



# GastroPlus®

## Virtual Introductory Workshop

October 25th-29th | November 15th-19th, 2021

### Workshop Overview

This introductory GastroPlus® workshop is designed to provide participants with the necessary information and skills needed to execute basic physiologically based pharmacokinetic (PBPK) modeling and simulations; and provide a foundational understanding of the [GastroPlus®](#) software.

The virtual workshop will consist of a combination of live lectures and hands-on exercises within the software.

Course materials are structured to demonstrate both theoretical and the practical aspects of PBPK modeling, yet remain versatile enough to benefit participants with diverse pharmaceutical science backgrounds.

**No prior experience with GastroPlus® is required.** However, if you are brand new to the software, we recommend attending one of our [complimentary, monthly 4-hour introductory sessions](#) first.

### Learning Objectives

At workshop completion, you will understand the inputs and interactions that exist among the various mechanistic phenomena affecting drug dissolution, drug absorption, pharmacokinetics, and pharmacodynamics.

#### Topics will include but are not limited to the following:

- pKa – ionization effects on solubility, dissolution, permeability, and absorption
- Solubility and permeability changes in the gastrointestinal tract and the differences in physiology between humans and preclinical species
- Formulation effects including, particle size distributions and controlled release dosage forms
- Predicting drug properties from chemical structures using the [ADMET Predictor® Module](#)
- Recognizing when to use PBPK versus standard compartmental PK models
- Assessing formulation strategies such as micro ionization and nanoparticles
- Fitting nonlinear metabolism and transport models
- Building PBPK-PD models using simulated target tissue concentrations
- Simulating populations such as mixes of ages, gender ratios, and ethnicities to help virtual trials predict bioequivalence
- Deconvoluting *in vivo* dissolution to generate more useful IVIVCs
- Modeling the *in vivo* exposure of large molecules ([biologics](#))



Register online! [simulations-plus.com/register-training-workshop](https://simulations-plus.com/register-training-workshop)



SimulationsPlus



# GastroPlus®

## Instructor(s)

This workshop will be taught by [Denise Morris](#) along with other experienced PBPK modelers from Simulations Plus.



**Denise Morris**

## Agenda (All times are Pacific Standard Time)

### Monday

08:00 - 10:00 **Introduction to GastroPlus**  
10:00 - 11:30 **Solubility Dissolution and Precipitation**  
11:30 - 12:00 30-minute lunch/dinner and bio break  
12:00 - 13:30 **Solubility Dissolution and Precipitation (continued)**

### Tuesday

08:00 - 09:00 **Passive Permeability and Absorption**  
09:00 - 12:00 **PBPK Modeling (IVIVE)**

### Wednesday

08:00 - 10:00 **Nonlinear Metabolism and Carrier Mediated Transport**  
10:00 - 11:00 **Compartmental PK Modeling**  
11:00 - 12:00 **PBPK Modeling of Biologics**

### Thursday

08:00 - 11:00 **Mechanistic IVIVCs and Virtual BE Trials**  
11:00 - 12:00 **PBPK-PD Modeling**

### Friday

08:00 - 10:00 **DDI Predictions**  
10:00 - 12:00 **Additional Dosage Routes (two of; dermal, pulmonary, ocular, and intra-articular)**

## Virtual Platform

Training sessions will consist of live instruction and hands-on examples via Microsoft Teams meetings. Participants will virtually attend using their PCs with enabling of cameras and microphones *optional but encouraged*.

## Requirements

PCs equipped with internet access and Google Chrome with Flash 9+ plugins are required to participate. Access to, at a minimum, the basic GastroPlus® module is also required.



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**GastroPlus Virtual Introductory Workshop**

October 25th-29th, 2021 - Register by October 11th

November 15th-19th, 2021 - Register by November 1st

Title: Professor Dr. Mr. Mrs. Miss Ms. **Industry**  
**Academia**

First name:

Last name: Company:

Job Title: Department:

Address:

Telephone: Email:

Purchase Order No. (if applicable):

Industry: \$2,000  
Academia: \$1,000\*

\*You must register with a valid .edu email address

**Method of payment (Please check one)**

- Payment by check (you will be invoiced upon receipt of your completed registration form)
- Payment online (you will be redirected to the payment portal when registering online at [simulations-plus.com/register-training-workshop](https://simulations-plus.com/register-training-workshop))

**Terms and Conditions**

**Registration:** The course is limited to the capacity of 25 participants. Confirmation email of registration will be returned upon successful registration at the following web site: [simulations-plus.com/register-training-workshop](https://simulations-plus.com/register-training-workshop)

**Cancellations:** Cancellations with a refund minus 4% credit card fees may be made two weeks before course date. No refunds will be given for cancellations received after this date. Substitutions may be made at any time.

**Payment Terms:** Following completion and return of the registration form, the total fee must be paid within 30 days of receipt of invoice. All fees must be paid in full prior to the start of the workshop.