We present the theory and applications of pharmacodynamics. With diverse pharmacokinetic-pharmacodynamic modeling concepts it is possible to describe and predict the time course of drug effects under various physiological and pathological conditions. The study of PK/PD and Disease Progression relationships can be of considerable value in understanding drug action, summarizing extensive data, building a knowledge repository, finding optimal dosing regimens, and in making predictions under new circumstances. More advanced PK/PD models have evolved into Systems Pharmacology.

Our classic 3-day course on the concepts and applications of PK/PD modeling will be presented on a level suitable for those knowledgeable in basic pharmacokinetics.

Special Note: We are offering this course and hotel venues adjacent to Niagara Falls with a large array of vacation activities including casinos. Bring your family!
May 13 Monday
08:00-08:30 Continental Breakfast/Registration
08:30-08:45 Dr. W.J. Jusko: **Introductions**
08:45-09:45 Dr. W.J. Jusko: **Overview of PK/PD**
09:45-10:45 Dr. D. Mager: **Art of Modeling**
10:45-11:00 Coffee
11:00-12:00 Dr. D. Mager: **Basic Pharmacology**
12:00-01:00 Lunch
01:00-02:00 Dr. W.J. Jusko: **Modeling Biophase Distribution**
02:00-03:00 Dr. W.J. Jusko: **Basic Indirect Response Models**
03:00-03:15 Break
03:15-04:15 Dr. D. Mager: **Modeling Transduction Processes**
04:15-05:00 Dr. W.J. Jusko: **Slow & Irreversible Effects**
05:00-06:00 Cocktail Hour
06:00-07:30 Group Dinner

May 14 Tuesday
08:00-08:30 Continental Breakfast
08:30-09:45 Dr. D. Mager: **Review & Exercises I**
09:45-10:00 Coffee
10:00-11:00 Dr. W.J. Jusko: **Chemotherapy Models**
11:00-12:00 Dr. W.J. Jusko: **Indirect Response Complexities**
12:00-01:00 Lunch
01:00-02:00 Dr. D. Mager: **Modeling Transduction Processes**
02:00-03:00 Dr. J. Earp: **FDA & Pharmacometrics**
03:00-03:15 Refreshments
03:15-04:15 Dr. D. Mager: **Systems Modeling in PK/PD**
04:15-04:30 Dr. W.J. Jusko: **Final Discussion and Summary**

REGISTRATION INFORMATION

**Course location:** The course will be held at The Conference Center Niagara Falls, 101 Old Falls Street, Niagara Falls, NY 14303. USA. Phone: (716) 278-2100. Fax: (716) 278-0008. The Center is 28 min from Buffalo International Airport. Website: [http://www.ccnfny.com](http://www.ccnfny.com)

**Hotel location:** Sheraton at the Falls, 300 Third St., Niagara Falls, NY 14303. USA. Phone: (716) 285-3361. The price is $93/night single/double occupancy (triple/quadruple add $10 per person). Hotel Deadline: April 8th, 2019. Website: [https://www.starwoodmeeting.com/Book/Pharmacokinetic2019](https://www.starwoodmeeting.com/Book/Pharmacokinetic2019)

**Fee:** Individual fee: $2800. This includes course documentation, continental breakfasts, mid-session refreshments, lunches and opening dinner. Up to 5 graduate students may enroll at a fee of $1400 (registered MS and PhD).

**Registration:** Online registration will begin October 1st, 2018. The course is limited to the capacity of 40 participants. Confirmation email of registration will be returned upon successful registration and payment at the following website: [http://pharmacy.buffalo.edu/](http://pharmacy.buffalo.edu/) under Quick Links.

**Cancellations:** Cancellations with a full refund may be made until March 12, 2019. No refund is possible on cancellations received after this date. Substitutions may be made at any time.

**Payment:** Mastercard, Visa, American Express, and Discover card payments will be accepted only at the following website: [http://pharmacy.buffalo.edu/](http://pharmacy.buffalo.edu/) under Quick Links. Contact course secretary: Suzette Mis, (716) 645-4831; mis@buffalo.edu, if you need further assistance.

**Antibody PK/PD and ADAPT Workshop:** This will be a separate 3-day workshop on Monoclonal Antibody PK/PD with hands-on ADAPT modeling components by Drs. Joseph Balthasar, Dhaval Shah, Donald Mager, and David D’Argenio. Laptops are required for ADAPT modeling. This course will utilize the facilities at The Conference Center Niagara Falls. See separate flyer for details. The fee is $2800. Graduate Students $1400.

**NONMEM® Course:** A separate 3-day hands-on tutorial course in Population PK Data Analysis using NONMEM® will be provided by Prof. Jill Fiedler-Kelly and colleagues from Cognigen Corporation, a SimulationsPlus company. Laptops are required. See separate flyer for details. The fee is $2800, which includes a textbook. Graduate Students $1400.

**Certara™ Model-Building Course:** A separate 3-day hands-on tutorial course using Phoenix software to gain insights into population model-building and interpretation of output. Laptops are required. See separate flyer for details. The fee is $2800. Graduate Students $1400.

**Social Activities:** Cognigen Corporation will sponsor evening excursions, including dinner, on Thursday, May 9th and Tuesday, May 14th, 2019.