

Dr. Siva Sankara Reddy Singam, Ph.D

Sr. Technical Officer (2)

FS & AQCL

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RESEARCH HIGHLIGHTS

- ↳ Synthesis of lead molecules with potential biological activity by employing modern synthetic procedures.
- ↳ Development of new synthetic methodologies as tools in multi-step organic synthesis.
- ↳ Well acquainted with polymorphism of finished drugs and different techniques of preparation of new polymorphs.
- ↳ Expertise in handling multi step organic syntheses from mg to 1Kg scale.
- ↳ Vast experience in synthesis, isolation & purification of organic compounds by a wide range of modern synthetic organic chemistry methods and their characterization using spectroscopic techniques [UV, FT-IR, NMR, Mass and HPLC].
- ↳ Capable of carrying independent and collaborative research.
- ↳ Working knowledge in most of the chemical databases and basics in computers.
- ↳ Able to identify experimental problems and resolve them independently.
- ↳ Profound efficiency in handling of hydroscopic, air sensitive reagents and reactions.
- ↳ Ability to write scientific reports, and manuscript for publication.
- ↳ Strong knowledge of chemistry software-ISIS draw, Chem draw, NMR software (mestrec) and ACD labs.
- ↳ Synthesized several compounds for different activity viz. outstanding equipotent activity towards COX-1 and COX-2. Some of the *Cryptocarya pyrones* have been identified as highly efficacious inhibitors of the G2 check point, which can enhance killing of cancer cells by ionizing radiation and DNA-damaging chemotherapeutic agents, particularly in cells lacking p53 function.

PROFESSIONAL SYNOPSIS

- ↳ A well experienced professional with **5 years** of experience in Research & Development. Well versed with the synthesis, characterisation and applications of a wide range of heterogeneous-homogeneous catalysts and organic reactions for chemical transformations ranging from small organic molecules to functionalised heterocycles.
- ↳ Research experience includes outstanding ability to analyse, gather, write, evaluate and produce detailed reports on various projects. Keen interest in studying the latest development in the field of Chemistry. Dexterous in ensuring compliance to quality measures and maintenance of appropriate requisite documentation as well as records.
- ↳ Exposure in planning and organizing day-to-day research activities and resolving procedural problem as appropriate to the timely accomplishment of research objectives. Extensive experience in scientific investigation and learning research techniques in a comprehensive R & D setup supported by extensive & modern research facilities. Exercises judgment within generally defined practices in selecting methods & techniques for obtaining research solutions; effective communication with excellent relationship management skills and strong analytical, problem solving & organisational abilities.

ACADEMICS

Post-Doctoral Fellowship: from Chungnam National University, Daejeon, South Korea in **2012** with Dr. Jeong Hun Sohn;

Research Topic: Towards the total synthesis of (+)-Norsecurinine and preparation of amine and allenyne intermediates for kinetic studies using Grubbs' catalyst.

Ph. D. in Organic Chemistry from IICT Hyderabad, India in **2011** with Dr. G. Sabitha.

Research Topic: *Stereoselective approaches for the total synthesis of bio-active lactones: Cryptopyranmoscatones, Cryptofolione, Dodoneines, Cryptocaryalactones and (-)-(3S,6R)-3,6-dihydroxy-10-methylundecanoic acid.*

Master of Science (Analytical Chemistry) from Sri Krishnadevaraya University Anantapur, India in **2005** (74.2% of marks).

Bachelor of Science (Chemistry) from Loyola Degree College, Sri Venkateshwara University, Tirupathi, India in **2003** (80.0% of marks).

CORE COMPETENCIES

- ↳ Effectively managing FTE and FFS projects for timely delivery while handling a multi-level team of chemistry professionals.
- ↳ Handling multi step organic synthesis in pharmaceutical company and separation of organic compounds by chromatographic methods.
- ↳ Entering data into appropriate database, performing routine basic manipulation, analysis & interpretation of data.

- ↳ Planning and organising day-to-day activities and resolving procedural and logistical problems as appropriate to the timely completion of research objectives.
- ↳ Identifying, collecting, processing, analysing and cataloguing data, according to the established protocol, procedures & standards, as appropriate to specific objectives of the research study.
- ↳ Setting up, calibrating, operating and maintaining a variety of laboratory research equipment as specified by the requirements of the research study.
- ↳ Conducting literature survey to understand & execute synthesis of organic compounds; contributing to the publication and/or presentation of results. Taking initiative to drive quality within the organization to achieve the global standards.
- ↳ Ensuring compliance of various quality measures by maintaining appropriate requisite documentation and records.

INDUSTRIAL EXPERIENCE

- ↳ **June 2012- May 2017:** Associate Research Scientist-II, **Sai Life Sciences Pvt. Ltd.**, Hyderabad, A.P., India.
 - Maintaining 15 FTE programme and participated in Teleconferences.
 - Achieved the given targets within time lines (planning, synthesis of target heterocyclic molecules and preparation of weekly and final reports).
- ↳ Joined SAI as Associate Research Scientist-I and worked in couple of FTE collaborations and PO based groups.
- ↳ Having strong experience in the synthesis of **Peptides** (tetra peptides etc.) and **Biotin linked** compounds in **10 mg to 1 kg scale**.
- ↳ **2006-2007:** Associate Worked as a Jr. Chemist in **Synthochirals Pvt. Ltd.**, Hyderabad, India.
- ↳ During my more than 5 year industrial experience in Sai life Sciences, have experienced I different chemistry like **amino acids, pyrazoles, thiazoles, triazoles, oxazoles, pyrimidines, imidazoles etc.,**

PUBLICATIONS

1. Stereoselective total synthesis of Cryptopyranmoscatone A1. Gowravaram Sabitha,***S. Siva Sankara Reddy**, and J. S. Yadav. **Tetrahedron Lett.** **2011**, *52*, 18, 2407-2409.
2. First total synthesis of Cryptopyranmoscatone B1 from 3,4,6-tri-*O*-acetyl-D-glucal. Gowravaram. Sabitha,* **S. Siva Sankara Reddy** and J. S. Yadav. **Tetrahedron Lett.** **2010**, *51*, 6259-6261.
3. Stereoselective approaches to the total synthesis of (6*R*,4'*S*,6'*R*)-Cryptofolione. Gowravaram Sabitha,* **S. Siva Sankara Reddy**, D. Vasudeva Reddy, Vangala Bhaskar and J. S. Yadav. **Synthesis** **2010**, 3453-3460.
4. A Concise Synthesis of (-)-(3*S*,6*R*)-3,6-Dihydroxy-10-methylundecanoic Acid Using a Cross-Metathesis Approach. Gowravaram Sabitha,* **S. Siva Sankara Reddy**, Vangala Bhaskar and J. S. Yadav. **Synthesis** **2010**, 1217-1222 (**Feature Article**).
5. Total Synthesis of (+)-Cryptocaryalactone and of a diastereoisomer of (+)-Strictifolione via Ring-Closing Metathesis (RCM) and Olefin Cross-Metathesis (CM). Gowravaram Sabitha,* Bhaskar Vangala, **S. Siva Sankara Reddy**, and J. S. Yadav. **Helv. Chim. Acta.** **2010**, *93*, 329-338.
6. Synthesis of Stereoisomers of Cryptofolione 6'-Mono- and 4',6'-Di-*O*-benzyl Ethers. Sabitha Gowravaram,* Bhaskar Vangala, **Siva Sankara Reddy. S.**, and J. S. Yadav. **Chin. J. Chem.** **2010**, *28*, 2421-2427.
7. A concise stereoselective total synthesis of synargentolide A from 3,4,6-tri-*O*-acetyl-D-glucal. Gowravaram Sabitha,* **S. Siva Sankara Reddy**, Atla Raju and J. S. Yadav. **Synthesis** **2011**, 1279-1282.
8. Total Synthesis of (+)-Dodoneine and Its 6-Epimer. Gowravaram Sabitha,* Vangala Bhaskar, **S. Siva Sankara Reddy**, and J. S. Yadav. **Synthesis** **2009**, 3285-3292.
9. Stereoselective total synthesis of (+)-(6*R*,2'*S*)-Cryptocaryalactone and (-)-(6*S*,2'*S*)-Epicryptocaryalactone. Gowravaram Sabitha,* V. Bhaskar, **S. Siva Sankara Reddy**, and J. S. Yadav. **Tetrahedron** **2008**, *64*, 10207-10213.
10. Total Synthesis of Desacetylumravumbolide, Umuravumbolide and their Biological Evaluation. Gowravaram Sabitha,* D.Vasudeva Reddy, **S. Siva Sankara Reddy**, J.S. Yadav, C. Ganesh Kumar and Pombala Sujitha. **RSC Advances** **2012**, *2*, 7241-7247.
11. Stereoselective synthesis of (-)-(1*R*,1'*R*,5'*R*,7'*R*)-1-Hydroxy-*exo*-brevicomine and (+)-*exo*-Brevicomine from 3,4,6-Tri-*O*-acetyl-D-glucal Gowravaram Sabitha,* Arekuthi Maheswara Reddy,, **S. Siva Sankara Reddy**, and J. S. Yadav. **Helv. Chim. Acta.** **2013**, *96*, 1610-1615.

SYMPOSIA ATTENDED:

- ↳ Participated in "12th CRSI National Symposium in Chemistry & 4th CRSI-RSC Symposium in Chemistry", February 4-7, 2010, at Indian Institute of Chemical Technology, Hyderabad, India.
- ↳ Participated in "Organic Synthesis and Human Well Being: Emerging Opportunities and Challenges (OSHWB)", August 1-4, 2010, at Indian Institute of Chemical Technology, Hyderabad, India.
- ↳ Participated in "MEDCHEM Congress-2011", February 25-26, at Indian Institute of Chemical Technology, Hyderabad, India.