

Dr. K. NARAYANAN., M.Sc., M.Phil., PhD



CURRICULUM VITAE

Objective: To pursue a career in the reputed teaching field where I can explore my knowledge and ability to take all chances as challenges and make them success with complete involvement and hard working.

PERSONAL PROFILE:

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|---------------------------|--|
| Date of birth & Age | 20-05-1984, 35 years |
| Father's name | K.Kuppusamy |
| Nationality | Indian |
| Community | Naidu-Yadhava |
| Marital status | Married |
| Address for communication | No 55/20 Sekar Nagar, Semmandalam post, Cuddalore district, Cuddalore- 607 001. Phone No: (04142) 230842. Cell: 9489835864 |
| Email | narayananchem@gmail.com |

EDUCATIONAL QUALIFICATION:

- **Ph.D. in Chemistry (2009–2014) (Awarded)**
Department of Chemistry, Annamalai University, Annamalainagar, Tamilnadu, India, 608002.
- **M.Phil., in Chemistry (2007-2008) (7.42 CGPA)**
Department of Chemistry, Pondicherry University, Puducherry. India.
- **M.Sc. in Chemistry (April 2006) (7.77 OGPA (Gold Medalist))**
Department of Chemistry, Annamalai University, Annamalainagar, Tamilnadu, India, 608002.
- **B.Sc. in Chemistry (April 2004) (72.69%)**
University of Madras, affiliated to St. Joseph's College of Arts and Science Cuddalore, Tamilnadu, India-607001.

AWARDS AND FELLOWSHIPS:

- University Fellowship (studentship) **2009** awarded by Annamalai University.

RESEARCH AREAS:

- Synthesis of novel organic compounds for biological applications.
- Drug discovery through the computer modeling (Schrodinger Maestro Docking software)
- Methodology development in Organic synthesis.

Title of the PhD Thesis:

“Synthesis, spectral characterization and antimicrobial evaluation of some novel nitrogen and sulphur containing heterocycles”

Under the Guidance of

Prof. Dr.S. Kabilan

Department of Chemistry

Annamalai University. Annamalainagar-608002

Email: kabilan@sify.com & kabilan60@sify.com

Cell: +91-9443924629 & +91-9788734555

Outline of the PhD Research Work

Heterocyclic ring systems having pyrazolone and piperidine nucleus have aroused great interest in the past and recent years due to their wide variety of biological properties and their presence in the biologically active pharmaceutical ingredients. The emphasis on the synthesis of piperidine-based heterocycles can be recognized owing to their essential part in the molecular framework of numerous alkaloids and drugs. An essential component of the search for the new leads in drug designing programme is the synthesis of molecules which are novel yet resembling known biologically more potent molecules due to the existence of some unique structural features. Hence, this ultimately formed an altogether new basis and opened up a new prospect to synthesize a system that combines pyrazolone with C4 heterocyclic substitutions and diarylpiperidones with some bioactive molecules such as N-allyl oximes/oxime ethers and N, O-allyl compounds as well as thiazolyl coumarin on diarylpiperidones (mono/bicyclic) and diaryltetrahydrothiopyranone moieties intact to evaluate their microbiological potency. All the substituents have marked influence on the conformation and chemical shifts of ring carbons and their associated protons. Moreover, the new series of compounds synthesized by this study are found to have broad spectrum of biological properties. In order to achieve unambiguous

structure elucidation, spectral investigation (IR, ^1H NMR, ^{13}C NMR, HOMOCOSY, NOESY and Mass) and single crystal X-ray diffraction analysis were undertaken.

SCIENTIFIC PUBLICATIONS:

1. **Narayanan, K.**; Shanmugam, M.; Vasuki, G.; Kabilan, S. *J. Mol. Struct.* **2014**, 1056-1057, 70.
2. **Narayanan, K.**; Shanmugam, M.; Jothivel, S.; Kabilan, S. *Bioorg. Med. Chem.Lett.* **2012**, 22, 6602.
3. Shanmugam, M.; **Narayanan, K.**; Chidambaranathan, V.; Kabilan, S. *Spectrochim Acta Part A*, **2013**, 105, 383.
4. Shanmugam, M.; **Narayanan, K.**; Kabilan, S.; Chidambaranathan, V. *Spectrochim Acta Part A*, **2013**, 116, 394.
5. M. Shanmugam, **K. Narayanan**, K.H Prasad, D. Karthikeyan, C.Loganathan, A.Raji V. Chidambaranathan., *New J. Chem.*, **2018**, 42, 1698.

SCIENTIFIC PRESENTATIONS:

International:

1. International conference of Indian council of chemists about “**Global Challenge’s- The Role of Chemistry in giving their solutions**” held at Bangkok June **2011**.

National:

1. National seminar on “Education and Research & National Convention of Chemistry Teachers (NCCT-13)” November **2013**.
2. State level seminar on “Recent trends in Chemistry” held at Government Arts College, Chidambaram, Tamilnadu, September **2012**.
3. National seminar on “**New vistas in Catalysis and Surface Science**” Department of Chemistry, Annamalai University, March **2012**.
4. National seminar on “**Recent Trends in Synthetic methods and chemistry of Natural Products**”, Department of Chemistry, Annamalai University, October **2011**.
5. National seminar on “**Novel synthetic and Computational strategies in Chemical Sciences**”, Department of Chemistry, Annamalai University, March **2011**.
6. National seminar on “**Chemistry of Nanomaterials and molecular dynamics**”, Department of Chemistry, Annamalai University, December **2010**.
7. National seminar on” **New Frontiers in Chemistry**”, Department of Chemistry, Annamalai University, March **2010**.

SCIENTIFIC WORKSHOP ATTENDED:

1. Two days workshop on “**X-Ray Crystallography and its Applications**”, Department of Chemistry, Bharathiar University, Coimbatore, Tamilnadu, India, March **2014**.
2. Two days workshop on “**Nuclear Magnetic Resonance (NMR) Spectroscopy**”, SAIF, Indian Institute of Technology, Madras, March **2012**.
3. One day workshop on “**Open Source Drug Discovery (OSDD)**”, CSIR-central electrochemical Research Institute, Karaikudi, December **2011**.
4. Fifteen days workshop on “**Winter School in Crystallography**”, UGC-Networking Resource centre in Chemistry, School of Chemistry, University of Hyderabad, December **2010**.
5. Two days workshop on “**Green Chemistry, Greening the Chemistry Curriculum**” held at Pondicherry University, March **2009**.

SKILLS AND ACCOMPLISHMENTS:

- Expertise in conducting variety of reactions involving low-temperature, inert-handling techniques, moisture sensitive reactions etc.
- Well versed in applying spectroscopic techniques viz., NMR, Mass, and IR etc to establish the structural characterization of organic molecules.
- Published research articles in reputed cited journals and presented papers in scientific conferences.
- Assisting in initiating research projects with doctoral and post-graduate students.
- Hands on experience: NMR (400MHz), UV-Visible Spectrophotometer, IR-spectrophotometer.
- Having proficiency about Spectroscopic interpretation of organic compounds by the NMR techniques (^1H NMR, ^{13}C NMR, 2D NMR).
- Solving crystal structure from the XRD data using WingX and SHELX-97.

INDUSTRIAL/TEACHING EXPERIENCES:

1. **QC Analyst**- Tagros Chemicals, SIPCOT industrial Complex, Pachayankuppam, Cuddalore-607002. (**2006.**, 8 Months).
2. **QC Analyst**- Packaging India Pvt. Ltd., Pillyarkuppam Post Bahoor, Kandanpet Village, Bahoor, Pondicherry - 607402. (**2007.**, 7 months).
3. **Lecturer in Chemistry**- Sri Jayaram Engineering College (CK engineering College), Chellangkuppam, Cuddalore-607002. (**2008.**, 6 Months).

4. **Resource Person**- Department of Chemistry, Directorate of Distance Education, Annamalai University, Annamalainagar, Chidambaram (2010-2013., 3 Years).
5. **Assistant Professor - Chemistry** - Head of the Department, Science and Humanities, Nightingale institute of Technology, Madukkarai, Coimbatore-641105. (01.03.2014-06.06.15).
6. **Assistant Professor - Chemistry** - Department of Science and Humanities, JCT College of Engineering and Technology, Pichanur, Coimbatore-641105. (15.06.15 – 14.7.2016).
7. **Assistant Professor - Chemistry**, Department of Science and Humanities, Excel Engineering College, Komarapalyam. (20.7.2016 to 16.04.2019).
8. **Assistant Professor (SR Grade) - Chemistry**, Department of Science and Humanities, Mankula Vinayagar Institute of Technology, Puducherry. (17.06.2019 onwards)

Additional Qualification : Having knowledge in Microsoft, Unix and C, C++

Languages known : English & Tamil.

Additional skills : **Having experience on preparing files for NBA and NAAC accreditation**

DECLARATION

I hereby declare that the above furnished particulars are true and correct to the best of my knowledge and belief.

Yours Sincerely,

(K.Narayanan)

Place: Cuddalore

Date:

References:

1. Dr.G.Vasuki

Associate professor,

Department of Chemistry,

Pondicherry University, Kalapet, Pondicherry 605 014, India

Email: vasukig@gmail.com: Cell: +91-9486664962

2. Dr.S. Kabilan

Professor

Department of Chemistry

Annamalai University. Annamalainagar-608002

Email: kabilan@sify.com & kabilan60@sify.com

Cell: +91-9443924629 & +91-9788734555