

Curriculum Vitae

01/06/2020

PERSONAL INFORMATION



Joice Maria Joseph



| Sex .

| Date of birth

| Nationality .

STUDIES APPLIED FOR

Novel Applications in ¹⁹F Magnetic Resonance Imaging

WORK EXPERIENCE

02/02/2020–31/07/2020
(Currently working)

Intern Student - Institute of Molecular Sciences of Orsay (ISMO), France

Studies on Protein-Nanoparticle Interaction- PLGA and PLGA- PEG Nanoparticle's Surface Reactivity Toward Proteins (Under the guidance of Dr. Ruxandra Gref, ruxandra.gref@u-psud.fr) (6 months, going on).

07/04/2017–15/06/2017

Intern Student - Indian Institute of Madras (IIT-M), India

Development of a probe for Hydrogen Sulfide detection to be used for bioimaging. **Unfolding Improved Techniques for Hydrogen Sulfide Detection** (Under the guidance of Dr. K. M. Muraleedharan, mkm@iitm.ac.in) (2 months, full time).

EDUCATION AND TRAINING

01/09/2019–Present

Master's in Medical and Industrial Applications of Radiations, Solar Fuels and Nanomedicine (Erasmus Mundus, SERP+)

EQF level 8

Université Paris-Saclay, Paris (France)

- Synthesis of nanoparticles - industrial and medical applications
- Computerized simulation, applications to biosystems
- Fast processes induced by radiations in condensed matter
- Radiation-induced reactivity in the biological matter - prebiotic chemistry
- Medical and industrial applications of ionizing radiations
- Societal aspects of radiations: ethic, risks.
- Scientific writing and patent law

01/06/2016 – 31/06/2018

Masters in Organic Chemistry (CGPA 8.89)

EQF level 8

Mahatma Gandhi University, Kottayam (India)

- Spectroscopic methods –NMR, XRD, mass spectroscopy etc.
- Synthetic methodology & multistep Organic Synthesis
- Retrosynthetic Analysis
- Organometallic chemistry and Organic synthesis involving metals,
- Asymmetric Synthesis
- Group Theory

02/09/2013–06/06/2016

Degree of Bachelor of Science
Mahatma Gandhi University, Kottayam (India)

EQF level 7

Year 1

- History of science
- Concepts of life and biological diversity
- Mathematics of physics, chemistry, and biology
- Computational methods and introduction to programming

Year 2

- Instrumental techniques- IR, HPLC, Capillary Electrophoresis, UV-Visible Spectroscopy
- Biochemistry
- Classical mechanics and introduction to quantum mechanics
- Physics and chemistry of solid-state

Year 3

- Structural Inorganic Chemistry
- Stereochemistry, and Organic reaction mechanism
- Genetics and genetical improvements
- Photochemistry, photobiology, and photophysics
- Electronic properties and materials, Macromolecular structure and function

01/06/2011–01/04/2013

Indian School Certificate (Pre-University)
St. Pius X English School, Kuttikanam (India)

EQF level 4

- Introduction to basic chemistry, biology, physics, Mathematics and English literature.
- Also involved in Socially Useful Productive Work (SUPW) and community services.

PERSONAL SKILLS

Language Skills

1. Malayalam (mother tongue).
2. English (IELTS: Listening 7.0, Speaking 6.5, Writing 7.5, Reading 7.0).
3. French(A1).

Communication Skills

- Skill development by active role in seminar presentations, group discussions and delivering teaching assignments.
- Able to communicate ideas through poster presentations, written reports.
- Trained at preparing daily reports of lab activities in ACS format.

Organisational Skills

- Leadership (I was the Class Representative of my group in Masters, Bachelors and Pre-university.)

Research - Related Skills

- During the projects I have been working on, I could develop the following skills that I am sure will help me prepare for this training program.
 - Expertise in handling instruments like
 - NMR (400 MHz - Bruker).
 - FT-IR Spectrometer.
 - UV-Visible Spectrometer.
 - Polarimeter.
 - Capillary Electrophoresis.
 - HPLC
- Skilled at interpretation of spectral data of ^1H , ^{13}C , DEPT, COSY, HSQC and HMBC -NMR experiments, UV- Visible Spectra, LSMS, HRMS, FT-IR Spectra, XRD spectra.
- Some techniques in organic synthesis that I have become proficient at during my project works are
 - Chromatographic purification methods.
 - Using of soxhlet apparatus.
 - Crystallization techniques.

- Moisture sensitive and low temperature reactions.
- Competent in handling dry reactions involving NaBH₄ using Glove box and Schlenk techniques.
- Skilled at handling Chemistry Software like Chemdraw, Chimera, Autodock Vina.
- Literature Surveys using Scifinder, Web of Science
- Scientific writing
- Hand-on experiments with
 - PCR, Biological Assays
 - Pump-probe spectroscopy techniques like Transient absorption spectroscopy, Time-resolved fluorescence spectroscopy (TCSPC).
 - Fricke dosimetry.
 - Synthesis of nanoparticles- Single and double emulsion, Nanoprecipitation.

ADDITIONAL INFORMATION

Academic Achievements

Master Thesis

Reductive Cyclisation of Chiral Pyrrolidine-2,5-Diones Starting from (2*S*,3*S*)- Tetrahydro-3-Hydroxy-5-Oxo-2,3-Furandicarboxylic Acid (Under the guidance of Prof. Dr. Ibrahim Ibnu Saud, i.ibnusaud@gmail.com) (12 months, full time).

Research Contribution

1. **Poster Presentation-** "Synthesis and biological evaluation of enantiopure indolizinidole, pyrroloisoquinoline and related molecules obtained from (2*S*,3*S*)- and (2*S*,3*R*)- Tetrahydro-3-Hydroxy-5-Oxo- 2,3-Furandicarboxylic Acids", Sarath M ,Zabeera K.T.,H.Felix F, Sukanya N, Melvin T, Joice M.J, and Ibrahim Ibnu Saud ; *20th CRSI National Symposium in Chemistry* ,February, 2017.
2. **Poster Presentation-**"Enantiopure synthesis of indolizinidole, pyrroloisoquinoline and imidazole alkaloids for (2*S*, 3*S*)- and (2*S*, 3*R*)- Tetrahydro-3-Hydroxy-5-Oxo- 2,3-Furandicarboxylic Acids", Sarath M , Divya S, Deenamma H,Felix F, Melvin.T, Joice M.J, Manjunathan P.S, Anizha R,Harie Z. and Ibrahim Ibnu Saud, *National seminar on Emerging Trends in Chemistry (CRSI-MKU)*,February, 2016.

Honours and Awards

National level exam: 27th rank in CSIR-NET (Council of Scientific & Industrial Research - National Eligibility Test) Chemical Sciences, conducted all over India in June 2019 (over 60K students appeared for exam).

Graduate Record Examinations (GRE): 304 (Verbal-152, Quantitative- 152, Analytical Writing- 3.5)

'**Outstanding Student of the Year**' award recipient in Pre-university.

Scholarships

1. Recipient of **Paris-Saclay International Scholarship** for masters. (2019-2020)
2. Recipient of monthly fellowship given by Mahatma Gandhi University, Kerala which was evaluated by Integrated Program Advisory committee (IPAC) for the tenure of 5 years (2013-2018).
3. Recipient of the Summer Research Fellowship from the **Indian Academy of Science (IAS)** for 2 months during internship at IIT Madras, India (2017).

Additional Credit Courses

1. Patent Law from the member of the council of European Patent Attorney (2019).
2. Course work on Scientific Writing that gave me training on how to write a scientific paper in various journal formats, present a poster, write a Ph.D. thesis, etc (M2 in France, 2019).
3. Certificate Course from Harvard University on "Fundamentals of Neuroscience." (April 2020).

Extracurricular Activities

- Sports and Games – High Jump (selected for Nationals), Hurdles, Marathon (2 times Championship holder in High school and Pre-university), Blue belt in karate. Games - Basketball, Kabaddi, Badminton (Captain in school team).
- Reading – novels (detective stories and biographies), newspaper articles, scientific articles.
- Caring to plants and pets.
- eDx online courses in
 1. "Introduction to Biomedical Imaging" from university of Queensland.
 2. "Biochemistry: Biomolecules, Methods, and Mechanisms" from MIT.
 3. "Science & Cooking: From Haute Cuisine to Soft Matter Science (chemistry)" from Harvard University.

REFERENCE

Name	Email address	Phone number	Institutional address	Relationship
1. Prof (Dr.) I. Ibnusaud	iibnusaud@gmail.com	+91 4812732992	Co-ordinator / Research Officer IIRBS, Priyadarshini Hills PO, Kottayam, Kerala 686560, India.	Organic Chemistry project supervisor (Master thesis guide)
2. Mme Ruxandra Gref	ruxandra.gref@u-psud.fr	+330169158234	research director at CNRS, Bâtiment 520, Bureau 2.10 598 Rue André Rivière, 91400 Orsay	Internship Supervisor in France.
3. I. N. N. Namboothiri	irishi@chem.iitb.ac.in	+22-2576-7196	Department of Chemistry, Indian Institute of Technology- Bombay, Powai, Mumbai- 400 076	Visiting professor in our institute and my chemistry professor.
4. Dr. Bakthan Singaram	singaram@ucsc.edu	831-459-3154 (Office)	Physical Sciences Building, 348, Physical & Biological Sciences Division, Chemistry & Biochemistry Department, University of California, Santa Cruz.	Organic Chemistry professor and evaluating guide for the master thesis

I, Joice Maria Joseph, hereby declare that the information provided in this letter is true and correct.

Place and date: Orsay, 01/06/2020

Signature