BIOMEDICAL SIMULATIONS RESOURCE
UNIVERSITY OF SOUTHERN CALIFORNIA

Workshop On

ADVANCED METHODS OF
PHARMACOKINETIC AND PHARMACODYNAMIC
SYSTEMS ANALYSIS

May 19–20, 1989
Marina International Hotel
4200 Admiralty Way
Marina del Rey, California

Sponsored by
BIOMEDICAL RESEARCH TECHNOLOGY PROGRAM
DIVISION OF RESEARCH RESOURCES
NATIONAL INSTITUTES OF HEALTH

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Chairman and Organizer:
David Z. D’Argenio
Associate Director, Biomedical Simulations Resource
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Institution</th>
</tr>
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<tr>
<td>8:30</td>
<td>Introductory Remarks</td>
<td>David Z. D'Argenio</td>
<td>University of Southern California</td>
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<tr>
<td>8:45</td>
<td>Physiological Models of Tissues and Organs</td>
<td>Robert L. Dedrick</td>
<td>National Institutes of Health</td>
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<tr>
<td>9:15</td>
<td>Drug and Metabolite Processing in Liver</td>
<td>K. Sandy Pang</td>
<td>University of Toronto</td>
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<td>9:45</td>
<td>Effect of Organ Perfusion on Renal Drug Transport</td>
<td>David E. Smith</td>
<td>University of Michigan</td>
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<tr>
<td>10:15</td>
<td>Discussion</td>
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<td>10:30</td>
<td>Break</td>
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<tr>
<td>10:45</td>
<td>Regional Pharmacokinetics: Insight from Inside</td>
<td>Laurence E. Mather</td>
<td>Flinders University</td>
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<tr>
<td>11:15</td>
<td>Choosing Monoclonal Antibodies Based on Pharmacokinetic Analysis</td>
<td>David G. Covell</td>
<td>National Cancer Institute</td>
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<tr>
<td>11:45</td>
<td>Discussion</td>
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<tr>
<td>12:00</td>
<td>Lunch Break</td>
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<tr>
<td>1:30</td>
<td>Modeling Physiological Systems with Gamma Retention Times: Theory and Application</td>
<td>James H. Matis</td>
<td>Texas A &amp; M University</td>
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<tr>
<td>2:00</td>
<td>Physiological Flow Models: A Semi-Parametric Approach</td>
<td>Davide Verotta</td>
<td>University of California, San Francisco</td>
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<tr>
<td>2:30</td>
<td>Parametric Model-Free Approach to Families of Similar Curves: Algorithms and Statistical Properties</td>
<td>Peter J. Munson</td>
<td>National Institutes of Health</td>
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<tr>
<td>3:00</td>
<td>Discussion</td>
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<td>3:15</td>
<td>Break</td>
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<tr>
<td>3:30</td>
<td>Heteroscedastic Nonlinear Regression</td>
<td>Stuart L. Beal</td>
<td>University of California, San Francisco</td>
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<td>4:00</td>
<td>Estimation of Pharmacokinetic Parameters from Bounded-Error Data</td>
<td>Eric Walter</td>
<td>CNRS – Ecole Supérieure d'Electricité</td>
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<td>4:30</td>
<td>Discussion</td>
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<tr>
<td>5:00</td>
<td>Reception</td>
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<tr>
<td>8:30</td>
<td>Drug Targeting in the Eye</td>
<td>Vincent H.L. Lee</td>
<td>University of Southern California</td>
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<td>9:00</td>
<td>Perspectives of System Analysis in Pharmacokinetic and Pharmacodynamic Research</td>
<td>Peter Veng-Pederson</td>
<td>University of Iowa</td>
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<tr>
<td>9:30</td>
<td>Semi-Parametric Approach to Non-Steady State Pharmacokinetic/dynamic Data</td>
<td>Lewis B. Sheiner</td>
<td>University of California, San Francisco</td>
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<td>10:30</td>
<td>Modeling Extreme Pharmacodynamic Hysteresis: Control of Myelosuppression due to Anti-Cancer Agents</td>
<td>Alan Forrest</td>
<td>University of Maryland</td>
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<tr>
<td>11:00</td>
<td>Modeling Pharmacokinetics and Pharmacodynamics of Methylprednisolone</td>
<td>Carl M. Metzler</td>
<td>The Upjohn Company</td>
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<td>11:30</td>
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<td>Incorporating Physiology into Pharmacokinetics and Pharmacodynamics</td>
<td>William F. Ebling</td>
<td>Stanford University</td>
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<td>2:00</td>
<td>Pharmacokinetic and Pharmacodynamic Modeling of Anesthetic Drug Effect in Man</td>
<td>Donald R. Stanski</td>
<td>Stanford University</td>
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<tr>
<td>2:30</td>
<td>Measurement and Kinetics of Drug Effects on the Central Nervous System</td>
<td>Meindert Danhof</td>
<td>State University at Leiden</td>
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<td>3:30</td>
<td>Pharmacokinetic and Pharmacodynamic Modeling in Drug Development and Therapeutics</td>
<td>Panel Discussion</td>
<td>LeBron Z. Benet, UCSF</td>
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<td>Carl M. Metzler, The Upjohn Co.</td>
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<td>Lewis B. Sheiner, UCSF</td>
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<td>Donald R. Stanski, Stanford</td>
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<td>4:15</td>
<td>Summary</td>
<td>F. Eugene Yates</td>
<td>University of California, Los Angeles</td>
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<tr>
<td>4:30</td>
<td>Closing Remarks</td>
<td>David Z. D’Argenio</td>
<td>University of Southern California</td>
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