

CURRICULUM VITAE

Dr. KOTRESH K. R

M.Sc., Ph.D.,

DATE OF BIRTH: 5th December 1988

NATIONALITY: Indian

LANGUAGES KNOWN: English and Kannada

MARITAL STATUS: Married

ADDRESS (CORRESPONDENCE)

Department PG Studies and Research in Biochemistry

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EDUCATIONAL QUALIFICATIONS				
DEGREE	SUBJECT	AFFILIATION	YEAR	SCORE
Doctorate of Philosophy (Ph.D.)	Biochemistry	Kuvempu University	2020	Awarded
Ph.D. Thesis Title:	Synthesis and Characterization of Magnetite (Fe ₃ O ₄) Nanoparticle to Enhance the Sustainability of Some Industrial Viable Thermophilic Enzymes by Immobilization.	Course Work Grade: 'A+'		
Master of Science (M.Sc.)	Biochemistry	Kuvempu University	2012	66.10%
Bachelor of Science (B.Sc.)	(Biochemistry, Microbiology, Biotechnology)	JSS College. Ooty road, Mysore - 507725	2010	61.81%

RESEARCH INTERESTS: Protein/Enzyme chemistry, Extremophiles Biochemistry, Bioremediation, Nanobiotechnology, environmental microbiology

HANDS-ON TECHNICAL PROFICIENCY

Molecular Biology Techniques: DNA & Protein Isolation, PCR, Protein Extraction & Purification, SDS-PAGE and Native PAGE, Centrifugation, Chromatography

Cell Culture Techniques: Maintenance of cell culture, isolation and characterization of microbial cells

Protein Biochemistry: Purification of protein/enzymes produced from thermophilic bacteria, Chromatographic techniques, Isolation and characterization of proteins by SDS-PAGE and Ion exchange chromatography, Biodegradation of textile azo dyes.

Immunological techniques: ELISA

Computer Skills: Proficiency with MS Word, MS Power Point, MS Excel and Origin software, MEGA software

Instruments handled: Spectrophotometer and colorimeter, Centrifuge, Electrophoresis, FPLC, Ion exchange chromatography, ELISA, lyophizer.

Work experience

Teaching: 3 years and counting. Department of Biochemistry, Kuvempu University, Shankaraghatta

Research: 8 years and counting. Department of Biochemistry, Kuvempu University, Shankaraghatta

RESEARCH SUPERVISOR FOR POST-GRADUATES

Name of candidate	Title of the project work	Year
Bhargavi S More	Optimization of <i>GT</i> KNG112 under submerged fermentation for decolorization of textile azo dyes.	2020
Mallikarjun M.Y and Keeerthan kumar K.R	Decolourization and degradation of hazardous azo dye methyl red by thermophilic <i>Geobacillus</i> sp. Metabolites characterization and biotoxicity	2021

Pallavi	Decolorization and degradation of carcinogenic sulfonated azo dye methyl orange by thermophilic <i>Geobacillus</i> sp: Metabolites characterization and Bio toxicity	2022
Adarsha K B	Bioremedial approach of geobacillus thermoleovorans KNG 112 for textile azo dye congo red degradation	2022
Priya K.S and Nagarathna	Decolourization and degradation of textile azo dye congo red by novel <i>Bacillus smithii</i> AMPNK: Metabolite characterization and biotoxicity	2023
Tanuja and Rakshitha M.V	Production of industrial viable thermos-amylase from <i>G. stearothermophilus</i> KTRAM using agri by-product as a substrate	2023
Jyothi H.M and Sirichanadana	“Decolorization and Degradation of carcinogenic sulphonated azo dye methyl orange by novel <i>Escherichia</i> sp. strain SAMKS 007”	2023
Swathi V and Suma	“Partial purification and Characterization of <i>Ficus Benghalensis</i> seed derived Bioactive Protein”	2023

LIST OF SELECTED PUBLICATIONS IN REPUTED PEER-REVIEWED INDEXED JOURNALS

INDEXED IN: SCOPUS, PUBMED, WEB OF SCEINCE, UGC-CARE, INDEXED COPERNICUS, SCIENCE CITATION INDEX EXPANDED AND GOOGLE SCHOLAR

Highest Impact Factor: **8.2**

Research Article Publications

1. Kotresh K. Rajashekarappa, Avinash B, Neelagund S. E, Gurumurthy D. M, and Prabhanshu Kumar (2024). Production of Industry-Viable Thermo-Amylase from *Geobacillus stearothermophilus* KTRAM Using Agricultural By-Product as a

Substrate. INDUSTRIAL BIOTECHNOLOGY,1-9. DOI: [10.1089/ind.2024.0018](https://doi.org/10.1089/ind.2024.0018)

2. Prathap A, H.S. Bhojya Naik, R. Viswanath, Maruthi Nayaka T.H, **Kotresh K.R** (2024). Efficacy of datura metal leaf extract on MnSrO₂ NPs synthesized using a green method in terms of pollutant reduction and antimicrobial activity. *Journal of Crystal Growth* 642 (2024) 127796. <https://doi.org/10.1016/j.jcrysgro.2024.127796>
3. **Kotresh Kyathanahally Rajashekarappa**, Avinash Basavarajappa, Shivayogeeswar Eshwarappa Neelagund, Gurumurthy Dummi Mahadevan, Rajeshwara Nagappa Achur, Prabhanshu Kumar (2024). Propitious catalytic response of immobilized α -amylase from *G. thermoleovorans* in modified APTES-Fe₃O₄ NPs for industrial bio-processing. *International Journal of Biological Macromolecules* 269 (2024) 132021. <https://doi.org/10.1016/j.ijbiomac.2024.132021>.
4. Prathap A, H.S. Bhojya Naik, R. Viswanath, Vishnu G, Adarshgowda N, **Kotresh K. R** (2024). An effect of Datura metal leaves extract on photocatalytic and antimicrobial activity of MgO nanoparticles synthesized via a biogenic method. *Chemical Data Collections*. Volume 51, June 2024, 101131
5. Rajkumar S. Meti, S. E. Neelagund, Deepadarshan Urs, K. K. Dharmappa, **K. R. Kotresh** Green synthesis of silver nanoparticles from *Acacia sinuata* seed extract and evaluation of their mosquitocidal and anticancer (Caco- 2and MG- 63 cell) activity. *Biomass Conversion and Biorefinery*. <https://doi.org/10.1007/s13399-023-05161-1>
6. Husna Tabasum, S. E. Neelagund, **K. R. Kotresh**, M. D. Gowtham, N. Sulochana (2023). GC–MS/MS analysis of chlorpyrifos in forensic samples with varied survival time. *Forensic Science, Medicine and Pathology*. <https://doi.org/10.1007/s12024-023-00720-4>.
7. Rajkumar S. Meti, Neelagund S. E, Deepadarshan Urs, Dharmappa K. K, **Kotresh K.R.** Biosynthesis, mosquito larvicidal potential, and anticancer activities of gold nanoparticles from *Acacia sinuata* seed extract. *Biomedicine*: 2023; 43(2): 684-689. <https://doi.org/10.51248/v43i02.2706>
8. Madhuri Sathyanarayana, Avinash Basavarajappa, **kotresh k rajashekarappa**, Shivayogeeswar Neelagund. A Network Pharmacology-Based Prediction and Verification of the Major Protein Targets of Bmnpv Obtained From Modern

Sequencing Technology against Plant Active Ingredients. *Der Pharma Chemica* 5(2):11-20. [DOI: 10.4172/0975-413X.15.2.11-20](https://doi.org/10.4172/0975-413X.15.2.11-20)

9. SinchanaMurugaraj, Avinash Basavararajappa, **Kotresh K Rajashekharappa**, Shivayogeeswar Neelagund. Microwave assisted synthesis of *veteria indica* mediated AgNPs: A study on antibacterial mechanism and antioxidant efficacy. *International journal of nanotechnology and application*. 2022
10. Husna Tabasum, S.E. Neelagund, **K.R. Kotresh**, M.D. Gowtham, N. Sulochana (2022). Estimation of chlorpyrifos distribution in forensic visceral samples and body fluids using LCMS method. *Journal of Forensic and Legal Medicine*. [DOI: 10.1016/j.jflm.2022.102423](https://doi.org/10.1016/j.jflm.2022.102423)
11. Husna Tabasum, Neelagund S.E, Harsha Raj G, Kotresh K.R, Avinash B, Gowtham M.D, Sulochana N (2022). Double deaths due to domestic carbon monoxide poisoning correlated with medicolegal autopsy and laboratory studies. *Biomedicine*. <https://doi.org/10.51248/v42i2.1305>
12. Kirthan Bhadravathi Ramashetty, Prabhakara Mustur Channabasappa, Bhojyanaik Halehatti Seetyanaik, Ereshanaik, Viswanath Ranganai, Amith Nayak Peerya Nayak Hemla Nayak, Ravikumar Shivakumar & **Kotresh Kyathanahally Rajashekarappa** (2021). Fabrication, depiction, DNA interaction, anti-bacterial, DFT and molecular docking studies of Co(II) and Cu (II) complexes of 3 methyl-1-phenyl-4-[(E)-(pyridin-2-yl) diazenyl]-1H-pyrazol-5-ol ligand. *Nucleosides, Nucleotides & Nucleic Acids*. <https://doi.org/10.1080/15257770.2021.1991373>
13. **Kotresh Kyathanahally Rajashekarappa**, Gurumurthy Dummi Mahadevan, Shivayogeeswar Eshwarappa Neelagund^a, Madhuri Sathynarayana, Divya Vijaya, Sikandar I. Mulla (2021). Decolorization of Amaranth R I and Fast red E azo dyes by thermophilic *Geobacillus thermoleovorans* KNG 112. *Journal of chemical technology and biotechnology*. 97(2):482-489. [DOI: 10.1002/jctb.6834](https://doi.org/10.1002/jctb.6834)
14. Mahesh Midatharahalli Chikkanna, Shivayogeeswar Neelgund, **Kotresh K. Rajshekarappa** (2018). Green synthesis of Zinc oxide nanoparticles (ZnO NPs) and their biological activity. *SN applied sciences*. A springer nature journal. 1-117 <https://doi.org/10.1007/s42452-018-0095-7>

15. **Kotresh K R**, Shivayogeeswar Neelagund, Gurumurthy D M (2020). Novel *Geobacillus Thermoleovorans* KNG 112 Thermophilic Bacteria from Bandaru Hot Spring: A Potential Producer of Thermostable Enzymes. *Asian Journal of Pharmaceuticals and Clinical Research*. 13(1): 134-141. DOI: <http://dx.doi.org/10.22159/ajpcr.2020.v13i1.36008>
16. **K. R. Kotresh**, S. E. Neelagund, M. C. Mahesh, B. Avinash (2018). Immobilization of Hyperthermostable α -Amylase Using Magnetite [Fe₃O₄] Nano Particle to Promote the Properties for Industrial Applications. *Journal of Bionanoscience*. 12:1-7. DOI:10.1166/jbns.2018.1579

REVIEW ARTICLES

- 1 **Ishneet Kaur Raheja, Prabhanshu Kumar, Kotresh Kyathanahally Rajashekarappa, Gurumuthy Dummi Mahadevan (2024)**. Nanobiosensors for Early Detection of Cancer: A Recent Update. *Biomedical Materials & Devices*. <https://doi.org/10.1007/s44174-024-00263-4>
- 2 Avinash B, **Kotresh K.R** and Neelagund S.E (2021). Coconut's Bud Rot by Phytophthora palmivora: A Destructive Disease. *Journal of Mycology & Mycological Sciences*. DOI:10.23880/oajmms-16000162

BOOK PUBLISHED

1. Immobilization of thermostable amylase on magnetite nanoparticles to enhance the sustainability (2022). **Kotresh K.R**, Avinash B, Shivayogeeswar Neelagund. *Lap Lambert academic publishing*.

Articles under Review

- 1 A Study of forensic acute poisoning cases registered in Western range, Karnataka, India- a retrospective study. Husna Tabasum, S.E. Neelagund, **K.R. Kotresh**, B. Avinash, S. Madhuri, M.D. Gowtham, N. Sulochana. *Forensic Science International*
- 2 Decolorization and degradation of hazardous azo dye Methyl Red by thermophilic

- Geobacillus* sp: metabolites characterization and Biototoxicity. **Kotresh K R**, Neelgund S.E, Avinash.B. *Extremophiles*
- 3 Bioremedial approach of *geobacillus thermoleovorans* KNG 112 for textile azo dye (congo red) degradation. Adarsh K.B, **Kotresh K R**, Neelgund S.E, Avinash.B, *AMB express*

Poster and Oral presentations in National and International Conferences

1. **Oral presentation** at national conference on “**Contemporary Focus and Future Prospects in Biological Research**” held on 21st & 22nd March 2024, at Department of P.G studies and Research in Biochemistry, Kuvempu University, shankaraghatta, Shimoga. Karnataka.
2. **Oral presentation** at national conference on “**Green Chemistry-Need of the Universe**” held on 28th February 2015, at Sri Shivalingeswara Swamy Govt. First Grade College & PG Centre, Chennagiri, Davanagere, Karnataka.
3. **Poster presentation** at national conference on “**Recent Trends in Applied Science & Technology**” held on 26th & 28th October 2017, at Department of Basic Sciences, Alliance College of Engineering and Design, Bangalore.
4. **Oral presentation** at international conference on “**Multidisciplinary Approaches of Science: Nanotechnology-A Boon for Mankind**” held on 18th & 19th September 2018, at Department of Life Sciences, School of Sciences, Garden City University, Bangalore.

Conference and workshop attended

1. Attended, **Chaired** the Scientific session and served as an evaluator of the oral presentation session at the National Conference on “**Advances in Food Technology and Nutrition-AFTN-2024**”, organized by the Department of studies and research in food technology, Kuvempu university, shankaraghatta, shimoga held on 15th & 16th March 2024.

2. **Participated** in one day international webinar on “ **Emerging Approaches in Food Processing Technology**” organized by the DSLD-College of Horticultural engineering and food technology, Devihosur, Haveri, karntaka, India held on 6th October, 2023.
3. **Participated** in IP Awareness/Training program under on ”**National intellectual property awareness mission**” held on 30th July 2022. Organized by Intellectual Property Office, India.
4. Served as **organizing commette member** in the workshop on “**phytomedicines: extraction, purification, in vitro and in vivo studies**” conducted by jnannasahyadri shankaraghatta and sahyadri college, shivmoga. Kuvempu university, under the department of science and technology (DST-STUTI) scheme, held on July 24th to 30th 2022.
5. **Participated** in the workshop on “role of analytical techniques in the quality assurance of pharmaceuticals” held on 17th January 2017, organised by KLEU’S Prabhakar kore basic science research center [BSRC], Belagavi, Karnataka, INDIA.
6. **Participated** in science academies lecture workshop (SALW) on role of plant taxonomy in conservation of biodiversity, held on 10th and 11th November 2016, organised by department of applied botany, kuvempu university, Shankaraghatta. Karnataka.
7. **Participated** in international conference at “7th bangalore INDIAA NANO 2014” held on 4th and 6th December 2014, at Lalith ashok hotel, bangalore.
8. **Participated** in international conference at “6th bangalore INDIA NANO 2013” held on 4th and 6th December 2013, at Lalith ashok hotel, Bangalore.

Declaration

I hereby declare that all the information provided above is true and accurate to the best of my knowledge. I also assure my complete dedication & hard work towards your esteemed organization.

Your’s



(Dr. Kotresh K R)

