Arun Prasath Raju

PHD STUDENT

Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, India

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Summary

Clinical pharmacologist with a passion for optimizing dosing strategies and supporting drug development using modeling and simulation techniques. Skilled in quantitative clinical pharmacology approaches specifically population pharmacokinetic/pharmacodynamic modeling.

Education

Manipal Academy of Higher Education *Karnataka, India*

PHD IN PHARMACEUTICAL SCIENCES (MAJOR: PHARMACOMETRICS) *Jul 2019 - Present*

- Dissertation: Dosage optimization of immunosuppressant in renal transplant patients

The Tamil Nadu Dr.M.G.R Medical University *Tamilnadu, India*

DOCTOR OF PHARMACY *Sep 2011 - Dec 2017*

- Thesis: Cost-Effectiveness analysis of antimicrobials

Positions

Manipal Academy of Higher Education, Manipal *Karnataka, India*

RESEARCHER *Jul 2019 - Present*

- Developing a population pharmacokinetic model to understand the pharmacokinetic variability of Tacrolimus in renal transplant recipients.
- Conducted a non-parametric time-to-event analysis for non-small cell lung cancer patients to understand the survival probability based on EGFR mutation status
- Developed a population pharmacokinetic model of hydroxychloroquine sulphate for COVID-19 prophylaxis in healthcare workers.
- Developed a population PK/PD model of acetaminophen in preterm neonates with hemodynamically significant patent ductus arteriosus.
- Contributed to a repository of reproducible pharmacokinetic models from the book “Pharmacokinetic and Pharmacodynamic Data Analysis” by Gabrielsson and Weiner using Pumas. (https://tutorials.pumas.ai)

Bioclinica, Mysore *Karnataka, India*

DRUG SAFETY ASSOCIATE *Jan 2018 - Jun 2019*

- Assessed case validity by verifying source documents.
- Prioritization of case based on seriousness of the ADR.
- Performed casualty assessment and narrative writing.
- Pharmacovigilance case processing using ARISg database
- Involved in creating, tracking, and withdrawing products in Regulatory Information Management System (RIMS) using Liquent Insight.

PSG Hospitals, Coimbatore *Tamilnadu, India*

CLINICAL PHARMACY RESIDENT *Dec 2016 - Dec 2017*

- Provided prescription review, clinical counselling
- Involved in antibiotic stewardship program led by hospital infection control committee
- Involved in case analysis, drug query handling, monitoring, and handling of medication errors and adverse drug reactions.

Skills

Clinical Pharmacology	Non Compartmental Analysis | Population PKPD Modeling
Programming/Markup Language	R | Julia | RMarkdown
Tools and Software	Pumas | Monolix | NONMEM | Phoenix WinNonlin | RStudio | GitHub
Version control	Git

Honours and Awards

FELLOWSHIP

2019 Dr.TMA Pai Doctoral Research Fellowship, Manipal Academy of Higher Education

MONETARY AWARD

2017 Best Poster Presentation, International Conference on New Insights of Pharmacoepidemiology and Pharmacoeconomics

Publications

1. Dilli Batcha, J. S., Gota, V., Matcha, S., Raju, A. P., Rao, M., Udupa, K. S., & Mallayasamy, S. (2024). Predictive performance of population pharmacokinetic models of imatinib in chronic myeloid leukemia patients. *Cancer Chemother. Pharmacol.* https://pubmed.ncbi.nlm.nih.gov/38441626/
2. Thomas, L., Raju, A. P., Chaithra, S., Kulavalli, S., Varma, M., Sv, C. S., Baneerjee, M., Saravu, K., Mallayasamy, S., & Rao, M. (2024). Influence of n-acetyltransferase 2 polymorphisms and clinical variables on liver function profile of tuberculosis patients. *Expert Rev. Clin. Pharmacol.*, *17*(3), 263–274. https://pubmed.ncbi.nlm.nih.gov/38287694/
3. Matcha, S., Dillibatcha, J., Raju, A. P., Chaudhari, B. B., Moorkoth, S., Lewis, L. E., & Mallayasamy, S. (2023). Predictive performance of population pharmacokinetic models for amikacin in term neonates. *Paediatr. Drugs*, *25*(3), 365–375. https://pubmed.ncbi.nlm.nih.gov/36943583/
4. Dilli Batcha, J. S., Raju, A. P., Matcha, S., Raj S, E. A., Udupa, K. S., Gota, V., & Mallayasamy, S. (2022). Factors influencing pharmacokinetics of tamoxifen in breast cancer patients: A systematic review of population pharmacokinetic models. *Biology (Basel)*, *12*(1), 51. https://pubmed.ncbi.nlm.nih.gov/36671744/
5. Raj, J. P., Gogtay, N. J., Pandey, A., Kakkar, A. K., Shafiq, N., Mekala, P., Pingali, U., Raju, A. P., Mallayasamy, S., & Kshirsagar, N. A. (2022). Population pharmacokinetics of hydroxychloroquine sulfate in healthcare workers, given for prophylaxis against coronavirus disease 2019 (COVID-19) in india. *J. Clin. Pharmacol.*, *62*(11), 1403–1411. https://pubmed.ncbi.nlm.nih.gov/35656997/
6. Thomas, L., Raju, A. P., Chaithra, M, S. S., Varma, M., Saravu, K., Banerjee, M., Sv, C. S., Mallayasamy, S., & Rao, M. (2022). Influence of n-acetyltransferase 2 (NAT2) genotype/single nucleotide polymorphisms on clearance of isoniazid in tuberculosis patients: A systematic review of population pharmacokinetic models. *Eur. J. Clin. Pharmacol.*, *78*(10), 1535–1553. https://pubmed.ncbi.nlm.nih.gov/35852584/
7. Matcha, S., Raj, E. A., Mahadevan, R., Raju, A. P., Rajesh, V., Lewis, L. E., & Mallayasamy, S. (2022). Pharmacometric approach to assist dosage regimen design in neonates undergoing therapeutic hypothermia. *Pediatr. Res.*, *92*(1), 249–254. https://pubmed.ncbi.nlm.nih.gov/34493833/
8. Tummala, H. P., Balusu, R., Thotakura, S., Pasnoor, A. K., Raju, A. P., Lal, S. M., Lewis, L. E., & Mallayasamy, S. (2022). Development of physiologically based pharmacokinetic model and assessment of the impact of renal underdevelopment in preterm infants on the pharmacokinetics of aminophylline. *J. Pharmacol. Pharmacother.*, *13*(1), 72–78. https://journals.sagepub.com/doi/10.1177/0976500X221080209
9. Sridharan, K., Ansari, E. A., Mulubwa, M., Raju, A. P., Madhoob, A. A., Jufairi, M. A., Hubail, Z., Marzooq, R. A., Hasan, S. J. R., & Mallaysamy, S. (2021). Population pharmacokinetic-pharmacodynamic modeling of acetaminophen in preterm neonates with hemodynamically significant patent ductus arteriosus. *Eur. J. Pharm. Sci.*, *167*(106023), 106023. https://pubmed.ncbi.nlm.nih.gov/34592463/
10. N, O. D., Simon, J. M., Tomy, S., R, A. P., & V, S. (2018). Appropriate empirical management of microbial infections in a tertiary care hospital: A cost- effectiveness approach. *Asian J. Pharm. Clin. Res.*, *11*(2), 124. https://journals.innovareacademics.in/index.php/ajpcr/article/view/22441

Workshops

2021 Disease progress and drug action workshop
2020 Pumas DDMoRe Bootcamp
2020 Pumas PKPD Bootcamp
2019 Pharmacometric Analysis using Phoenix WinNonlin
2019 PBPK Workshop using PK-Sim
2019 PopPK, Data analysis and Visualization Workshop using R and NONMEM

Experience

Centre for Pharmacometrics, Manipal

TEACHING ASSISTANT *2022-Present*

- Trained graduate students on data visualization and exploration using tidyverse package

Society of Pharmacometrics and Health Analytics

COORDINATION COMMITTEE *2019-Present*

- Organized and facilitated workshops on population pharmacokinetics (PopPK), data analysis and visualization using R and Pumas software for pharmacometric modeling and simulation

Society for the Study of Xenobiotics,India

COORDINATION COMMITTEE *2019-Present*

- Organized and facilitated the 7th Annual Conference of the Society for the Study of Xenobiotics (SSX-2024)
- Coordinated a Certificate Course in Drug Metabolism and Pharmacokinetics for five consecutive years, reaching over 1000 participants.
- Coordinated the Students/Young Investigators session at the 7th Asia Pacific ISSX Conference contributing to the successful organisation and execution of the event.

Project Dontabhaktuni

COORDINATION COMMITTEE *2019-2021*

- Coordinated and facilitated several workshops and webinars on various topics in clinical pharmacology domain

Asian Pharmacometrics Network

ORGANISING COMMITTEE *Nov 2020*

- Organized and facilitated the 2nd Asian Pharmacometrics Network Symposium
- Contributed to the planning and execution of the symposium, including managing registration and logistics, preparing conference materials and reports.