



## A Two Day Workshop On

# Pharmacokinetic & Pharmacodynamic Modeling and Simulation

On 24<sup>th</sup> and 25<sup>th</sup> February, 2020

### About The Workshop

Pharmaceutical Modeling and Simulation is a domain-specific extension of the Julia differential equation solver libraries for performing analysis of pharmacometric models. We will start showing users how to implement PK/PD models with complex dosing schedules and incorporating population models. Then we will turn to the process of estimating population parameters from data. Next, the capability of Pumas to perform common pre-clinical and clinical data analytics work flows such as Non-Compartmental Analysis (NCA). In vitro- in vivo correlation (IVIVC), Bio-equivalence (BE) and Clinical Trial Design (CTS) will be introduced. This workshop will be a mix of demonstration and hands-on work where participants will be able to download the Pumas Software and perform the analysis in real-time. At the end of the workshop, participants will have an overview of the Pumas toolkit and its utility in modern age computing. For more details about Pumas please visit: [www.pumas.ai](http://www.pumas.ai)

### Objectives

- To familiarize the participants with the basics of Pharmacokinetics Studies, Drug Metabolism and Concepts of Modeling and Simulation
- To give the understanding of utilizing Modeling and Simulation in the process of drug development
- To familiarize participants in the use of Pumas for NCA, NLME and other methods related to PKPD data analysis

### About Department of Pharmacy, BITS Pilani

The Birla Institute of Technology and Science, Pilani known to many as BITS Pilani, is an all-India Institute for higher education. Founded in 1964 in collaboration with Massachusetts Institute of Technology (MIT), USA, it is one of the top most educational Institute in India. The Department of Pharmacy at BITS Pilani is one of the few early schools of Pharmacy in India. Established in 1950 under the able leadership of (Late) Prof. M. L. Schroff, Father of Pharmacy Education in India, it blossomed into one of the most sought after Schools of Pharmacy due to its broad-based education system with rigorous training and dissemination of knowledge and university-industry linkages. Ranked 5<sup>th</sup> topmost Pharmacy institute by the NIRF India Ranking-2019. Currently the department offers Bachelor, Masters and Ph.D programs in Pharmacy. Faculties of Department of Pharmacy are actively involved in carrying out extra-mural research projects funded by various industries (Torrent, IPCA, Lubrizol, TTK, LIG, SPIC, BASF, Etica Clinpharm, Incisive Element, Slayback) and Government bodies (SERB, ICMR, UGC, DBT, DST, CSIR, ITRA). Alumni's of the Department are well placed in India as well as abroad in various pharmaceutical companies, government organizations like drug control, research laboratories and in several well-known academic institutions.

### Content to be Delivered

- Concept of Compartment Modelling, Non-compartment Analysis in Pharmacokinetics
- Pharmacokinetic Study of Drugs and Metabolites: in Plasma & Urine after IV and Oral Administration
- BCS and In Vitro In Vivo Correlation
- Multi-Compartment Pharmacokinetics of Drugs in Plasma, Urine after IV and Oral Administration
- PK-PD Modelling and Simulation Studies

### Resource Persons



#### Prof. R.N.Saha

Director, BITS Pilani-Dubai Campus  
[Senior Professor, Department Of Pharmacy, Pilani Campus]

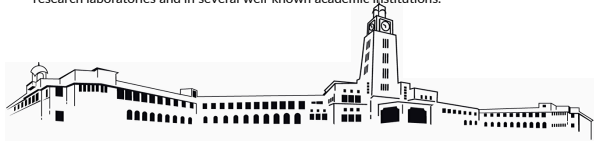
#### Dr. Vijay Ivaturi

Assistant Professor,  
School of Pharmacy  
University of Maryland, USA



### University of Maryland, School of Pharmacy (UMB), USA

Established in 1841, the University of Maryland School of Pharmacy is ranked as one of the top ten schools of pharmacy in the United States. The School is a thriving center for professional and graduate education, pharmaceutical care, research, and community service. Its faculty create the future of pharmacy by pioneering new roles for pharmacists in advanced clinical practice and conducting cutting-edge research in drug discovery and development, comparative effectiveness and patient-centered outcomes, and disease management. A contemporary curriculum, innovative educational experiences, and strategic professional relationships help to inspire excellence in the School's more than 800 students, residents, and postdoctoral fellows. Together, we are critical thinkers, lifelong learners, and leaders who are sought for our expertise.





## Registration Details

Fee structure for registering in the program:

|                    |         |
|--------------------|---------|
| Student            | ₹ 2000  |
| Faculty            | ₹ 3500  |
| Industry Personnel | ₹ 8,000 |
| Foreign Delegates  | \$ 200  |

Registration fee should be bank transferred to the following account. Please email the screen-shot or receipt of the account transfer along with the registration form transfer along with the registration form to: [skdubey@pilani.bits-pilani.ac.in](mailto:skdubey@pilani.bits-pilani.ac.in) (Dr. Sunil Kumar Dubey) [deepak.chitkara@pilani.bits-pilani.ac.in](mailto:deepak.chitkara@pilani.bits-pilani.ac.in) (Dr. Deepak Chitkara)

|                     |   |
|---------------------|---|
| Beneficiary Name    | Birla Institute of Technology & Science, Pilani |
| IFSC/RTGS Code      | ICIC0001538                                     |
| Account Type        | SAVINGS   |
| Bank                | ICICI Bank Ltd                                  |
| Branch & City       | Pilani  |
| Switch Code         | ICICINBBNRI                                     |
| MICR Number         | 333229175                                       |
| Bank Account Number | 079901000123                                    |

## Team Members

• **Chief Patron:**  
Prof. Souvik Bhattacharyya  
Vice Chancellor  
BITS Pilani

## Organizing Team

|                         |                       |
|-------------------------|-----------------------|
| Dr. Atish T. Paul [HOD] | Prof. R. Mahesh       |
| Prof. Hemant R. Jadhav  | Prof. S. Murugesan    |
| Prof. Rajeev Taliyan    | Prof. Anil B. Gaikwad |
| Dr. Anil Jindal         | Dr. Deepak Chitkara   |
| Dr. Sunil Kumar Dubey   | Dr. Anupama Mittal    |
| Dr. Gautam Singhvi      | Dr. Aniruddha Roy     |
| Dr. Murali M. Pandey    | Dr. Sandeep Sundriyal |
| Dr. Richa Shrivastava   | Dr. Vaibhav A. Dixit  |

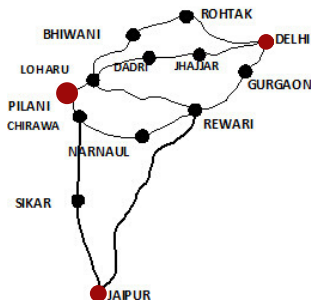
## Accommodation Details

### Booking as per availability

Limited number of hostel accommodations are available @ 300 per person per day on first come-first serve basis. Accommodation will be available at the Institute Guest House (VFAST) on first come-first serve basis.  
Email: [pandeymm@pilani.bits-pilani.ac.in](mailto:pandeymm@pilani.bits-pilani.ac.in) (Dr. Murli M. Pandey)  
Email: [anil.jindal@pilani.bits-pilani.ac.in](mailto:anil.jindal@pilani.bits-pilani.ac.in) (Dr. Anil Jindal)  
Phone : +91-9950-952-634, +91-1596-51-5847 (O)

### How to reach Pilani?

Pilani can be easily reached either by road or by rail. Nearest railway stations are Chirawa on Western railway (~16 Km) and Loharu on Northern railway (~24 Km). There are regular bus services from Delhi and Jaipur to Pilani. By road, distance from Delhi is 200 Km and from Jaipur is 250 Km



## For More Details Contact:

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