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**Permanent Address**

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Tarikere (tq), Chikkamagalur (dt).  
Karnataka, India.

**Personal Information**

Date of Birth : 12<sup>th</sup> February 1990  
Sex : Male  
Nationality : Indian  
Marital Status : Married  
Languages Known:  
Kannada&English  
(Read, Write & Speak)  
Hindi (Read & Speak)

**CURRICULUM  
VITAE**

**Career Objective**

To be with an organization, where I can explore my potential in an environment characterized by opportunity, flexibility and continuously acquiring skills in emerging trends in science and technology.

**Training**

- As a Trainee student in Protein Chemistry laboratory, Department of Biochemistry, Kuvempu University.
- As a Trainee student in Biogenics, Hubli.
- Attended workshop on ‘Role of Analytical techniques in Quality Assurance of Pharmaceuticals’.

**Skill Profile**

- Team work and troubleshooting the experiments.
- Ability to adopt with new emerging technologies.
- Good academic skills.
- Good writing and communication skills.
- Computer knowledge.
- Analytical and biological instrument handling like chromatography and centrifuge, cell staining, microbiology techniques.

## Academic Profile

Educational Qualification	Institution	Year of Passing	University/Board	Marks Obtained (%)
<b>Ph.D.</b> Biochemistry	Jnana Sahyadri, Shankarghatta - 577451	2019	Kuvempu University, Shivamogga, Karnataka	Awarded
<b>M.Sc</b> Biochemistry	Jnana Sahyadri, Shankarghatta - 577451	2012	Kuvempu University, Shivamogga, Karnataka	63.42%
<b>B.Sc</b> (Chemistry, Zoology and Biotechnology)	JSS College of Arts, Commerce and Science, Ooty road, Mysore - 507725	2010	JSS University	68.05%

## Work experience

Organization	Position	Dates
AMCI pvt ltd. Bengaluru.	<b>Biochemistry faculty</b>	September 2019 to January 2020
Vyuhgenics Ind. Bengaluru.	<b>Research Analyst</b>	February 2020 to August 2020
Department of Biochemistry, Kuvempu University, Shankarghatta, Shivamogga.	<b>Guest Faculty</b>	October 2020 to TILL NOW

## TECHNICAL EXPERTISE

### **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 produced from pathogenic fungi.
- Filtration chromatography.
- Isolation and characterization of proteins by SDS-PAGE and Ion exchange chromatography.

### **Immunological techniques**

- ELISA.

### **Computer Skills**

- Proficiency with MS Word, MS Power Point, MS Excel and Origin software.

### **Instruments Handled**

- Light microscope
- Spectrophotometer and colorimeter
- Centrifuge
- Electrophoresis
- FPLC
- Ion exchange chromatography

### **PhD Research Work**

**Project Title** : **Synthesis of Novel Nanoparticles using Silk worm fecal matter: Characterization of nanoparticles for their Biological applications.**

**Organisation** : Jnana Sahyadri, Kuvempu University, Shankarghatta.

**Laboratory** : Protein Chemistry laboratory, Department of Biochemistry.

**Duration** : 4.5 years (since from November 2013- August 2018).

**Description** : There were so many methods are employing for the synthesis of nanoparticles, among those chemical and physical synthesis are prominent, but which were found to be very hazardous to environment and expensive. To overcome this, currently the novel biological synthesis methods for nanoparticles are dominating. Where in, biological synthesis method is cost effective and environmentally friendly, so we have chosen biological synthesis method for the synthesis of nanoparticles using silkworm fecal matter as a reducing agent. The plenty of silkworm fecal matter is available in the farmer's silkworm rearing houses and they are discarding lot of silkworm fecal matter without knowing importance of it. From this discarded waste, we could set the biochemical technique to synthesize the novel metal nanoparticles and made them easily available, in turn boost the application of silk worm fecal matter. Nanomaterials are found to be more effective as antibacterial and antifungal agents and also emerged as enzyme inhibitors in recent days. Hence, we have used the synthesized nanoparticles to inhibit the fungus causing bud rot disease of coconut and cell wall degrading enzymes produced by the pathogenic fungus. Coconut is one the major economic crop in India, a considerable amount of crop will be lost every year due to bud rot disease. So, we have undertaken inhibition studies of synthesized nanoparticles against bud rot disease causing fungi and its enzymes using biologically synthesized novel metal nanoparticles, which would led to develop a new drug and treatment for bud rot disease of coconut.

## Research Article Publications

1. **Avinash Basavarajappa** and Shivayogeeswar E Neelagund, “An Investigation on Antibacterial Efficacy of Biosynthesized Novel Copper nanoparticles using Silkworm fecal matter”. *Imperial Journal of Interdisciplinary Research (IJIR)*, Vol-2, Issue-12, 2016.
2. **Avinash B** and S E Neelagund, “An Investigation on Antibacterial and Free Radical Scavenging Efficacy of Biosynthesized Silver Nanoparticles Using Silkworm Fecal Matter (*Bombyx mori*-L)”. *Journal of Bionanoscience*, Vol. 11, Issue-01, 2017.
3. K R Kotresh, S E Neelagund, M C Mahesh, and **B Avinash**, “Immobilization of hyperthermostable - Amylase Using Magnetite [Fe<sub>3</sub>O<sub>4</sub>] Nano Particle to Promote the Properties for Industrial Applications”. *Journal of Bionanoscience*, Vol. 12, Issue-01, 2018.
4. **Avinash B** and S E Neelagund, “Isolation, Identification and Molecular Characterization of Pathogenic Fungus causing bud Rot Disease to Coconut: Its Inhibition using Silkworm Fecal Matter Mediated Synthesized Silver and Copper Nanoparticles”. *Journal of Mycology & Mycological Sciences*, Vol. 04, Issue-01, 2021.
5. Husna Tabasum, Neelagund S.E, Harsha Raj G, Kotresh K.R, **Avinash B**, Gowtham M.D and Sulochana N, “Double deaths due to domestic carbon monoxide poisoning correlated with medicolegal autopsy and laboratory studies”. *Biomedicine*: Vol. 42, Issue-02, 2022.
6. **Avinash B**, Kotresh KR and S E Neelagund, “Coconut’s Bud Rot by *Phytophthora palmivora*: A Destructive Disease”. *Journal of Mycology & Mycological Sciences*, Vol. 05, Issue-01, 2022.
7. Sinchanamurugaraj, **Avinash B**, Kotresh K R and Neelagund S E, “Microwave Assisted Synthesis of *Vateria indica* Mediated Agnps; A Study on Antibacterial Mechanism and Antioxidant Efficacy”. *International Journal of Nanotechnology and Application*, Vol. 12, Issue-02, 2022.
8. Madhuri Sathyanarayana, **Avinash Basavarajappa**, Kotresh K Rajashekarappa and Neelagund SE, “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*, Vol. 15, Issue-02, 2023.
9. Kotresh Kyathanahally Rajashekarappa, **Avinash Basavarajappa**, Shivayogeeswar Eshwarappa Neelagund, Gurumurthy Dummi Mahadevan, Rajeshwara Nagappa Achur, Prabhanshu Kumar, “Propitious catalytic response of immobilized  $\alpha$ -amylase from *G. thermoleovorans* in modified APTES-Fe<sub>3</sub>O<sub>4</sub> NPs for industrial bio-processing”. *International Journal of Biological Macromolecules*, Vol. 269, Issue-01, 2024.

## Books published

1. **Avinash Basavarajappa**, Shivayogeeswar E Neelagund and Rajkumar S Meti, “Novel Nanoparticles from Silk worm”. *LAP Lambert Academic Publishing*.
2. Kotresh KR, **Avinash B** and Shivayogeeswar Neelagund, “Immobilization of thermostable amylase on to

magnetite nanoparticles”. *LAP Lambert Academic Publishing*.

#### Articles under Review

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1. Screening of *Phytophthora palmivora* for different cell wall degrading enzymes like Pectinases and Cellulases and their optimization of different parameters of production.
2. Partial purification of Pectinases and Cellulases from bud rot disease causing fungi *Phytophthora palmivora* and their inhibition by nanoparticles synthesized using Silkworm fecal matter.
3. Purification and Immobilization of *Geobacillus thermoleovorans* KNG 112 thermostable  $\alpha$ -amylase onto modified magnetite nanoparticles
4. Decolorization and degradation of hazardous azo dye methyl red by thermophilic *Geobacillus* sp. Metabolites, characterization and Biototoxicity
5. Multi-functional studies of microwave irradiated Silver nanoparticles synthesized using *Bixa orellana* seed extract.

#### Books under review

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1. **Avinash B** and S E Neelagund, “Biosynthesized AgNPs and CuNPs as potent inhibitors of *Phytophthora palmivora*; Cellulase and Pectinase inhibition”. *Agrica international*.

#### Poster and Oral presentations in National and International Conferences

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1. Oral presentation at National conference on “**Green Chemistry-Need of the Universe**”, held on 28<sup>th</sup> February 2015, at Sri Shivalingeshwara Swamy Govt. First Grade College & PG Centre, Chennagiri, Davangere, Karnataka.
2. Poster presentation at International conference on at “**Nanoscience, Nanotechnology and Advanced Materials**” held on 14<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> December 2015, at GITAM University, Vishakhapatnam, Andhra Pradesh.
3. Oral presentation at International conference on “**Nanotechnology: the fruition of science ICON-2017**”, held on 15<sup>th</sup> and 16<sup>th</sup> February 2017, at Nesamony Memorial Christian college, Marthandam, Tamilnadu
4. Poster presentation at International conference on “**Green Chemical and Nanotechnology Opportunity and Challenges-2017**”, held on February 27<sup>th</sup> and 28<sup>th</sup> 2017, at St. Allosius College, Mangalore, Karnataka
5. Poster presentation at National Conference on “**Recent trends in Applied Science & Technology (RTAST-2017)**”, held on Oct 26<sup>th</sup> and 27<sup>th</sup> 2017, at Alliance College of Engineering & Design, Bangalore.

## **Extracurricular Activities**

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1. Received 1<sup>st</sup> prize for acting in “Sahyadri Uthsava” held on 10<sup>th</sup> September 2010 organized by Kuvempu University, Shivamogga.
2. Received 2<sup>nd</sup> prize in “Sahyadri Uthsava” quiz competition held on 16<sup>th</sup> July 2014 organized by Kuvempu University, Shivamogga.
3. Won Silver medal in Kuvempu University Sports and Cultural Activities for Shuttle badminton held on May 2019 organized by Kuvempu University.
4. Won Gold medal in Biochem Club shuttle badminton tournament held on 15<sup>th</sup> April, 2019 organized by Department of Biochemistry, Kuvempu University.
5. Won Gold medal in Biochem Club shuttle badminton tournament held on 15<sup>th</sup> September, 2022 organized by Department of Biochemistry, Kuvempu University.

### **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 organization.



(Dr. Avinash B)