotechnology-II; B803: Bioinformatics, B704: Imaging Techniques in Biology; B601: Immunology; B502: Molecular Biology. Plant Biotechnology. Reproduction in Angiosperm.

Post graduate M.Sc. Botany: Cytogenetics, Molecular Biology. Plant Biotechnology. Reproduction & embryology in Angiosperm, Biotechnology: Plant & Microbes, Plant Physiology

ACHIEVEMENTS/AWARDS

1. **Guest Editor**: Special issue: Biobased nanomaterials fabrication and application in drug delivery and tissue engineering, Biotechnology for Sustainable Materials, BMC, Springer Nature.
2. **Best Oral Presentation Award:** Keratin nanofiber in tissue engineering: Fabrication, Characterization and in-vitro cell culture study, Second National Conference on Nanotechnology & Environment (NCNE-2024) held at NIT Raipur during 13-14th December 2024.
3. Qualified **CSIR-UGC National Eligibility Test (NET)- December, 2018, and June, 2019** for Lectureship (LS). Subject: Life Sciences.
4. Qualified Chhattisgarh **State Eligibility Test** -2017, **(CGSET-2017)** for Lectureship. Subject: Life Sciences.
5. **Best Oral Presentation Award:**
   - Silver nanoparticle loaded lignin nanofiber and their antimicrobial activity. National Conference on Recent Advances & Trends in Biotechnology held on 10-12th January 2020 organized by SOS in Biotechnology, Pt. Ravishankar Shukla University, Raipur Chhattisgarh.
6. **Best Poster Award**
   - Catalytic Activity of *Acacia* Lignin stabilized silver Nanoparticles', presented in 17th National Conference on Surfactants, Emulsions and Biocolloids (NATCOSEB-XVII,) organized by School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh. November 4-6, 2015. **Poster Presentation.**
7. **Young Scientist Award**
   - Awarded as **Chhattisgarh Young Scientist** for the year 2013 by Chhattisgarh Council of Science and Technology (CCOST), Raipur, Chhattisgarh, India.

- **Refresher/Orientation/FDP course participated**

- 1. Completed 24 days Faculty Induction Program (Orientation course) (Residential/offline mode) of UGC Malaviya Mission Teacher Training Programme (MMTTP), Organized by Malaviya Mission Teacher Training Centre (MMTTC), Himachal Pradesh University (HPU), Shimla, Himachal Pradesh. From 21st April to 17th May 2025. (Grade A).

2. Participated in 12 days online refresher course on '**Material for Energy & Sustainability',** under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by Malaviya Mission Teacher Training Centre, center for Science and Society (CS^2), Indian Institute for Science, Education and Research (IISER) Bhopal. 4^{th}-18^{th} November 2024. A grade
3. Completed the NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by Malaviya Mission Teacher Training Centre, Pt. Ravishankar Shukla University, Raipur, (C.G.) from 02.04.2024 to 13.04.2024
4. ONE WEEK NATIONAL WORKSHOP CUM FDP On Instrumentation and Analytical Technique in Scientific Research form 24-31 January 2024 organized by Department of Zoology and Science Club, Govt. Digvijay College Rajnandgaon.
5. One week computer training Faculty Development Program for college staff on Advanced Office Automation from 22-28 Feb 2024 organized by Department of Computer Science and Computer Application Govt. Digvijay College, Rajnandgoan.

Administrative responsibilities

1. Coordinator Incubation Cell
2. Internal Quality Assurance Cell (IQAC) Member (2024-25).
3. Member of Criteria II & III (Internal Quality Assurance Cell) IQAC.
4. Member of Employment and Guidance cell.
5. Member of Canteen committee.
6. Member of Campus Garden committee.
7. Member of Boys hostel committee.
8. Academic Bank of Credit committee.

Research Project (Ongoing)

S. No.	Title	Cost in Lakh	Role as PI/ Co-PI	Agency	Status
1.	Lignin as a Molecular Toolbox: Unlocking Novel Anticancer Therapies ANRF/IRG/2025/001829/ LS	**71,77,440 .00**	PI	ANRF-IRG	Accepted for Evaluation (Under Process)
2.	'Development of biodegradable and biocompatible hair keratin-cellulose acetate based nanofibres scaffold as potential candidate for tissue engineering'	**28,93,900.00**	PI	ANRF (SERB) State University Research Excellence (SURE) Scheme, ANRF, New Delhi	**Ongoing** December, 2023 to December 2026

	Sanction order no. SUR/2022/003839				

Details of Projects completed:

S. No	Title	Cost in Lakh	Duration	Role as PI/Co-PI	Agency
1.	Polysaccharide based electrospun nanofiber for neural tissue engineering. PDF/LS/2016/001156	**18,30,323.00**	August 2016-August-2018 2 years	PI	Science and Engineering Research Board **(SERB),** India. Under National Post-Doctoral Fellowship scheme **(SERB NPDF)**
2.	Synthesis and characterization of Sal lignin-chitosan based biodegradable film for packaging applications	50000.00	Completed 2023-2024	PI	Autonomous Cell, Govt. Digvijay College, Rajnandgaon, CG

LIST OF PUBLICATIONS: International: 38 National: 05 Cumulative IF: >100 Citation: 2050

h-index= 18; i10 index= 24 (Source: Google Scholar) Last update: 15/04/2026

Research paper: 20	**Review article: 08**	**Book chapter: 09**	**Book: 02**
Q1 Journal Paper: 14	**Q2 Journal Paper: 06**	**Q3 Journal Paper: 02**	

28. **Keshaw Ram Aadil***, Khushboo Bhange, Anand Barapatre, Gita Mishra, Bikas Kumar, Harit Jha, Solange I. Mussatto (2025). Next-generation microbial strategies for lignocellulosic waste valorization: toward a circular bioeconomy,Waste and Biomass Valorization (2026). 1-20. (IF:2.8). **Q2**

27. Raj Kumar, Nagavendra Kommineni, **Keshaw Ram Aadil**, Nimeet Desai, Naveen Bunekar, Sagar Salave, Raviteja Bulusu, Deepak Kumar, Lalit K Vora, (2025). Lipid nanoparticle-based therapeutics for infectious diseases. International Journal of Pharmaceutics (IF:5.2). **Q1** (Elsevier). **(IF: 6.5).** 126420. https://doi.org/10.1016/j.ijpharm.2025.126420

26. Raj Kumar, Aresh Sahu, **Keshaw Ram Aadil,** Yogendra Kumar Mishra, Ajeet Kaushik (2025). Recent Progress in Multifunctional MXene Quantum Dots for Cancer Therapy. Current Opinion in Biomedical Engineering, 100635 (IF 4.2). **Q2** https://doi.org/10.1016/j.cobme.2025.100635. (Elsevier). **(IF: 4.2).**

25. **Keshaw R. Aadil,** K. Bhange, Gita Mishra, Aresh Sahu, Samiksha Sharma, Neha Pandey, Yogendra Kumar Mishra, Ajeet Kaushik & Raj Kumar. (2025). Nanotechnology Assisted Strategies to Tackle COVID and Long-COVID. *BioNanoScience,* 15, 217, 1-33. **(IF: 3.2).Q3**

https://doi.org/10.1007/s12668-025-01812-x. Springer Nature. Citation: 03.

24. **Keshaw Ram Aadil**, K. Bhange, Gita Mishra, N. Kumar (2024). Keratin nanofiber in tissue engineering: Bridging Nature and Innovation. Biotechnology for Sustainable Materials (Springer Nature). 1, 1-21. https://doi.org/10.1186/s44316-024-00019-6 Citation: 10

23. **Keshaw R. Aadil**, A Nathani, A Rajendran, CS Sharma, N Lenka, P Gupta (2023). Investigation of human hair keratin based nanofiberous scaffold for skin tissue engineering application. Preprint. Drug Delivery and Translational Research. Drug Delivery and Translational Research 14 (1), 236-246 (Springer nature) **[IF: 5.6]. Q1** https://doi.org/10.1007/s13346-023-01396-7 Citation: 12.

22. Raj Kumar, **Keshaw Ram Aadil** , Kunal Mondal , Yogendra Kumar Mishra , David Oupicky , Seeram Ramakrishna, Ajeet Kaushik. (2022). Neurodegenerative disorders management: state-of-art and prospects of nanobiotechnology. Critical Review in Biotechnology, 1-33. Taylor & Francis) **(IF: 9.062). Q1** https://doi.org/10.1080/07388551.2021.1993126 . Citation: 66

21.Raj Kumar, Arun Butreddy, Nagavendra Kommineni, Pulikanti Guruprasad Reddy, Naveen Bunekar, Chandrani Sarkar, Sunil Dutt, Vivek K Mishra, **Keshaw Ram Aadil**, Yogendra Kumar Mishra, David Oupicky and Ajeet Kaushik. Lignin: Drug/Gene Delivery and Tissue Engineering Applications. (2021). International Journal of Nanomedicine (Dove Press), 16, 2419-2441. **(IF: 6.5) Q1. https://doi.org/10.2147/IJN.S303462.** Citation: 140.

20.Ankita Chaubey, **Keshaw R. Aadil**, Harit Jha (2021). Synthesis and characterization of lignin-poly lactic acid film as active food packaging material. Material Technology: Advanced Performance Material. 36 (10), 585-593. **[IF=3.7] Q2.** Taylor & Francis. https://doi.org/10.1080/10667857.2020.1782060 Citation: 64

19. Raj Kumar, **Keshaw Ram Aadil**, Shivendu Ranjan, Vijay Bhooshan Kumar, (2020). Advances in nanotechnology and nanomaterials based strategies for neural tissue engineering. Journal of Drug Delivery Science and Technology (Elsevier) 57:101617.**Q1**. https://doi.org/10.1016/j.jddst.2020.101617 **[IF: 5.062].** Citation: 155

18. Piyush Parkhey, **Keshaw R. Aadil**, Batul Diwan, J Satya Eswari, Pratima Gupta (2020). Artificial neural network and response surface methodology: a comparative analysis for optimizing rice straw pretreatment and saccharification. Preparative Biochemistry & Biotechnology (Taylor & Francis).50(5) 1-13. **[IF=1.9] Q2.** https://doi.org/10.1080/10826068.2020.1737816 . Citation: 12

17. **Keshaw R. Aadil,** Akash Nathani, Chandra S. Sharma, Nibedita Lenka, Pratima Gupta (2019). Investigation of poly(vinyl) alcohol-gellan gum based electrospun nanofiber as scaffolds for tissue engineering applications. Journal of Drug Delivery Science and Technology (Elsevier).**Q1** 54: 101276. https://doi.org/10.1016/j.jddst.2019.101276 . **[IF: 4.9].** Citation: 53

16. **Keshaw R. Aadil**, Neha Pandey, Solange I. Mussatto, Harit 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 (Elsevier). 7 (5): 103296. **Q1 [IF: 7.968].** https://doi.org/10.1016/j.jece.2019.103296. Citation: 141

15. **Keshaw R. Aadil,** Akash Nathani, Chandra S. Sharma, Nibedita Lenka, Pratima Gupta (2018). Fabrication of biocompatible alginate-poly(vinyl alcohol) nanofibers scaffolds for tissue engineering applications. Material Technology: Advanced Performance Material. 33(8), 507-512. **[IF: 3.846] Q2.** Taylor & Francis. Indexing: Scopus (Corresponding author). https://doi.org/10.1080/10667857.2018.1473234 . Citation: 55

14. **Keshaw R. Aadil,** Solange I. Mussatto, Harit Jha (2018). Synthesis and characterization of silver nanoparticles loaded lignin-poly(vinyl alcohol) electrospun nanofibers and their antimicrobial activity. International Journal of Biological Macromolecules. 120 (Part A), 763-767. **[IF: 8.5] Q1.** Indexing: Scopus/Pubmed. PMID: 30144548. (Corresponding author). Citation: 158 .https://doi.org/10.1016/j.ijbiomac.2018.08.109

13. Anand Barapatre, **Keshaw R Aadil,** Harit Jha, (2017). Biodegradation of Malachite Green by the Ligninolytic Fungus Aspergillus flavus. CLEAN-Soil, Air, Water. 45(4), 1-12. DOI: 10.1002/clen.201600045 **[IF = 1.4].** **Q3** WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. Citation: 80.

12. **Keshaw R. Aadil,** Anand Barapatre, Avtar Singh Meena, Harit Jha (2016). Hydrogen peroxide sensing and cytotoxicity of Acacia lignin stabilized silver nanoparticles. International Journal of Biological Macromolecules.82, 39-47. **[IF: 8.5].** Citation: 101. **Q1.** Elsevier. Indexing: Scopus/Pubmed. PMID: 26434518.https://doi.org/10.1016/j.ijbiomac.2015.09.072

11. **Keshaw R Aadil,** Dolly Prajapati, Harit Jha (2016). Improvement of physcio-chemical and functional properties of alginate film by Acacia lignin. Food Packaging and Shelf Life. 10, 25-33. **[IF = 10.6].** Elsevier. **Q1** Citation: 113. (Corresponding author).https://doi.org/10.1016/j.fpsl.2016.09.002

10. **Keshaw R Aadil,** Harit Jha (2016). Physico-chemical properties of lignin-alginate based edible films in the presence of different plasticizers. Iranian Polymer Journal. 25 (8), 661-670. **[IF = 2.8]** **Q2.** Springer. Citation: 40

09. **Keshaw R Aadil,** Anand Barapatre, Harit Jha (2016). Synthesis and characterization of Acacia lignin-gelatin film for its possible application in food packaging. Bioresources and Bioprocessing. 3(27):1-11.**Q1** Citation: 79, Springer **[IF = 4.578].** https://doi.org/10.1186/s40643-016-0103-y

08. **Keshaw R Aadil**, Rajan Jha, Harit Jha (2016). Synthesis, characterization and metal adsorption capacity of Acacia lignin based resin. Asian Journal of Biological and Life Sciences. 5(1):40-45.

07. Anand Barapatre, **Keshaw R Aadil**, Harit Jha, (2016). Synergistic antibacterial and antibiofilm activity of silver nanoparticles biosynthesized by *Aspergillus flavus* and *Emericella nidulans*. Bioresources and Bioprocessing. 3(8): 1-13. **Q1** Springer Citation: 203. **[IF = 4.578]** https://doi.org/10.1186/s40643-016-0083-y

06. Anand Barapatre, **Keshaw R Aadil,** Bhupendra N Tiwary, Harit Jha, (2015). In-vitro antioxidant and antidiebetic activity of bio modified Acacia wood lignin. International Journal of Biological Macromolecules. 75; 81-89. **[IF: 8.5].** **Q1** Citation: 127. Indexing: Scopus/Pubmed. PMID: 25600985.https://doi.org/10.1016/j.ijbiomac.2015.01.012

05. **Keshaw R Aadil**, A. Barapatre, S. Sahu, H Jha, B.N.Tiwary, (2014). Free radical scavenging activity and reducing power of *Acacia nilotica* wood lignin. International Journal of Biological Macromolecules. 67, 220-227. **[IF: 8.5].** **Q1** Citation: 159. Indexing: Scopus/Pubmed. PMID: 24685465.https://doi.org/10.1016/j.ijbiomac.2014.03.040

04. Shyam Sunder Sharma, **Keshaw Aadil,** Madan Singh Negi, Shashi Bhushan Tripathi. (2014). Efficacy of two dominant marker systems, ISSR and TE-AFLP for assessment of genetic diversity of biodiesel species *Pongamia pinaata.* Current Science. 106, (11), 1576-1580. **Q2** **[IF: 1.102].** Citation: 15.http://www.jstor.org/stable/24102463

03. Harit Jha, Anand Barapatre, Mithlesh Prajapati, **Keshaw Ram Aadil** and Sunil Senapati (2013). Antimicrobial activity of rhizome of selected Curcuma variety. International Journal of Life Sciences Biotechnology and Pharma Research, 2, (3) 183-189. Citation:60 **http://ijlbpr.com/jlbpradmin/upload/ijlbpr_51d448fc2736e.pdf**

02. Anand Barapatre, Sudha Sahu, **Keshaw Aadil** and Harit Jha (2013). Value added products from agrowaste. Recent Research in Science and Technology, 5(2): 07-12. Citation: 3 [Proceedings of National Conference on Biological Sciences in Present Scenario, Oct 10-11, 2012. Held at Post Graduate Department of Biotechnology and Microbiology, St. Thomas College, Bhilai Chhattisgarh, India].

01. **Keshaw Ram Aadil,** Anand Barapatre, Namrata Rathore, Sandhya Pottam and Harit Jha (2012). Comparative study of in-vitro antioxidant and antidiabetic activity of plant extracts of Acacia arabica, Murraya koeingii, Catharanthus roseus and Rouwolfia serpentine. International Journal of Phytomedicine, 4 (4), 543-551. **[IF = 1.23].** Citation: 14

PUBLISHED Book = 02 /Book Chapters = 09

Chapters:

1. **Keshaw Ram Aadil**, K. Bhange, Gita Mishra, Raj Kumar (2026). Revolutionizing precision oncology: Combating chemoresistance with nanorobotics. Book name: Novel and Innovative Drug Delivery Systems to Overcome Chemoresistance in Human Malignancies. 123-144. Acadmic Press (Elsevier). 2026/1/1. https://doi.org/10.1016/B978-0-443-45717-3.00012-X
2. **Keshaw Ram Aadil**, K. Bhange, Anubhuti Jha, N. Kumar Gita Mishra (2025). Chapter 11: Lipid nanoparticles–mRNA platforms: Advancing cancer immunotherapy". Book: "Lipid Nanoparticles-based mRNA Delivery System" Editor: Raj Kumar. Publisher. Elsevier 978-0-443-45006-8 B978-0-443-45006-8.00005-7.
3. **Keshaw Ram Aadil,** Khushboo Bhange, Gita Mishra, Raj Kumar, (2025). Chapter: 'Revolutionizing Precision Oncology: Combating Chemoresistance with Nanorobotics, book: Novel and Innovative Drug Delivery Systems to Overcome Chemoresistance in Human Malignancies. Elsevier 9780443457173
4. Sanu Awasthi, Harit Jha, **Keshaw Ram Aadil** (2023), Fabrication and characterization of lignin-agar based bioactive porous scaffold for biomedical application 131-146. Book: Role of Applied Sciences in Social Implications Volume C: Life Science. Probecell Academic Publishing, Bhilai, CG, India. ISBN 978-81-959977-1-8.
5. Bhange K, **Keshaw R. Aadil,** Divya S. Tyagi, Tushar Chandrakar (2023) Current trends of Microbial pigments: Production, Characteristics and Applications 50-61, Book: Role of Applied Sciences in Social Implications Volume C: Life Science. Probecell Academic Publishing, Bhilai, CG, India.. ISBN 978-81-959977-1-8.
6. **Keshaw Ram Aadil,** Sanu Awasthi, Raj Kumar, Sunil Dutt, Harit Jha (2023). Advanced Functional Nanomaterials of Biopolymers: Structure, Properties and Applications (Book chapter). Book name: Functional Materials from Carbon, Inorganic and Organic Sources: Methods and Advances (Elsevier). ISBN. 978-0-323-85788-8.
7. Sunil Dutt , Abhishek Kumar Gupta, **Keshaw Ram Aadil** , Naveen Bunekar, Vivek K. Mishra, Raj Kumar, Abhishek Gupta, Abhishek Chaudhary, Ashwani Kumar, Mohit Chawla and Kishan Gugulothu, Nanomaterials of metal and metal oxides for optical biosensing application. Metal Oxide Series, Series Editor, Ghenadii Korotcenkov. Editor: Kunal Mondal. Metal Oxides for Biomedical and Biosensor Applications. DOI: https://doi.org/10.1016/B978-0-12-823033-6.00011-9. Publication

   Date : 03/12/2021Chapter 13; 322-352. Elsevier.
8. Raj Kumar, Naveen Bunekar, Sunil Dutt, Pulikanti G Reddy, Abhishek K Gupta, **Keshaw R Aadil,** Vivek K Mishra, Shivendra Singh, Chandrani Sarkar (2021). 2D Advanced Functional Nanomaterials for Cancer Therapy, Book Name: 2D Advanced Functionalized Inorganic Nanomaterials: Synthesis and Energy Conversion Applications, Publisher: John Wiley & Sons, Publication Date:12 06/2021, Print ISBN: 978-3-527-34677-6; ePDF ISBN: 978-3-527-82395-6. (Book chapter).
9. **Keshaw R Aadil** and Pratima Gupta. (2019). Fabrication and characterization of hair keratin-chitosan based porous scaffolds for biomedical application. Book: REUSE AND RECYCLING OF MATERIALS: NEW HEADWAYS. River Publisher, Denmark, pages: 313-325. ISBN No. 9788770220583; e-ISBN: 9788770220576. [Book Chapter]. Published date: Aug 2019.
10. Raj Kumar, Abhishek Gupta, Mohit Chawla, **Keshaw Ram Aadil**, Sunil Dutt, Vijay Bhooshan Kumar, Abhishek Chaudhary (2020). Advances in Nanotechnology based Strategies for Synthesis of Nanoparticles of Lignin. © Springer Nature Switzerland AG 2019. S. Sharma and A. Kumar (eds.), Lignin Biosynthesis and Transformation for Industrial Applications, Springer Series on Polymer and Composite Materials. .Vol.1, 203-229, Publication date: 2020/4/14 Book Chapter. DOI: https://doi.org/10.1007/978-3-030-40663-9_7.

Book:

1. Keshaw R. Aadil and Harit Jha (2020), (First Edition). Potential Industrial application of lignin formulated biopolymers and nanomaterials, Poddar Publications (BHU).
2. Harit Jha and **Keshaw R Aadil** (2016). Lignocellulose Based Composites and Biopolymers. Lambert Academic Publishing. [13/06/2016]. ISBN no. 978-3-659-89712-2. (Book).
3. Editors: Keshaw Ram Aadil and Solange I Mussatto, Microbial Lignin Valorization and Bioprocess Engineering., Under Process. Academic Press (Elsevier). 2026. Accepted (Under Process)

Program Organized:
As Program Coordination:

1. As Organizing Secretary: Seven days national level intensive training program on Advanced Laboratory Instruments from Higher Education, organized by IQAC, Cell, Govt. Digvijay Autonomous PG College, Rajnandgaon, 6-12 March, 2026.
2. As Program Coordinator: Two days national level workshop on Incubation and Startup Ecosystem: Need of NEP 2020 organized by Incubation Cell, Govt. Digvijay Autonomous PG College, Rajnandgaon, 20-21 Feb, 2026
3. As Organizing Secretary: Seven days national level Workshop on IKS in higher education organized by IQAC, Cell, Govt. Digvijay Autonomous PG College, Rajnandgaon, 24-30 April, 2025.

Guest lecture/Resource person

1. 7-Day Inter-College Lecture Series, topic: Plants for Human Welfare and Startup Opportunity: 'Waste to Wealth', organized by Dhurwarao Madiya Government College Bhairamgarh, Bijapur, 2 to 7 December 2024.
2. Invited talk at Sahid Durvasha Nishad Govt. Arjunda, College, Balod, Date: 30/01/2026.

CONFERENCES International: 11 National: 13 Invited lectures: 03

1. Presented research paper Sustainable biomaterial at 2nd Chhattisgarh Green Summit **(CGS 2026),** 13-15 March, 2026, PT. RSU Raipur. Oral presentation/Speaker.
2. Presented research paper Waste to wealth keratin nanofiber for biomedical application application at International Conference on Chemical Biology as a Platform for Rational Drug Design, **(ICCB 2026),** Department of Biotechnology, GGV, Bilaspur, CG and Chemical Biology Society Kolkata. at 9-11 February, 2026, Organized by Oral presentation/Speaker.
3. Keratin nanofiber in tissue engineering application: APA International Conference on Polymer for Advanced Technology **(APA 2025),** 13-15 October, 2025, Udaipur. **Oral presentation/Speaker**
4. Development of lignin based antimicrobial nanofiber mat for biomedical application, presented at 3rd International conference on Role of Science, Technology, Management & Social Science in Viksit Bharat 2047, held from 9-10th January, 2025 Sarguja Universilty, Sarguja. **Oral presentation.**
5. **Best Oral Presentation Award:** Keratin nanofiber in tissue engineering: Fabrication, Characterization and in-vitro cell culture study, Second National Conference on Nanotechnology & Environment (NCNE 2024) held at NIT Raipur during 13-14th December 2024. **Oral presentation.**
6. Present a startup idea/ Pitch deck on **Startup Sangam Conclave 2024,** organized by GGV Startup Foundation-DST ITBi at Guru Ghasidas Vishwavidyalaya, Bilaspur held from 28-29 Nov. 2024. **Oral presentation.**
7. Lignin based material for biomedical application, presented in two days national seminar on Innovation and entrepreneurship in Biotechnology (NEIEB 2023), Organized by Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur held from 8-9th December 2023. **Oral presentation.**

8. Fabrication and characterization of lignin-agar based bioactive porous scaffold for biomedical application, presented in the International Conference IC-RASSI-2023 organized by Govt. Digvijay Autonomous Postgraduate College Rajnandgaon (C.G.) India from 6 to 8th February 2023. **Oral presentation.**
9. Lignin-PVA-Silver nanoparticles based nanofiber and their antimicrobial activity. National Conference on Recent Advances & Trends in Biotechnology held on 10-12th January 2020 organized by SOS in Biotechnology, Pt. Ravishankar Shukla University, Raipur Chhattisgarh. **Best Oral Presentation Award.**
10. Investigation of hair keratin-poly(vinyl alcohol) based nanofiber as scaffolds for tissue engineering application. International Conference on Recent Advances in Biotechnology and Biochemistry (ICRABB 2020) held on 8-9th January 2020, organized by NIT Raipur, Chhattisgarh**. Oral Presentation**
11. 'Fabrication, characterization and biocompatibility study of hair keratin-poly (vinyl alcohol) based nanofiber scaffolds for biomedical application'. Presented in 56th Annual Convention of Chemist and International Conference on Recent Trends in Chemical Sciences held on 14-16th November 2019, organized by SOS in Chemistry, Pt. RSU Raipur. **Oral Presentation**
12. Fabrication, characterization and biocompatibility study of Poly(hydroxyl butyrate) - collagen based electrospun nanofiber scaffolds. Presented on UGC-SAP-DRS-II 3rd National Conference on Advances in Environmental & Chemical Sciences, organized by School of Studies in Chemistry, Pt. Ravi Shankar Shukla University Raipur, Chhattisgarh, India. 27-28 March, 2019. **Oral Presentation**
13. Fabrication of biocompatible gellan gum-poly(vinyl) alcohol based electrospun nanofiber for tissue engineering applications. Presented on International Conference on Emerging Researches in Bioscience (ICERB-2018), Organized by Department of Zoology, Guru Ghsidas Vishwavidyalaya, Bilaspur, CG, India. October 28-30th, 2018. **Oral Presentation.**
14. 'Fabrication, characterization and biocompatibility study of alginate-poly(vinyl alcohol) nanofibers', presented in National Seminar on Nanotechnology to Translational Nanomedicine: Status Assessment, Challenges and New Horizons. Organized by University Institute of Pharmacy, Pt. Ravi Shankar Shukla University Raipur, Chhattisgarh, India. 15-17th March, 2018. **Oral Presentation.**
15. **'**Fabrication and characterization of hair keratin-chitosan based porous scaffolds for biomedical application', presented in Fourth International Conference on Reuse and Recycling of Materials (ICRM 2018). Organized by International and Inter University Center for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam, Kerala, India. 9-11th March, 2018. **Invited Lecture.** Abstract book ISBN No. 978-93-5300-475-0
16. Entitled: 'Hydrogen peroxide sensing and cytotoxicity of *Acacia* lignin stabilized silver nanoparticles' presented in International Conference on Biomaterials, Biodiagnostics, Tissue Engineering, Drug Delivery and Regenerative Medicine (BiTERM-2016) Organized by Centre for Biomedical Engineering, Indian Institutes of Technology-Delhi, New Delhi, from April 15-17, 2016. **Poster Presentation.**
17. 'Catalytic Activity of *Acacia* Lignin stabilized silver Nanoparticles', presented in 17th National Conference on Surfactants, Emulsions and Biocolloids (NATCOSEB-XVII,) organized by School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur, Chhattisgarh, under the aegis of Indian Society for Surface Science and Technology (ISSST) Kolkata. November 4-6, 2015. **Poster Presentation. [Best Poster Award].**
18. Entitled: *'In-vitro* cytotoxicity and antimicrobial activity of novel lignin-zinc oxide nanoparticles,' presented in 'National Conference on Empowering Mankind with Microbial Technologies (AMI-EMMT 2014), Organized by Association of Microbiologists of India (AMI) and Tamil Nadu Agriculture University (TNAU), Coimbatore from November 12-14, 2014. **Poster Presentation.**
19. Entitled 'synthesis and characterization of cellulose nanocrystals from *acacia* wood for its putative applications in biomedical,' presented in International Conference on Polymeric Biomaterials, Bioengineering & Biodiagnostics (Biomaterial-2014 Organized by Department of Textile Engineering, Indian Institutes of Technology-Delhi, New Delhi, from Oct 27 to 30, 2014. **Poster Presentation.**

20. 'Lignin mediated novel route for the synthesis of silver nanoparticles', presented in International Conference on Polymer: Vision and Innovations (APA-2014), organized by Department of Textile Engineering, Indian Institutes of Technology-Delhi, New Delhi February 19-21, 2014. **Poster Presentation.**
21. 'Synthesis and characterization of *Acacia* lignin based resin,' presented in International Conference on Chemical and Bioprocess Engineering-India (ICCBPE-IN, 2013), organized by Department of Chemical Engineering, National Institutes of Technology- Warangal, Andhra Pradesh, November 16, 17, 2013. **Oral Presentation**.
22. Development of novel biodegradable polymeric composites from *Acacia* (Babool) waste' presented in XI Chhattisgarh Young Scientist Congress-2013 from 28th Feb to 1st March, 2013. **Oral Presentation**.
23. Controlled drug release study of synthesized lignin-alginate copolymer, National conference on 'Microbial Diversity: Exploration, Conservation & Application' organized by Department of Botany, Govt. Science college, Bilaspur, from 14-17th March, 2013. **Oral Presentation**.
24. Study of antioxidant activities of lignin extracted by various methods,' presented in National seminar on Plant Biology & it's role in Sustainable food & Energy Production, from March 17-18, 2012, organized by Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur, CG. **Poster presentation.**

WORKSHOPS ATTENDED

1. Participated online in Indian National Young Academy of Sciences (INYAS) Flagship Event for Post-PhD Opportunities: Research, Academia and IndustrY Opportunities, Science Journalism, GrAnt writing and Networking (PRAYOJAN) workshop organized by INYAS during 23rd-24th April 2022.
2. Participated in "Two Weeks Faculty Development Programme on Entrepreneurship" Organized by Chhattisgarh Industrial and Technical Consultancy Centre (CITCON) Raipur in association with Institute of Renewable Energy Technology & Management, Pt. Ravishankar Shukla University Raipur held on 20th Jan -1st Feb 2020.
3. GIAN workshop: Biomaterial Engineering and Digital Manufacturing 12-21st December, 2016, Organized by Department of Chemical Engineering, IIT Hyderabad, Hyderabad, India.
4. Training on Electrospning techniques under the supervision of Prof. Natarajan TS, at Department of Physcis, IIT Madras from 23rd June to 10th July 2014.
5. Two days national workshop on 'Alternative to use of animal sacrifice in life science education for teachers' organized by Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur, CG from 24-25th August, 2013.
6. Attended 02 days workshop on 'Ion beam induced material modifications and neutron beam generation using 3 MV particle accelerator- Application in physical, chemical and life sciences' organized by Department of Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, CG from 19-20 August, 2013.
7. Successfully completed the training course on 'Application of NMR' organized by Indian Institute of Technology-Madras, Chennai from 21st to 23rd March, 2013.
8. Successfully completed dissertation work from The Energy & Resources Institute (TERI), New Delhi entitled 'Assessment of genetic diversity in *Pongamia pinnata* using AFLP and ISSR marker, (2009).
9. Attended 7 days' workshop on Phylogenetic and Structural analysis of Hemoglobin (Protein) in Bioinformatics entitled "Phylogenetic and structural analysis of Insulin (Protein), in Bioinformatics and emphasis on Drug designing". During the period I learnt about using various bioinformatics software, how to use these software for analysis of Protein and dealt with Drug designing, learnt about the software like BLAST, Hex and Hyperchem organized by niTza Biologicals, Hyderabad, (24th Nov. to 1st December, 2008).

Editor/REVIEWER

1. Guest Editor: Special issue collection on **Biobased nanomaterials fabrication and application in drug delivery and tissue engineering,** BMC/Springer Nature August 2025-2026.
2. Journal of Polymers and the Environment (Springer Nature).
3. Journal of Nanoparticle Research (Springer).
4. Macromolecular Research (Springer).

3. Brazilian Journal of Microbiology (Springer).
4. ACS Sustainable Chemistry & Engineering.
5. Journal of Nanostructure in Chemistry (JNSC) (Springer).
6. Journal of Environmental Chemical Engineering. (Elsevier).
7. Biotechnology and Bioprocess Engineering (Springer).
8. Material Today Communication. (Elsevier).
9. International Journal of Biological Macromolecules (Elsevier).
10. Journal of Applied Surface Science (Elsevier).
11. Green chemistry (RSC)

MEMBERSHIPS

i. Asian Polymer Association (APA) Life Member. ID: L498
ii. Society of Tissue Engineering and Regenerative medicine, India (STERM). Life Member. ID: LM(1)141

REFERENCES

- Dr. Harit Jha, Associate Professor, Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur, CG. E-mail: harit74@yahoo.co.in; harit.jha@ggu.ac.in, Mo. 9826630805
- Prof. Chandra Shekar Sharma, Professor, Department of Chemical Engineering, IIT Hyderabad. cssharma@iith.ac.in, Mo. 8374461784
- Dr. Pratima Gupta, Associate Professor, Department of Biotechnology, NIT Raipur, CG Email ID: pgupta.bt@nitrr.ac.in Mo. 7000420752, 9893427084
- Prof. Keshav Kant Sahu, Department of Biotechnology, Pt. Ravishankar Shukla University, Raipur, CG, Email ID: skeshavkant@gmail.com, Mo. 9425228966.
- Prof. Kallol K Ghosh, Director, Centre for Basic Sciences, Pt. Ravishankar Shukla University, Raipur, CG, kallolkghosh@gmail.com

PERSONAL DETAILS

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Permanent Address: Pt. Deen Dayal Upadhyay Nagar, Ward no. 6, Near Chikhli police station, Rajnandgaon, 491441, (Chhattisgarh).

Languages Known: English and Hindi (Read, write and speak).

[Dr. Keshaw Ram Aadil]