Dr. CH. N. S. SAI PAVAN KUMAR

ASSOCIATE PROFESSOR | ORGANIC CHEMISTRY

Department of Chemistry

Vignan's Foundation for Science, Technology & Research (Deemed to be University)

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Professional Profile

Academic and research professional in Organic Chemistry with experience in university teaching, postdoctoral research, doctoral supervision, research project mentoring, and publication-oriented research. Research interests include total synthesis of biologically active natural products, heterocyclic chemistry, synthetic methodology, and bioactive molecules.

Academic & Research Experience

- Academic Experience: As Associate Professor (Nov 2018 – till date) at Vignan's Foundation for Science, Technology and Research (Deemed to be University), Guntur, Andhra Pradesh in the Department of Chemistry, School of Applied Sciences and Humanities and deputed to Vignan Degree & PG College, Palakalur, Guntur.
- Assistant Professor: August 2015 – October 2018 at Vignan's Deemed to be University.
- Research Experience: As Postdoctoral research fellow from October 2011 to March 2015 at Academia Sinica, Taipei, Taiwan under the supervision of Prof. Rong-Jie Chein.
- Research Topic: Total synthesis of antidiabetic labdane type diterpenes Galanals & Panduratin D and synthetic methodologies based on anionic Snieckus-Fries rearrangement.
- Senior Research Trainee: Indian Institute of Chemical Technology, Hyderabad from December 2010 to May 2011.

Academic Qualifications

- Ph.D. (Organic Chemistry): Indian Institute of Chemical Technology, Hyderabad from November 2005 to February 2011 (Awarded from Acharya Nagarjuna University)
- Title of the thesis: Synthetic Studies of Macrolides: Stagonolide-G, Hygrocin-A & Synthesis and Bioevaluation of Nitrogen Containing Heterocyclic Compounds.
- Research guide: Prof. Dr. V. Jayathirtha Rao, FRSC (Emeritus Scientist).
- Qualified CSIR-JRF examination in December 2004 conducted by the Council of Scientific and Industrial Research (CSIR), Govt. of India.
- M.Sc. (Organic Chemistry): First Division from Andhra University, Visakhapatnam, Andhra Pradesh, India (2002 - 2004).
- B.Sc. (Chemistry, Physics, Mathematics): First Division from Andhra University, Visakhapatnam, Andhra Pradesh, India (1999 - 2002).

Research Expertise & Technical Skills

- Total synthesis of biologically active natural products and synthetic molecules involving multi-steps.
- Purification/Separation techniques pertinent to synthetic organic chemistry.
- Design and synthesis of biologically active heterocyclic compounds and new synthetic methodologies.
- Profound efficiency in handling of hygroscopic, air sensitive reagents and reactions.
- Proficiency in analyzing spectroscopic data like NMR, Mass, IR etc. needed for structure elucidation.
- Considerable expertise and extensive knowledge of the scientific literature.
- Independent handling of NMR, GC-MS, IR, UV-Visible, Polarimeter, Fluorescence, Glove Box and HPLC Instruments.
- Skilled in the use of MS Word, Excel, Power Point, Chemdraw, Chem 3D, ACD labs and ISIS draw and expertise in the preparation of research reports and manuscripts.
- Expertise in teaching for Post graduate and Graduate students.
- Worked as Reviewer for few International journals (SCI) viz., Arkivoc, Iranian Journal of Chemistry and Chemical Engineering (IJCCE), Journal of the Chinese Chemical Society, Current Organic Synthesis, Letters in Organic Chemistry etc.
- As Examiner for Semester end Practical Examinations, P.G. Courses, Acharya Nagarjuna University and as Paper Setter for KBN College, Krishnaveni College, CR Reddy College & VFSTR, Vadlamudi.

Projects & Research Mentoring

- Parallel to my Ph.D. work, I have actively participated in Kansai Paints, Japan in IICT project dealing with in making chemical libraries.
- Handled bio related Industrial projects during Post doc tenure.
- Handled several M.Sc. Projects for the student's dissertations.

Research Publications

Research impact (as stated in the source CV): Google Scholar – 781 citations; h-index 14. Scopus – 676 citations; h-index 13. Cumulative impact factor (CIF): >100.

1. “Rational design, Synthesis, and Biological Evaluation of Triazoloquinazoline Carboxamides as Potent Inhibitors of MDR-TB Targeting Mycobacterial Membrane Protein Large 3 (MmpL3)” Munipalle Shyam Prasad, N. S. Sai Pavan Kumar, Ch.* Future Medicinal Chemistry Accepted Manuscript 2026.

2. “Bioactive Molecules - via - Baylis Hillman Chemistry” N. S. Sai Pavan Kumar, Ch.; Jayathirtha Rao, V. Synlett 2025, 36(17), 2772-2790.

3. “Efficient green solvent extraction and bioassay studies of Favipiravir in rat dried blood spots using an ionic liquid based dispersive liquid-liquid micro extraction (IL-DLLME) coupled with HPLC-PDA: Application to bioequivalence studies”. Rajashekhar, K.; Gangu Naidu, Ch.; N. S. Sai Pavan Kumar, Ch.*; Ramachandra, B. Current Pharmaceutical Analysis 2024, 20(7), 514-523.

4. “Impurity Profiling and a Stability Indicating Advanced Liquid Chromatographic Method Development and Validation for the Estimation of Related Impurities of Anagrelide” Pavani, P.; Prasada Rao, PTSRK.; N. S. Sai Pavan Kumar, Ch., Usha Rani, N., Lakshmi Tulasi, S. Asian Journal of Chemistry 2024, 36(2), 325.

5. “Analytical Quality by Design Aided Stability Indicating a robust UPLC Technique for the quantification of Sonidegib and its organic impurities in bulk drug substance” Rajasekhar, K.; Gangu Naidu Ch.; N. S. Sai Pavan Kumar, Ch.*, Ramachandra, B.; Padiya, R. Separation Science Plus 2024, 7(3), 2300181.

6. “Development and Validation of Favipiravir severe acute respiratory syndrome Coronavirus 2 Drug by Dissolution method with Filter Compatibility study” Kanithi, S.; N. S. Sai Pavan Kumar, Ch.; * Gangu Naidu, Ch. Ind. J. Pharm. Sci. 2023, 85(4), 895.

7. "Quality by design based pareto charts responses assessment approach for a validated stability-indicating LC method for sunitinib and associated impurities in oral dosage forms" Rajasekhar, K.; Gangu Naidu Ch.; N. S. Sai Pavan Kumar, Ch.*; Bheema Shankar, E. Research Journal of Pharmacy and Technology 2023, 16(4), 1999-5.

8. “Green synthesis of bimetallic ZnO-CuO Nano catalyst for the hydro-dechlorination of 1,2-Dichlorobenzene and 3-Chlorophenol” Pavani, P; Prasada Rao, PTSRK; N. S. Sai Pavan Kumar, Ch.; Satwinder Singh, M; Usha Rani, N; Lakshmi Tulasi, S. Asian Journal of Chemistry 2023, 35(3), 578-584.

9. “Green synthesis and characterization of co-doped ZnO nanoparticles via the accumulation of cobalt ion onto Pistia (Pistia stratiotes L.,) plant tissue and its photocatalytic activity toward organosulfur pollutants.” Usha Rani, N.; Pavani, P.; N. S. Sai Pavan Kumar, Ch.; Satwinder Singh, M; Tulasi, S. L. Rasayan J. Chem. 2023, 16(1), 398.

10. “Total Synthesis of (–)-Panduratin D" Bavikar, Suhas Ravindra; Lo, Hong-Jay; N. S. S. Pavan Kumar, Ch.; Chein, Rong-Jie Chem. Commun., 2022, 58, 8564-8567.

11. “FTIR spectra of pure components and their binary liquid components (Binary mixtures of formamide with aniline, N-methyl aniline and N, N-dimethyl aniline)” Yella Reddy, P.; Srinivasa Krishna, T.; Gowrisankar, M.; Siva Kumar, K.; N. S. Sai Pavan Kumar, Ch.* Int. J. Ambient Energy 2022, 43(1), 5327-5343.

12. “Spectroscopic thermodynamic properties of binary liquid mixtures of non-polar and polar solvents (Tetrachloromethane, 2-chloroaniline, 2-methylaniline, and 2-methoxyaniline) at various temperatures” Yellareddy, P.; Babavali, Sk. F., Srinivasa Krishna, T.; Gowrisankar, M.; N. S. S. Pavan Kumar, Ch.* Journal of Molecular Liquids 2021, 342, 117550.

13. “Study on molecular interactions of binary mixtures of 2,6-dimethyl cyclohexanone with substituted anilines at T = (303.15 to 313.15) K through thermodynamic properties and FT-IR Spectra and correlation with the Jouyban-Acree model”. Yellareddy, P.; N. S. Sai Pavan Kumar, Ch.* Gowrisankar, M.; Babu, Sk.; Rathnam, M. V. Journal of Molecular Liquids 2021, 343, 117708.

14. “A validated stability indicating RP-HPLC method for determination of Esmolol Hydrochloride and its related impurities” Kanithi, S.; N. S. Sai Pavan Kumar, Ch.; * Gangu Naidu, Ch. Int. J. Pharm. Sci. Res. 2021, 12(11), 6016.

15. “Acoustic, volumetric and FTIR study of binary liquid mixtures of 2-methyl cyclohexanone with amides” Yella Reddy, P.; Srinivasa Krishna, T.; Gowrisankar, M.; Siva Kumar, K.; N. S. Sai Pavan Kumar, Ch.* The Journal of Chemical Thermodynamics 2021, 154, 106316.

16. “A Validated SPE-UPLC-DAD Method for Quantification of Parabens in Industrial Waste Effluent Water Samples by Using Activated Carbon Nanofiber Modified Filter Paper” Bheema Shankar, E.; Gangu Naidu, Ch.; N. S. Sai Pavan Kumar, Ch.; Rajashekhar, K. Asian J. Chem. 2021, 33 (2), 350.

17. “Stereoselective synthesis of (-)-Tetrahydropyrenophorol” Ramanujan, V.; Sadikha, Sk.; N. S. Sai Pavan Kumar, Ch.* J. Serb. Chem. Soc. 2020, 85(9), 1129.

18. “PEG-600 mediated an efficient and environmentally sustainable synthesis of 2-(1H-benzo[d]imidazole/oxazole/thiazole-2-yl)-N-Arylbenzamides” Karunakar, P.; N. S. Sai Pavan Kumar, Ch.* Russian Journal of Organic Chemistry 2020, 56(7), 1289.

19. “Design, Synthesis and Anticancer activity of novel Triazole substituted Quinazoline Hybrids” Karunakar, P.; Gujjewar, S.; Sharma, S.; Pothukanuri, S.; Muthusamy, K.; Arumugam, P.; N. S. Sai Pavan Kumar, Ch.* Int. J. Res. Pharm. Sci., 2020, 11(3), 3569.

20. “Self-catalyzed of one-pot four component green synthesis of 2-amino-6-(1,4-dioxo-3,4-dihydrophthalazin-2(1H)-yl)-4-phenyl-4H-pyran-3,5-dicarbonitriles” Karunakar, P.; N. S. Sai Pavan Kumar, Ch.* Russian Journal of Organic Chemistry 2019, 55(12), 1936.

21. “Efficient synthesis and antimicrobial activity of 2-Pyridyl-4-thiazolidinones from 2-chloro nicotinaldehydes” Bharath Kumar, S.; N. S. Sai Pavan Kumar, Ch.;* Santhoshi, A.; Pranay Kumar, K.; Murty, U. S.; Jayathirtha Rao, V. Iran. J. Chem. Chem. Eng. 2019, 38(3), 97.

22. “Reversed Phase-UPLC Separation Analysis of Amitriptyline and Pregabalin from their Degradants” Kanithi, S.; N. S. Sai Pavan Kumar, Ch.;* Der Pharma Chemica, 2019, 11(1), 42.

23. “Emtricitabine, tenofovir and rilpivirine from their degradation products analysis by HPLC” Kanithi, S.; N. S. Sai Pavan Kumar, Ch.*; Thulaseedhar, A. Int. J. Res. Pharm. Sci., 2019, 10(4), 3674.

24. “From carbamate to chalcone: Consecutive anionic Fries rearrangement, anionic Si→C alkyl rearrangement and Claisen-Schmidt condensation” Naveen Kumar, S.; Bavikar, S. R.; N. S. Sai Pavan Kumar, Ch.; Furay Yu, I.; Chein, R, -J. Org. Lett., 2018, 20(17), 5362.

25. “Total Synthesis of Diplodialide C and D” Ramanujan, V.; N. S. Sai Pavan Kumar, Ch.* Arkivoc 2018, (vii), 332.

26. “Design, Synthesis, Cytotoxicity and Molecular Docking Studies of Novel Baylis-Hillman Derived 1,2,3-Triazole Derivatives” Santhoshi, A.; Sadikha, Sk.; Bikshapathi, R.; N. S. Sai Pavan Kumar, Ch.;* Sivan, S. Der Pharma Chemica, 2018, 10(9), 97-104.

27. “Efficient synthesis of N-allylated 2-nitroiminoimidazolidine analogues from Baylis-Hillman bromides” Bharat Kumar, S.; N. S. Sai Pavan Kumar, Ch.;* Santhoshi, A.; Pranay Kumar, K.; Murthy, U. S. N.; Jayathirtha Rao, V. Synth. Commun., 2017, 47, 131.

28. “Stereoselective total synthesis of decarestricine J” Ramanujan, V. B.; Sreenivasulu, R. Chavali, M.; N. S. Sai Pavan Kumar, Ch.* Monatsh Chem. 2017, 148, 1865.

29. “An expedient synthesis of new 2-(furoxan-3-yl) thiazolidine-4-one derivatives” Naveen Kumar, S.; N. S. Sai Pavan Kumar, Ch.* Anudeep S. R. V.; Sharma, K. K.; Jayathirtha Rao, V.; Jagadeesh Babu, N. Arkivoc, 2016, (v), 32.

30. “Synthesis of labdane diterpenes Galanal A and B from (+)-Sclareolide” N. S. Sai Pavan Kumar, Ch.; Chein, R, -J. Org Lett. 2014, 16(11), 2990.

31. “First total synthesis of Fuzanins C, D and their analogues as anticancer agents” Naveen Kumar, S.; N. S. Sai Pavan Kumar, Ch.; Srihari, E.; Sravani, K.; Srinivas, K.; Swetha, S.; Naidu, V. G. M.; Jayathirtha Rao, V. RSC Adv. 2014, 4, 8365.

32. “DBU Promoted Facile Synthesis of New Thieno[2,3-b]Pyridine/Quinoline derivatives and Their Antimicrobial Evaluation” N. S. Sai Pavan Kumar, Ch.; Srihari, E.; Ravinder, M, Pranay Kumar, K.; Murthy, U. S. N.; Jayathirtha Rao, V. J. Heterocyclic. Chem., 2013, 50, E131.

33. “A facile route for the synthesis 1,4-disubstituted tetrazolone derivatives and evaluation of their antimicrobial activity” Santhoshi, A.; Sadhu, P. S.; Sriram, R.; N. S. Sai Pavan Kumar, Ch.; Mahendar, B.; Jayathirtha Rao, V. Med Chem Res. 2013, 22, 3329.

34. “Triphosgene mediated chlorination of Baylis-Hillman adducts” Narender Reddy, T.; N. S. Sai Pavan Kumar, Ch.; Mahendar, B.; Jayathirtha Rao, V. J. Chem. Sci. 2012, 124, 513.

35. “PCC-SiO2/AlCl3 promoted Efficient Oxidation of Azaindoles and Indoles” Sriram, R.; N. S. Sai Pavan Kumar, Ch.; Raghunandan, N.; Ramesh, V.; Sarangapani, M.; Jayathirtha Rao, V. Synth. Commun. 2012, 42, 3419.

36. “Stereoselective Synthesis of Stagonolide-G from D-Mannitol” N. S. Sai Pavan Kumar, Ch.; Ravinder, M.; Naveen Kumar, S.; Jayathirtha Rao, V. Synthesis 2011, 451.

37. “Synthesis and Biological Evaluation of Tetrazole Containing Compounds as Possible Anticancer Agents” N. S. Sai Pavan Kumar, Ch.; Parida, D. K.; Santhoshi, A.; Kota, A. K.; Sridhar, B.; Jayathirtha Rao, V. Med Chem Comm. 2011, 2, 486.

38. “An Efficient Stereoselective Approach for the Synthesis of (+)-(4S, 5S)-Muricatacin” Srinivas, Ch.; N. S. Sai Pavan Kumar, Ch.; China Raju, B.; Jayathirtha Rao, V. Helv. Chim. Acta 2011, 94, 669.

39. “Synthesis and Antimalarial Activity of Baylis-Hillman Adducts from Substituted 2-Chloro Quinoline-3-Carbaldehydes” Srihari, E.; Siva Kumar, G.; N. S. Sai Pavan Kumar, Ch.; Seth, R. K.; Biswas, S.; Sridhar, B.; Jayathirtha Rao, V. Heterocyclic Commun., 2011, 17, 111.

40. “Novel Combination of Sodium Borohydride and Reusable Polyaniline Salt Catalyst for Rapid and Efficient Reductive Amination of Carbonyl Compounds” Lavanya Devi, C.; Olusegun, O. S.; N. S. Sai Pavan Kumar, Ch.; Jayathirtha Rao, V.; Palaniappan, S. Catalysis Letters 2009, 132, 480.

41. “Efficient Synthesis of 14-Substituted-14-H-Dibenzo[a,j]Xanthenes using Silica Supported Sodium Hydrogen Sulfate or Amberlyst-15 Catalyst” N. S. Sai Pavan Kumar, Ch.; Srinivas, Ch.; Sadhu, P. S.; Jayathirtha Rao, V.; Palaniappan, S. J. Heterocyclic Chem., 2009, 46, 997.

42. “First Stereoselective Total Synthesis and Anticancer Activity of New Amide Alkaloids of Roots of Pepper” Srinivas, Ch.; N. S. Sai Pavan Kumar, Ch.; China Raju, B.; Jayathirtha Rao, V.; Naidu, V. G. M.; Ramakrishna, S.; Diwan, P. V. Bioorg. Med. Chem. Lett., 2009, 19, 5915.

43. “Use of Pyridinium Chlorochromate and Reusable Polyaniline Salt Catalyst Combination for the Oxidation of Indoles” N. S. Sai Pavan Kumar, Ch.; Lavanya Devi, C.; Jayathirtha Rao, V.; Palaniappan, S. Synlett 2008, 13, 2023.

44. “Green Approach for the Synthesis of Quinoxaline Derivatives in Water Medium Using Reusable Polyaniline-sulfate Salt Catalyst and Sodium Laurylsulfate” Srinivas, Ch.; N. S. Sai Pavan Kumar, Ch.; Jayathirtha Rao, V.; Palaniappan, S. Catalysis Letters 2008, 121, 291.

45. “Efficient, Convenient and Reusable Polyaniline-sulfate Salt Catalyst for the Synthesis of Quinoxaline Derivatives” Srinivas, Ch.; N. S. Sai Pavan Kumar, Ch.; Jayathirtha Rao, V.; Palaniappan, S. J. Mol. Catal. A: Chem., 2007, 265, 227.

Books & Book Chapters

1. “Synthesis of Macrolides and N-Heterocyclic Compounds” book published by LAP LAMBERT Academic Publishing GmbH & Co. KG Saarbrücken, Germany with ISBN 978-3-659-11555-4 in May 2012.

2. “Total Synthesis of Macrolides” book chapter published by IntechOpen Limited, London, UK in July 2019. ISBN:978-1-78985-944-7.

3. “An Overview of Oxidizing and Reducing Agents in Total Synthesis” book chapter in “Advances in Organic Synthesis” Book series, Bentham Science Publications 2022, 16, 271-305. ISBN: 978-981-5039-27-6

4. “Molecular iodine-catalyzed synthesis of N-heterocycles and some important organic transformations” book chapter for Non-Metal Catalyzed Synthesis Bioactive Heterocycles’, De Gruyter Publisher, Germany published in December 2023, pp 163-187. ISBN: 9783110985474.

5. “Development and Validation of a RP-HPLC method for the simultaneous determination of twenty related substances of Sulfamethoxazole and Trimethoprim in injection dosage form” book chapter for Current Trends in Drug Discovery, Development and Delivery (CTD4-2022), Special Publications in Royal Society of Chemistry published in December 2023. ISBN: 978-1-83767-109-0.

6. “Microwave-assisted solvent-free multicomponent synthesis of bioactive heterocycles” book chapter for ‘Multicomponent Synthesis Bioactive Heterocycles’ Book Series, De Gruyter Publisher, Germany published in December 2023 ISBN: 9783110985313.

7. “Microwave assisted aqueous mediated synthesis of bioactive heterocycles” book chapter for ‘Aqueous-Mediated Synthesis Bioactive Heterocycles’ Book Series, De Gruyter Publisher, Germany published in Feb 2024 ISBN: 9783110985627.

8. “Titanium mediated reactions in organic synthesis” book chapter in “Advances in Organic Synthesis” Book series, Bentham Science Publications, 2026.

Patents

1. “Design and implementation of smart air quality detection system.” Pavani, P.; Usha, N.; Rao, P. T. S. R. K. P.; Sivanadh, M.; N. S. Sai Pavan Kumar, Ch.; Naidu, Ch. G. Australian Patent Granted, Patent number: 2021100661.

2. “Efficient green solvent extraction and bioassay studies of Favipiravir in rat dried blood spots using an ionic liquid based dispersive liquid-liquid micro extraction (IL-DLLME) coupled with HPLC-PDA: Application to bioequivalence studies.” Naidu, Ch. G.; N. S. Sai Pavan Kumar, Ch.; Rajashekhar, K.; Rajesh Babu, K. B. India Patent published on 13/12/2024, Issue No: 50/2024.

3. “A QbD-assisted UPLC method for the Accurate Quantification of Sonidegib and its Organic Impurities in Bulk Drug Substance”. Naidu, Ch. G.; N. S. Sai Pavan Kumar, Ch.; Rajashekhar, K.; Beepala, S. K. Indian Patent published on 10/01/2025, Issue No: 02/2025.

4. “Green synthesis of multifunctional nanofertilizers for sustainable agriculture” Pavani, P.; Kumari, D. S.; N. S. Sai Pavan Kumar, Ch.; Eswar, P.; Chakrapani, Ch. Indian Patent published on xx/xx/2026, Issue No: xx/2026.

5. “Green synthesis of stimuli - responsive smart nanofertilizers for controlled nutrient release in sustainable agriculture” Pavani, P.; Dillirani, G.; Abdul, Sk.; N. S. Sai Pavan Kumar, Ch.; Kumari, D. S. Indian Patent published on xx/xx/2026, Issue No: xx/2026.

Invited Talks, Resource Person Roles, Conferences & Seminars

1. Presented work as poster on “Design, synthesis, in-vitro anticancer evaluation and in-silico molecular docking studies of 5-azaindole linked 1,3,4-oxadiazole and pyridine derivatives” at ANRF sponsored Two-day National Conference on ‘Recent Advances in Designing and Sustainable Development of Small Molecules for Pharmaceutical and Optoelectronic Applications’ (RADSDSMPOA-2026) held at Vignan’s Foundation for Science, Technology and Research on 26th & 27th June’ 2026.

2. Presented work as poster on “A Facile One-Pot Multicomponent Approach to Isatin-Derived Imidazoles” at RUSA sponsored national seminar on ‘The Alchemical Legacy of Acharya Nagarjuna: Exploring Traditional and Contemporary Perspectives (ALAN-2026)’ held at Acharya Nagarjuna University on 7th & 8th Jan’2026.

3. Presented work as poster on “Design, Synthesis and Biological Evaluation of New Tetrazol-1-yl imidazo[1,2-a]pyridine Derivatives” at UGC sponsored national seminar on Recent Advances in Chemical Sciences for Sustainable Development (RACSSD-2025) held at Acharya Nagarjuna University on 3rd & 4th March’2025.

4. Participated in International Online Seminar on “High Energy Materials, Energy Storage & Biofuels” organized by the Department of Applied Chemistry, Amity University, Madhya Pradesh, aligned with UN Sustainable Development Goals 7 & 13 on 16th May’2025.

5. Participated in 5th International Online Conference on Nanomaterials (IOCN 2025) on 22-24 Septemeber’ 2025.

6. Participated in IP Awareness/Training program under National Intellectual Property Mission on 1st July 2025, organized by Intellectual Property Office, India.

7. Participated in CEFIPRA sponsored Joint Indo-French International Seminar on “Exploring Contemporary Vistas in applying (Organo)catalysis for Pharma Industry: For Sustaining Future” at VFSTR, Vadlamudi from 11th-13th Dec 2024.

8. Participated in National Conference on “Frontiers in Polymer Science & Technology” Organized by Department of Chemistry, School of Applied Sciences & Humanities, VFSTR, Vadlamudi in collaboration with SERB, India from 28th-30th Nov’2024.

9. As Resource person for the Extension/Guest lecture on “Molecular Spectroscopy”on 1/2/2024 at T.J.P.S. College (PG Courses), Ring Road, Guntur.

10. Participated in a One-day Workshop sponsored by Science and Engineering Research Board under SSR initiative in “Advanced Polymeric Materials & Computational Chemistry” Organized by Department of Chemistry, School of Applied Sciences and Humanities, VFSTR (Deemed to be University) on 28th March 2024.

11. As Convener for National Science Day organized by Department of Chemistry, Vignan Degree & P. G. College on 28th February 2024.

12. Presented work as poster on “CTAB assisted Knoevenagel condensation of Barbituric acids and facile synthesis of pyrimidine fused heterocyclic derivatives in water” at UGC sponsored national seminar on Recent Trends in Sustainable Technology and it’s Applications in Applied Sciences (STAAS-2024) held at Acharya Nagarjuna University on 23rd & 24th Feb’2024.

13. Presented work on “Synthesis of Macrolide Natural Products and new N-Heterocyclic entities - A green protocol” at Andhra Loyola College, Vijayawada in A Two Day National Conference on Frontiers in Chemical Sciences (FCS-2K24) on 23rd & 24th Jan’2024.

14. As Resource person for the Extension/Guest lecture on “Molecular Spectroscopy”on 7/11/2023 at St.Ann’s College for Women, Amaravati Road, Guntur.

15. Participated in a National Workshop on “Hands on Training Using In-Silico Tools for Chemical/Biological Applications” Organized by Department of Chemistry, School of Applied Sciences and Humanities, VFSTR (Deemed to be University) during 14th to 17th October, 2023.

16. Presented work on ‘Design, Synthesis and Bio-activity of New Chemical Entities’ at 5th International Pharma Conference (5th Pharma – 2023), May 23-24, 2023 conducted by Reignite Innovative Conferences, Hyderabad.

17. Participated in a National Workshop on “Surface Analysis of Chemical Material by BET and SEM Techniques” sponsored by SERB, New Delhi held at Vignan’s Foundation for Science, Technology and Research on 23rd March 2023.

18. As Convener for Celebration of 1st National Science Day organized by Department of Chemistry, Vignan Degree & P. G. College on 28th February 2022.

19. Presented work on ‘Synthesis and Pharmacological Activity of Small-Molecules Including Natural Products’ at 3rd International Pharma Conference (3rd Pharma – 2021), December 17-18, 2021 conducted by Reignite Innovative Conferences, Hyderabad (Awarded 1st Best Speaker Presentation Award).

20. Attended in UGC sponsored National Seminar on “Advances in Chemistry and its Allied Sciences (ACAS-2021)” held at Acharya Nagarjuna University on 17th & 18th March, 2021.

21. Work presented as poster at Acharya Nagarjuna University for UGC sponsored International Conference on “Recent Advances in Chemical, Pharmaceutical & Biological Sciences (RACPABS – 2020)” from 5th to 7th March 2020.

22. Participated in Workshop on “Atomistic simulation for the applications of Material Science” held at Vignan’s Foundation for Science, Technology and Research on 6th February 2020

23. Work presented at Vignan’s Foundation for Science, Technology and Research for DST-SERB sponsored national conference on “Recent Advances in Materials Science for Sustainable Development – 2019” from 31st Aug-1st October.

24. Participated in One-Day International Symposium on 28th November 2018 on “Recent Trends in Chemical Biology” organized by Research Development and Consultancy Cell, Osmania University.

25. As Resource Person for One day State Level Workshop on 30th August 2017 on “Applications of Chromatography and Spectroscopic techniques in Chemistry” held at Government Degree College for Women, Hussaini Alam, Hyderabad.

26. As Resource Person for One day State Level Workshop on 6th September 2017 on “Structural Elucidation of Organic Compounds by Spectroscopic Methods” held at Jagarlamudi Kuppuswamy Choudary College (Autonomous), Guntur.

27. As an Organizing Committee Member for the DST Sponsored National Conference on “Advanced Chemical Materials and Processes for Technological Applications in Life Sciences, Pharmacy and Health care” on 18 – 19 August, 2017 held at Vignan’s Foundation for Science, Technology and Research (Vignan University), Guntur.

28. “Total Synthesis of Panduratin D” Work presented as Oral Presentation (Invited talk) at Annual Junior Chemist Meeting on Frontier Molecular Science, Feb 5-6, 2015, Miaoli, Taiwan. N. S. Sai Pavan Kumar, Ch., Chein, R. -J.

29. “Synthesis of Labdane-type diterpene as an antidiabetic drug candidate”Work presented at The 9th AFMC International Medicinal Chemistry Symposium (AIMECS), October 15-18, 2013, Grand Hotel, Taipei, Taiwan. Rong-Jie Chein, N. S. Pavan Kumar, Ch, Klim King, Nan-Shih Liao.

30. Participated in 15th International Symposium on Novel Aromatic Compounds (ISNA-15)” July 28-Aug 2, 2013, at Howard Civil Service Intl. House, Taipei, Taiwan.

31. “Synthesis and Anticancer Activity of New Tetrazole Derivatives from Baylis-Hillman Allyl Amines” Work presented in “98th Indian Science Congress (ISC 2011)” Jan 3-7, 2011. SRM University, Tamilnadu, India. N. S. Sai Pavan Kumar, Ch.; Parida, D. K.; Kota, A. K.; Jayathirtha Rao, V.

32. “Novel Combination of Sodium Borohydride and Reusable Polyaniline Salt Catalyst for Rapid and Efficient Reductive Amination of Carbonyl Compounds” Work presented in UGC sponsored National Seminar on “Environmentally Benign Synthetic Methodologies in Chemistry (EBSMC-2010)” Feb. 9-10, 2009. Kakatiya University, Warangal, India. N. S. Sai Pavan Kumar, Ch.; Lavanya Devi, C.; Jayathirtha Rao, V.; Palaniappan, S.

33. “Synthesis of Fuzanins” Work presented in National Seminar on “New Dimensions in Chemical Sciences (NDCS-2010)” Jan 30, 2010, Osmania University, Hyderabad, India, N. S. Sai Pavan Kumar, Ch.; Naveen Kumar, S.; Jayathirtha Rao, V.

34. Actively Participated in Various Webinars, Quiz Competitions and several FDP’s in Online from April 2020 - December 2021.

Honours, Awards & Professional Memberships

- Nominated Life membership from Society for Materials Chemistry (SMC), Chemistry division, BARC, Mumbai, India in December 2025.
- Nominated Life membership from Association of Chemistry Teachers (ACT), Homi Bhabha Centre for Science Education, TIFR, Mumbai in March 2025.
- Nominated as ‘Associate Fellow’ by A.P. Akademi of Sciences in 2020.
- Nominated as Editorial member for the “Edwin Group of Journals”, M.P, India.
- Appointed as Member of the Arkivoc (An SCI journal) Editorial Board of Referees.
- Awarded as "Best Researcher Award" in the International Scientist Awards on Engineering, Science and Medicine held on 26th & 27th Feb 2021 Hyderabad.
- ‘Research Excellence Certificate’ has Awarded in Recognition of outstanding performance in executing high quality Research during AY 2017, 21, 22, 23, 24.
- Awarded “NPTEL Discipline Star” Certificate of Appreciation from NPTEL for July-December 2023.

Faculty Development, Refresher & Certification Courses

- Completed a eight day NEP Orientation & Sensitization Programme on “NEP Orientation and Sensitization on Transforming Higher Education: Innovation, Employability, Sustainability, and Digital Engagement Programme” under Malaviya Mission Teacher Training Programme (MMTTP) of UGC organized by Central University of Andhra Pradesh from 10th to 19th Aug’ 2026.
- Completed AICTE Training And Learning (ATAL) Academy Faculty Development Programme on “AI driven Bio-remediation of Waste Water with Sustainable Hydrogen Production” organized by Vignan’s Foundation for Science, Technology & Research (Deemed to be University) Off campus from 13/10/2025 to 18/10/2025.
- Completed Faculty Development Programme on “Analytical Techniques” organized by Department of Chemistry, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore in collaboration with Association of Chemistry Teachers (ACT) from 21th-25th April’2025.
- Completed a six day Faculty Development Programme on “Material Science and Nanotechnology” organized by UCG-Malaviya Mission, Teachers Training Center, Central University of Kerala from 02-07 Dec’2024.
- Completed a five day Faculty Development Programme on “Spectroscopic and chromatographic Techniques” organized by Department of Chemistry, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore in collaboration with Chromatographic Society of India (CSI) from 24th April to 28th April 2023.
- Completed a two weeks Science Academies Refresher Course on Spectroscopic Techniques: “New facets in contemporary fields of Chemical, Material and Pharmaceutical Sciences” Organized by Division of Chemistry, Dept. of Sciences and Humanities, Vignan’s Foundation for Science, Technology & Research sponsored by Indian National Science Academy and Indian Academy of Sciences from 06/05/2022 to 20/05/2022.
- Completed a ten-day Faculty Development Programme on “Outcome Based Education – A 21st Century Pedagogical Model” Organised by the Directorate of Academy for Faculty Development (AFD), Vignan’s Deemed to be University, Vadlamudi from 21st to 30th June 2021.

- Completed a six-day Faculty Development Programme on “Emerging Trends in Sciences - Usage of Research Tools and Techniques” Organised by Department of Freshman Engineering, Vardhman College of Engineering, Hyderabad from 15th to 20th June 2020.
- Completed a five day Faculty Development Programme on “Molecules and Beyond the Molecules” Organised by Department of Humanities and Basic Sciences, Godavari Institute of Engineering and Technology, Rajamahendravaram from 15th to 19th June 2020.
- Completed Science Academies Refresher Course on “Upskilling Chemistry Teachers on Latest Pedagogical Tools for Impactful Teaching” Organised by Dept. of Sciences and Humanities, Vignan’s Foundation for Science, Technology & Research sponsored by Indian National Science Academy and Indian Academy of Sciences from 27/11/2018 to 11/12/2018.
- Completed “Online Refresher Course in Chemistry for Higher Education Faculty” Certification Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 30/03/2019.
- Completed NPTEL online certification course “Reagents in Organic Synthesis” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 19/12/2020 (Elite + Silver).
- Completed NPTEL online certification course “Introductory Organic Chemistry II” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 26/08/2021 (Elite + Gold + Topper of the course).
- Completed NPTEL online certification course “A Study Guide in Organic Retrosynthesis: Problem Solving Approach” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 23/04/2022 (Elite + Silver).
- Completed NPTEL online certification course “Application of Spectroscopic Methods in Molecular Structure Determination” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 25/11/2022 (Elite Silver + Topper of the course).
- Completed NPTEL online certification course “Bioinorganic Chemistry” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 26/03/2023 (Elite + Silver).
- Completed NPTEL online certification course “One And Two Dimensional Nmr Spectroscopy For Chemists” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 29/10/2023 (Elite).
- Completed NPTEL online certification course “Molecular Rearrangements and Reactive Intermediates in Organic Synthesis” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 26/10/2024 (Elite + Silver).
- Completed NPTEL online certification course “Metal Mediated Synthesis-I” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 20/09/2025 (Elite + Silver + Topper of the course).
- Successfully completed ‘Generative AI Foundations Certificate Program’ certified by UpGrad in collaboration with Microsoft on July 2025.
- Completed NPTEL online certification course “Artificial Intelligence: Concepts and Techniques” Under SWAYAM programme of Ministry of Human Resource Development, Government of India held on 24/10/2026 (Elite + Silver).

Leadership & Administrative Responsibilities

- During my course of PhD and Post doc, I have trained several (> 50) post-graduate students parallel to my work.
- Currently, Scholars Ph.D. Pursuing – 4 & Ph.D. Awarded – 5 Members.
- As Placements officer for P.G.streams at Vignan Degree & PG College from 2017-20.
- As Head of the Department, Chemistry from 2021-24 taking all the responsibilities of Chemistry department pertaining classwork allotment, syllabus coverage, counselling, laboratories, time tables, placements etc. for both under graduation and post-graduation streams at Vignan Degree & P.G. College.
- As college (Single Point of Contact) SPOC-NPTEL Local Chapter from Sep’2021.

References

Professional references are available upon request.