

BIOMEDICAL SIMULATIONS RESOURCE  
UNIVERSITY OF SOUTHERN CALIFORNIA

Short Course On

**ADVANCED**

**MODELING METHODOLOGIES IN  
PHARMACOKINETICS AND PHARMACODYNAMICS**

May 17-18, 1991

Marina International Hotel  
4200 Admiralty Way  
Marina del Rey, California

Sponsored by

BIOMEDICAL RESEARCH TECHNOLOGY PROGRAM  
NATIONAL CENTER FOR RESEARCH RESOURCES  
NATIONAL INSTITUTES OF HEALTH

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Chairman and Organizer:  
David Z. D'Argenio, Ph.D.  
Co-Director, Biomedical Simulations Resource

Friday, May 17, 1991

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|-------|--|--|
| 8:30  | Introductory Remarks   | <b>David Z. D'Argenio</b><br>University of Southern California   |
| 8:45  | Use of Physiologically-Based Pharmacokinetic and Pharmacodynamic Models in Cancer Risk Assessment                                  | <b>Richard A. Corley</b><br>Dow Chemical Company                 |
| 9:45  | New Methodological Developments in Stochastic Compartmental Modeling   | <b>James H. Matis</b><br>Texas A&M University                    |
| 10:45 | Break  |  |
| 11:00 | Estimating Permanence Time, Exit Time, and Steady-State Volume of Distribution Using Compartmental and Noncompartmental Hypotheses | <b>Aldo Rescigno</b><br>University of Parma                      |
| 12:00 | Lunch Break  |  |
| 1:30  | Noncompartmental and Physiological Interpretation of Residence Time Moments  | <b>Michael Weiss</b><br>Martin-Luther-Universität                |
| 2:30  | Nonparametric Approaches to Model Pharmacokinetic and Pharmacodynamic Data   | <b>Davide Verotta</b><br>University of California, San Francisco |
| 3:30  | Break  |  |
| 3:45  | Assessing Variability of Parameters Estimated by Nonlinear Regression  | <b>Douglas M. Bates</b><br>University of Wisconsin, Madison      |
| 4:45  | Experiment Design for System Identification: Qualitative and Quantitative Problems   | <b>Luc Pronzato</b><br>CNRS Ecole Supérieure d'Electricité       |
| 6:00  | Reception  |  |

**Saturday, May 18, 1991**

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|-------|--|--|
| 8:45  | Characterizing Intra-Subject Variability in Heteroscedastic Nonlinear Random Effect Models | <b>David Giltinan</b><br>Genentech, Inc.                                   |
| 9:45  | Nonlinear Mixed Effects Models for Population Pharmacokinetics Data                        | <b>Mary J. Lindstrom</b><br>University of Wisconsin, Madison               |
| 10:45 | Break  |  |
| 11:00 | Nonparametric Methods in Population Data Analysis: Continuous and Discrete Approaches      | <b>Alan Schumitzky</b><br>University of Southern California                |
| 12:00 | Lunch Break  |  |
| 1:30  | The Bayesian Analysis of Population Pharmacokinetic Data via Stochastic Simulation         | <b>Jonathan C. Wakefield</b><br>Imperial College of Science and Technology |
| 2:30  | Pharmacokinetic Aspects of Site Specific Drug Delivery                                     | <b>Leon Aarons</b><br>University Manchester                                |
| 3:30  | Break  |  |
| 3:45  | Design of Dosage Regimens for Uncertain Pharmacokinetic Systems                            | <b>David Z. D'Argenio</b><br>University of Southern California             |
| 4:45  | Summary Perspective  |  |
| 5:30  | Reception  |  |

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Marina del Rey, California

DIRECTORY OF PARTICIPANTS

Leon Aarons  
Department of Pharmacy  
University of Manchester  
Manchester M13 9PL  
United Kingdom

Kamal A. Aqleh  
UCLA - CHS  
Department of Anesthesiology  
Room BH-511  
Los Angeles, CA 90024-1778

Samuel A. Afuwape  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Deborah K. Armstrong  
Children's Hospital of Los Angeles  
4650 Sunset Blvd.  
Los Angeles, CA 90027

Arvin Agah  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Douglas M. Bates  
Department of Statistics  
University of Wisconsin  
Madison, WI 53706

Chul W. Ahn  
Department of Biostatistics  
City of Hope National Medical Center  
1500 E. Duarte Road  
Duarte, CA 91010-0269

Robert P. Beliles  
National Research Council  
2101 Constitution Avenue  
Washington, DC 20418  
HA-354

Kazumasa Aizawa  
Box 0626, Room C-255  
University of California, San Francisco  
San Francisco, CA 94143-0626

Nancy Berman  
Clinical Studies Center  
Research Building 1  
Harbor-UCLA Medical Center  
1000 W. Carson Street  
Torrance, CA 90509

Shalender Bhasin  
RB#1, Division of Endocrinology  
Harbor-UCLA Medical Center  
Torrance, CA 90509

Bianca Bocchialini  
691 Panorama Drive  
San Francisco, CA 94131

David Bradley  
USC Department of Physiology  
2025 Zonal Avenue  
110 Mudd Building  
Los Angeles, CA 90033

Ricardo Brechner  
Radiology Department  
University of Southern California  
Los Angeles, CA 90089-1451

O. Bres  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024-1596

Dianne M. Brundage  
1464 N. Victoria  
St. Paul, MN 55117

Richard C. Brundage  
HSUF 9-145  
308 Harvard St., SE  
Minneapolis, MN 55455

Stan Carson  
School of Medicine  
University of Southern California  
Los Angeles, CA 90033

Fabrizio C. Celentano  
Department of Biomathematics  
UCLA School of Medicine  
Los Angeles, CA 90024-1766

Elaine Chen  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90033

Fei Chen  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90033

David M. Cohen  
Department of Physiology  
University of Southern California  
1333 San Pablo Street  
Los Angeles, CA 90033

Richard Corley  
Toxicology Research Laboratory  
The Dow Chemical Company  
1803 Building  
Midland, MI 48674

Andrew C. Daxis  
City of Hope  
1500 E. Duarte Road  
Duarte, CA 91010

David Z. D'Argenio  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Carlo De Angelis  
Sunnybrook Health Science Centre  
Department of Pharmacy  
2075 Bayview Avenue  
North York, Ontario  
CANADA M4N 3M5

Teresa Del Gianni  
Children's Hospital of Los Angeles  
4650 Sunset Blvd.  
Los Angeles, CA 90027

Joseph J. DiStefano, III  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024-1596

Du-Shieng Chien  
Allergan, Inc.  
2525 Dupont Drive  
Irvine, CA 92715

J.B. Dyck  
Anesthesia Service (112A)  
Veterans Administration Medical Center  
3801 Miranda Avenue  
Palo Alto, CA 94304

Natalie Eddington  
University of Maryland  
School of Pharmacy  
Department of Pharmaceutics  
32 S. Green Street  
Baltimore, MD 21201

Gary L. Elfring  
The Upjohn Company  
MS 9168-298-139  
Kalamazoo, MI 49001

Talmage Egan  
Anesthesia Service (112A)  
Veterans Administration Medical Center  
3801 Miranda Avenue  
Palo Alto, CA 94304

William F. Elmquist  
College of Pharmacy  
Washington State University  
355 Wagner Hall  
Pullman, WA 99164

Ahmed A. El-Tahtawy  
University of Southern California  
1985 Zonal Avenue #610  
Los Angeles, CA 90033

Kristen Featherstone  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Dagan Feng  
Department of Computer Science  
University of Sydney  
Madsen Building, F09  
Sydney, NSW 2006  
Australia

Pierre Fiset  
Anesthesia Service (112A)  
Veterans Administration Medical Center  
3801 Miranda Avenue  
Palo Alto, CA 94304

Courtney Fletcher  
College of Pharmacy  
University of Minnesota  
7-115 HSUF  
308 Harvard St., S.E.  
Minneapolis, MN 55455

Christina Flögel  
Department of Anesthesiology  
UCLA - CHS, BH 411  
10833 Le Conte Avenue  
Los Angeles, CA 90024-1778

Alan Forrest  
Clinical Pharmacokinetics Laboratory  
Millard Fillmore Hospital  
3 Gates Circle  
Buffalo, NY 14209

Dennis Fung  
University of California  
Davis Medical Center  
2315 Stockton Blvd.  
Sacramento, CA 95817

Thomas M. Gilman  
Clinical Pharmacy  
School of Pharmacy  
University of Southern California  
1985 Zonal Avenue  
Los Angeles, CA 90033

David M. Giltinan  
Genentech, Inc.  
460 Point San Bruno Blvd.  
South San Francisco, CA 94080

David Gough  
AMES, R-014  
University of California, San Diego  
La Jolla, CA 92093

Mark Gumbleton  
Department of Pharmacy  
University of California, San Francisco  
San Francisco, CA 94143-0446

Lars L. Gustafsson  
Department of Clinical Pharmacology,  
Huddinge University Hospital  
S-14186 Huddinge  
Sweden

Chao Hen  
Department of Pharmacy  
University of California, San Francisco  
San Francisco, CA 94143-0446

Donald Hill  
University of Texas Medical Branch  
301 University Blvd. G-01  
Galveston, TX 77550-2780

Harlan Hill  
Fred Hutchison Cancer Research Center  
1124 Columbia Street AB-122  
Seattle, WA 98104-2092

Betty Hoener  
School of Pharmacy, Box 0446  
University of California, San Francisco  
San Francisco, CA 94143

Phillip S.C. Hong  
School of Pharmacy, PSC 512  
University of Southern California  
1985 Zonal Avenue  
Los Angeles, CA 90033

Chuanpu Hu  
Operations Research  
Stanford University  
Stanford, CA 94305

Li-Min Huang  
Computer Science Department  
University of California, Los Angeles  
4731 Boelter Hall  
Los Angeles, CA 90024

Marianne Hübner  
Department of Mathematics  
University of Southern California  
Los Angeles, CA 90089-1113

C.A. Hunt  
School of Pharmacy, Box 0446  
University of California  
San Francisco, CA 94143-0446

Agneta Hurst  
School of Pharmacy (PSC 602)  
University of Southern California  
1985 Zonal Avenue  
Los Angeles, CA 90033

Masahiro Iwaki  
Department of Pharmacy, S-822  
University of California, San Francisco  
San Francisco, CA 94143-0446

André J. Jackson  
Food and Drug Administration  
HFD-652  
5600 Fishers Lane  
Rockville, MD 20857

George Jaresko  
School of Pharmacy  
University of Southern California  
1985 Zonal Avenue  
Los Angeles, CA 90033

Roger W. Jelliffe  
School of Medicine  
University of Southern California  
Los Angeles, CA 90033

Donald T. Jung  
SYNTEX - A3-BMR  
3401 Hillview Ave.  
Palo Alto, CA 94304

Darryl Katz  
Department of Mathematics  
California State University  
Fullerton, CA 92634

Toshihiro Kikkoji  
Department of Pharmacy, Rm S-834  
University of California, San Francisco  
San Francisco, CA 94143-0446

Saraswati Kensare  
School of Pharmacy, Box 0446  
University of California, San Francisco  
San Francisco, CA 94143

Richard Ko  
7646 Windbridge Drive #164  
Sacramento, CA 95831

Hamid Kohen  
Department of Anesthesia  
UCLA - CHS, BH 511  
Los Angeles, CA 90024-1778

Thomas H. Kramer  
Department of Pharmacology  
College of Medicine  
University of Arizona  
Tucson, AZ 85724

Elliot M. Landaw  
Department of Biomathematics  
UCLA School of Medicine  
Los Angeles, CA 90024-1766

David Lau  
Department of Pharmacy, S-926  
University of California, San Francisco  
San Francisco, CA 94143-0446

D. Renald Lemieux  
Institute of Biomedical Engineering  
Faculty of Medicine  
University of Montreal  
P.O. Box 6128 Station A  
Montreal, Quebec H3C 3J7  
Canada

Harry H.M. Lemmens  
680 Riverside Drive  
Los Altos, CA 94022

Mary J. Lindstrom  
Biostatistics Center  
University of Wisconsin, Madison  
Madison, WI 53706

Allen I. Lipsey  
Children's Hospital Clinical Lab., MS 32  
P.O. Box 54700  
Los Angeles, CA 90054-0700

Bill Lovejoy  
Graduate School of Business  
Stanford University  
Stanford, CA 94305-5015

Daniel C. Maneval  
Genentech, Inc., MS-34  
460 Point San Bruno Blvd.  
South San Francisco, CA 94080

Prasarn Manitpisitkul  
Department of Pharmacodynamics  
(M/C 865)  
College of Pharmacy  
833 S. Wood Street  
Chicago, IL 60612

Etan Markowitz  
22925 Van Deene Avenue  
Torrance, CA 90502

Tamara Maryon  
Department of Biostatistics  
City of Hope National Medical Center  
1500 E. Duarte Road  
Duarte, CA 91010

James H. Matis  
Department of Statistics  
Texas A&M University  
College Station, TX 77843

Gary Matzke  
School of Medicine  
University of Southern California  
Los Angeles, CA 90033



Michael Mayersohn  
College of Pharmacy  
University of Arizona  
Tucson, AZ 85721

Aravind Mittur  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Ben-Porat Mordechai  
Maklis 5  
Petach-Tikva 49558  
Israel

Joyce Mordenti  
Genentech, Inc.  
460 Point San Bruno Blvd.  
South San Francisco, CA 94131

Maulik Nanavaty  
Baxter Healthcare Corporation  
RT 120 Wilson Road, WG1-2N  
Roundlake, IL 60073

Chin K. Ng  
Division of Nuclear Med. & Biophysics  
B2-086 CHS  
UCLA School of Medicine  
Los Angeles, CA 90024

Ann C. Nguyen  
School of Pharmacy, Box 0446  
University of California, San Francisco  
San Francisco, CA 94143

Thang Ngoc Nguyen  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024

Thuvan Nguyen  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024-1596

Amos Norman  
Warren Hall  
University of California, Los Angeles  
900 Veteran Avenue  
Los Angeles, CA 90024

Joseph Ojingwa  
School of Pharmacy, Box 0446  
University of California, San Francisco  
San Francisco, CA 94143

Gary Osaka  
GENENTECH, Inc.  
460 Point San Bruno Blvd.  
Mail Stop 34  
South San Francisco, CA 94080

Frank Pelsor  
Food and Drug Administration  
HFD-530, NRC Room 218  
5600 Fishers Lane  
Rockville, MD 20857

Beatrice Perotti  
Department of Pharmacy  
University of California  
San Francisco, CA 94143

John G. Pierce  
Mathematics Department  
California State University  
Fullerton, CA 92634

Luc Pronzato  
Laboratoire des Signaux & Systèmes  
CNRS Ecole Supérieure d'Electricité  
Plateau de Moulon  
F-91192 Gif-sur-Yvette Cedex  
France

Thomayant Prueksaritanont  
Department of Pharmacy  
University of California, San Francisco  
San Francisco, CA 94143-0446

Aldo Rescigno  
Genentech, Inc.  
460 Point San Bruno Blvd.  
South San Francisco, CA 94080

John H. Rodman  
Pharmacokinetics Lab.  
St. Jude Children's Research Hospital  
332 N. Lauderdale  
Memphis, TN 38138

Paresh Sanghani  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90033

Yoshihiro Saito  
Drug Studies Unit  
School of Pharmacy  
University of California  
San Francisco, CA 94143

Mark Sale  
Clinical Pharmacology Room S169  
Stanford University Medical Center  
Stanford, CA 94305

Lawrence Scherr  
CYTO-OPTICS  
1739 N. Roosevelt Avenue  
Altadena, CA 91001

Alan Schumitzky  
Department of Mathematics  
University of Southern California  
Los Angeles, CA 90089-1113

Veronica Segredo  
3051 24th Avenue  
San Francisco, CA 94132

Debjoti Sensharma  
Computer Science Department  
University of California  
Los Angeles, CA 90024

Guzy Serge  
Department of Chemical Engineering  
University of California  
Berkeley, CA 94720

Joseph A. Sgro  
3810 Reeds Landing Circle  
Midlothian, VA 23113

Jaymin Shah  
Syntex A3-BMR  
3401 Hillview Avenue  
Palo Alto, CA 94303

Eric A. Shank  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024

Lewis B. Sheiner  
Room C-255  
Department of Laboratory Medicine  
University of California, San Francisco  
San Francisco, CA 94143-0626

Gisela Spieler  
Department of Mathematics  
California State University  
Fullerton, CA 92634

Gérard Sirois  
Faculty of Pharmacy  
University of Montreal  
C.P. 6128 Succ. A.  
Montreal, QC H3C 3J7  
Canada

N. Ty Smith  
9-125 VA Medical Center  
3350 La Jolla Village Drive  
San Diego, CA 92161

Rajeshwari Sridhara  
520 Longmeadow Circle  
St. Charles, IL 60174

Amy Srigritsanopol  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90089-1113

S.P. Srinivas  
Department of Ophthalmology  
Stanford University  
5030, Medical Center  
Stanford, CA 94305

Marigo Stavridi  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

J.H. Steinbach  
Gastroenterology, V 111 D  
VA Medical Center  
3350 La Jolla Village Drive  
San Diego, CA 92161

Diane Tang-Liu  
Allergan, Inc.  
2525 Dupont Drive  
Irvine, CA 92715

Reem Thomas  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Sauwaluxana Tongaree  
Pharmaceutics Department  
University of the Pacific  
Stockton, CA 95204

Joel I. Usansky  
Allergan, Inc.  
2525 Dupont Drive  
Irvine, CA 92713-9534

Davide Verotta  
Departments of Laboratory Medicine  
and Medicine  
School of Medicine and Pharmacology  
University of California  
San Francisco, CA 94143

Paolo Vicini  
Computer Science Department  
University of California  
4731 Boelter Hall  
Los Angeles, CA 90024-1596

C.T. Viswanathan  
Division of Biopharmaceutics  
Food and Drug Administration, Rm 13 B 21  
5600 Fisher Lane  
Rockville, MD 20857

D. Russell Wada  
Department of Anesthesia  
University of California  
CHS-BH511  
Los Angeles, CA 90024-1778

Parker B. Waechter, II  
Computer Science Department  
University of California  
4731 Boelter Hall - Biocybernetics Lab.  
Los Angeles, CA 90024-1495

Jonathan C. Wakefield  
Department of Mathematics  
Imperial College of Science and Technology  
Exhibition Road  
London, SW7 2AZ  
United Kingdom

Jeff Wang  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90033

Richard Watanabe  
USC Department of Physiology  
2025 Zonal Avenue  
110 Mudd Building  
Los Angeles, CA 90033

Michael Weiss  
Institut für Pharmakologie und Toxikologie  
Martin Luther Universität Halle-Wittenberg  
Leninallee 4  
D-4020 Halle  
Germany

Mark Wewle  
Department of Mathematics  
University of Southern California  
Los Angeles, CA 90089-1113

David A. White  
6955 Waterview Way  
Sacramento, CA 95831

Matthew B. Wolf  
Department of Physiology  
University of South Carolina  
School of Medicine  
Columbia, SC 29208

Spage Yee  
Department of Anesthesia  
University of California  
CHS-BH511  
Los Angeles, CA 90024-1778

Jenny Zhang  
Pharmacokinetics Laboratory  
School of Pharmacy  
University of Southern California  
Los Angeles, CA 90033

Roumei Zhang  
Department of Biomedical Engineering  
University of Southern California  
Los Angeles, CA 90089-1451

Parnian Zia-Amirhosseini  
School of Pharmacy, S-926  
University of California, San Francisco  
500 Parnassus  
San Francisco, CA 94143-0446