# **EDUCATION**

*Ph.D (Biotechnology)* - Shivaji University, Kolhapur 2023

Doctoral research topic- "Isolation, identification and phylogenetic study of iron tolerant bacteria and their application for biosynthesis of magnetic nanoparticles".

*M.Sc. (Biotechnology)* - Shivaji University, Kolhapur 2013

**B.Sc. (Biotechnology) - Shivaji University,** Kolhapur 2011 (Secured **third rank** in University merit List)

*Higher Secondary School Certificate*-Maharashtra Board 2008

Secondary School certificate- Maharashtra Board 2006

### **EXPERIENCE**

School of Nanoscience and Technology, Shivaji University, Kolhapur Assistant Professor December 2021-December 2022

## Indo-American Hybrid Seeds, Bangalore

Research Assistant (Trainee) November 2014-May 2015 **Project-**"Validation of markers linked with virus resistant loci in Tomato, Chili," (Marker assisted selection).

## Vivekanand College, Kolhapur

Assistant Professor June 2013-October 2014

Publications : 7 h-index : 5 Citations : 149 i-10 index : 5

#### **CURRENT POSITION**

Assistant Professor, School of Nanoscience and Technology, Shivaji University, Kolhapur.

# **FELLOWSHIPS & AWARDS**

**2019-2021 Senior Research Fellowship** CSIR-UGC, New Delhi

2017-2019 Junior Research Fellowship CSIR-UGC, New Delhi

2017-CSIR-UGC NET (LS and JRF) (AIR-41) Life Science

2017-GATE (Biotechnology)

2015-SET (Maharashtra & Goa) Life Science

#### LANGUAGES English, Hindi, Marathi

### **RESEARCH SKILLS**

- Biological nanoparticle synthesis and application in biomedical field.
- Protein extraction and purification
- Molecular Biology- DNA Extraction, Electrophoretic techniques, Polymerase chain reaction.
- Plant tissue culture and animal tissue culture
- Marker Assisted Selection for different traits in Plants

# **PUBLICATIONS**

- Desai M.P., Paiva-Santos A.C., Nimbalkar M.S., Sonawane K.D., Patil P.S., Pawar K.D. (2023) Iron tolerant Bacillus badius mediated bimetallic magnetic iron oxide and gold nanoparticles as Doxorubicin carrier and for hyperthermia treatment. Journal of Drug Delivery Science and Technology (81),104214 (IF-5.06)
- Desai M. P., Patil R. V., Harke S. S., Pawar K. D. (2021). Bacterium Mediated Facile and Green Method for Optimized Biosynthesis of Gold Nanoparticles for Simple and Visual Detection of Two Metal Ions. Journal of Cluster Science, 32(2): 341–350. C (IF-3.44)
- **3. Desai M.P.**, Pawar K. D. (2020). Immobilization of cellulase on iron tolerant *Pseudomonas stutzeri* biosynthesized photocatalytically active magnetic nanoparticles for increased thermal stability. Material science and Engineering C (106), 110169. (IF-7.32)
- Desai M.P., Patil R.V., Pawar K. D. (2020). Green biogenic approach to optimized biosynthesis of noble metal nanoparticles with potential catalytic, antioxidant and antihaemolytic activities. Process Biochemistry (98), 172-182. (IF-4.88)
- Desai M.P., Patil, R.V., Pawar, K. D. (2020). Selective and sensitive colorimetric detection of platinum using *Pseudomonas stutzeri* mediated optimally synthesized antibacterial silver nanoparticle. Biotechnology Reports (25), e00404.
- 6. Desai M.P., Sangaonkar, G. M., Pawar, K. D. (2018). Kokum fruit mediated biogenic gold nanoparticles with photoluminescent, photocatalytic and antioxidant activities. Process Biochemistry (70), 188-197. (IF 4.88)
- Sangaonkar, G. M., Desai, M. P., Dongale, T. D., Pawar, K. D. (2020). Selective interaction between phytomediated anionic silver nanoparticles and mercury leading to amalgam formation enables highly sensitive, colorimetric and memristor-based detection of mercury. Scientific Reports (10), 2037. (IF-4.9)

# PATENT GRANTED

K. D. Pawar, **M.P Desai**, "Biomolecule mixture for biogenic synthesis of metal nanoparticles" Indian patent application No.-202121045333A

# **PATENT FILED**

K.D.Pawar, **M.P Desai**, "Biomolecule mixture for biogenic synthesis of metal nanoparticles" International patent- PCT/IN2021/051188 (In process).