

## **GastroPlus™**

*April 2017*

Dear GastroPlus™ User,

Thank you for your interest in GastroPlus. Our Simulations Plus development team continues to work hard to make GastroPlus the most advanced and reliable simulation of drug absorption, pharmacokinetics, and pharmacodynamics in the world today.

### **1. Updates in version 9.5**

- **Biologics Module:**
  - Modeling of Antibody-Drug Conjugates (ADCs)
- **Additional Dosage Route Module:**
  - Intramuscular Administration – NEW!
    - Includes solution and controlled release formulation
  - Controlled release formulation in subcutaneous administration
  - New built-in animal physiologies in different routes:
    - Minipig (seven different regions), rat, and mouse in transdermal
    - Dog and mouse in pulmonary
    - Monkey in ocular
- **PBPKPlus™ Module:**
  - New built-in physiologies for:
    - Chinese population (pediatrics & adults)
    - Hepatic impairment
  - New treatment of fraction unbound in tissues
- **IVIVCPlus™ Module:**
  - Automated mechanistic deconvolution across multiple records and saved log file
  - New utility to calculate an *in vivo* release profile from an *in vitro* dissolution profile and previously built IVIVC directly in GastroPlus
- **General Features:**
  - Updates in Population Simulator
    - More parameters with PEAR distribution
    - Ability to set up mg/kg and mg/m<sup>2</sup> dosing during population simulation
  - New options for saving simulation results:
    - Expanded the information saved in the output file
    - Save the output file in Excel format
    - Option for automatic saving of simulation results at the end of each single simulation
  - Bug fixes

### **2. Updates in version 9.0**

- **Biologics Module – NEW!**
  - physiologically based pharmacokinetic simulation (requires also PBPKPlus Module license) of monoclonal antibodies (mAb) after intravenous or subcutaneous administration
- **Dermal model in Additional Dosage Route Module – NEW!**
  - model for mechanistic simulation of drug absorption and pharmacokinetics after

- topical or subcutaneous administration
- Oral cavity model in Additional Dosage Route Module – NEW!
  - model for mechanistic simulation of drug absorption and pharmacokinetics after administration to the oral cavity
- ADMET Predictor™ Module additions:
  - allows specifying complete PK (Compartmental PK or PBPK) model setup during structure import
  - new clearance predictions (Km & Vmax values, or CLint values) for five (5) CYP enzymes (1A2, 2C9, 2C19, 2D6, and 3A4)
- Metabolism and Transporter Module additions:
  - default UGT expression levels in dog liver and gut
- General features:
  - new license management system

### **3. Installation of GastroPlus on your computer/Network**

GastroPlus is a modeling & simulation software program designed to run on Windows 7, 8, and 10 systems, or Mac computers through Parallels (or similar Windows virtualization). GastroPlus can be installed from the \*.zip package retrieved from our ShareFile online portal, either as a “standalone” installation on your computer or as a “network installation” on your local area network. Refer to the installation manual for detailed instructions on the installation process.

Before GastroPlus can be run from your installation, it has to be activated. The activation process is handled via email with our licensing department. Should you have any questions, please contact one of our customer support representatives at: [licensing@simulations-plus.com](mailto:licensing@simulations-plus.com) or +1-661-723-7723.

### **4. GastroPlus tutorial**

GastroPlus includes an extensive help file with a re-designed tutorial for new users. This tutorial can be used by prospective customers during the evaluation of GastroPlus, or by new/existing customers to assist with validating a computer system (i.e., running tutorials to confirm the same results are generated on your computer versus what is reported in the tutorial).

The tutorial document contains step-by-step instructions for running GastroPlus simulations. A few standard simulations and their use in drug development are described. Data for running these simulations are also provided wherever necessary, along with the nature and source of the data. The tutorial data files are present in the Tutorials folder after installing GastroPlus on your computer.

### **5. Customer support**

As part of our Personal Consultation Program, Simulations Plus has assigned scientists to specifically serve you in your use of GastroPlus. Feel free to contact them for advice on techniques for using the program better, for suggestions, and bug reports.

We stand ready to help you. If you need assistance in getting started, or if you would like advice on techniques for using the program most effectively in your research, please feel free to contact us.



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We look forward to serving you and assisting in any way we can.

Best regards,

Walt Woltosz  
Chairman and CEO  
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