Bayesian Biostatistics Conference

January 26 - 28, 2009
Houston, Texas

Program Committee

Donald A. Berry, co-chair (M. D. Anderson)
Telba Z. Irony, co-chair (CDRH, FDA)
Kathryn Chaloner (University of Iowa)
Stacy R. Lindborg (Eli Lilly and Company)
Andrew Mugglin (University of Minnesota)
Sharon-Lise T. Normand (Harvard University)

Online registration and additional information available at http://www.mdanderson.org/departments/biostats

Partially funded by the Department of Biostatistics
The University of Texas M. D. Anderson Cancer Center

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Online registration and additional information available at:
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Registration fees cover:
- **all sessions**
- **handout materials**
- **continental breakfast days 1-3**
- **boxed lunch days 1 & 2**
- **reception & hors d'oeuvres day 1**

Registration (U.S. dollars):
$300 - general registration
$150 - special student discount

Preliminary Program

Monday, January 26, 2009

8:00 am — **Registration check-in and on-site registration**

8:00 am - 9:00 am — **Continental breakfast** (provided)

Morning Session

9:00 am - 11:45 am — **Short Course I: Title TBA**
Donald A. Berry (M. D. Anderson)

15-minute break at 10:15 am

11:45 am - 1:00 PM — **Boxed lunch** (provided)

Afternoon Sessions

1:00 PM - 3:30 PM — **Short Course II: Title TBA**
Gary L. Rosner (M. D. Anderson)

15-minute breaks at 2:15 and at 3:30 PM

3:45 PM - 5:30 PM — **Keynote Speaker:** Donald B. Rubin (Harvard University)

Monday, January 26 (continued)

6:30 PM - 9:00 PM

Welcome Reception

6:30 - 7:30 - Hors d'oeuvres and cash bar
7:30 - 9:00 - Panel Discussion : Topic TBA

PANELISTS:
Telba Z. Irony (CDRH, FDA), Moderator
Jim Berger (Duke University)
Donald A. Berry (M. D. Anderson)
Gregory Campbell (CDRH, FDA)
A. Lawrence Gould (Merck)

Tuesday, January 27, 2009

8:00 AM - 9:00 AM

Continental breakfast (provided)
Registration available

Morning Sessions

9:00 AM - 10:30 AM

Session 1: Statistical Genetics Applied to Biomedical Sciences

Speaker: Paola Sebastiani (Boston University)
Title: Bayesian Modeling of Complex Traits: Diagnostic Versus Prognostic Models

Speaker: Marta Blangiardo (Imperial College Centre for Biostatistics, UK)
Collaborator: Sylvia Richardson (Imperial College Centre for Biostatistics, UK)
Title: A Bayesian Calibration Model for Combining Different Preprocessing Methods in Affymetrix Chips

Speaker: TBA
Title: TBA

Chair: Donald A. Berry (M. D. Anderson)

10:30 AM - 10:45 AM

Break

10:45 AM - 12:15 PM

Session 2: Bayesian Clinical Trials

Speaker: David Ohlssen (Novartis Pharmaceuticals)
Collaborators: Hayley Jones (MRC Biostatistics Unit, UK), Beat Neuenschwander, Amy Racine, and Michael Branson (Novartis Pharma, Switzerland)
Title: A Case Study Examining the Use of Bayesian Methods for Subgroup Analysis in Clinical Trials

Speaker: Peter Müller (M. D. Anderson)
Title: Borrowing Strength with Non-exchangeable Priors Over Subpopulations

Tuesday, January 27 (continued)

Session 2 (continued)

10:45 AM - 12:15 PM

Speaker: Alice R. Pressman (Kaiser Foundation Research Institute) Collaborators: Andrew Avins (University of California SF) and Alan Hubbard (UC Berkeley)
Title: A Comparison of Two Worlds: How Does Bayes Hold Up to the Status Quo?

Chair: Kathryn Chaloner (University of Iowa)

12:15 PM - 1:30 PM **Boxed lunch** (provided)

Afternoon Parallel Sessions 3 & 4

1:30 PM - 3:00 PM **Session 3: Bayesian Clinical Trials: Improving Cancer Research**

Speaker: Stuart Bailey (Novartis Pharma) Collaborator: Daniel Lorand (Novartis)
Title: The Simultaneous Assessment of Safety and Efficacy: An Application of a Bayesian Model to Determine the Optimal Biological Dose in Oncology Phase I Dose Escalation

Speaker: Brani Vidakovic (Georgia Institute of Technology and Emory University) Collaborators: André Rogatko (Samuel Oschin Comprehensive Cancer Institute), Mourad Tighiouart (Emory University), and Pulak Ghosh (Novartis Pharma)
Title: Individualized Patient Dosing in Cancer Clinical Trials

Speaker: Andrew Mugglin (University of Minnesota)
Collaborator: Nathan Enas (Eli Lilly and Company)
Title: An Efficient Randomized Bayesian Phase II Study Design: A Model and a Case Study

Chair: Sharon-Lise T. Normand (Harvard University)

1:30 PM - 3:00 PM **Session 4: Bayesian Methods Influencing Health Policy**

Speaker: A. James O'Malley (Harvard University)
Collaborators: Sharon-Lise T. Normand (Harvard University) and Richard Frank (National Bureau of Economic Research)
Title: Traditional Instrumental Variables Methods Versus Likelihood and Bayesian Approaches for Comparing Antipsychotic Medications

Speaker: Yulei He (Harvard University)
Collaborators: Bob Wolfe and Sharon-Lise T. Normand (Harvard University)
Title: The Healthcare World Is Not Flat: Understanding Geographical Variations in the Quality of Hospital Care

Speaker: Gillian D. Sanders (Duke University)
Collaborator: Scott Schmidler (Duke University)
Title: Effect of HPV Vaccine Characteristics and Implementation Strategies on the Incidence of Disease

Chair: Stacy R. Lindborg (Eli Lilly and Company)

Tuesday, January 27 (continued)

3:00 PM - 3:15 PM **Break**

Afternoon Parallel Sessions 5 & 6

3:15 PM - 4:45 PM **Session 5: Bayesian Clinical Trials: Dose Selection Methods**

Speaker: Yu-Hui Chang (University of Iowa)
Collaborators: Kathryn Chaloner and Patricia Winokur (University of Iowa)
Title: An Adaptive Dose Exploration Design for the Estimation of Human Colonizing Dose 50 and Human Colonizing Dose 90

Speaker: François Vandenhende (ClinBAY, Belgium)
Collaborators: Davorka Tomic, Alexander Coppell, Ping He, Gilmore O'Neill (Biogen Idec, Inc.), and David J. Brooks (Imperial College, UK)
Title: Bayesian Dose Selection Strategy in Biomarker Trials: A Case Study Using Brain Imaging

Speaker: Peter F. Thall (M. D. Anderson)
Title: Utility-based Optimization of Combination Therapy Using Ordinal Toxicity and Efficacy in Phase I/II Trials

Chair: Andrew Mugglin (University of Minnesota)

3:15 PM - 4:45 PM **Session 6: Bayesian Methods in the Analysis of Clinical Trial Data**

Speaker: Joseph W. Hogan (Brown University) Collaborator: Joo Yeon Lee (FDA)
Title: Construction and Calibration of Priors for Handling Missing Data in Clinical Trials

Speaker: Zachary Skrivanek, (Eli Lilly and Company)
Collaborators: Brenda L. Gaydos (Eli Lilly and Company) and Scott M. Berry (Berry Consultants)
Title: Proof by Simulation: A Case Study

Speaker: Michael Daniels, (University of Florida, Gainesville)
Collaborators: C. Wang (University of Florida, Gainesville) and Daniel O. Scharfstein (Johns Hopkins University)
Title: Bayesian Semiparametric Selection Models with Application to a Breast Cancer Prevention Trial

Chair: Stacy R. Lindborg (Eli Lilly and Company)

5:30 PM - 8:00 PM **Poster Session**

Wednesday, January 28, 2009

8:00 AM - 9:00 AM **Continental Breakfast** (provided)

Morning Sessions

9:00 AM - 10:30 AM **Session 7: Bayesian Decision Theory**

Speaker: David Draper (University of California, Santa Cruz)
Title: Bayesian Decision Theory in Clinical Trial Design and Analysis: The Utility of Utility

Speaker: J. Andrés Christen (CIMAT, México)
Collaborators: Peter Müller, J. Kyle Wathen, and Judith Wolf (M. D. Anderson)
Title: A Bayesian Randomized Clinical Trial: A Decision Theoretic Sequential Design

Speaker: Robert Parker (Amgen, Inc.)
Collaborator: Joseph Ibrahim (University of North Carolina)
Title: Assessing Similarity to Existing Drugs to Decide Whether to Continue Drug Development

Chair: Telba Z. Irony (CDRH, FDA)

10:30 AM - 10:45 AM **Break**

10:45 AM - 12:15 PM **Session 8: Bayesian Adaptive Clinical Trials**

Speaker: Jason T. Connor (Berry Consultants)
Collaborators: Donald A. Berry (M. D. Anderson), Michael Snabes (BioSante Pharmaceuticals, Inc.), and William White (University of Connecticut Health Center)
Title: A Phase III Cardiovascular Safety Trial Using A Bayesian Adaptive Design

Speaker: Frank E. Harrell, Jr. (Vanderbilt University School of Medicine)
Title: Case Study of a Maximally Flexible Bayesian Design in Biologics Research with a Skeptical Prior and Cox Model-based Analysis

Speaker: Bradley P. Carlin, (University of Minnesota)
Collaborator: Brian Hobbs (University of Minnesota)
Title: Power Priors for Adaptive Incorporation of Historical Information in Clinical Trials

Chair: Sharon-Lise T. Normand (Harvard University)

12:15 PM **Closing Remarks** - Program Committee