

Dr. Rajasekhar Sreerama

Researcher / Associate Professor



Profile

Passionate, enthusiastic and motivated researcher with 12+ years of experience in medicinal and computational chemistry with excellent publication record. Currently looking for excited, pro-active and challenging research environment contributing towards personal and professional growth.

Education

Ph.D., VIT University (Vellore Institute of Technology), Vellore, India

July 2014 — April 2022

Thesis title: Exploration of Potential Bioactivities of S and N - Heterocycles via Structure-based Drug Design, Synthesis and Molecular Docking

Supervisor: Prof. Kaushik Chanda

Masters in Pharmaceutical Chemistry, The Tamilnadu Dr.M.G.R. Medical University, Chennai, India

July 2010 — April 2012

Thesis title: Synthesis, Characterization and Biological Evaluation of Some Novel N-Mannich Bases of Benzimidazoles derivatives

Supervisor: Prof. M. Sugumaran

Bachelors in Pharmacy, The Tamilnadu Dr.M.G.R. Medical University, Chennai, India

August 2005 — August 2008

Thesis title: Phytochemical & Pharmacological Activity on Plant Extract of *Pedalium Murex. Linn.*

Supervisor: Prof. S. Balasubramanian

Diploma in Pharmacy, State Board of Technical Education, Andhra Pradesh, India

July 2003 — May 2005

Details

13-553, Eswar koil Street, Chittoor, Andhra Pradesh, India

+91 8142755997, 9885376801

drrajasekhar37@gmail.com

Date of birth

1986-01-11

Nationality

Indian

Driving license

Low motor vehicle

Links

<https://orcid.org/0000-0002-2287-2286>

Skills

Computational Chemistry, Expert

Drug Design & Discovery, Expert

UV Visible Spectrophotometer, Expert

HPLC, Expert

Rotary Flash Evaporator, Expert

FTIR Spectroscopy, Expert

Green Synthesis, Expert

Teaching Skills

Course planning, Experienced

Seminar planning, Experienced

Appraisal reviews, Experienced

Curriculum strategic development, Experienced

Course quality enhancement, Experienced

Faculty event coordinating, Experienced

Employment History

Lecturer, Sri Venkateswara College of Pharmacy, Chittoor, Andhra Pradesh, India

November 2008 — June 2010

Assistant Professor, Sri Venkateswara College of Pharmacy, Chittoor, Andhra Pradesh, India

April 2012 — December 2018

Associate Professor, Sri Venkateswara College of Pharmacy (Autonomous), Chittoor, Andhra Pradesh, India

Jan 2019 — Till date

- Expertise in molecular design and modelling, docking, dynamics, ADMET studies, QSAR studies, Machine learning and novel techniques.
- Exposure in *anti-tuberculosis, anti-leishmanial, anti-inflammatory and anti-microbial activities*
- Maintained extensive knowledge in current research, ensuring teaching met academic standards.
- Delivered engaging lectures, seminars and tutorials, increasing class productivity.
- Continuously improved subject knowledge by conducting thorough research.
- Presented various guest lecturers and actively participated in various seminars, workshops.
- Assisting the UG and PG research projects.

Major projects:

- 1) Nutritional Package for Preventing Osteoporosis among Post-Menopausal Women – An Interventional Study;
- 2) Design, Synthesis, Characterization and Biological Evaluation of Phosphodiesterases 5-(PDE5) Inhibitors and Other Related Compounds;
- 3) Exploration of Potential Bioactivities of S and N - Heterocycles via Structure-based Drug Design, Synthesis and Molecular Docking
- 4) Development and Validation of RP-HPLC Method for Simultaneous Estimation of Guaifenesin and Pseudoephedrine HCl in Extended Release Tablet Dosage form

University Ratification

- **Assistant Professor** appointment was ratified by the Jawaharlal Nehru Technological University Anantapur (JNTUA), Ananthapuramu, Andhra Pradesh
June 2016

Software skills

AutoDock Vina *Experienced*

GLIDE *Experienced*

Cresset FLARE software *Beginner*

GROMACS software *Beginner*

BIOVIA Discovery *Experienced*

QikProp software *Experienced*

Prism *Expert*

Photoshop *Expert*

Word, Excel, Power point *Expert*

Adobe Illustrator *Beginner*

Languages

English *Very good command*

Hindi *Very good command*

Telugu *Native speaker*

Tamil *Very good command*

Kannada *Entry level*



Courses

Drug Discovery, University of California San Diego through Coursera

March 2020 — April 2020

Introduction to Molecular Spectroscopy, University of Manchester Coursera

March 2020 — April 2020

Patent Drafting for Beginners, SWAYAM - NPTEL

January 2019 — March 2019

Spectroscopic Techniques for Pharmaceutical and Biopharmaceutical Industries, SWAYAM - NPTEL

July 2019 — October 2019

Chemistry for Higher Education, AICTE - ARPIT

September 2019 — December 2019

Computer Aided Drug Design, SWAYAM - NPTEL

July 2018 — August 2018

📄 Publications

Original articles

1. UpalaDasmahapatra, **Sreerama Rajasekhar***, Grandhe Neelima, BarnaliMaiti, Ramanathan Karuppasamy, and Kaushik Chanda, "In-silico Molecular Modelling, MM/GBSA Binding Free Energy and Molecular Dynamics Simulation study of Some Novel Thiazetidines as Potential Inhibitors of Tuberculosis", *Chemistry and Biodiversity*, 2023, DOI:10.1002/cbdv.202200925.
2. **Sreerama Rajasekhar***, Ramanathan Karuppasamy, Balamurali MM and Kaushik Chanda, "Identification of novel inhibitors of Mycobacterium Tuberculosis PrpR through Structure Based Drug Design, Docking and Molecular Dynamics Simulations", *Journal of Computational Chemistry*, 2022, 43(9), 619-630, DOI:10.1002/jcc.26823.
3. **Sreerama Rajasekhar***, Ramanathan Karuppasamy, and Kaushik Chanda, "Exploration of Potential Inhibitors for Tuberculosis via Structure-based Drug Design, Molecular Docking and Molecular Dynamics Simulation". *Journal of Computational Chemistry*, June 2021, 42(24), 1736-1749, DOI: 10.1002/jcc.26712.
4. Anusha G., Sujatha V., Shalini R., Bhaskar Reddy K., **Rajasekhar S.** "Nutritional Package for Preventing Osteoporosis among Post-Menopausal Women –In view of bone density." *European Journal of Molecular & Clinical Medicine (EJMCM)*, 8(1), March 2021, 2149-2158.
5. Anusha G., Sujatha V., Shalini R., Bhaskar Reddy K., **Rajasekhar S.** "Interventional study to improve ionized Calcium levels among Postmenopausal Women to prevent Osteoporosis", *International Journal of Research in Pharmaceutical Sciences*, 11(4), Dec 2020, 7817-7821.
6. Ramesh Kumar Yadhav, M. Sirisha, S. Heena Kousar, Jammi Chandrasekhar, **Sreerama Rajasekhar.** "Synthesis, Characterization of Some Novel Benzimidazole Compounds and its Prediction of Biological Activity through Computer-Aided Drug Design." *Journal of Young Pharmacists*, 11(3), Jul-Sep, 2019, 499.
7. Neelima G, **Sreerama Rajasekhar**, T Prasanth Kumar, Immanuel Agasteen, Prayas Acharya, "Development and Validation of RP-HPLC Method for Simultaneous Estimation of Guaifenesin and Pseudoephedrine HCl in Extended Release Tablet Dosage form." *Der Pharma Chemica*, April 2017, 9(6), 43-47.
8. **Sreerama Rajasekhar***, G Neelima, Kaushik Chanda & V. Gunasekaran. "Design, synthesis, characterization and anti-inflammatory activity of some novel Benzimidazole derivatives", *International Journal of Research in Pharmaceutical Sciences*, June 2015, 6 (2), 30-33.
9. Neelima G, **Sreerama Rajasekhar***, T Prasanth Kumar, Immanuel Agasteen, Prayas Acharya, "Development and Validation of RP-HPLC Method for Simultaneous Estimation of Guaifenesin and

📄 Patents Granted

📄 Title of the invention: "A system for delivery of nanocarriers towards osteosarcoma and overcoming cancer drug resistance." German Patent, Application No. 20 2022 100 610.5, Publication Date: 20/01/2022.

📄 Title of the invention: "**Machine learning based breast cancer detection in integration with fuzzy logic.**" Australian Patent, Application No. 2020104023, Publication Date: 11/12/2020.

📄 Patents Filed

📄 Title of the invention: "**Novel dual release nano structured lipid carrier enriched transdermal patch to deliver low bioavailable cardiovascular drugs.**" Indian Patent Application No.202041026683 A, Publication Date: 10/07/2020.

📄 Title of the invention: "**Machine learning based smart detection of heart disease integrated with big data.**" Indian Patent Application No. 202041045221 A, Publication Date: 30/10/2020.

📄 Title of the invention: "**Artificial neural network based detection of cardiac arrhythmia in Heart patients.**" Indian Patent Application No. 202041046509 A, Publication Date: 06/11/2020.

📄 Title of the invention: "**A Novel Design of Dual Nozzle Touchless Sanitizer Dispenser.**" Indian Patent Application No. 202141015730 A, Publication Date: 16/04/2021.

Pseudoephedrine HCl in Extended Release Tablet Dosage form.
Der Pharma Chemica, April 2017, 9(6), 43-47.

10. **Sreerama Rajasekhar**, G Neelima, Kaushik Chanda & V.Gunasekaran. "Design, synthesis, characterization and anti-inflammatory activity of some novel Benzimidazole derivatives", International Journal of Research in Pharmaceutical Sciences, June 2015, 6 (2), 30-33.
11. Murugesan Sugumaran and **Sreerama Rajasekhar***. "Synthesis, Characterization and Biological evaluation of some novel N-Mannich bases of Benzimidazole derivatives", Indian Journal of Heterocyclic Chemistry, 2012, 1 (2), 22-26.
12. Sugumaran M, Poornima M, Yokesh Kumar M and **Sree Rama Rajasekhar**. "RP-HPLC method for the determination of Tenatoprazole in pharmaceutical formulations", Der Pharmacia Sinica, 2011, 2(5), 12-16.
13. Sugumaran M, Suresh Gandhi M, Sankarnaraynan K, Yokesh M, Poornima M and **Sree Rama Rajasekhar**. "Chemical composition and antimicrobial activity of vellaikodi variety of Piper betle Linn Leaf oil against dental pathogens", International Journal of Pharm Tech Research, 2011, 3(4), 2135-2139.

Review articles

14. G Neelima, **Sreerama Rajasekhar**, "A overview of Molecular Docking – A Novel Technique for Drug Discovery", *International Journal of Interdisciplinary Sciences and Engineering Applications*, 2022, 3(1), 16-23.
15. **Sreerama Rajasekhar***, Soumyadip Das, Balamurali MM and Kaushik Chanda, "Therapeutic inhibitory activities of cytidine derivatives: A patent overview". *ChemistrySelect*, 2021, 6(48), 13786-13808, DOI: 10.1002/slct.202102856.
16. Seshaiiah Krishnan Sridhar, **Sreerama Rajasekhar**, A. Ikram Khan, Karnam Charan Sai, M.D. Kusuma Priya, Vinod Kumar, "Review of Chemical, Pharmacological Activities of Naphthyridine Derivatives (1970 to 2020)". *International Journal of Pharma and Bio Sciences*, 2021, 12(4), 40-55.
17. Seshaiiah Krishnan Sridhar, Selvaraj Britoraj, **Sreerama Rajasekhar**, Jayaseelan Sundaraseelan. "Review of Chemical, Pharmacological, Biological Activities of Isatin and its Derivatives – Part-1 (1877 to 2002)". *Journal of Science and Technology*, 5(3), May-June, 2020, 225-247
18. Seshaiiah Krishnan Sridhar, Selvaraj Britoraj, **Sreerama Rajasekhar**, Jothieswari Dhamotharan, Jayaseelan Sundaraseelan. "Review of Chemical, Pharmacological, Biological Activities of Isatin and its Derivatives – Part-2 (2002 To 2020)". *Journal of Science and Technology*, 5(4), July-August, 2020, 288-307.
19. **Sreerama Rajasekhar***, Kaushik Chanda, Barnali Maiti. "A decade update on benzoxazoles, a privileged scaffold in synthetic organic chemistry." *Synlett*, Jan 2017, 28 (05), 521-541, DOI: 10.1055/s-0036-1588671.

Conferences (Oral Presentation)

Vellore Institute of Technology, VIT University, India

June 2020

Design, *in-silico* Molecular Docking studies, Synthesis, Spectral Characterization of Some Novel Benzimidazole Compounds and its Prediction of Biological Activity through PASS Software

JNT University Anantapur, India

June 2015

Synthesis, Characterization and anti-inflammatory activity of some Novel Benzimidazole Derivatives

Conferences (Poster Presentation)

MS Ramaiah University of Applied Sciences, Bengaluru, India

November 2019

In-silico Drug Design, Molecular Modelling, Synthesis and Characterization of novel Benzimidazoles

Awards Received

- "Best Researcher Award" received from International Scientist Awards on Engineering, Science and Medicine, Trivandrum, 28th August, 2021.
- "Iconic Educationist Award-2020" from The Glorious Organization for Accelerated to Literacy, New Delhi on 30th November, 2020.
- "Young Researcher in Pharmaceutical Chemistry" award received from Venus International Foundation, Chennai, India on 21st September, 2019.

20. Prayas Acharya, T Prasanth Kumar, Immanuel Agasteen, **Sreerama Rajasekhar**, G Neelima. "A Review on Analytical Methods for Determination of Guaifenesin Alone and In Combination with Other Drugs in Pharmaceutical Formulations." Saudi Journal of Medical and Pharmaceutical Sciences, March 2017, 3(3A), 148-159
21. **Sreerama Rajasekhar***, Kaushik Chanda, BarnaliMaiti and Balamurali MM. "Synthesis and Medicinal Applications of Benzimidazoles: An Overview." Current Organic Synthesis, 13(6), 40-60, Oct 2016, DOI: 10.2174/1570179413666160818151932.

Book chapters

22. **Sreerama Rajasekhar***, Kaushik Chanda. "In Silico Drug Design, Molecular Modelling, Synthesis and Characterization of Novel Benzimidazoles". Book Chapter - Special Publications in Royal Society of Chemistry (RSC), UK, November 2019, 273-287, DOI: 10.1039/9781839160783-0027.

* - Shared authorship

+ - Corresponding author

Grants

Department of Science and Technology, India

Dec 2016 — Dec 2019

INR 52,94,000 for project "Nutritional Package for Preventing Osteoporosis among Post Menopausal Women – An Interventional Study"

University Grants Commission, India

Jan 2015 — Jan 2017

INR 4,30,000 for project "Design, Synthesis, Characterization and Biological Evaluation of Phosphodiesterases 5-(PDE5) Inhibitors and Other Related Compounds "

Thesis Co-supervision

Master Thesis:Regulatory Standards and Strategies of ANDA, Jawaharlal Nehru Technological University Anantapur, India. 2022. (Ms. KadiyalaHimaja)

Bachelor Thesis: Design of novel azole derivatives via structure based drug design, molecular docking and ADMET studies, Jawaharlal Nehru Technological University Anantapur, India 2022. (Ms. M.Parameswari)

Bachelor Thesis: *In-silico* exploration of novel azole derivatives via ligand based drug design, molecular docking and ADMET studies, Jawaharlal Nehru Technological University Anantapur, India. 2021. (Mr. S.YaseenBasha)

Bachelor Thesis: Synthesis, Characterization and biological Activity of Some Novel benzothiazole Derivatives, Jawaharlal Nehru Technological University Anantapur, India. 2020. (Mr. Ramesh Kumar Yadav)

Bachelor Thesis: Green synthesis of benzoxazole derivatives using magnetically recyclable ferrite-l-cysteine nanocatalyst, Jawaharlal Nehru Technological University Anantapur, India. 2019. (Ms. N. Udaya Bhanu)

Reviewer

- ❖ Heliyon, Cell Press Publishers – 2022
- ❖ Arabian Journal of Chemistry – 2022
- ❖ Editorial Board - International Digital Library for Medicine & Research (IDLMR)
- ❖ Editor for Pharmaceutical Books - Pritam Publications Jalgaon

VidwanID :181816

(<https://vidwan.inflibnet.ac.in/profile/181816>)

ORCID ID: <https://orcid.org/0000-0002-2287-2286>

Scopus ID :54788361900

Web of Science Researcher ID :L-7771-2016

Subjects Handled

UG – B.Pharmacy Course:

1. Pharmaceutical Organic Chemistry – I (Theory & Lab)
2. Pharmaceutical Organic Chemistry – II (Theory & Lab)
3. Pharmaceutical Inorganic Chemistry (Theory & Lab)
4. Pharmaceutical Biochemistry (Theory & Lab)
5. Pharmaceutical Analysis – I (Theory & Lab)
6. Medicinal Chemistry – I (Theory & Lab)
7. Medicinal Chemistry – II (Theory)
8. Chemistry of Natural Drugs (Theory)
9. Computer-Aided Drug Design (Theory)
10. Research Methodology (Theory)

UG – Pharm.D. Course:

1. Pharmaceutical Organic Chemistry - (Theory & Lab)
2. Medicinal Chemistry (Theory & Lab)
3. Research Methodology – (Theory)

PG – M.Pharm. Course:

1. Electrometric methods and spectral analysis
2. Quality Assurance of Pharmaceuticals

Special Achievements:

After assuming the position of Assistant Professor at Sri Venkateswara College of Pharmacy, Chittoor, Andhra Pradesh I am also played a pivotal role in administrative experience have also accomplished.

- Getting **Permanent Affiliation** from JNTUA, Ananthapuramu (2013 & 2018)
- Getting recognition and renewals of Scientific and Industrial Research Organization (**SIRO**) for In-House R & D facility from DISR, New Delhi (2014, 2018, 2020 & 2023)
- Getting recognition from **UGC** under section **2(f) & 12(B)** of UGC Act, 1956 (2014)
- Applying and getting approval from Pharmacy Council of India (**PCI**), New Delhi and All India Council for Technical Education (**AICTE**), New Delhi.
- Played pivotal role in getting Accreditation from National Board of Accreditation (**NBA**), New Delhi (2016, 2019 & 2022)
- Played pivotal role in getting Accreditation from National Assessment and Accreditation Council (**NAAC**), Bengaluru (2016 & 2022)
- Applying and Accorded Autonomous status to Institution by University Grants Commission (**UGC**), New Delhi. (2021)
- Coordinator, Ranked in the rank band 51-75 of **NIRF** Rankings 2018 by MHRD, Government of India (2018)
- Coordinator, Ranked 57th of **NIRF** Rankings 2019 by MHRD, Government of India (2019)
- Coordinator, Ranked 69th of **NIRF** Rankings 2020 by MHRD, Government of India (2020)
- Coordinator, Ranked 62nd of **NIRF** Rankings 2021 by MHRD, Government of India (2021)
- Coordinator, Ranked 68th of **NIRF** Rankings 2022 by MHRD, Government of India (2022)
- Member, Institutional Innovation Cell (**IIC**) by MHRD (2018-2021)
- Coordinator, **ATAL Ranking** of Institutions on Innovation Achievements (ARIIA) ranking framework (2021) and Ranked under Promising Category.
- Played pivotal role in getting approval under section **35 AC** of the Income Tax Act, 1961 from National Committee for Promotion of Social and Economic Welfare for M/s Srinivasa Educational Academy (SEA), RVS Nagar, Chittoor (2016) [File No. V.27011/25/2015-SO (NAT.COM) dated 26.09.2016
- Played pivotal role in getting approval under **80 G (5) (vi)** of the Income Tax Act, 1961 for M/s Srinivasa Educational Academy (SEA), RVS Nagar, Chittoor (2016) [File No. CIT(E)/Hyd/123(12)/80G/2015-16] dated 16.06.2016
- Played pivotal role in getting approval under section **35 (1)(ii)** of the Income Tax Act, 1961 for M/s Srinivasa Educational Academy (SEA), RVS Nagar, Chittoor (2016) [File No. 203/40/2015-ITA (II)] dated 31.03.2016
- Played pivotal role in approval process of **Importer Exporter Code**, for M/s Srinivasa Educational Academy (SEA), RVS Nagar, Chittoor (2016)

Memberships:

- ❖ Life member – Indian Association of Colleges of Pharmacy (IACP-APLM087)
- ❖ Life member – Association of Pharmacy Teachers of India (APTI)
- ❖ Affiliate Member – Royal Society of Chemistry (RSC), UK (687503)
- ❖ Registered Pharmacist – Andhra Pradesh Pharmacy Council, Guntur (43163 A1)
- ❖ Innovation Ambassador - MoE's Innovation Cell & AICTE, New Delhi (5371)
- ❖ Fellow Member – Eudoxia Research University, USA (ERU/FMERU/2022-098)
- ❖ Vice President – Eudoxia Research State Council, USA (ERU/SC/2022/AP/VP/1033)

Recognitions:

- ❖ **Q – Leader** – Nominated as Mentor by A.P State Council of Higher Education (APSCHE) for mentoring the Higher Educational Institutions in Andhra Pradesh for Assessment and Accreditation by NAAC.
- ❖ **Evaluator** – Nominated as a Pre-Screening Evaluator in Smart India Hackathon (SIH) 2022, Govt. of India.
- ❖ **Evaluator** – Nominated as a Pre-Screening Evaluator in Toy Hackathon 2021, Govt. of India.

References

Prof. Kaushik Chanda, Professor, Vellore Institute of Technology, Vellore, India

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Prof. Dr. K. Bhaskar Reddy, Director, Sri Venkateswara College of Pharmacy (Autonomous), Chittoor, India

bhaskurra@gmail.com · +91 91766 88999

Prof. V. Gunasekaran, Principal, Rao's College of Pharmacy, Nellore, India

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Declaration:

I am also confident of my ability to work in a team. I hereby declare that all the information furnished above is true to the best of my knowledge.



Dr. RAJASEKHAR SREERAMA

Date: **18-06-2023**

Place: **Chittoor**