NIBIB/NHLBI/NSF Workshop on
Improving Health Care Accessibility Through Point-of-Care Technologies

April 11-12, 2006

AGENDA

Tuesday, April 11

7:30 a.m. - 8:00 a.m.  Registration and Continental Breakfast  Farragut Foyer

8:00 a.m. - 8:10 a.m.  Welcome and Opening Remarks  
Roderic I. Pettigrew, M.D., Ph.D.  
Director  
National Institute of Biomedical Imaging and  
Bioengineering, NIH, DHHS

Point-of-Care Testing Overview  Farragut

8:10 a.m. - 8:30 a.m.  The Role of Point-of-Care Testing in Improving Health Outcomes  
Christopher P. Price, Ph.D., FACB, FRSC, FRCPath  
Visiting Professor in Clinical Biochemistry  
Department of Clinical Biochemistry  
John Radcliffe Hospital and University of Oxford

8:30 a.m. - 8:50 a.m.  Technology for Point-of-Care Testing: Issues and Implementation  
Larry J. Kricka, D.Phil., FACB, CChem, FRSC, FRCPath  
Professor of Pathology and Laboratory Medicine  
Director of General Chemistry  
University of Pennsylvania

Technologies for Point-of-Care Testing  Farragut

Sensors and Lab-on-a-Chip Devices

8:50 a.m. - 9:15 a.m.  Integrated Lab-on-a-Chip Devices for Point-of-Care Diagnostics  
John T. McDevitt, Ph.D.  (moderator)  
Professor, Department of Chemistry and Biochemistry  
The University of Texas at Austin

9:15 a.m. - 9:40 a.m.  Acute Care Blood Testing at the Point of Care  
Imants R. Lauks, Ph.D.  
President and Chief Executive Officer  
Epocal, Inc.
*Tuesday, April 11 (continued)*

9:40 a.m. - 10:05 a.m.  
Point-of-Care Testing for ACS, Heart Failure, and Drug Overdose in the Emergency Room  
*Jeff Bishop, Ph.D.*  
Principal Scientist  
Biosite, Inc.

10:05 a.m. - 10:30 a.m.  
The Founding of TheraSense  
*Adam Heller, Ph.D.*  
Research Professor, Department of Chemical Engineering  
The University of Texas at Austin

10:30 a.m. - 10:40 a.m.  
Saliva-Based Point-of-Care Diagnostics  
*Eleni Kousvelari, D.D.S., D.Sc.*  
Acting Director, Center for Biotechnology and Innovation  
National Institute of Dental and Craniofacial Research, NIH, DHHS

10:40 a.m. - 11:00 a.m.  
Break  
Farragut Foyer

Noninvasive and Minimally Invasive Monitoring  
Farragut

11:00 a.m. - 11:25 a.m.  
Important Clinical Targets for Noninvasive Monitoring  
*Donald S. Prough, M.D.*  
Professor and Chair, Department of Anesthesiology  
The University of Texas Medical Branch

11:25 a.m. - 11:50 a.m.  
Biomedical Monitoring Using Noninvasive and Minimally Invasive Approaches  
*Gerard L. Coté, Ph.D.*  
Charles H. and Bettye Barclay Professor and Head, Department of Biomedical Engineering  
Texas A&M University

11:50 a.m. - 12:15 p.m.  
Noninvasive Monitoring With Novel, High-Resolution Optical Techniques  
*Rinat O. Esenaliev, Ph.D.* (moderator)  
Associate Professor, Department of Neuroscience and Cell Biology  
The University of Texas Medical Branch

12:15 p.m. - 1:15 p.m.  
Working Lunch  
Decatur

12:45 p.m. - 1:15 p.m.  
Overcoming Barriers in the Manufacture of Small Components and Devices  
*Kornel Ehmann, Ph.D.*  
James N. and Nancy J. Farley Professor in Manufacturing and Entrepreneurship  
Department of Mechanical Engineering  
Northwestern University
Tuesday, April 11 (continued)

1:15 p.m. - 1:30 p.m. Break

Low-Cost Imaging

1:30 p.m. - 1:35 p.m. Introduction
Rebecca Richards-Kortum, Ph.D. (moderator)
Stanley C. Moore Professor of Bioengineering
Rice University

1:35 p.m. - 2:00 p.m. Automated Pathology for Cancer Screening in China
Branko Palcic, Ph.D.
Senior Scientist, Department of Cancer Imaging
University of British Columbia and BC Cancer Agency

2:00 p.m. - 2:25 p.m. Point-of-Care Cervical Cancer Screening in South Africa
Thomas Wright, M.D.
Professor, Department of Pathology
Columbia University Medical Center

2:25 p.m. - 2:50 p.m. Miniature Microscopy for Point-of-Care Diagnostics and Parallel Microscopy for Automated Diagnosis
Michael R. Descour, Ph.D., M.S.
Associate Professor of Optical Sciences
University of Arizona

2:50 p.m. - 3:15 p.m. Multifunctional Optical Imaging Agents for Point-of-Care Diagnosis and Testing
Stephen A. Boppart, M.D., Ph.D.
Associate Professor, Department of Electrical and Computer Engineering
University of Illinois at Urbana-Champaign

3:15 p.m. - 3:30 p.m. Break

Informatics and Telehealth

3:30 p.m. - 3:55 p.m. Medical Information Bus Concepts for Collecting Clinical Patient Data From the Intensive Care Unit and Other Acutely Ill Patients
Reed M. Gardner, Ph.D. (moderator)
Emeritus Professor and Chair, Department of Medical Informatics
University of Utah School of Medicine
Tuesday, April 11 (continued)

3:55 p.m. - 4:20 p.m.  Health Data Collection in Resource-Constrained Environments: Real-World Implementation Issues
*Paul G. Biondich, M.D., M.S.*
Research Scientist, Regenstrief Institute
Assistant Professor of Pediatrics
Indiana University School of Medicine

4:20 p.m. - 4:45 p.m.  Communications for Rural Health Care
*Eric Brewer, Ph.D.*
Professor, Department of Electrical Engineering and Computer Science
University of California, Berkeley

4:45 p.m. - 5:10 p.m.  Telehealth Services to the Home: The Time Has Come
*Dena S. Puskin, Sc.D.*
Director
Office for the Advancement of Telehealth Health Resources and Services Administration, DHHS

5:10 p.m. - 5:30 p.m.  Break

5:30 p.m. - 6:30 p.m.  Poster Session (with light refreshments)  Dewey

Wednesday, April 12

7:30 a.m. - 8:00 a.m.  Registration and Continental Breakfast  Farragut Foyer

8:00 a.m. - 8:10 a.m.  Introductory Remarks  Farragut
*Richard Buckius, Ph.D.*
Acting Assistant Director for Engineering
National Science Foundation

Clinical Needs and Opportunities in Point-of-Care Testing  Farragut

8:10 a.m. - 8:40 a.m.  Delivering Health Care in Developing Countries
*Henry “Skip” Francis, M.D.*
Program Officer for Sub-Saharan Africa
Fogarty International Center
National Institutes of Health
Wednesday, April 12 (continued)

8:40 a.m. - 9:40 a.m. The Potential of Point-of-Care Testing To Revitalize Primary Care Office Practice  
  John M. Hickner, M.D., M.Sc.  
  Professor of Family Medicine  
  University of Chicago Pritzker School of Medicine

9:40 a.m. - 10:30 a.m. Emergency Medical Services: Needs and Opportunities in Point-of-Care Testing  
  Robert M. Domeier, M.D., FACEP  
  EMS Coordinator  
  Saint Joseph Mercy Hospital

10:30 a.m. - 11:00 a.m. Break  
  Farragut Foyer

Panel on Home Point-of-Care Testing: One Location, Many Care Models  
  Farragut

11:00 a.m. - 11:15 a.m. The Many Faces of Home Point-of-Care Monitoring  
  Justin Starren, M.D., Ph.D., FACMI (moderator)  
  Associate Professor of Clinical Biomedical Informatics and Clinical Radiology  
  Columbia University Medical Center

11:15 a.m. - 11:30 a.m. Use of Point-of-Care Testing in Home Health Care: Opportunities and Challenges  
  Carolyn R. Krause, Ph.D., R.N.  
  Executive Director  
  Wisconsin Center for Nursing

11:30 a.m. - 11:45 a.m. Disease Management: A Quantum Leap in Quality Improvement  
  Maureen A. Dailey, M.S.N., R.N., CWOCN  
  Consultant  
  Dailey Solutions

11:45 a.m. - 12 noon Patient Portals: Connecting Clinicians and Patients at Home  
  James Ralston, M.D., M.P.H.  
  Assistant Investigator  
  Center for Health Studies  
  Group Health Cooperative

12 noon - 12:15 p.m. The “Self-Managed” Patient  
  Patricia Flatley Brennan, Ph.D., R.N., FAAN, FACMI  
  Moehlman Bascom Professor  
  School of Nursing and College of Engineering  
  University of Wisconsin-Madison

12:15 p.m. - 12:30 p.m. Q&A Session on Home Health Care
Wednesday, April 12 (continued)

12:30 p.m. - 1:50 p.m.  Working Lunch (with breakout sessions)

Room 1  Farragut

1:00 p.m. - 1:25 p.m.  Improving Health Care Accessibility Through Point-of-Care Technologies: Issues From the IVD Industry Perspective
Paul D’Orazio, Ph.D.
Director of Sensor Development
Instrumentation Laboratory

Room 2  Decatur

1:00 p.m. - 1:25 p.m.  Systems Engineering and Health Care
Ronald L. Rardin, Ph.D., M.P.A.
Professor, School of Industrial Engineering
Regenstrief Center, Purdue University

1:25 p.m. - 1:50 p.m.  Imaging and Point-of-Care Technologies
Kai Erik Thomenius, Ph.D., M.S.
Chief Technologist, Ultrasound and Biomedical Imaging Technologies
GE Global Research

1:50 p.m. - 2:00 p.m.  Break

2:00 p.m. - 2:30 p.m.  Point-of-Care Technologies, Telehealth, and Indian Health Care
Mark F. Carroll, M.D.
Telehealth Program Director
Indian Health Service, DHHS

Evidence and Policy Decisions in Point-of-Care Testing  Farragut

2:30 p.m. - 2:45 p.m.  Evidence To Support Policy Decisions on Point-of-Care Testing
Christopher P. Price, Ph.D., FACB, FRSC, FRCPath
Visiting Professor in Clinical Biochemistry
Department of Clinical Biochemistry
John Radcliffe Hospital and University of Oxford
Wednesday, April 12 (continued)

FDA and CMS Perspectives

2:45 p.m. - 3:00 p.m. Center for Devices and Radiological Health Review Practice for Point-of-Care Devices: A Diagnostic Perspective

*Arleen F. Pinkos*
Scientific Reviewer
Office of In Vitro Diagnostic Device Evaluation and Safety
Center for Devices and Radiological Health
U.S. Food and Drug Administration, DHHS

3:00 p.m. - 3:15 p.m. Regulation of Point-of-Care Medical Devices

*Anthony D. Watson, M.S., M.B.A.*
Chief, General Hospital Devices Branch
Center for Devices and Radiological Health
U.S. Food and Drug Administration, DHHS

3:15 p.m. - 3:30 p.m. The Medicare Coverage Process

*Shamiram Feinglass M.D., M.P.H.*
Senior Medical Officer
Coverage and Analysis Group, Office of Clinical Standards and Quality
Centers for Medicare & Medicaid Services

3:30 p.m. - 3:45 p.m. Q&A Session on Evidence and Policy Decisions

3:45 p.m. - 4:00 p.m. Break

4:00 p.m. - 4:30 p.m. Review of NIH/NSF Recommendations

*Larry J. Kricka, D.Phil., FACB, CChem, FRSC, FRCPath*
Professor of Pathology and Laboratory Medicine
Director of General Chemistry
University of Pennsylvania

4:30 p.m. - 4:35 p.m. Closing Remarks