Personalized Medicine: Promises and Prospects

A Conference Hosted By

HARVARD MEDICAL SCHOOL - PARTNERS HEALTHCARE CENTER FOR GENETICS AND GENOMICS

November 3-4, 2005
The Conference Center
Harvard Medical School
Boston, Massachusetts

Conference Program
November 3, 2005

Dear Colleague,

It is my pleasure to welcome you to Personalized Medicine: Promises and Prospects.

The past few years have witnessed a revolution in the understanding of health and disease, brought on by the sequencing of the human genome and the creation of a map of human genetic variation. It is now becoming possible to translate this knowledge to patient care. The ability to use genetic and genomic information in diagnosis, prognosis and treatment has been given a name: personalized medicine. The goal of personalized medicine is to provide the right diagnosis and treatment to the right patient at the right time at the right cost.

Hosted by the Harvard Medical School – Partners Healthcare Center for Genetics and Genomics (HPCGG) the conference will focus on the perspectives of Government, Pharmaceutical, Academic, and Diagnostic leaders as well as those of healthcare providers and payers in implementing the new paradigm of personalized medicine. The program will feature several personalized medicine case studies on topics such as lung cancer and cardiovascular disease and will highlight the information technology infrastructure needed to make personalized medicine a reality. The tone for the conference will be one that will explore what happens "on the ground" when personalized medicine is put into practice, and what that means for caregivers, patients and payers, as well as for the industries that develop products for personalized medicine.

Formed in 2001, the HPCGG is a joint venture between Harvard Medical School and Partners Healthcare, including its founding members Massachusetts General Hospital and Brigham and Women’s Hospital. The Center’s mission is to integrate genetics and genomics into the practice of medicine. It is involved in the full spectrum of genetics and genomics activities, including basic research, clinical research, core services for researchers, molecular-based diagnostic testing, clinical care and training and education.

I would like to take this opportunity to thank the members of our organizing committee for all of their hard work in planning the conference; our speakers for their willingness to share their thoughts and plans on this exciting topic; and the program’s sponsors, whose support allows today’s conference to become a reality. This is truly an exciting time for medicine and I am delighted you have decided to join us.

Sincerely,

Raju Kucherlapati, Ph.D.
Scientific Director of Harvard-Partners Center for Genetics and Genomics
Sponsors
The Harvard – Partners Center for Genetics and Genomics would like to thank the sponsors of this event for their generous support.

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Conference Organizing Committee

Raju Kucherlapati, Ph.D.
Scientific Director of Harvard-Partners Center for Genetics and Genomics
Paul C. Cabot Professor of Genetics, Harvard Medical School

Edward Abrahams, Ph.D.
Executive Director
Personalized Medicine Coalition

Mara G. Aspinall
President, Genetics
Genzyme Corporation

Abbie Celniker, Ph.D.
Senior Vice President, Research and Development Strategy and Operations
Millenium Pharmaceuticals

William F. Crowley Jr., M.D.
Chief, Reproductive Endocrine Unit; Director, Clinical Research Program
Massachusetts General Hospital

Mason Freeman, M.D., Ph.D.
Translational Medicine Head for Cardiovascular and Metabolism, Novartis Institute for Biomedical Research

David Ginsburg, M.D.
Chief, Division of Medical Genetics
Professor of Internal Medicine and Human Genetics
University of Michigan

Geoffrey Ginsburg, M.D., Ph.D.
Director, Center for Genomic Medicine
Duke University

Marcia A. Kean
Chief Executive Officer
Feinstein Kean Heathcare

Daniel K. Podolsky, M.D.
Chief Academic Officer
Partners HealthCare System

Hakan Sakul, Ph.D.
Director and Site Head, Clinical Pharmacogenomics-Groton Laboratories
Pfizer Global R & D
# Conference Program

**Thursday, November 3, 2005**

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<td>7:30-8:45</td>
<td>Registration &amp; Continental Breakfast</td>
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<tr>
<td>8:45</td>
<td>Welcome</td>
<td><strong>Daniel Podolsky, MD</strong>, Chief Academic Officer, Partners HealthCare System</td>
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| 9:00-12:00 | Session I – Perspectives on Personalized Medicine | **Session Moderator: Raju Kucherlapati, PhD**  
Scientific Director, Harvard-Partners Center for Genetics and Genomics, Paul C. Cabot Professor of Genetics, Harvard Medical School |
| 9:00       | Societal Impact of Personalized Medicine | **Reed V. Tuckson, MD, FACP**, Senior Vice President, Consumer Health and Medical Care Advancement, UnitedHealth Group |
| 9:30       | Personalized Medicine and Drug Development Development | **Declan P. Doogan, MD**, Senior Vice President, Head of Worldwide Development, Pfizer Global Research & |
| 10:00      | Prospective Medicine: The Next Health Care Transformation | **Ralph Snyderman, MD**, Chancellor Emeritus, Duke University |
| 10:30      | The Right Test for the Right Patient at the Right Time - The Crucial Role of Diagnostics in Personalized Medicine | **Mara Aspinall**, President, Genetics, Genzyme Corporation |
| 11:00      | Panel                                   | All Four Speakers                                                                    |
| 11:30      | Lunch                                   | e-Salon open with Wi-Fi                                                              |
### Thursday, November 3, 2005

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<tr>
<td>12:30-4:00</td>
<td>Session II - Case Studies</td>
<td>Session Moderator: Cynthia Morton, PhD, William Lambert Richardson Professor of Obstetrics, Gynecology and Reproductive Biology and Professor of Pathology, Harvard Medical School; Director of Cytogenetics, Brigham and Women’s Hospital</td>
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<tr>
<td>12:30</td>
<td>Managing Bleeding and Clotting in the 21st Century</td>
<td>David Ginsburg, MD, James V. Neel Distinguished University Professor, Departments of Internal Medicine &amp; Human Genetics, Investigator, Howard Hughes Medical Institute, University of Michigan</td>
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<tr>
<td>1:00</td>
<td>Targeted Medicine for Heart Attack?</td>
<td>Eric J. Topol, MD, Provost, Cleveland Clinic Lerner College of Medicine; Professor of Medicine &amp; Genetics, Case Western Reserve University</td>
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<td>1:30</td>
<td>Molecular Targeting of Lung Cancer</td>
<td>Daniel A. Haber, MD, PhD, Director of the MGH Cancer Center, Massachusetts General Hospital</td>
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<tr>
<td>2:00</td>
<td>Pediatric Genetic Testing</td>
<td>David Valle, MD, Professor of Pediatrics, Molecular Biology and Genetics, Johns Hopkins University; School of Medicine</td>
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<td>2:30</td>
<td>Development of Targeted Therapies - Gleevec</td>
<td>John Hohneker, MD, Vice President, US Medical Affairs and Services, Oncology, Novartis Pharmaceuticals Corporation</td>
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<td>3:00</td>
<td>Break</td>
<td>e-Salon open with Wi-Fi</td>
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<tr>
<td>3:30</td>
<td>The Business of Personalized Medicine: Delivering Better Therapies to Patients</td>
<td>Deborah Dunsire, MD, Chief Executive Officer, Millennium Pharmaceuticals, Inc.</td>
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<tr>
<td>4:00-5:00</td>
<td>Session III - Training &amp; Education</td>
<td>Session Moderator: Katherine A. Schneider, MPH, CGC, Senior Genetic Counselor, Dana-Farber Cancer Institute</td>
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<tr>
<td>4:00</td>
<td>Integration of Genetics into Medical Practice: Educational Challenges</td>
<td>Bruce Korf, MD, PhD, Wayne M. and Sara Crews Finley Professor of Medical Genetics, Chair, Department of Genetics, University of Alabama at Birmingham</td>
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<tr>
<td>4:30</td>
<td>Role of Government in Personalized Medicine</td>
<td>Sharon F. Terry, MA, President and CEO, Genetic Alliance</td>
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| 5:00-7:00  | Cocktail Reception & PMC Award Presentation | ▪ “PMC 2005 Leadership in Personalized Medicine Award”, presented by Edward Abrahams, Ph.D., Executive Director, PMC  
▪ e-Salon open with Wi-Fi                                                                                                                                                                                                                                                                                                                                                                 |

Dinner on your own
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<td>Continental Breakfast</td>
<td>e-Salon open at 8:00 with Wi-Fi</td>
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<tr>
<td>8:30-12:00</td>
<td>Session IV: Information Technology</td>
<td>Session Moderator: John Glaser, Ph.D., Vice President and Chief Information Officer, Partners HealthCare System</td>
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<tr>
<td>8:30</td>
<td>Privacy and Security Requirements of the EMR - Experiences from the Massachusetts eHealth Collaborative</td>
<td>Robert J. Mandel, MD, Chief Operating Officer, Massachusetts eHealth Collaborative</td>
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<td>8:55</td>
<td>Information Based Medicine: Innovation in Patient Care</td>
<td>Michael E. Svinte, Vice President, Information Based Medicine EBO, IBM Healthcare and Life Sciences</td>
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<td>9:20</td>
<td>Personalized Medicine: Creating the Foundation of Promise</td>
<td>Jeff Miller, Vice President, Worldwide Health and Life Sciences, Hewlett-Packard</td>
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<td>9:45</td>
<td>Role of the EMR in Personalized Medicine</td>
<td>Carol C. Diamond, MD, MPH, Managing Director of Healthcare Program, The Markle Foundation</td>
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<td>10:10</td>
<td>Break</td>
<td>e-Salon open with Wi-Fi</td>
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<tr>
<td>10:40</td>
<td>Panel Discussion</td>
<td>All four Speakers</td>
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<tr>
<td>11:20</td>
<td>The Decade of Health Information Technology</td>
<td>David J. Brailer, MD, PhD, National Coordinator for Health Information Technology, U.S. Department of Health and Human Services</td>
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<tr>
<td>11:50</td>
<td>Closing Comments</td>
<td>Raju Kucherlapati, PhD, Scientific Director, Harvard-Partners Center for Genetics and Genomics, Paul C. Cabot Professor of Genetics, Harvard Medical School</td>
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<tr>
<td>12:00</td>
<td>Box Lunch</td>
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Mara Aspinall
Mara Aspinall joined Genzyme in 1997. She is responsible for the Genzyme Genetics business unit, which includes nine laboratories across the United States and operations in Japan. Prior to becoming president of Genzyme Genetics in 2001, Ms. Aspinall was president of Genzyme Pharmaceuticals. She has also served as Genzyme’s vice president of corporate development. Before joining Genzyme, Ms. Aspinall was a director of client services at Hale and Dorr, LLC, and a senior consultant at Bain and Company. She has an M.B.A. from Harvard Business School and a B.A. from Tufts University.

David Brailer
Dr. Brailer was appointed the first National Health Information Technology Coordinator on May 6, 2004. Dr. Brailer’s duties as National Coordinator are to execute the actions ordered by President George W. Bush in the Executive Order that he issued on April 27, 2004, which called for widespread deployment of health information technology within 10 years to help realize substantial improvements in safety and efficiency. Dr. Brailer is recognized as a leader in the strategy and financing of quality and efficiency in health care, with a particular emphasis on health information technology and health systems management.

Prior to his appointment, Dr. Brailer was a Senior Fellow at the Health Technology Center in San Francisco, CA, a nonprofit research and education organization that provides strategic information and resources to health care organizations about the future impact of technology in health care delivery. At the Center, he advised a variety of regional and national data sharing projects.

Dr. Brailer also served for ten years as Chairman and CEO of CareScience, Inc., a leading provider of care management services and Internet-based solutions that help reduce medical errors and improve physician and hospital-based performance. While at CareScience, Dr. Brailer led the company in developing groundbreaking inventions with major research institutions, establishing the nation’s first health care Application Service Provider (ASP) and creating a care management business process outsourcing partnership that allowed hospitals to outsource their care management functions on an at-risk basis. Dr. Brailer also designed and oversaw the development of one of the first community-based health information exchanges in Santa Barbara County, California.

Dr. Brailer holds doctoral degrees in both medicine and economics. While in medical school, he was a Charles A. Dana Scholar at the University of Pennsylvania, School of Medicine and was the first recipient of the National Library of Medicine Martin Epstein Award for his work in expert systems. Dr. Brailer was among the first medical students to serve on the Board of Trustees of the American Medical Association. He completed his medical residency at the Hospital of the University of Pennsylvania and became board certified in internal medicine along the clinical investigator pathway. Dr. Brailer was a Robert Wood Johnson Clinical Scholar at the University of Pennsylvania and, until recently, was active in patient care delivery with an emphasis on immune deficiency. He earned his M.D. degree at West Virginia University and his Ph.D. in managerial economics at The Wharton School.

Carol Diamond
Carol Diamond is Managing Director of the Markle Foundation’s Healthcare program. The Healthcare program’s goal is to accelerate the rate at which information technology enables consumers and the health system that supports them to improve health and health care. Previously, Diamond was president of U.S. Quality Algorithms (USQA), Aetna U.S. Healthcare’s performance measurement affiliate, USQA’s Chief Healthcare Information Officer and head of the company’s Health Services Research unit. As USQA president, she led a 400-employee business unit that developed and deployed sophisticated clinical and financial information products and services. Prior to joining USQA, Diamond was a consultant for Johnson & Johnson Health Care Systems and the Robert Wood Johnson Foundation. Diamond sits on the American Academy of Family Physicians Public Advisory Board and the National Academy of Science’s Science Technology and Economic Policy Board. She also publishes regularly on health care quality measurement. Diamond earned her dual B.A./M.D. at the Medical School of the State University of New York at Brooklyn and her master’s degree in public health at the University of Medicine and Dentistry of New Jersey, Rutgers University.

Deborah Dunsire
Dr. Dunsire joined Millennium in July, 2005 with nearly 20 years of experience in the commercial, operational, clinical and scientific aspects of a world-leading pharmaceutical business.

Dr. Dunsire led the Novartis U.S. Oncology Business, playing a critical role in the broad development and successful launch of a number of products including Zometa, Femara and Gleevec.

She was also responsible for managing the merger and significant growth of the combined Sandoz Pharmaceuticals and Ciba-Geigy oncology businesses and evaluated and implemented key business development initiatives. Dr. Dunsire also served on the U.S. pharmaceutical executive committee at Novartis, was a designated member of the corporate executive group, and a member of the operating committee charged with defining corporate strategy, managing operations and assessing executive performance.
Earlier in her career, Dr. Dunsire was a clinical researcher responsible for the implementation of global phase II and phase III studies across multiple therapeutic areas such as immunology, endocrinology, neurology, dermatology, oncology and transplantation. She has also been a practicing physician.

Dr. Dunsire was the 2001 recipient of the American Cancer Society Excalibur Award and the 2000 recipient of the Health Care Business Women’s Association Rising Star Award. Dr. Dunsire is a graduate of the medical school of the University of the Witwatersrand, South Africa.

Declan Doogan

Declan Doogan received an MD degree from Glasgow University in 1975. Following posts in internal medicine, he was awarded Membership of the Royal College of Physicians in 1977.

He spent four years in pharmaceutical medicine in the Netherlands, then joined Pfizer Central Research in 1982 as Clinical Project Manager for the LUSTRAL™ (sertraline) development programme.

Dr Doogan became a Fellow of the Royal College of Physicians in 1988 and a Fellow of the Faculty of Pharmaceutical Medicine in the following year. In 1989 he moved to the operating division of Pfizer UK, and became Medical Director in 1990.

He went to Pfizer Japan in 1995 as Vice President, Medical, and in 1997 became Vice President, Clinical Development with Pfizer Central Research. In 1999 he moved to Pfizer in Groton, Connecticut, USA, as Senior Vice President Clinical Development Europe and Japan. In March 2001, Dr Doogan returned to the UK as Senior Vice-President, PGRD and Director of the Sandwich Laboratories and Japan Development.

Dr Doogan returned to the US in June 2003 to take up his present position as Senior Vice-President, Medical and Development Science.

David Ginsburg

Dr. Ginsburg is James V. Neel Distinguished University Professor of Internal Medicine and Human Genetics and a member of the Life Sciences Institute at the University of Michigan Medical School. He received his B.A. degree in molecular biophysics and biochemistry from Yale University and his M.D. degree from Duke University School of Medicine. His postdoctoral clinical and research training was done at the Brigham and Women’s Hospital and Children’s Hospital, Harvard Medical School. Dr. Ginsburg is a member of the Institute of Medicine of the National Academy of Sciences, a fellow of the American Association for the Advancement of Science, and recipient of the E. Donnall Thomas Lecture and Prize from the American Society of Hematology, the Basic Research Prize from the American Heart Association, and the 2004 ASCI Award from the American Society of Clinical Investigation. He was recently elected a fellow of the American Academy of Arts and Sciences.

John Glaser

John Glaser is Vice-President and Chief Information Officer, Partners HealthCare System, Inc. Previously, he was Vice-President, Information Systems at Brigham and Women’s Hospital. Prior to Brigham and Women’s Hospital, Dr. Glaser managed the Healthcare Information Systems consulting practice at Arthur D. Little.

Dr. Glaser was the founding Chairman of College of Healthcare Information Management Executives (CHIME) and is past President of the Healthcare Information and Management Systems Society (HIMSS). He has been a member of the Board of the American Medical Informatics Association. He is currently the President of the Foundation for eHealth Initiative Board.

He is a fellow of HIMSS, CHIME and the American College of Medical Informatics. He has been awarded the John Gall award for healthcare CIO of the year. CHIME has established a scholarship in Dr. Glaser’s name. He was a recipient of CIO Magazine’s 20/20 Vision Award. Partners HealthCare has received several industry awards for its effective and innovative use of information technology.

Dr. Glaser is on the editorial boards of CIO Magazine, Healthcare Informatics, Biotechnology Healthcare, Journal of Biomedical Informatics, and Journal of Healthcare Information Management. He has published over ninety articles and two books on the strategic application of information technology in healthcare.

He holds a Ph.D. in Healthcare Information Systems from the University of Minnesota.

Daniel Haber

Dr. Daniel Haber was born in Paris, France in 1957. He came to the US in 1973 to attend college at Massachusetts Institute of Technology, where he received BS and MS degrees. He continued his studies at Stanford University under the Medical Scientist Training Program. He obtained his PhD in the laboratory of Dr. Robert Schimke in 1981, studying gene amplification as a mechanism of chemotherapeutic drug resistance, and received his MD in 1983. He subsequently completed a medical internship and residency at Massachusetts General Hospital, followed by a clinical fellowship in medical oncology at Dana Farber Cancer Institute (1986). Dr. Haber then pursued postdoctoral research training with Dr. David Housman at MIT, working on the characterization of the Wilms Tumor sup-
Dr. Korf completed a doctorate in genetics and cell biology from Rockefeller University and his medical degree from Cornell University. He then served as medical director of the Partners Center for Human Genetics, with appointments at Brigham and Women's Hospital and Massachusetts General Hospital. He currently serves as the chair of the University of Alabama at Birmingham’s (UAB) Department of Genetics and holds the Wayne H. Finley and Sara Crews Finley Chair of Medical Genetics at UAB. He is a member of the board of directors of the American College of Medical Genetics and has served as President of the Association of Professors of Human or Medical Genetics. Dr. Korf’s major research interest is the natural history and genetics of neurofibromatosis.

Robert Mandel
Dr. Robert Mandel is the Chief Operating Officer of the MAeHC where he has operational responsibility for the organization’s mission of establishing three demonstration pilots of community-wide comprehensive electronic clinical infrastructure. This infrastructure will include electronic medical records, clinical decision support and information exchange all of which will provide better information and tools to support decision making at the point of care. The system will also enhance the ability to measure and report on outcomes and quality, supporting continuous improvement in healthcare delivery.

Prior to joining MAeHC, Robert was at Blue Cross Blue Shield of Massachusetts for five years most recently as Vice President of eHealth. His responsibilities in this role included managing the BCBSMA eHealth Program with significant focus on the eRx Collaborative and piloting medical decision support applications and other technologies that offer the potential of improving the quality and efficiency of care delivery. Robert also spent three years as Vice President of Provider Enrollment and Services where he lead many of the organization’s administrative simplification initiatives. In his tenure at the company Robert also served as Vice President of Health Care Services Administration and Medical Information and as Senior Medical Director of the Provider Partnerships Division.

Previous to Blue Cross Blue Shield of Massachusetts, Robert was the Vice President and Chief Medical Officer for Health Central, a provider-sponsored health plan in Harrisburg, PA. Before that, he served as Vice President of Clinical Integration for Capital Health Systems in Harrisburg, PA. He practiced ophthalmology full time for eight years in Harrisburg, PA before beginning his administrative career. Robert did his undergraduate work at Princeton University and obtained his medical degree from the Johns Hopkins University School of Medicine. After deciding to leave clinical practice full time, he obtained an MBA through the Wharton School of the University of Pennsylvania in Philadelphia in 1994.
Jeffrey Miller
Jeff Miller is Vice President for the worldwide Health Industry in HP’s Public Sector, Health and Education organization with responsibility for market strategy, business planning, and solution development. In addition, he oversees marketing and sales activities, driving overall effectiveness and impact on a global scale.

Miller is based in Research Triangle Park, North Carolina, and is a guest lecturer at the University of North Carolina School of Public Health. He has also served as the technical advisor to the Hospital and Health Networks Most Wired Hospitals program. He holds a master’s of Business Administration from the Fuqua School of Business at Duke University in Durham, North Carolina, and a bachelor’s in Economics from Northwestern University in Chicago.

Cynthia Morton
Cynthia Casson Morton received her Bachelor’s of Science degree from the College of William and Mary in Virginia and her Ph.D. in Human Genetics from the Medical College of Virginia in Richmond. She is the William Lambert Richardson Professor of Obstetrics, Gynecology and Reproductive Biology and Professor of Pathology at Harvard Medical School, Associate Director of the Harvard-Partners Center for Genetics and Genomics and Director of Cytogenetics at Brigham and Women’s Hospital, Dr. Morton is certified by the American Board of Medical Genetics in Ph.D. Medical Genetics, Clinical Cytogenetics and Clinical Molecular Genetics. Her research interests are in molecular cytogenetics, hereditary deafness, genetics of uterine leiomyomata and human developmental disorders.

As Director of Cytogenetics, Dr. Morton oversees the largest full-service academic cytogenetics laboratory in the country. This laboratory has been at the forefront in implementing molecular methods in diagnostic testing for chromosome studies that cross the lifespan. These tests include preimplantation and prenatal diagnostics, perinatal and childhood studies in the evaluation of congenital and developmental disorders, infertility and pregnancy loss studies, and cytogenetics of leukemias, lymphomas and solid tumors. Her laboratory has been a major site for training laboratory geneticists in clinical cytogenetics. Dr. Morton is a past member of the Board of Directors of the American Board of Medical Genetics where she served as Secretary, Treasurer and Chair of the Accreditation Committee. She was the Chair of the Molecular Genetic Pathology Policy and Exam Committees of the American Board of Medical Genetics and the American Board of Pathology. She served as a member and Chair of the Board of Scientific Counselors of the National Institute of Deafness and Other Communication Disorders. Currently she is a member of the Counsel of Scientific Trustees of the Deafness Research Foundation and serves as a member of the NIH Auditory Study Section. Dr. Morton has been selected to be the next Editor of The American Journal of Human Genetics.

Daniel Podolsky
Daniel Podolsky, M.D., is the newly appointed Chief Academic Officer of Partners HealthCare System. He is also the Mallinckrodt Professor of Medicine at Harvard Medical School and Chief of Gastroenterology of Massachusetts General Hospital in Boston, where he recently served as Chair of the Executive Committee on Research. Dr Podolsky is an authority on inflammatory bowel diseases and other digestive disorders. His research interests have focussed on the delineation of epithelial cell function, and his laboratory has made significant contributions to understanding the mechanisms through which growth factors and cytokines regulate epithelial function and the mechanisms of epithelial injury and repair. He is the Author of more than 300 original research and review articles, the past Editor-in-Chief of the journal Gastroenterology, and has been actively involved in numerous national organizations, including serving as President of the American Gastroenterological Association (AGA) in 2003-2004. Dr Podolsky received his undergraduate degree from Harvard College summa cum laude, and his medical degree from Harvard Medical School, followed by residency training in internal medicine and a fellowship at Massachusetts General Hospital.

Katherine Schneider
Katherine Schneider served as President of the National Society of Genetic Counselors (NSGC) in 2002. Schneider has a wide range of clinical and research experience in genetic counseling. She is currently Senior Genetic Counselor at the Dana-Farber Cancer Institute in Boston, Massachusetts. Her primary responsibilities are to provide genetic counseling services to individuals and families at risk for inherited forms of cancer and to develop and conduct clinical research projects involving those who undergo genetic testing. Prior to joining Dana-Farber in 1991, Schneider was part of a genetic counseling start-up company called Genetic Resource, which provided genetic counseling services to a variety of medical group practices and academic centers. She began her career at Yale University’s Department of Human Genetics Fetal Diagnosis Unit. There she provided genetic counseling for patients undergoing prenatal diagnosis and gathered data about clinical services for ongoing research projects. While at Yale, Schneider also oversaw the statewide maternal serum alpha-fetoprotein screening program in Connecticut.

Schneider is regarded as a leader in the field of cancer genetic counseling and in 1992, she was the first recipient of

Schneider has also served on two National Task Forces regarding genetic testing; The Task Force on Genetic Testing of the NIH-DOE Working Group on ELSI of the Human Genome Project and the Cancer Genetic Studies Consortium Task Force on Informed Consent.

Schneider graduated from the Yale University School of Medicine with a master's degree in public health (MPH) and from the University of California at Riverside cum laude with a bachelor of arts in human development. She is certified by the American Board of Medical Genetics and the American Board of Genetic Counseling and is also a member of the American Society of Human Genetics.

Ralph Snyderman
Dr. Ralph Snyderman is Chancellor Emeritus and James B. Duke Professor of Medicine at Duke University. Prior to that, he served as Chancellor for Health Affairs, Executive Dean of the School of Medicine, and President and Chief Executive Officer of the Duke University Health System, one of the few fully integrated health systems in the country. Dr. Snyderman led the transition of this excellent medical center into an internationally recognized model for academic medicine. During his tenure, the medical school and hospital ranked amongst the nation’s best. Dr. Snyderman was senior Vice President for Medical Research and Development at Genentech, Inc.

Dr. Snyderman received his M.D., magna cum laude, in 1965 from the Downstate Medical Center of the State University of New York and he served his internship and residency in medicine at Duke. Pre-eminent in his field of immunology, Dr. Snyderman is internationally recognized for his research contributions to our understanding of inflammation that have led to numerous important discoveries published in nearly 350 manuscripts over the last 25 years.

Additionally, Dr. Snyderman serves as a member of the board of directors of Proctor and Gamble Inc. as well as several other boards.

Michael Svinte
Michael Svinte is Vice President of Information Based Medicine at IBM Healthcare and Life Sciences, an IBM emerging business opportunity unit focused on information-based medicine. Svinte is charged with shaping IBM’s strategy and leading investments in opportunities such as clinical genomics, pharmacogenomics, clinical decision intelligence and biomedical imaging. Svinte’s organization works closely with business partners to define and deliver solutions to academic medical research centers, hospitals, governments, pharmaceutical and biotech clients around the world. The unit is part of IBM’s Healthcare and Life Sciences Industry.

Before assuming his current position, Svinte held executive positions in IBM Life Sciences as the vice president for worldwide business development and marketing. IBM Life Sciences became one of IBM’s most successful new businesses. He also held executive positions in IBM Global Services and at IBM corporate headquarters, and has served on the IBM Business Transformation Executive Council and IBM Strategy Executive Council. Svinte joined IBM in 1997. Prior to that, he was at Procter & Gamble in various business leadership roles for 11 years. Svinte earned his bachelor’s in business administration at the University of Michigan Business School.

Sharon Terry
Sharon is President and CEO of the Genetic Alliance and the founding Executive Director of PXE International, a lay advocacy group for the genetic condition pseudoxanthoma elasticum (PXE). Following the diagnosis of their two children with pseudoxanthoma elasticum (PXE) in 1994, Sharon, a former college chaplain, and her husband, Patrick, founded and built a dynamic organization that fosters ethical research and policies and provides support and information to members and the public. She is at the forefront of consumer participation in genetics research, services and policy and serves as an Ethical Legal and Social Implications Research Advisor of NHGRI/NIH, and a member of many of the major governmental advisory committees on medical research, including the National Institute of Arthritis Musculoskeletal and Skin Diseases Council. She is a member of the board of directors of the Biotechnology Institute and the advisory board of the Johns Hopkins Genetics and Public Policy Center funded by the Pew Charitable Trusts. She has co-authored numerous papers including two papers on the discovery of the PXE gene, published back-to-back in Nature Genetics, June 2000. As a co-inventor of the gene associated with PXE (ABCC6), she has filed a patent application for the invention. She directs a 19-lab research consortium and manages 52 offices worldwide for PXE International.

She recently founded the Genetic Alliance Biobank and serves as president of its board. The Biobank is a cooperative biological samples and data repository that allows lay advocacy and community organizations to bank and manage samples and data, thereby accelerating research both within and across disease by providing access to fully protected, linked samples in a centralized collection.

Sharon feels strongly that consumers, working together and partnering with professionals and industry, can generate the energy and mechanisms necessary to realize the promise of

continued
basic research. Her work with the Genetic Alliance over the past few years has included working on international and national committees, particularly focused on genetic literacy, research protections, biosample repositories, technology translation, accessible services and youth issues. Sharon is committed to facilitating technical assistance to lay advocacy groups, so that each group benefits from the wisdom of the other.

**Eric Topol**

Dr. Eric J. Topol is Chief Academic Officer of The Cleveland Clinic Foundation and Provost of the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. He is also Chairman of the Department of Cardiovascular Medicine and Professor of Medicine and Genetics. He is Program Director for the NIH supported Specialized Center of Clinically Oriented Research (SCCOR) on the molecular basis of coronary artery disease. He is certified as a Diplomate by the National Board of Medical Examiners, and as a Diplomate by the American Board of Internal Medicine in cardiovascular disease and internal medicine.

Dr. Topol has been elected to the American Association of Physicians, the American Society of Clinical Investigation, and the Johns Hopkins Society of Scholars. He is a Fellow of the American College of Cardiology, the American College of Physicians, and the European Society of Cardiology. He has been recognized by the Institute of Scientific Information (ISI) to be in the top 10 (#8) of cited biomedical researchers in medicine (1993-2003), and he is ranked 1st by Science Watch among authors of high impact papers in cardiovascular research (1993-2003). His work on the genomics of coronary disease led to the discovery of the first mutation (MEF2A deletion) inducing coronary disease and heart attack (Science, 2003), and received recognition as a top 10 research advance by the American Heart Association, garnering Dr. Topol the Clinical Research Innovator Award of the Doris Duke Charitable Foundation in 2001. The cardiology program he directs in Cleveland has been ranked Number 1 in the United States by U.S. News & World Report for the past 10 years.

Dr. Topol has served as chairman and principal investigator for more than 15 international multi-center randomized clinical trials, including the 5 GUSTO trials, the largest heart attack studies ever conducted, and many others, with cumulatively more than 200,000 patients enrolled. He was the first physician ever to administer recombinant t-PA, 2 different platelet glycoprotein IIb/IIIa inhibitors (abiximab and eptifibatide), and a novel anticoagulant (bivalirudin) to patients with coronary artery disease. The results of these large-scale trials, involving 40 countries around the world, have substantially changed our approach to patients with acute MI, percutaneous coronary interventions, and unstable angina.

Currently he serves on the editorial board for over 20 peer-reviewed medical publications including Circulation, Circulation Research, Journal of the American College of Cardiology, American Journal of Cardiology, Heart and the European Heart Journal. He has over 900 original publications and has edited 18 books, including the Textbook of Interventional Cardiology (1s through 4th editions) and the Textbook of Cardiovascular Medicine, the third edition now in preparation.

**Reed Tuckson**

A graduate of Howard University and Georgetown University School of Medicine, Dr. Reed Tuckson is currently Senior Vice President of Consumer Health and Medical Care Advancement at UnitedHealth Group where he is responsible for working with all of the Company’s business units to improve the quality and efficiency of health services.

Formerly, Dr. Tuckson served as Senior Vice President, Professional Standards, for the American Medical Association (AMA). He is former President of the Charles R. Drew University of Medicine and Science in Los Angeles; has served as Senior Vice President for Programs of the March of Dimes Birth Defects Foundation; and is a former Commissioner of Public Health for the District of Columbia.

Dr. Tuckson is an active member of the Institute of Medicine of the National Academy of Sciences and served as the Chairperson of its Quality Chasm Summit Committee and a member on their Committee on the Consequences of the Uninsured. Currently, he serves as Chair of the Secretary of Health and Human Services’ Advisory Committee on Genetics, Health and Society. Dr. Tuckson has also held other federal appointments, including cabinet level advisory committees on health reform, infant mortality, children’s health, violence, and radiation testing.

**David Valle**

Dr. Valle is Professor of Pediatrics, Medicine, Molecular Biology and Genetics, Ophthalmology, and Biology at the Johns Hopkins University School of Medicine. He received his undergraduate degree in zoology and his medical degree from Duke University. His internship and residency in pediatrics were completed at the Johns Hopkins Hospital. His postdoctoral research in metabolism was done at NIH. Dr. Valle was recently elected to the National Academy of Sciences’ Institute of Medicine.
The past several years have fueled a revolution in human genetics, which is having a very significant impact on virtually all specialties of medicine. There are several scientific advances that are responsible for this revolution. One is the recognition that the genetic composition of humans has a significant role to play in that individual’s health and predisposition to common diseases such as heart disease and cancer. The second is the availability of the human genome sequence and the many high throughput technologies that have been developed during the human genome project. This new genomic era provides excellent opportunities to identify genes and the specific genetic changes that are responsible for human disease, and to understand how such changes cause disease. In the clinical arena, it is becoming possible to utilize the emerging genetic and genomic knowledge to diagnose and treat patients. Widespread use of such genetic and genomic information will revolutionize medical practice. In the area of treatment, the knowledge of the genetic basis of human disease is ushering a new era in drug development that is focused on targeted drug development. Genetic profiling of individuals in clinical trials will help in correlating individuals with their response to specific drugs, leading to the era of personalized medicine.

To realize the promise of genetics and genomics in research and in medical practice, the Harvard Medical School-Partners Healthcare Center for Genetics and Genomics (HPCGG) was established in the fall of 2001. Its mission is to accelerate the realization of personalized medicine by discovering and integrating genetic knowledge into the healthcare system. Raju Kucherlapati, Ph.D., the Paul C. Cabot Professor of Genetics at Harvard Medical School, is the Center’s first scientific director.

The mission of the Center is being accomplished through the following approaches:

- Recruiting outstanding faculty
- Providing enabling technologies for researchers
- Offering genetic-based diagnostic testing
- Caring for patients with genetic disorders
- Training and educating physicians, scientists and the public
- Developing an IT infrastructure to integrate genetic and genomic data into clinical decision support systems

For more information about the Center please visit www.hpcgg.org
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