
Curriculum Vitae

Dr. Rajeshwer Vanjari

Research Scientist

Sai Life Sciences Pvt Ltd,

Hyderabad, India.

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Objective

Working as part of a research team, I have been able to greatly improve my chemical knowledge and gain further experience of organic chemistry, particularly, synthesis employing modern strategies such as Coupling, C-H activation and multiple cyclization in the new era of Chemistry. Regular discussions of ideas with colleagues within a team environment have given me the necessary skills to contribute significantly to the success of a research group. I would like to utilize these skills in the pharmaceutical organizations and be the part of its growth.

Research Experience

- Research Scientist**
Sai Lifesciences Pvt Ltd
July 2022-present
- Postdoctoral Fellow**
Area: "Synthesis and *Chemical Biology of Peptides and Development of Cyclic Peptides as Cancer Drugs*"
Supervisor: **Prof. Ashraf Brik**
Schulich Faculty of Chemistry, Technion Israel Institute of Technology, Israel.
Nov 2019-Mar 2022
- Postdoctoral Fellow**
Area: "Metal Catalyzed Cyclization/Functionalization of *Ynamides*"
Supervisor: **Prof. Akhila K. Sahoo**
School of Chemistry, University of Hyderabad, Hyderabad, India
2016 – 2019

Education

- Ph. D. (Organic Chemistry)**
Thesis Title: "Development of green protocols employing C-H activation and coupling strategies"
Supervisor: **Prof. Krishna Nand Singh**
Banaras Hindu University, Varanasi
2011–2016
- M.Sc. Organic Chemistry**; Distinction (82%)
Osmania University, Hyderabad, Telangana, India
Major: *Organic Chemistry specialization*
2008 – 2010
- B.Sc. 1st Class** (83%)
Nizam College, Hyderabad, Telangana, India
Major: *Chemistry, Botany and Zoology*
2005 – 2008

- **Higher Secondary Education**; 1st Class (92%)
Major: *Chemistry, Physics, Botany and Zoology*, 2003-2005

Awards and Achievements

- National Postdoctoral Fellowship (DST SERB-INDIA) Jan 2017-Jan 2019
- All India Joint **CSIR-UGC NET**: CSIR-JRF (Chemical Science) 2010
- Best Poster award in the SERB-ACS National Postdoctoral Fellows 2020
(NPDF) Research Poster Competition

Industrial Exposure

Responsible for planning, designing the experiments and executing the synthesis. Experienced in the synthesis of small organic molecules as well as peptide synthesis. Preparing the reports and weekly updates and reporting to the manager.

Research Exposure

Organic Synthesis:

- Synthetic transformations involving metal catalysis, coupling reactions, C-H activation, and cyclization.
- Expert in design and execution of multi-step organic synthesis.
- Handled moisture sensitive and pyrophoric reagents like organo lithium, Grignard, organosilanes, and organoboranes.
- Expert in Synthetic methodology development of small organic molecules/heterocycles.
- Heterocyclic synthesis/multicomponent reactions.

Peptide Chemistry:

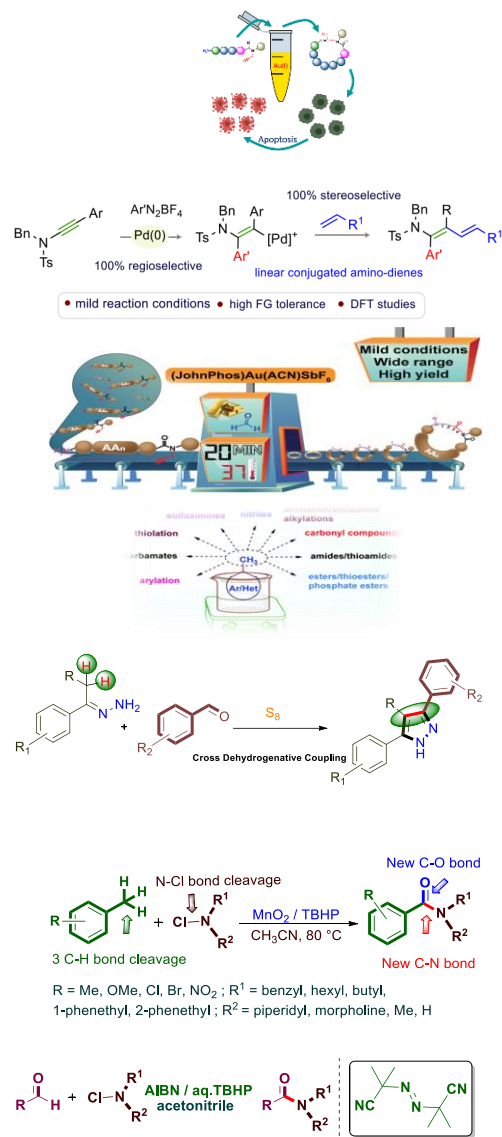
- Solid and Solution Phase Peptide Synthesis (SPPS), Native Chemical Ligation, Ser/Thr ligation, KAHA ligation and Desulfurization.
- Peptide disulfide bond formation.
- Cyclic peptide synthesis, and chemical protein synthesis.
- Peptide protecting group strategies to form new chemical bonds.
- Fluorescence based assay for screening of peptides using 96-well plate against proteins such Tetra and Di Ubiquitin (Plate reader/Bradford/Fluorescence methods) for finding new modulators and cancer cell activity.

Technical Skills

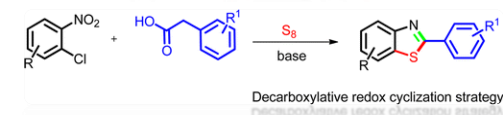
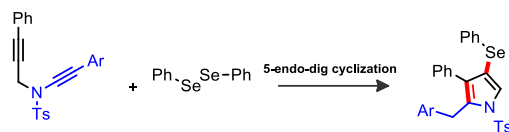
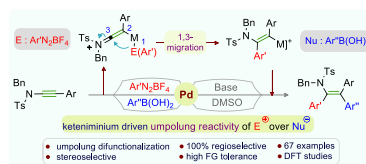
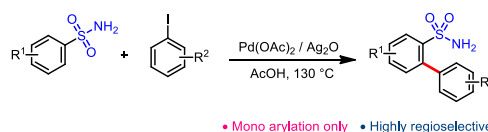
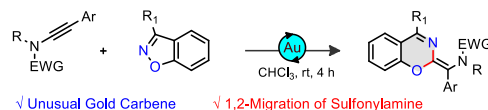
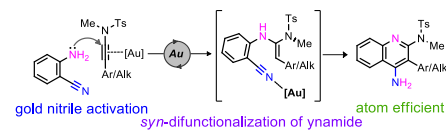
- Reaction Skills: Schlenk technique, Glove-box technique, Crystallization, Lyophilization, Thin layer Chromatography, and Silica-gel Column Chromatography, etc.
- Analytical instruments Handled: Mass, NMR (Bruker), HPLC (analytical and preparative- Thermo Scientific), GC, FT-IR, pH metre, Polarimetre, Plate reader, and Microwave synthesizer etc.
- Single Crystal Refinement and Solution using Wingx, SHELXL, ChemDraw, and Scifinder etc.,
- Interpretation of analytical data using NMR, Mass, IR, LCMS and X-ray diffraction.
- Manual and automatic solid phase peptide synthesizers, and Lyophilizer, etc.

Representative Publications

- 1 “Gold(I)-Mediated Rapid Cyclization of Propargylated Peptides via Imine Formation” **Rajeshwer Vanjari**, Deepanjan Panda, Shaswati Mandal, Ganga B. Vamisetti and Ashraf Brik* *Journal of The American Chemical Society* 2022, 144, 4966. (IF: 16.383).
- 2 “Palladium-Catalyzed Regioselective Aryl-Alkenylation of Ynamides” **Rajeshwer Vanjari**, Shubham Dutta, Shengwen Yang, Vincent Gandon* and Akhila K. Sahoo* *Organic Letters*, 2022, 24, 1524. (IF: 6.072).
- 3 “A Highly Efficient Cyclization Approach of Propargylated Peptides via Gold(I)-Mediated Sequential C–N, C–O and C–C Bond Formation” **Rajeshwer Vanjari**, Emad Eid, Ganga B. Vamisetti, Shaswati Mandal and Ashraf Brik* *ACS Central Science* 2021, 7, 2021-2028. (IF: 18.728).
- 4 “Utilisation of methylarenes as versatile building blocks in organic synthesis” **Rajeshwer Vanjari**, and Krishna Nand Singh* *Chemical Society Reviews*, 2015, 44, 8062-8096. (IF: 60.615).
- 5 “Sulphur promoted C(sp³)-C(sp²) cross dehydrogenative cyclisation of acetophenone hydrazones with aldehydes: efficient synthesis of 3, 4, 5-trisubstituted 1H-pyrazoles” **Rajeshwer Vanjari**, Tirumaleswararao Guntreddi, Saurabh Kumar, and Krishna Nand Singh* *Chemical Communications*, 2015, 51, 366-369. (IF: 6.065).
- 6 “MnO₂ Promoted Sequential C–O and C–N Bond Formation via C–H Activation of Methylarenes: A New Approach to Amides” **Rajeshwer Vanjari**, Tirumaleswararao Guntreddi and Krishna Nand Singh* *Organic Letters*, 2013, 15, 4908-4911 (Highlighted in *Synfacts*, Issue 12, 2013 by Paul Knochel). (IF: 6.072).
- 7 “AIBN-initiated metal free amidation of aldehydes using N-chloroamines” **Rajeshwer Vanjari**, Tirumaleswararao Guntreddi and Krishna Nand Singh* *Green Chemistry*, 2014, 16, 351-356. (IF: 11.034).



- 8 “Gold Catalyzed 1,2-Syn Difunctionalization of Ynamides”
Rajeshwer Vanjari, Shubham Dutta, Manash Protim Gogoi, Vincent Gandon* and Akhila K. Sahoo* *Organic Letters*, 20 (24), 8077-8081. (IF: 6.072).
- 9 “Ring Expansion and 1, 2-Migration Cascade of Benzisoxazoles with Ynamides: Experimental and Theoretical Studies”
Rajeshwer Vanjari, Shubham Dutta, B. Prabagar, Vincent Gandon* and Akhila K. Sahoo* *Chemistry An Asian Journal*, 2019, 14, 4828-4836. (IF: 4.56).
- 10 “Palladium-Catalyzed Site-Selective C–H Functionalization of Weakly Coordinating Sulfonamides: Synthesis of Biaryl Sulfonamides” **Rajeshwer Vanjari**, Tirumaleswararao Guntreddi and Krishna Nand Singh* *Chemistry An Asian Journal*, 2016, 11, 696–699. (IF: 4.56).
- 11 “Keteniminium Driven Umpolung Difunctionalization of Ynamides” Shubham Dutta,^a Shengwen Wang,[#] **Rajeshwer Vanjari**^{#, a} Vincent Gandon^{*b} and Akhila K. Sahoo^{*a} *Angewandte Chemie. Intl. Edn.*, 2020, 132, 10877-10882 (# equal contribution) (IF: 15.34).
- 12 “An Unconventional Sulfur-to-Selenium-to-Carbon Radical Transfer: Chemo- and Regioselective Cyclization of Yne-Ynamides” Shubham Dutta, B. Prabagar,[#] **Rajeshwer Vanjari**,[#] and Akhila K. Sahoo* *Green Chemistry*, 2020, 22, 1113-1118. ((# equal contribution) (IF: 11.034).
- 13 “Decarboxylative Thioamidation of Arylacetic and Cinnamic Acids: A New Approach to Thioamides” Tirumaleswararao Guntreddi, **Rajeshwer Vanjari**, and Krishna Nand Singh* *Organic Letters*, 2014, 16, 3624-3627. (IF: 6.072).
- 14 “Elemental Sulfur Mediated Decarboxylative Redox Cyclization Reaction of o-Chloronitroarenes and Arylacetic Acids” Tirumaleswararao Guntreddi, **Rajeshwer Vanjari**, and Krishna Nand Singh* *Organic Letters*, 2015, 16, 976. (IF: 6.072).
- 15 “Yb (iii)-catalysed syn-thioallylation of ynamides” Manash Protim Gogoi, **Rajeshwer Vanjari**, B Prabagar, Shengwen Yang, Shubham Dutta, Rajendra K Mallick, Vincent Gandon, Akhila K Sahoo* *Chemical Communications*, 2021, 57, 7521-7524. (IF: 6.22).
- 16 “Thioarylation Radical Cyclization of Yne-Dienone” Rajendra K. Mallick, Shubham Dutta, **Rajeshwer Vanjari**, Arnaud Voituriez and Akhila K. Sahoo* *J. Org. Chem.* 2019, 84 (16), 10509-10517. (IF: 4.35).



Conference Presentations

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| 1 | “16th CRSI National Symposium in Chemistry (NSC-16) February 7-9, 2014 at IIT Bombay. <i>Poster Presentation</i> . | Feb, 2014 |
| 2 | “15th CRSI National Symposium in Chemistry (NSC-15), 2013 at BHU. <i>Poster Presentation</i> . | Feb, 2013 |

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| 3 | “17th CRSI National Symposium in Chemistry (NSC-17) February 6-8, 2014 at NCL-Pune. <i>Poster Presentation</i> . | Feb, 2015 |
| 4 | “National Symposium on Nano materials and Sustainable synthetic strategies held in BHU, 2015. <i>Poster Presentation</i> . | Mar, 2015 |
| 5 | “Participated in “7 th CRSI-RSC International Symposium” held in BHU, 2013. | Feb 2013 |

Personal Details

- Permanent Address: S/O Ganganna, 1-29, Local Velmal, Nirmal (Dt), Soan (M), Telangana, PIN: 504105, India.
 - Date of Birth: Aug 08, 1988; Male, Married
 - Nationality: Indian
 - Languages Known: English (full professional proficiency), Telugu (native language), and Hindi.
- Google Scholar ID: https://scholar.google.co.in/citations?user=Rlv8m_YAAAAJ&hl=en

References:

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