



SCIENCE + SOFTWARE = SUCCESS

GastroPlus® v9.8.1

January 2021

Dear GastroPlus User,

Thank you for your interest in the [GastroPlus](#) PBBM / PBPK modeling and simulation platform. Our development team continues to work hard to make GastroPlus the most advanced and reliable simulation program for drug absorption, pharmacokinetics, and pharmacodynamics in the world today.

1. Updates in version 9.8.1

- ACAT™ Model:
 - Rearrangement/scaling of the equations in the mechanistic precipitation model to improve the integration speed
- [ADMET Predictor® Module](#):
 - Added hepatocyte clearance models for rat and human
- [DDI Module](#):
 - Our DDI compound models have been updated to include more mechanisms and the models have been thoroughly validated
 - Added a "Validated" column in the DDI perpetrator table to clearly identify the values that have been validated by our DDI experts for use in your simulations
 - New or updated and validated compound model files with documentation ready for regulatory submissions (by request only)
- Population Simulator:
 - Enhanced probability contours outputs
 - Units provided in the bioequivalence summary files for individual and crossover trials
 - Option to include variability in lung deposition
 - Metabolite comparison in bioequivalence summary files for individual & crossover trials
- Compartmental PK:
 - Adjusted Fup based on species defined by the gut physiology
- General Features:
 - Provided information of read write status of the installation directory
 - Allowed users to define tolerance for the integration process
 - Bug fixes

2. Updates in version 9.8

- ACAT™ Model:
 - Conversion of glucuronide metabolite back to parent compound in the gut lumen
 - Mechanistic treatment of cyclodextrin formulations
- [Additional Dosage Route Module](#):
 - NEW: Intraarticular administration
 - NEW: Inhalation of volatile compounds in the pulmonary (PCAT™) model
 - Pulmonary (PCAT™): Addition of lysosomal trapping mechanism



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- Ocular (OCAT™): Topical ointment administration; Protein binding in tissues
- Dermal (TCAT™): Flexible dermal dosing through mixed multiple doses (*.mdd) file; an updated model for sebum permeability
- Intramuscular and Subcutaneous: Extensions for Long-Acting Injectable formulations
- ADMET Predictor® Module:
 - Machine learning predictions of compound interaction (substrate and/or inhibitor) with additional transporters (OATP1B3, OAT1, OAT3, OCT1, OCT2)
 - Machine learning predictions of Km values for several transporters (OATP1B1, OATP1B3, OAT1, OAT3, OCT1, OCT2)
- DDI Module:
 - New or updated validated compound model files with documentation ready for regulatory submissions
- Population Simulator:
 - Automated execution of repeated trials
 - Intrasubject variability with crossover trials
 - Updated physiological CVs for many intestinal parameters
- [PBPKPlus™ Module](#):
 - Extension of lung tissue to account for drug partitioning into the lung fluid for fit-for-purpose discovery modeling
- General Features:
 - Bug fixes

3. Installation of GastroPlus on your computer/network

GastroPlus is designed to run on Windows 8 and 10 systems, or Mac computers through Parallels (or similar Windows virtualization). The software 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 or our [website](#) for instructions.

Before GastroPlus can be run from your installation, it must be activated. The activation process is handled via email with our licensing department at licensing@simulations-plus.com or +1-661-723-7723.

4. GastroPlus tutorial

GastroPlus includes an extensive help file with an updated tutorial. Prospective customers can use this tutorial during the evaluation of GastroPlus, for new and existing customers it can 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. The tutorial data files are present in the Tutorials folder *after* installing GastroPlus on your computer.



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5. Customer support

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

We stand ready to help. If you would like advice on techniques for using the program most effectively in your research, please contact us.

Telephone: +1-661-723-7723
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We look forward to assisting in any way we can.

Best regards,

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