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Area of Expertise

My group works in the area of pharmacometrics. Our specific focus of research is in developing population pharmacokinetic and pharmacodynamic models to understand and optimize dosing regimen. Our current projects are in quantifying the effect of non-adherence to medications on the prophylaxis of HIV infection.

Qualifications

BPharm, Kakatiya University
PhD in Pharmaceutical Sciences, Mercer University

Recent Publications

Model-based predictions of protective HIV pre-exposure prophylaxis adherence levels in cisgender women

Zhang, L., Iannuzzi, S., Chaturvedula, A., Irungu, E., Haberer, J. E., Hendrix, C. W. & von Kleist, M., 2023, (Accepted/In press) In: Nature Medicine.

Population pharmacokinetics of tenofovir, emtricitabine and intracellular metabolites in transgender women

Tanaodomongkon, A., Chaturvedula, A., Hendrix, C. W., Fuchs, E. J., Shieh, E., Bakshi, R. P. & Marzinke, M. A., Aug 2022, In: British Journal of Clinical Pharmacology. 88, 8, p. 3674-3682 9 p.

Determining the Exposure Threshold for Levonorgestrel Efficacy Using an Integrated Model Based Meta-Analysis Approach

Lingineni, K., Chaturvedula, A., Cicali, B., Cristofolletti, R., Wendl, T., Hoechel, J., Brown, J. D., Vozmediano, V. & Schmidt, S., Feb 2022, In: Clinical Pharmacology and Therapeutics. 111, 2, p. 509-518 10 p.

Quantitative Assessment of Levonorgestrel Binding Partner Interplay and Drug-Drug Interactions Using Physiologically Based Pharmacokinetic Modeling

Cicali, B., Lingineni, K., Cristofolletti, R., Wendl, T., Hoechel, J., Wiesinger, H., Chaturvedula, A., Vozmediano, V. & Schmidt, S., Jan 2021, In: CPT: Pharmacometrics and Systems Pharmacology. 10, 1, p. 48-58 11 p.

Incorporating Pharmacometrics into Pharmacoeconomic Models: Applications from Drug Development

Srinivasan, M., White, A., Chaturvedula, A., Vozmediano, V., Schmidt, S., Plouffe, L. & Wingate, LM. M. T., 1 Oct 2020, In: PharmacoEconomics. 38, 10, p. 1031-1042 12 p.

Broader Implications of Modeling and Simulation (M&S) Tools in Pharmacotherapeutic Decisions: A Cautionary Optimism

Chaturvedula, A., Palasik, B. N., Cho, H. J. & Goyal, N., 29 Apr 2020, In: Frontiers in Pharmacology. 11, 571.

Utility of Physiologically Based Pharmacokinetic Modeling in Point-of-Care Decisions: An Example Using Digoxin Dosing in Continuous Venovenous Hemodiafiltration

Srinivasan, M., Hirani, R., Tsiu, M., Kabani, K., Chaturvedula, A. & Palasik, B., 1 Feb 2020, In: Therapeutic drug monitoring. 42, 1, p. 1-5 5 p.

Assessment of Demographic and Socio-Behavioral Factors on Adherence to HIV Pre-Exposure Prophylaxis Using a Markov Modeling Approach

the Partners Demonstration Project Team, 12 Jul 2019, In: Frontiers in Pharmacology. 10, 785.

Artificial Intelligence and Pharmacometrics: Time to Embrace, Capitalize, and Advance?

Chaturvedula, A., Calad-Thomson, S., Liu, C., Sale, M., Gattu, N. & Goyal, N., Jul 2019, In: CPT: Pharmacometrics and Systems Pharmacology. 8, 7, p. 440-443 4 p.

Population pharmacokinetics of primaquine and the effect of hepatic and renal dysfunction: An exploratory approach

Sridharan, K., Sannala, C. K. R., Mallayasamy, S., Chaturvedula, A., Kadam, P., Hase, N., Shukla, A., Gogtay, N. & Thatte, U., 1 Jan 2019, In: Indian Journal of Pharmacology. 51, 1, p. 17-24 8 p.

Sponsored Projects

A Challenge in Family Planning: Understanding the Risks of Unintended Pregnancies and Side Effects Resulting from Drug Interactions with Contraceptives

White, A. & Chaturvedula, A.

University of Florida

1/02/18 → 31/10/20

Improving PrEP protection of Transgender women through mechanistic pharmacokinetic understanding

Chaturvedula, A.

Johns Hopkins University

11/03/19 → 29/02/20

Real-World Adherence to HIV/PrEP in Serodiscordant African Couples

Chaturvedula, A.

Massachusetts General Hospital

1/06/16 → 31/05/18