CURRICULUM VITAE

Dr. CH. N. S. SAI PAVAN KUMAR
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Academic Qualification:

Academic Experience: As Associate Professor (November 2018 – till date) at Vignan Degree & P.G. College, Guntur, Andhra Pradesh in the Department of Chemistry, Palakaluru, Guntur.
Assistant Professor: August 2015 – October 2018 at Vignan Degree & P.G. College

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 A and B and synthetic methodologies based on anionic Snieckus-Fries rearrangement.

Senior Research Trainee: Indian Institute of Chemical Technology, Hyderabad from December 2010 to May 2011.

Ph.D. (Organic Chemistry): Indian Institute of Chemical Technology, Hyderabad from November 2005 to February 2011.

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).

Professional Competence:

- 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 analysing 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.
- An easy going and friendly interpersonal relationship.
- Expertise in teaching for Post graduate and Graduate students.
- Worked as **Reviewer** for few International journals (SCI) viz., Journal of the Chinese Chemical Society, Current Organic Synthesis, Letters in Organic Chemistry, IJCCE etc.
- As **Examiner** for Semester end Practical Examinations, P.G. Courses, Acharya Nagarjuna University.

Projects Handled:

- 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

List of Publications: Citations 524; h-index 11 (from Google Scholar citations)

1. "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.

2. "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.
3. "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.
4. "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.
5. "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.
6. "Stereoselective synthesis of (-)-Tetrahydropyrenophorol" Ramanujan, V.; Sadikha, Sk.; **N. S. Sai Pavan Kumar, Ch.*** *J. Serb. Chem. Soc*. **2020**, *85(9)*, 1129.
7. "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.
8. "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.
9. "Self-catalysation 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.
10. "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.

11. "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.
12. "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.
13. "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.
14. "Total Synthesis of Diplodialide C and D" Ramanujan, V.; **N. S. Sai Pavan Kumar, Ch.*** *Arkivoc* **2018**, (vii), 332.
15. "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.
16. "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.
17. "Stereoselective total synthesis of decarestricine J" Ramanujan, V. B.; Sreenivasulu, R. Chavali, M.; **N. S. Sai Pavan Kumar, Ch.*** *Monatsh Chem*. **2017**, *148,* 1865.
18. "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.
19. "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.
20. "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.
21. "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.

22. "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*, 332.
23. "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.
24. "PCC-SiO_2/$AlCl_3$ 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.
25. "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.
26. "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.
27. "An Efficient Stereoselective Approach for the Synthesis of (+)-(4*S*, 5*S*)-Muricatacin" Srinivas, Ch.; **N. S. Sai Pavan Kumar, Ch.**; China Raju, B.; Jayathirtha Rao, V. *Helv. Chim. Acta* **2011**, *94*, 669.
28. "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.
29. "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.
30. "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.
31. "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.

32. "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.
33. "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.
34. "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.
35. "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 in press.*
36. "COVID (SARS-CoV-2) drug Favipiravir Development and validation of a new UPLC technique with Dissolution and Filter Compatibility study" Kanithi, S.; **N. S. Sai Pavan Kumar, Ch.; *** Gangu Naidu, Ch. *Ind. J. Pharm. Sci.* Accepted.
37. "Quality by design based pareto charts responses evaluation approach for the development of a validated stability-indicating LC method for sunitinib maleate and its impurities in solid oral dosage form" Rajasekhar, K.; Gangu Naidu Ch.; **N. S. Sai Pavan Kumar, Ch.***; Beema Shankar, E. *Indian J. Pharm. Educ. Res.,* Communicated.
38. "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. **J. Genet. Eng. Biotechnol**. Communicated. *As Corresponding Author

Book/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.
3. "*An Overview of Oxidizing and Reducing Agents in Total Synthesis"* book chapter in "Advances in Organic Synthesis" Book series, Bentham Science Publications 2021, 16, 1-39.

Patents:

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

Presentation in Symposiums/Seminars:

1. Presented work at 3rd International Pharma Conference (3rd Pharma – 2021), December 17-18, 2021 conducted by Reignite Innovative Conferences, Hyderabad (**Awarded 1st Best Speaker Presentation Award**).
2. 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.
3. 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.
4. 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
5. Work presented as poster 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.
6. 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.
7. 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.

8. 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.
9. 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.
10. "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.
11. "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.
12. Participated in 15th International Symposium on Novel Aromatic Compounds (ISNA-15)" July 28-Aug 2, 2013, at Howard Civil Service Intl. House, Taipei, Taiwan.
13. "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.
14. ''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.
15. Actively Participated in Various **Webinars**, **Quiz Competitions** and several **FDP**'s in Online from April 2020 - December 2021.

Honours or Awards:

- Nominated as **'Associate Fellow'** by **A.P. Akademi of Sciences** in 2020.
- Awarded as **"Best Researcher Award"** in the International Scientist Awards on Engineering, Science and Medicine held on 26th & 27th Feb 2021 Hyderabad, Organized by VDGOOD Professional Association.

Refresher courses / other courses:

- 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 **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** or **Study Webs of Active –Learning for Young Aspiring Minds** 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** or **Study Webs of Active –Learning for Young Aspiring Minds** programme of Ministry of Human Resource Development, Government of India held on 19/12/2020.
- Completed NPTEL online certification course "*Introductory Organic Chemistry II*" Under **SWAYAM** or **Study Webs of Active –Learning for Young Aspiring Minds** programme of Ministry of Human Resource Development, Government of India held on 26/08/2021 (**Elite Gold + As Topper of the course**).

Leadership Capability / Administrative work:

- Assistance in dissertation thesis of ~40 M.Sc./M.Pharma students.
- 7 Research scholars working for Ph.D. under my supervision (Out of 7, 3 students submitted thesis).
- As Placements officer for P.G. courses at Vignan Degree & P.G. College, Palakaluru from 2017-2020.
- As **Head of the Department** for U.G. and P.G. courses from Feb'2021 onwards taking all the responsibilities of Chemistry department pertaining classwork allotment, syllabus coverage, counselling, laboratories, time tables etc. for both under graduation & post-graduation streams at Vignan Degree & P.G. College, Palakaluru.
- As college (**Single Point of Contact)** SPOC-NPTEL Local Chapter from Sep'2021.

Personal Data:

Nationality : Indian
Date of Birth : 9th April 1981
Sex : Male
Marital Status : Married