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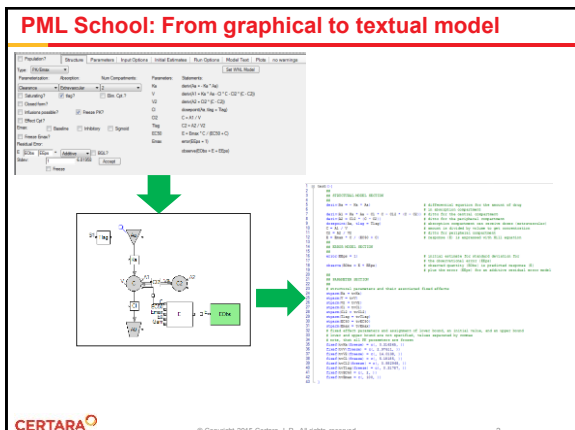
PML School:
Learn how to build custom PK and PK/PD models in Phoenix WinNonlin

PML School – what is it?

- PML stands for Phoenix Modeling Language
 - Where Phoenix is:
 - "...the industry's premier PK/PD modeling and simulation software workbench..."
 - Ultimate goal of PML School is to lower the entry barrier for new modelers
- PML School will be a series of live webinars
 - Many common modeling scenarios will be covered in individual sessions
 - Webinars will occur every 2 weeks

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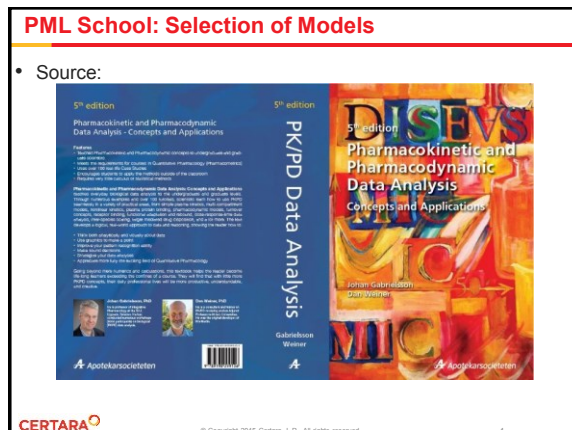
PML School: From graphical to textual model



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PML School: Selection of Models

- Source:



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PML School: Selection of Models

- Selection Criteria
 - Reviewed all support cases from past 4 years
 - Modeling questions were assigned to relevant exercises in the book
 - Exercises were ranked according to frequency of associated support cases
 - Top 10 PK models and
 - Top 10 PD models were selected

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PML School: Selection of Models

PK Models	(PK)PD models
<ul style="list-style-type: none"> • 3-compartment model • Multiple Dose • Parent Metabolite Kinetics • IVPO, simultaneous fit • Michaelis-Menten <ul style="list-style-type: none"> ◦ Dose Escalation ◦ Multiple Dose • Target-Mediated Drug Disposition (TMDD) • Zero Order Absorption • Allometric Scaling • Enterohepatic recirculation 	<ul style="list-style-type: none"> • PKPD Link • Hill model, Logistic model • Tumor Growth Inhibition • Enzyme Inhibition • PKPD Link, Initial Estimates • Warfarin • Indirect Response, Dose Escalation • Multiple Dose, Indirect Response • Dose Response, Dose Escalation, ED50 • Transduction, Transit Compartments

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PML School: Live Webinar

- There will be 20 live webinars over the next 12 months
 - Each webinar will introduce a single model
 - Live Webinars start in October 2016
 - Final webinar in August 2017
 - Each model will be developed in stages:
 1. Built-in model
 2. Graphical model
 3. Textual model
 - Special attention will be given to Initial Estimates

PML School: Materials

- Each model will be made available in Certara Forum
 - Link to live webinar and presentation slides
 - <https://support.certara.com/forums/forum/34-pml-school/>
 - Model text as file download
 - Can be imported into Phoenix model object to be run on a new dataset
 - Questions and comments can be exchanged in the Forum
 - Or can be entered into the Certara Support portal at:
 - <https://support.certara.com/support>
 - Or can be sent as emails to support@certara.com

PML School: Revision of Models

- Deviations from exercises in the book:
 - Clearance parametrization is used for all models
 - Alternative parametrizations used in the book are ignored
 - Differential equations used for all models
 - Closed form algebraic models have been converted to differential equations

Summary

- A new PML School is introduced to the user community
- Exercises from Gabrielsson & Weiner's book as source
 - 20 Exercises selected
 - Based on frequency of question in support
- Each of the 20 models/exercises will be presented in individual Live Webinars
 - Live webinars are scheduled between October 2016 – August 2017
- Certara Forum will be used to make the school materials available
- Models have been slightly revised