

---

## Rupal Makwana

---



---

**INDIA: +91 70 288 56243**  
[rupalmakwana0111@gmail.com](mailto:rupalmakwana0111@gmail.com)

Gender – Female

Marital Status – Married

DOB – 17<sup>th</sup> Sep. 1988

Languages known: Hindi,  
Gujarati, Marathi, English

---

### **OBJECTIVE**

---

To contribute my scientific expertise to commercially focused research programs

To be an integral member of the research team where I will be responsible for delivering scientific R&D outcomes.

Algal biotechnology research, leading and contributing to a diverse range of multi-disciplinary applied projects including those exploring the application of algae/ algal systems to develop future biofuels (oil, biomass, alcohol, methane), Future functional

---

---

### **KEY EXPERIENCES**

---

- Experience in exploring the application of algae/ algal systems to develop future biofuels (oil, biomass, alcohol, methane), Future functional foods, Pigments and antioxidants
  - Algal and cyanobacterial isolation, biomass production and maintenance of axenic culture, Nano particle production and testing its anti-microbial activity
  - Excellent work planning, data analysis and record keeping skills with an attention to detail
  - Highly motivated and organized with excellent interpersonal and communication skills
  - Flexible in thinking and working methods, willingness to learn new techniques, be comfortable switching between projects and capable of rapidly adapting to new information
  - Able to work to tight deadlines and timeframes
- 

### **EDUCATION**

---

- M.Sc. in Microbiology, University of Pune - 2011
  - B.Sc. in Microbiology, University of Pune - 2009
  - Higher Secondary School – Maharashtra state board, Pune, India - 2006
  - Secondary School Certificate – Maharashtra State board, Pune, India – 2004
- 

---

### **WORK EXPERIENCES**

---

### **TEACHING EXPERIENCE**

---

foods, Pigments and antioxidants, Pollution control and bioremediation, Bioactives, Aquaculture, High value materials

---

## SKILLS

Team work & Project management skills

Problem solving & Communication skills

Research and technical skills

Basic writing, editing, speaking, and presentation skills

Business skills and Awareness of industry trends

Understanding of legal and regulatory matters

---

---

## REFERENCES

1) Prof. B. B. Chaugule  
**UGC, Emeritus Professor**  
Department of Botany,  
University of Pune, India.  
Email : [profbbc@gmail.com](mailto:profbbc@gmail.com)

2) Mrs. Sneha Ogale  
**Head, Dept. of Microbiology**

---

Working as Assistant Professor in B. Voc Department at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune 16. (From August, 2017) till date.

### **Assistant Professor - Full time : Modern College of Arts, Commerce & Science, Pune, India**

- F.Y. B. Voc. - Food Microbiology (Theory & Practical )
  - A. Microbial growth in food
  - B. Food fermentation
  - C. Foodborne diseases
  - D. Trends in food microbiology.
- T.Y. B.Voc. - 1. Quality control & quality assurance (Theory & Practical )
  - A. Concept of quality, quality attributes, quality control in food industry, concept of quality management, objective, importance & function of quality control
  - B. Sampling procedure & plans, Food Safety & Standard act 2006, domestic regulations, global food safety initiative, various organization dealing with inspection, traceability, authentication , certification & quality assurance(PFA, FPO, MPO, AGMARK, BIS), labelling issues, international food standards.
  - C. Use of HACCP, Total quality management, GMP/ GHP, GLP, GAP, Sanitary & hygienic practices, quality manuals, Documentation & audits, Indian & international quality system and standards, Import- Export policy, Export documentation, Laboratory quality procedure 7 performance.
  - T.Y. B.Voc. - 2. Food laws & regulations (Theory)
    - A. Mandatory & Voluntary Food Laws
    - B. Food Safety & Standards Act 2016
    - C. Establishment, Composition, Qualification Chairperson & Other members of FSSAI (II)
    - D. Central Advisory committee, Scientific Panel, Scientific Committee, Duties & function of Food Authority, Food Safety Officer, PFA Act, Consumer protection Act, Standards of weight & measures.
    - E. Analysis of Food offences & penalty, General principles & provision of Food in FSSA

### **August 2017 - November 2017**

### **Assistant Professor - CHB : Modern College of Arts, Commerce & Science, Pune, India**

- S.Y. B. Voc. - Food Safety & Standards (Theory & Practical )

---

Ganeshkhind, Pune, India.  
Email:sneha.ogale@moderncolle  
gegk.com

3) Dr. Neelima Kulkarni  
**Prof. Dept. of Microbiology**  
Ganeshkhind, Pune,India.  
Email:neelima.kulkarni@moder  
ncollegegk.com

---

## Instruments Used During Project

- Trinocular Microscope
- Centrifuge
- UV Visible Spectrophotometer
- pH meter
- Freeze Dryer
- Sonicator
- Atomic Absorption Spectroscopy
- X-Ray Diffraction
- Scanning electron microscope with energy dispersive spectroscopy
- Mixer Mill
- Ultrasonicator
- Cold centrifuge
- Magnetic Stirrer
- Rotary Evaporator & Gas Chromatography

---

## SEMINAR, PROJECT & SELECTION

---

- A. Food safety management tools
- B. Microbiological criteria
- C. Food laws & standards
- D. Recent concerns
  - T.Y. B.Voc. - Waste management in food industry (Theory & Practical )
  - A. Ion exchange treatment ,drinking water treatment, bio filters, bio clarifiers, recovery of useful material from effluent by different methods
  - B. Water quality & treatment,BOD, COD, discharge limits of effluents.
  - C. Recovery of biological from dairy, meat, fish & poultry processing industry
  - D. Case study: cane sugar waste, molasses for alcohol, bagasse for paper pulp, bioethanol, vermiculture

## RESEARCH EXPERIENCE

### 2013 – 3 Months

#### Jr. Research Fellow in Dept. of Botany, University of Pune

Pune, Maharashtra, India

**Project Title :** Collection, Identification and Screening of Algal

Biodiversity from Western Maharashtra for Quality and Quantity of Lipids.

**Project Investigator :** Prof. B.B.Chaugule, Mr. B.G. Meshram

#### **Accomplishments**

- Collection of Algal Samples from various regions of Western Maharashtra.
- Purification & Isolation of Algae samples.
- Study Growth Curve of Algae Sample using Chlorophyll estimation and cell count method.
- Scale Up studies to obtain biomass of algae samples and carry out lipid analysis and fatty acid profiles.
- Submission of more than 104 Pure culture of algal samples to Repository IBSD, Manipur, India.

### 2011-2013, 20 Months

**Research Fellow in RIL Project, Dept. of Botany, University of Pune.** Pune, Maharashtra, India

**Project Title :** Collection, Identification and Screening of Algal

- 
- Participated and Completed 'Training on Algal Bioresources Utilization' held by Institute of Bioresources and Sustainable Development, Imphal, Manipur.
  - Presented a paper in the International Conference on "Business Opportunities in Life Sciences" organized by Modern College of Arts , Science and Commerce, Pune.
  - Participated in International Conference on "Current Trends in Medicinal Plants Research" organized by Department of Botany, University of Pune, Pune.
  - Won 2 nd prize for project entitled "Antibacterial Activity of Ayurvedic Compounds" held in Modern College, Pune.
- 

Biodiversity (Marine Samples) for Quality and Quantity of Lipids.

**Project Investigator :** Prof. B.B.Chaugule

**Accomplishments**

- Collection of Algal Samples from various regions of India.
- Purification & Isolation of Algae samples.
- Study Growth Curve of Algae Sample using Chlorophyll estimation and cell count method.
- Scale Up studies to obtain biomass of algae samples

**2010-2011, 12 Months**

**MSc Final Year Project, Dept. of Botany, University of Pune.** Pune, Maharashtra, India

**Project Title :** Biosynthesis of Silver Nanoparticle from Microalgae.

**Project Investigator :** Prof. B.B.Chaugule, Mrs Vaidehi Dande

*[Mentor]*

**Accomplishments**

- Isolation and Identification of Algae by using various methods
- Establishment of axenic culture using various methods
- Study Growth Curve of Algae Sample using Chlorophyll estimation and cell count method.
- Scale Up studies to obtain biomass of algae samples
- Freeze dried algae samples used for Silver nanoparticle synthesis.
- Characterisation of Silver nanoparticles.