

PERSONAL INFORMATION

Manasa Nandimandalam



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WORK EXPERIENCE

November 2019 – Till date

PhD Student in Morphogenesis and tissue engineering

Sapienza University of Rome, Rome, Italy (<https://www.uniroma1.it/it/pagina-strutturale/home>)

- Lab On-Chip for the detection of pathogens, and Inorganic target molecules.
- Synthesis of monomer from Trichloro silane.
- Fabrication of Microfluidic chip with polymer brushes for aptamer and fragments-based-biosensor for the detection of Adenosine Tri phosphate (ATP).
- Study of data Electrochemical photosensor for the detection of ATP.
- Aptamer based detection of Zn metal from the industrial contaminants.

sector Education - Research

June 2016 – December 2017

Secondary School Teacher - Science

Montfort Metric Higher Secondary School, Ariyalur, Tamil Nadu, India

Business or sector Education - Teaching

July 2013 – August 2014

Junior Research Fellow

Gandhi Institute of Technology and Management University, Vishakapatnam, Andhra Pradesh, India (<https://www.gitam.edu/>)

- Liquid-liquid Solvent extraction of metals from mineral acids by using amines and organic substances.
- Worked on estimation of chromium metal & extraction of metal released from industries
- Done various industrial visits to understand the process and metal extraction from process waste.
- Tested water quality Index of water samples collected from various areas.
- Extracted Chromium and iron from industrial waste and analyzed using UV-Visible Spectrophotometric analysis

sector Education – Research

September 2012 – June 2013

Quality control, Research & Development, Process development Officer

SNF India, Vishakapatnam, Andhra Pradesh, India (<http://www.snf-india.com/>)

- Synthesis of Flocculants, Binders, Emulsions, and coagulants.
- Improvement of formulation, Process development of binder, research in use of binders in iron ore palletization to improve strength of pellets.
- Use of flocculants to remove dyes from the wastewater of textile industry.
- Been part of ISO 9001: 2000 implementation and won prize for best practices in laboratory.

Business Polymer Industry – Research & Development

EDUCATION AND TRAINING

| Qualifications | Specialization | Institute | Year of passing | Percent of marks |
|----------------|--|--|--------------------|------------------|
| Pursuing Ph.D | Morphogenesis and tissue engineering (Bio Physics) | Sapienza universita di Roma / Rome | 2022 | |
| M.Sc(1 year) | Nanotechnology engineering | Sapienza universita di Roma / Rome | 2019(Discontinued) | 51 CFU |
| M.Sc. | Organic chemistry | GITAM university / Vishakhapatnam | 2012 | 7.74/10 CGPA |
| B.Sc. | Microbiology, Chemistry, | Sri Venkateshwara University / Nellore | 2010 | 77.8/100 |

PERSONAL SKILLS

Mother tongue(s) Telugu

| Other language(s) | UNDERSTANDING | | SPEAKING | | WRITING |
|-------------------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C2 | C2 | C2 |
| Italian | A1 | A1 | A1 | A1 | A1 |
| Hindi | B2 | B2 | B2 | B2 | B2 |

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

- Communication skills**
- Absorbing, sharing, and understanding information presented.
 - Empathic listener and persuasive speaker.
 - good communication skills gained through my experience as a teacher and employer.
 - Excellent presentation skills.
- Job-related skills**
- Synthesis of microfluidic lab on chip.
 - In vitro detection of ATP using Photosensors.
 - Handling Fluorescence Spectro photometer.
 - Solvent extraction methods
 - UV Spectro photometer analysis.
 - Polymers quality control methods.
 - good command of quality control processes.
- Computer skills**
- good command of Microsoft Office™ tools
 - Proficiency in CHEM Draw software
 - Basic Knowledge in LaTeX Software.
- Other skills**
- Painting
 - Reading Books
 - Singing (Carnatic Vocal) and Dancing (Bharathanatyam)

ADDITIONAL INFORMATION

- Publications**
- Split aptamers immobilized on polymer brushes integrated in a lab-on-chip system based on an array of amorphous silicon photosensors: a novel sensor assay (Under Review with Materials Journal)
 - Solvent extraction of Iron (III) with Tri Methyl Amine from Mineral acid solutions, Chemical Science Transactions, 2014, Vol.3 (4).
 - Solvent extraction of chromium (VI) from Aqueous acid solution by Tri-Iso Octyl Amine, Electronic journal of chemistry, 2013, Vol.1 (2) PP. 29-33.
 - Determination of water quality of areas near by Amadalavalasa Mandal in Srikakulam District A.P., Asian journal of Research in Chemistry, 2013, vol.6, issue:12 Page No.1153-1155.
- Projects**
- Detection of ATP at lower concentrations using Lab on-Chip systems.
 - Spectrofluorometric detection of Zn²⁺ in the residue water of a chemical industry by using Aptabeacons. (Feb 2021 to sept 2021)
 - Solvent extraction of chromium from aqueous acid solutions. (July 2013 to Aug 2014)
 - Recovery and Reuse of industrial contaminants in and around Visakhapatnam. (July 2013 to Aug 2014)
 - Synthesis of silver Nano particles from henna extract and study of their antimicrobial activity. (Jun 2012 to Aug 2012)
 - Synthesis of Sumatriptan Succinate. (Feb 2012 to Jun 2012)
- References**
1. Prof. Cesare Manetti (Cesare.Manetti@uniroma1.it)
 2. Dr. Francesca Costantini (francesca.costantini@uniroma1.it)
 3. Prof. Massimo Reverberi (massimo.reverberi@uniroma1.it)