SIVA RAMA RAJU KANUMURI

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Summary

A pharmacokinetics scientist with more than 6 years of postdoctoral research experience in small molecule preclinical discovery ADMET to clinical pharmacokinetic studies. Experienced in designing and orchestrating the execution of various *in vitro* and *in vivo* pharmacokinetic studies (human, rodents, and non-rodents) for optimization of ADMET properties of new chemical entities (NCE) and drugs under development using different modeling approaches for the prediction of clinical pharmacokinetics.

Professional Experience

13 Feb 2022 – Present — **Assistant Scientist**, Department of Pharmaceutics and Translational Drug Development Core, College of Pharmacy, University of Florida, Gainesville, Florida
(Advisors: Drs. Christopher McCurdy and Abhisheak Sharma)

Projects

1. Performing and overseeing the *in vitro* and *in vivo* pharmacokinetic studies for the compounds for TDD core.
2. PopPK of Kava-Kava capsules and Kratom products for optimization of dosage regime in healthy volunteers for pharmacodynamic studies.
3. Preclinical *in vitro* and *in vivo* pharmacokinetics of Kratom alkaloids in different rodent species.
4. Performing *in vitro* permeability assays using different commercial and in-house cell lines (CaCO2, MDCK etc.) for the determination of the role of transporters in the absorption of compounds.
5. UPLC-MS/MS Analysis of the compounds in biological samples.
6. Modeling of the *in vitro* and *in vivo* pharmacokinetic data using different software packages (Pheonix WinNonlin, Gastroplus etc.) for prediction of pharmacokinetics in humans.

24 June 2019 – 12 Feb 2022 — **Postdoctoral Associate**, Department of Pharmaceutics and Translational Drug Development Core, College of Pharmacy, University of Florida, Gainesville, Florida
(Advisors: Drs. Christopher McCurdy and Abhisheak Sharma)

Projects

1. PopPK of Kava-Kava capsules for optimization of dosage regime in healthy volunteers for pharmacodynamic studies.
2. Preclinical *in vitro* and *in vivo* pharmacokinetics of Kratom alkaloids in different rodent species.

3. Performing *in vitro* permeability assays using different commercial and in-house cell lines (CaCO2, MDCK etc.) for the determination of the role of transporters in the absorption of compounds.
4. UPLC-MS/MS Analysis of the compounds in biological samples.
5. Modeling of the in vitro and in vivo pharmacokinetic data using different software packages (Pheonix WinNonlin, Gastroplus etc.) for prediction of pharmacokinetics in humans.

16 February 2017 – 23 June 2019 **Postdoctoral Associate**, Department of Pharmaceutics, College of Pharmacy, University of Cincinnati, Cincinnati, Ohio (Advisor: Dr. Giovanni Pauletti)

Projects

1. A Collaborative industry-academia research project aimed at developing a sublingual *in vitro* model for high throughput screening of lead molecules/formulations (collaboration with P&G Corp. and Simulations Plus, Inc.). Performing the absorption studies on different cell-line models and using this data along with the measured physicochemical properties to develop a PBPK model for the *in vitro-in vivo* extrapolation (IVIVE) using Gastroplus software®.
2. A Collaborative industry-academia research project aimed at validating the EpiIntestinal™, human 3D *in vitro* small intestinal tissue model for the intestinal permeability assessment and drug metabolism in the intestine (collaboration with MatTek life sciences, USA).

23 September 2011 – 31 March 2013 **Project Associate**, Pharmacokinetics & Metabolism Division CSIR-Central Drug Research Institute, Lucknow, India (Advisor: Dr. Wahajuddin)

- Conducting various *in vitro* ADME studies of NCEs such as permeability assessment, metabolic stability with liver microsomes, reaction phenotyping, plasma protein binding, and CYP inhibition assays, etc.
- Bioanalysis of NCEs in plasma, blood, urine, tissues using HPLC and LC-MS/MS for qualitative and quantitative analysis.
- Identification and characterization of *in vitro* and *in vivo* metabolites in various biological matrices like microsomes and plasma in both pre-clinical animals.
- Provide expert advice/inputs to lead optimization projects with respective ADME.
- Analysis of preclinical study samples and prediction of pharmacokinetic parameters using Certara Phoenix^{TM} (NCA and Compartmental analysis).
- Excretion (urine, feces, and bile) studies and tissue distribution studies of various NCE's
- *In vitro/in vivo* drug-drug and herb-drug interaction studies (DDI).

Educational Qualifications

PhD

Institute: Pharmacokinetics & Metabolism Division, CSIR-Central Drug Research Institute, Lucknow, Uttar Pradesh, India

Duration: 1 August 2013- 14 October 2016

Project: Investigation of preclinical pharmacokinetics of isoformononetin, a potential anti-osteoporotic compound, and isoflavones-drug interactions.

M.S. (Pharmaceutics)

Institute: Department of Pharmaceutics, National Institute of Pharmaceutical Education & Research (NIPER), Raebareli, Uttar Pradesh, India

Duration: 1 August 2009- 27 June 2011

Project: Exploration of the role of P-glycoprotein in the absorption of the antimalarial drug (Lumefantrine) using standardized permeability models.

Bachelor of Pharmacy

Institute: Shri Vishnu College of Pharmacy, Andhra University, Vishakapatnam, Andhra Pradesh, India

Duration: 1 August 2004- 20 March 2008

Course Audited at University of Florida

Institute: University of Florida, Florida, USA

Courses: Pharmacometrics and Systems Pharmacology; Model Informed Drug Development; Pharmacokinetics & Biopharmaceutics

PG Diploma in Patent Law

Institute: NALSAR University of Law, Hyderabad, India

Duration: 2014- 2015

Technical Expertise

- Well-versed with handling of analytical instruments and techniques like UV spectrophotometry, HPLC/UPLC with different detectors, and Waters UPLC-MS/MS, Agilent QTOF LC-MS/MS, and AB SCIEX API- 3200/4000/5500-Q Trap LC-MS/MS instruments.
- Proficient with molecular biology techniques including RNA isolation, RT-PCR, and western blotting.
- Proficient with primary cell culture and maintenance.
- Experienced in handling/using Radiolabeled compounds for permeability studies.
- Proficient in using softwares such as Masslynx, Analyst (LC-MS/MS), Masshunter, Class VP, Lab solutions, Graphpad Prism, and Endnote.
- Proficient with Phoenix WinNonlin, NLME, PK compartmental modeling, and PK-PD modeling.
- Hands-on experience in PBPK modeling with Gastroplus.
- Proficient in literature search and data retrieval using various scientific search engines like Pubmed, Google Scholar, Scopus, Scirus, etc.

Achievements & Awards

2015 Travel grant from ISSX organizing committee to attend and present my work at 20th North American ISSX Meeting in Orlando, USA

2015 International Travel grant by Dept of Science and Technology, New Delhi (India) for attending and presenting my work at 2015 AAPS in Orlando, USA

2015 International Travel grant by Centre for International Co-operation in Science (India) for attending and presenting my work at 2015 AAPS in Orlando, USA

2013 CSIR-Senior Research Fellowship by Government of India to pursue Ph.D.

2012 8th Dr. P.D. Sethi Annual Award 2012 for Best Paper in Pharmaceutical Analysis
2011 Silver Medal in M.S (Pharmaceutics) at NIPER Raebareli, India

Professional Achievements

- Co-guided the dissertation of 10 Master's Students.

Open Researcher and Contributor ID (ORCID): 0000-0002-6087-6587

Peer-Reviewed Publications

Number of publications: 74 **Publications as the first author: 14**
Total Citations (Google Scholar): 1546
Google Scholar Profile: https://scholar.google.co.in/citations?user=3vGWOHYAAAAJ&hl=en

Selected publications:

1. **Raju KSR,** Mamallapalli J, Nelson R, McCurdy CR et al. Clinical pharmacokinetics of kavalactones after oral dosing of standardized kava extract in healthy volunteers. **J Ethnopharmacol.** 297:115514. 2022. doi: 10.1016/j.jep.2022.115514
2. Mamallapalli J*, **Raju KSR*,** Corral P, Johnston E et al. Characterization of different forms of kava (Piper methysticum) products by UPLC-MS/MS. **Planta Med.** 88(14):1348-1359. 2022. doi: 10.1055/a-1708-1994. **(* equally contributed)**
3. Smith KE, Rogers JM, Sharma A, McCurdy CR, Weiss ST, Dunn KE, Feldman JD, Kuntz MA, Mukhopadhyay S, **Raju KSR**, Taylor RC, Epstein DH. Responses to a "Typical" Morning Dose of Kratom in People Who Use Kratom Regularly: A Direct-Observation Study. **J Addict Med**. 2024 . doi: 10.1097/ADM.0000000000001259.
4. Melchert PW, Zhang Q, Mukhopadhyay S, **Kanumuri SRR**, McCurdy CR, Markowitz JS. An in vitro evaluation of kratom (Mitragyna speciosa) on the catalytic activity of carboxylesterase 1 (CES1). **Chem Biol Interact**. 384:110715. 2023 doi: 10.1016/j.cbi.2023.110715.
5. Berthold EC, Kamble SH, **Kanumuri SRR**, Kuntz MA, Senetra AS, Chiang YH, McMahon LR, McCurdy CR, Sharma A. Comparative Pharmacokinetics of Commercially Available Cannabidiol Isolate, Broad-Spectrum, and Full-Spectrum Products. **Eur J Drug Metab Pharmacokinet**. 48(4):427-435. 2023 doi: 10.1007/s13318-023-00839-3.
6. Kamble SH, Obeng S, León F, Restrepo LF, King TI, Berthold EC, **Kanumuri SRR**, Gamez-Jimenez LR, Pallares VLC, Patel A, Ho NP, Hampson A, McCurdy CR, McMahon LR, Wilkerson JL, Sharma A, Hiranita T. Pharmacokinetic and Pharmacodynamic Consequences of Cytochrome P450 3A Inhibition on Mitragynine Metabolism in Rats. **J Pharmacol Exp Ther**. 385(3):180-192. 2023 doi: 10.1124/jpet.122.001525.
7. Von Roemeling CA, Doonan BP, Klippel K, Schultz D, Hoang-Minh L, Trivedi V, Li C, Russell RA, **Kanumuri RS**, Sharma A, Tun HW, Mitchell DA. Oral IRAK-4 Inhibitor CA-4948 Is Blood-Brain Barrier Penetrant and Has Single-Agent Activity against CNS Lymphoma and Melanoma Brain Metastases. **Clin Cancer Res**. 29(9):1751-1762. 2023 doi: 10.1158/1078-0432.CCR-22-1682.
8. Laforest LC, Kuntz MA, **Kanumuri SRR**, Mukhopadhyay S, Sharma A, O'Connor SE, McCurdy CR, Nadakuduti SS. Metabolite and Molecular Characterization of Mitragyna

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speciosa Identifies Developmental and Genotypic Effects on Monoterpene Indole and Oxindole Alkaloid Composition. **J Nat Prod**. 86(4):1042-1052. 2023 doi: 10.1021/acs.jnatprod.3c00092.

9. Kamble SH, Berthold EC, **Kanumuri SR,** et al. Metabolism of Speciociliatine, an Overlooked Kratom Alkaloid for its Potential Pharmacological Effects. AAPS J. 19;24(5):86. 2022. doi: 10.1208/s12248-022-00736-8.
10. Popa R, Kamble SH, **Kanumuri RS,** et al. UPLC-MS/MS method for the quantification of MCI-77, a novel sigma-1 receptor ligand, and its application to pharmacokinetic studies. **J Chromatogr B Analyt Technol Biomed Life Sci.** 1196:123187. 2022 doi: 10.1016/j.jchromb.2022.123187.
11. Ostrov DA, Bluhm AP, Li D, Khan JQ, Rohamare M, Rajamanickam K, K Bhanumathy K, Lew J, Falzarano D, Vizeacoumar FJ, Wilson JA, Mottinelli M, **Kanumuri SR,** et al. Highly Specific Sigma Receptor Ligands Exhibit Anti-Viral Properties in SARS-CoV-2 Infected Cells. **Pathogens**. 10(11):1514. 2021. doi: 10.3390/pathogens10111514.
12. Chaturvedi S, Malik MY, Sultana N, Jahan S, Singh S, Taneja I, **Raju KS**, Rashid M, Wahajuddin M. Chromatographic separation and estimation of natural antimalarial flavonoids in biological matrices. **Proc. Indian Natl. Sci. Acad.** 87, 446–468. 2021. doi:10.1007/s43538-021-00050-5.
13. Berthold EC, Kamble SH, **Raju KS** et al. The Lack of Contribution of 7-Hydroxymitragynine to the Antinociceptive Effects of Mitragynine in Mice: A Pharmacokinetic and Pharmacodynamic Study. **Drug Metab Dispos.** 50(2):158-167. 2022. doi: 10.1124/dmd.121.000640.
14. **Raju KS**, Rashid M, Gundeti M, et al. LC-ESI-MS/MS method for the simultaneous determination of isoformononetin, daidzein, and equol in rat plasma: Application to a preclinical pharmacokinetic study. **J Chromatogr B Analyt Technol Biomed Life Sci**. 1129:121776. 2019. doi:10.1016/j.jchromb.2019.121776
15. Singh SK, Valicherla GR, Bikkasani AK, Cheruvu SH, Hossain Z, Taneja I, Ahmad H, **Raju KS**, et al. Elucidation of plasma protein binding, blood partitioning, permeability, CYP phenotyping and CYP inhibition studies of Withanone using validated UPLC method: An active constituent of neuroprotective herb Ashwagandha. **J Ethnopharmacol** 270:113819. 2021. doi: 10.1016/j.jep.2021.113819.
16. Maxwell EA, King TI, Kamble SH, **Raju KS**, et al. Oral Pharmacokinetics in Beagle Dogs of the Mitragynine Metabolite, 7-Hydroxymitragynine. **Eur J Drug Metab Pharmacokinet**. 2021 doi: 10.1007/s13318-021-00684-2.
17. Kamble SH, Berthold EC, King TI, **Raju KS**, et al. Pharmacokinetics of Eleven Kratom Alkaloids Following an Oral Dose of Either Traditional or Commercial Kratom Products in Rats. **J Nat Prod**. 84(4):1104-1112. 2021 doi: 10.1021/acs.jnatprod.0c01163.
18. Chear NJ, Leon F, Sharma A, **Raju KS**, et al. Exploring the Chemistry of Alkaloids from Malaysian Mitragyna speciosa (Kratom) and the Role of Oxindoles on Human Opioid Receptors. **J Nat Prod**. 84(4):1034-1043. 2021. doi: 10.1021/acs.jnatprod.0c01055.
19. Berthold EC, Kamble SH, **Raju KS**, et al. Preclinical pharmacokinetic study of speciociliatine, a kratom alkaloid, in rats using an UPLC-MS/MS method. **J Pharm Biomed Anal.** 194:113778. 2021 doi: 10.1016/j.jpba.2020.113778.
20. Singh SK, Rashid M, Bhalala K, Malik Y, Chaturvedi S, **Raju KS** et al. A novel nanosized phospholipid complex of Biochanin A for improving oral bioavailability: Preparation and in-

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vitro/in-vivo characterizations. **J Drug Delivery Sci Technol.** 61:102254. 2021. Doi:10.1016/j.jddst.2020.102254.

21. Berthold EC, Yang R, Sharma A, Kamble SH, **Raju KS**, et al. Regulatory sampling of industrial hemp plant samples (Cannabis sativa L.) using UPLC-MS/MS method for detection and quantification of twelve cannabinoids. **J Cannabis Res.** 2(1):42. 2020. doi: 10.1186/s42238-020-00050-0..
22. Maxwell EA, King TI, Kamble SH, **Raju KS**, et al. Pharmacokinetics and Safety of Mitragynine in Beagle Dogs. **Planta Med**. 86(17):1278-1285 2020. doi: 10.1055/a-1212-5475.
23. Kamble SH, León F, King TI, Berthold EC, Lopera-Londoño C, **Raju KS**, et al. Metabolism of a Kratom Alkaloid Metabolite in Human Plasma Increases Its Opioid Potency and Efficacy. **ACS Pharmacol Transl Sci**. 3(6):1063-1068. 2020. doi: 10.1021/acsptsci.0c00075.
24. Popa R, Kamble SH, **Kanumuri RS**, et al. Bioanalytical method development and pharmacokinetics of MCI-92, a sigma-1 receptor ligand. **J Pharm Biomed Anal**. 191:113610. 2020. doi: 10.1016/j.jpba.2020.113610.
25. Kamble SH, Sharma A, King TI, Berthold EC, León F, Meyer PKL, **Raju KS** et al., Exploration of cytochrome P450 inhibition mediated drug-drug interaction potential of kratom alkaloids. **Toxicol Lett**. 19:148-154. 2020. DOI: 10.1016/j.toxlet.2019.11.005.
26. Taneja I, Raghuvanshi A, **Raju KS**, et al., Bioavailability, tissue distribution and excretion studies of a potential anti-osteoporotic agent, medicarpin, in female rats using validated LC–MS/MS method. **J Pharm Biomed Anal.** 180:112978 2020. DOI: 10.1016/j.jpba.2019.112978.
27. Taneja I, Karsauliya k, Rashid M, Sonkar AK, **Raju KS** et al., Species differences between rat and human in vitro metabolite profile, in vivo predicted clearance, CYP450 inhibition and CYP450 isoforms that metabolize benzanthrone: Implications in risk assessment. **Food Chem Toxicol.** 111:94. 2018. doi: 10.1016/j.fct.2017.11.009.
28. Rashid M, Singh SK, Malik MY, Jahan S, Chaturvedi S, Taneja I, **Raju KS** et al., Development and validation of UPLC-MS/MS assay for quantification of cladrin: Absolute bioavailability and dose proportionality study in rats. **J Pharm Biomed Anal**. 152:289. 2018. doi: 10.1016/j.jpba.2018.01.044.
29. Verma DK, Gupta S, Biswas J, Joshi N, Raju **KS** et al., Metabolic Enhancer Piracetam Attenuates the Translocation of Mitochondrion-Specific Proteins of Caspase-Independent Pathway, Poly [ADP-Ribose] Polymerase 1 Up-regulation and Oxidative DNA Fragmentation. **Neurotox Res**. 34(2):198. 2018. doi: 10.1007/s12640-022-00471-0.
30. Verma DK, Gupta S, et al., New therapeutic activity of metabolic enhancer piracetam in treatment of neurodegenerative disease: Participation of caspase independent death factors, oxidative stress, inflammatory responses and apoptosis. **Biochimica et Biophysica Acta (BBA) - Molecular Basis of Disease**. 1864(6A):2078. 2018. doi: 10.1016/j.bbadis.2018.03.014.
31. Kadian N*, **Raju KS*** et al., Comparative assessment of bioanalytical method validation guidelines for pharmaceutical industry. **J Pharmaceut Biomed Anal.** 134:295. 2017 doi: 10.1016/j.jpba.2016.03.052. **(* equally contributed)**
32. Yaseen Malik M, Taneja I, **Raju KS** et al., RP-HPLC Separation of Isomeric Withanolides: Method Development, Validation and Application to In situ Rat Permeability Determination. **J Chromatogr Sci.** 55(7):729–735. 2017. doi: 10.1093/chromsci/bmx027.
33. Anand D, Yadav PK, Patel OP, Parmar N, Maurya RK, Vishwakarma P, **Raju KS** et al.,

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Antileishmanial Activity of Pyrazolopyridine Derivatives and Their Potential as an Adjunct Therapy with Miltefosine**. J Med Chem.** 60(3): 1041-1059. 2017. doi: 10.1021/acs.jmedchem.6b01447.

34. Mittal M, Pal S, China SP, Porwal K, Dev K, Shrivastava R, **Raju KS**, et al., Pharmacological activation of aldehyde dehydrogenase 2 promotes osteoblast differentiation via bone morphogenetic protein-2 and induces bone anabolic effect. **Toxicol Appl Pharmacol.** 316: 63-73. 2017. doi: 10.1016/j.taap.2016.12.013.
35. Dola VR, Soni A, Agarwal P, Ahmad H, **Raju KS** et al., Synthesis and Evaluation of Chirally Defined Side Chain Variants of 7-Chloro-4-Aminoquinoline To Overcome Drug Resistance in Malaria Chemotherapy. **Antimicrob Agents Chemother.** 61(3): e01152-16. 2017. doi: 10.1128/AAC.01152-16.
36. **Raju KS** et al., DBS-platform for biomonitoring and toxicokinetics of toxicants: proof of concept using LC-MS/MS analysis of fipronil and its metabolites in blood. **Sci Rep**. 6:22447. 2016. doi: 10.1038/srep22447.
37. **Raju KS** et al., Preclinical pharmacokinetics and species differences in the CYP-mediated metabolism of isoformononetin, a potential anti-osteoporotic isoflavonoid. **Drug Metabolism Rev**. 48(Suppl 1): 49. 2016
38. Taneja I, **Raju KS** et al., Effect of polymorphism on the preclinical pharmacokinetics of desbutyl-lumefantrine, a potential anti-malarial agent. **Drug Metabolism Rev**. 48(Suppl 1): 32. 2016.
39. Wahajuddin M, Taneja I, **Raju KS** and Rashid M. Pharmacokinetic endeavors for antimalarial therapeutics. **Int J Infect Dis**. 45S:1-477. 2016. doi:https://doi.org/10.1016/j.ijid.2016.02.323.
40. Wahajuddin M, Singh SP, Taneja I, **Raju KS** et al., Development and validation of an LC-MS/MS method for simultaneous determination of piperaquine and 97-63, the active metabolite of CDRI 97-78, in rat plasma and its application in interaction study. **Drug Test Anal.** 8(2):221. 2016. doi: 10.1002/dta.1807.
41. Singh SP, Dwivedi N, **Raju KS** et al., Validation of a rapid and sensitive UPLC-MS-MS method coupled with protein precipitation for the simultaneous determination of seven pyrethroids in 100 μL of rat plasma by using ammonium adduct as precursor ion. **J Anal Toxicol**. 40(3):213-21. 2016. doi: 10.1093/jat/bkw002.
42. Patel OP, Mishra A, Maurya R, Saini D, pandey J, Taneja I, **Raju KS** et al., Naturally Occurring Carbazole Alkaloids from *Murraya koenigii* as Potential Antidiabetic Agents**. J Nat Prod**. 79(5):1276. 2016. doi: 10.1021/acs.jnatprod.5b00883.
43. **Raju KS** et al., No effect on pharmacokinetics of tamoxifen and 4-hydroxytamoxifen by multiple doses of red clover capsule in rats. **Sci Rep**. 5:16126. 2015. doi: 10.1038/srep16126.
44. **Raju KS** et al., Simultaneous determination of Centchroman and tamoxifen along with their metabolites in rat plasma using LC-MS/MS. **Bioanalysis** 7 (8):967-979. 2015. doi: 10.4155/bio.14.253.
45. Taneja I*, **Raju KS*** et al., Assessment of pharmacokinetic compatibility of short acting CDRI candidate trioxane derivative, 99-411, with long acting prescription antimalarials, lumefantrine and piperaquine. **Sci Rep**. 5:17264. 2015. doi: 10.1038/srep17264. **(* equally contributed)**
46. Taneja I*, **Raju KS*** et al., Oral bioavailability, intravenous pharmacokinetic, plasma protein binding and metabolic stability studies of ALDH2 activator, alda-1, using validated LC-ESI-

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MS/MS method in rat plasma. **RSC Adv.** 5:54395-54402. 2015. doi. 10.1039/C5RA06859B. **(* equally contributed)**

47. **Raju KS** et al., Phytochemical analysis of isoflavonoids using liquid chromatography coupled with tandem mass spectrometry. **Phytochem Rev.** 14(3):469-498. 2015. doi:10.1007/s11101-015-9400-x.
48. Wahajuddin M, Singh SP, Taneja I, **Raju KS** et al., Simultaneous quantification of proposed anti-malarial combination comprising of lumefantrine and CDRI 97-78 in rat plasma using the HPLC-ESI-MS/MS method: application to drug interaction study. **Malar J.** 14:172. 2015. doi: 10.1186/s12936-015-0684-5.
49. Verma DK, Joshi N, **Raju KS** et al., Metabolic enhancer piracetam attenuates rotenone induced oxidative stress: a study in different rat brain regions. **Acta Neurobiol Exp** 2015, 75: 399-411. PMID: 26994419
50. Arora S, Taneja I, Challagundla M, **Raju KS** et al., In vivo prediction of CYP-mediated metabolic interaction potential of formononetin and biochanin A using in vitro human and rat CYP450 inhibition data. **Toxicol Lett.** 239(1):1-8. 2015. doi: 10.1016/j.toxlet.2015.08.202.
51. Taneja I, **Raju KS** et al., LC-ESI-MS/MS method for bioanalytical determination of osteogenic phytoalexin, medicarpin, and its application to preliminary pharmacokinetic studies in rats. **J Chromatogr B Analyt Technol Biomed Life Sci.** 1001:9-16. 2015. doi: 10.1016/j.jchromb.2015.06.025.
52. Taneja I, **Raju KS** et al., Dietary Isoflavones as Modulators of Drug Metabolizing Enzymes and Transporters: Effect on Prescription Medicines. **Crit Rev Food Sci Nutr.** 2015 DOI:10.1080/10408398.2015.1045968.
53. Dwivedi P, Khatik R, Chaturvedi P, Khandelwal K, Taneja I, **Raju KS** et al., Arteether nanoemulsion for enhanced efficacy against Plasmodium yoelii nigeriensis malaria: An approach by enhanced bioavailability. **Colloid Surface B**. 126:467-75. 2015. doi: 10.1016/j.colsurfb.2014.12.052.
54. Wahajuddin*, **Raju KS*** et al., Investigation of Functional Role of P-glycoprotein in Limiting the Oral Bioavailability of Lumefantrine. **Antimicrob Agent Chemother**. 58(1):489-494. 2014. doi: 10.1128/AAC.01382-13. **(* equally contributed)**
55. Tripathi A, Singh SP, **Raju KS** et al., Effect of Red Clover on CYP expression: An Investigation of Herb-Drug Interaction at Molecular Level. **Indian J Pharmaceut Sci**. 76(3): 261-266. 2014. PMID: 25035541.
56. Dwivedi P, Khatik R, Khandelwal K, Taneja I, **Raju KS** et al., Pharmacokinetics study of arteether loaded solid lipid nanoparticles: An improved oral bioavailability in rats. **Int J Pharmaceut**. 466(1-2):321-327. 2014. doi: 10.1016/j.ijpharm.2014.03.036.
57. Gupta S, Verma DK, Biswas J, **Raju KS** et al., The metabolic enhancer piracetam attenuates the mitochondrion-specific endonuclease-G translocation and oxidative DNA fragmentation. **Free Rad Biol Med.** 73C:278-290. 2014. doi: 10.1016/j.freeradbiomed.2014.05.014.
58. Dwivedi P, Khatik R, Khandelwal K, Srivastava R, Taneja I, **Raju KS** et al., Self-nanoemulsifying drug delivery system (SNEDDS) for oral delivery of arteether: pharmacokinetics, toxicity and antimalarial activity in mice. **RSC Adv**. 4: 64905-18. 2014. Doi:10.1039/C4RA09267H.
59. Chauhan P, Ravi M, Singh S, **Raju KS** et al., Palladium and copper-catalyzed ligand-free

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coupling of phenylhydrazines in water. **RSC Adv**. 4(82): 43336-40. 2014. Doi:10.1039/C4RA04621H.

60. Wahajuddin, **Raju KS** and Taneja I. Bioanalysis of antimalarials using liquid chromatography. **TrAC-Trends in Anal Chem**. 42: 186-204. 2013. Doi:10.1016/j.trac.2012.09.014.
61. **Raju KS** et al., Utility of non-invasive biomatrices in pharmacokinetic studies. **Biomed Chromatogr.** 27(10):1354-66. 2013. doi: 10.1002/bmc.2996.
62. Tadigoppula N, Korthikunta V, Gupta S, Kancharla P, Khaliq T, Soni A, Srivastava RK, Srivastava K, Puri SK, **Raju KS** et al., Synthesis and Insight into the Structure–Activity Relationships of Chalcones as Antimalarial Agents. **J Med Chem.** 56(1):31-45. 2013. doi: 10.1021/jm300588j.
63. Maurya R, Soni A, Anand D, Ravi M, **Raju KS** et al., Synthesis and Antimalarial Activity of 3,3-Spiroanellated 5,6-Disubstituted 1,2,4-Trioxanes. **ACS Med Chem Lett**. 4(2): 165–169. 2013. doi: 10.1021/ml300188t.
64. Taneja I, Erukala M, **Raju KS** et al., Dried blood spots in bioanalysis of antimalarials: relevance and challenges in quantitative assessment of antimalarial drugs. **Bioanalysis.** 5(17):2171-86. 2013. doi: 10.4155/bio.13.180.
65. Wahajuddin, Taneja I, Arora S, **Raju KS** and Siddiqui N. Disposition of pharmacologically active dietary isoflavones in biological systems. **Curr Drug Metabol**. 14(4):369-80. 2013. doi: 10.2174/1389200211314040002.
66. Singh SP, Wahajuddin**, Raju KS** et al., Reduced bioavailability of tamoxifen and its metabolite 4-hydroxytamoxifen after oral administration with biochanin A (an isoflavone) in rats. **Phytother Res.** 26(2):303-7. 2012. doi: 10.1002/ptr.3652.
67. Wahajuddin, Singh SP, **Raju KS**, Nafis A and Jain GK. Simultaneous determination of nine model compounds in permeability samples using RP-HPLC: Application to prove the cassette administration principle in single pass intestinal perfusion study in rats. **J Pharmaceut Biomed Anal.** 67-68:71-76. 2012. doi: 10.1016/j.jpba.2012.03.048.
68. Wahajuddin, **Raju KS** and Singh SP. Fate of pharmacologically active isoflavones upon administration in sprague dawley rats. **J Bioequiv Bioavailab**. 2012, 4(3): 76.
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1. **Raju KS** et al., Effect of Red Clover extract pre-treatment on the pharmacokinetics of tamoxifen by the modulation of major drug metabolizing Enzymes. **AAPS 2015** W4298 presented at 2015 AAPS Annual Meeting and Exposition held in Orlando, USA.
2. **Raju KS** et al., Preclinical pharmacokinetics and species differences in the CYP-mediated metabolism of isoformononetin, a potential anti-osteoporotic isoflavonoid. **ISSX Online Abstracts**, Supplement 10, No. 2, 2015 presented at 20th North American ISSX Meeting held in Orlando USA.
3. Taneja I, **Raju KS** et al., Effect of polymorphism on the preclinical pharmacokinetics of desbutyl-lumefantrine, a potential anti-malarial agent. **ISSX Online Abstracts**, Supplement 10, No. 2, 2015 presented at 20th North American ISSX Meeting held in Orlando USA.
4. Wahajuddin, **Raju KS** et al., Drug-Drug Interaction Potential Assessment of Tamoxifen and Centchroman. **AAPS Journal**. W4275, 2013 presented at 2013 AAPS Annual Meeting and Exposition held in San Antonio, USA.
5. **Raju KS** et al., "Effect of Red clover extract on the pharmacokinetics of Tamoxifen" presented in **APA INDIA 2015** organized by Boston Society in Mumbai, India.
6. **Raju KS** et al., "Functional Role of P-gp in the Oral Absorption of Lumefantrine" Presented in 3rd International symposium on **DMPK-2012** organized in NIPER Mohali, Punjab, India.
7. **Raju KS** et al., "RP-HPLC method for the simultaneous determination of US-FDA approved permeability markers along with phenol red in permeability samples" Presented in 2nd International symposium on **DMPK-2011** organized in NIPER Mohali, Punjab, India.

Trainings/Workshops undergone:

- Workshop "Introductory GastroPlus Simulation and Modeling (PBPK) Workshop" in 2017 organised by Simulation Plus Inc in Cambridge, Massachusetts, USA.
- Participated in "International Certified Course on Pharmacokinetics/Pharmacodynamics" in 2016 organised by South Asian Chapter of American College of Clinical Pharmacology and Bombay College of Pharmacy.
- Workshop "Introductory GastroPlus Simulation and Modeling (PBPK) Workshop" in 2016 organised by PAGIN and Simulation Plus at PSG IMS&R, Coimbatore, India.
- Workshop "Revolutionizing Drug Development in India & Pharmacometrics Training with hands-on NLME (Phoenix-WinNonlin)" in 2015 organised by PAGIN and Certara at PSG IMS&R, Coimbatore, India.
- Workshop "Seminar cum Workshop on Concepts and Apllications of PKPD modeling using WinNonlin" in 2013 organised by IIT-BHU and Certara at Dept of Pharmaceutics, IIT-BHU, India.

- Workshop "PK/PD Workshop Using Phoenix-WinNonlin, NLME and IVIVC" in 2013 organised by Certara and Pharmacokinetics and Metabolism Division, CSIR-CDRI, Lucknow, India.
- Workshop "QTRAP Application Training on Lightsight & Metablite Identification on QTRAP 5500 LC-MS/MS" in 2013 organised by AB Sciex in Pharmacokinetics and Metabolism Division, CSIR-CDRI, Lucknow, India.

Membership in Professional Societies

- Life Member of the Indian Society for Mass Spectrometry
- Postdoctoral Member of the American Association of Pharmaceutical Scientists and member of leadership team
- Postdoctoral Member of the International Society for Study of Xenobiotics

Reviewer of Journals

- Frontiers in Pharmacology (Associate Editor)
- Journal of Pharmaceutical and Biomedical Analysis (JPBA)
- European Journal of Drug Metabolism and Pharmacokinetics (EJDR)
- Clinical Drug Investigation (CDIA)
- Pharmaceutics
- Drug Testing and Analysis
- Indian Journal of Pharmaceutical Sciences

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References

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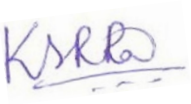
Declaration

I hereby solemnly declare that all the information provided here is as per the best of my knowledge.



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Kanumuri Siva Rama Raju