

*The National Cancer Institute Office of Biorepositories and Biospecimen Research (OBBR)
and the National Institutes of Health Office of Rare Diseases present the
Biospecimen Research Network (BRN) Symposium:*

Advancing Cancer Research through Biospecimen Science

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Renaissance M Street Hotel
Washington, D.C.

Speaker Bios

Brian M. Balgley, M.D., Ph.D., earned his doctorate in biochemistry at the University of Maryland. He directed the university's mass spectrometry core facility before joining Calibrant Biosystems, Inc., where he has led the development of the company's Gemini drug discovery platform. In his role as Chief Technical Officer, he is responsible for advancing Calibrant's Gemini platform for the differential analysis of proteins from microdissected tissue specimens. In addition, Dr. Balgley leads the company's drug discovery programs while working closely with the executive team to guide overall business strategy within the company. Dr. Balgley has more than 12 years of experience in proteomic technology development and mass spectrometry.

Anna D. Barker, Ph.D., serves as Deputy Director of the NCI and as Director of NCI's Advanced Technologies and Strategic Partnerships. In this role, she has developed and implemented multi/transdisciplinary programs in strategic areas of cancer biology and advanced technologies including the Nanotechnology Alliance for Cancer, The Cancer Genome Atlas (TCGA), and the Clinical Proteomics Technologies Initiative for Cancer. She actively participates in these programs and serves in a team leadership role for TCGA. Dr. Barker has also led and collaborated on the development of contemporary resources for cancer research in the areas of biospecimens and bioinformatics to support molecularly based personalized medicine. Dr. Barker has a long history in research and the leadership and management of research and development in the academic, nonprofit, and private sectors. She served as a senior scientist and subsequently as a senior executive at Battelle Memorial Institute, where she developed and led a large group of scientists working in drug discovery and development, pharmacology, and biotechnology, with a major focus in oncology and NCI-supported programs. She cofounded and served as CEO of a public biotechnology drug development company and founded a private cancer technology-focused company. Her research interests include small molecule experimental therapeutics, tumor immunology, and free-radical biochemistry in cancer etiology and treatment. Anna Barker

completed her M.A. and Ph.D. at The Ohio State University, where she trained in immunology and microbiology.

Guido Brink, M.S., began his career in the Department of Quality Control Development at Centocor. Under FDA Good Laboratory Practices regulations, he performed extensive validation studies using biochemical analyses for newly developed monoclonal antibody drugs. As Head Technician of the Molecular Pathology Department and Family Cancer Clinic at the Netherlands Cancer Institute, he developed diagnostic techniques for the analysis of hereditary breast cancer mutations in BRCA1 and BRCA2 genes, and in his role as Quality Manager, he developed quality systems for the histology, cytology, and molecular pathology laboratories, including one that resulted in an ISO/IEC 17025 accreditation for hereditary breast cancer diagnostic screening. From 2001 through 2003, Mr. Brink worked with the future Agendia BV board and laboratory director to cofound this company. In 2003, he joined Agendia, where he was responsible for quality control, regulatory affairs, information and communication technology, and logistics. Mr. Brink's accomplishments at Agendia include obtaining an ISO/IEC 17025 accreditation for Agendia as the first microarray laboratory in the world, accreditation certificates from the U.S. Government and College of American Pathologists under the Clinical Laboratory Improvement Amendments, and the first global In Vitro Diagnostic Multivariate Index Assay clearance from the FDA for Agendia's MammaPrint, the 70-gene breast cancer signature. Together with the FDA, he also developed a Special Control Guidance Document for breast cancer testing in the United States. As Director of Quality Management and Regulatory Affairs, Mr. Brink is also responsible for reimbursement of Agendia's services worldwide.

Patrick O. Brown, M.D., Ph.D., is a Howard Hughes Investigator and Professor in the Department of Biochemistry, Beckman Center for Molecular and Genetic Medicine, at Stanford University Medical Center. He received his M.D. and Ph.D. from the University of Chicago. His thesis work with Nicholas Cozzarelli investigated the basic molecular mechanisms of DNA topoisomerases. Dr. Brown completed residency training in pediatrics in 1985 at Chicago's Children's Memorial Hospital. In a postdoctoral fellowship at the University of California, San Francisco with J. Michael Bishop and Harold Varmus, he characterized the mechanism by which retroviruses, such as HIV, incorporate their genes into the genomes of their hosts. In 2000, Dr. Brown played a pioneering role in open access to the scientific literature by cofounding the Public Library of Science with Harold Varmus and Michael Eisen. His current research activities include systematic studies of global gene expression programs and their regulation; the use of DNA microarrays and other genomic approaches to explore fundamental questions in cell biology, physiology, and development; and the development and application of molecular profiling methods for detection and diagnosis of disease, particularly cancer.

Kevin Camphausen, M.D., is Chief of the Radiation Oncology Branch at the NCI's Center for Cancer Research and Head of the NCI's Imaging and Molecular Therapeutics Section. He received his M.D. from Georgetown University in 1996 and completed his internship there in 1997. He

performed a residency in radiation oncology at the Joint Center for Radiation Therapy at Harvard Medical School that included studies of the interaction of angiogenesis inhibitors and radiotherapy. Dr. Camphausen joined the NCI in July of 2001 as a tenure-track investigator. Beginning in April of 2004 he served as Deputy Chief of the Radiation Oncology Branch and recently became Branch Chief. Dr. Camphausen is an internationally recognized leader and expert in the field of drug-induced tumor radiosensitization, including the use of antiangiogenic agents in combination with radiotherapy.

Carolyn C. Compton, M.D., Ph.D., is Director of the NCI Office of Biorepositories and Biospecimen Research and Acting Director of the Office of Technology and Industrial Relations. She received her M.D. from Harvard Medical School and Ph.D. from the Harvard Graduate School of Arts and Sciences and trained in anatomic pathology and clinical pathology at Brigham and Women's Hospital. She came to the NCI from McGill University in Montreal, where she was Strathcona Professor and Chair of Pathology and Pathologist-in-Chief of McGill University Health Center. Prior to this, she was Professor of Pathology at Harvard Medical School and Director of Gastrointestinal Pathology at Massachusetts General Hospital. Currently, she is an adjunct professor of pathology at the Johns Hopkins Medical School. In addition to human biospecimen science, her research interests include translational studies in colon cancer, pancreatic cancer, and wound healing. Dr. Compton currently holds several national and international leadership positions in professional organizations such as the College of American Pathologists, the Cancer and Leukemia Group B, the American Joint Committee on Cancer, and the American Society of Clinical Oncology. She is currently a member of the editorial boards of *Cancer*, *Cell Preservation Technology*, and *Clinical Proteomics*. She has published more than 350 original papers, reports, review articles, books, and abstracts.

Angelo M. De Marzo, M.D., Ph.D., received his M.D. and Ph.D. in experimental pathology from the University of Colorado Health Sciences Center in 1994. He completed a residency in anatomic pathology at the Johns Hopkins University (JHU) School of Medicine and subsequently a research fellowship in the Department of Urology with Dr. Donald S. Coffey. He joined the full-time faculty at Johns Hopkins in 1998 as Instructor of Pathology. Dr. De Marzo is currently Associate Professor of Pathology, Urology, and Oncology and serves as Director of the Pathology Core for the Specialized Program of Research Excellence (SPORE) in prostate cancer; Director of Pathology Cancer Research; and Director of the Tissue Microarray Core Facility at JHU. He has published 97 peer-reviewed primary publications, 29 invited reviews, and 6 book chapters, mostly related to the molecular pathogenesis of prostate cancer. Dr. De Marzo's laboratory serves as an official immunohistochemistry core in the prostate cancer SPORE and has developed open source tissue microarray software tools collectively known as TMAJ (<http://tmaj.pathology.jhmi.edu>). Dr. De Marzo leads the Pathology Core component of the Inter-Prostate SPORE Biomarkers Study, bringing together 11 institutions to enroll patients to enhance the ability to develop predictive biomarkers in prostate needle biopsies. Dr. De Marzo

serves as a Prostate Cancer Research Program Integration Panel Member for the Department of Defense Congressionally Directed Medical Research Program Prostate Cancer Research Program, has served as an ad hoc member on a number of NIH study sections and grant review panels, and is an Editorial Board Member for The Prostate and the new AACR Journal Cancer Prevention Research.

Theo deVos, Ph.D., is Vice President of Development Diagnostics at Epigenomics, Inc. He received his doctorate in genetics from the University of Manitoba, with a focus on the genetics of immunity to parasitic infection. He went on to a postdoctoral fellowship at Seattle Biomedical Research Institute, where he worked on genomic organization and genome plasticity in *Leishmania* and helped in founding the *Leishmania* genome project. Dr. deVos subsequently served as Director of Research at Icogen Corporation, a biotechnology startup company in Seattle. He joined Epigenomics in 2002, where he has been responsible for the development, optimization, and implementation of preanalytic processes for the validation of DNA methylation biomarkers.

William E. Grizzle, M.D., Ph.D., earned his Ph.D. in biophysics and his M.D. from Johns Hopkins University and is currently Professor of Pathology at the University of Alabama at Birmingham. His research program employs proteomic and genomic approaches to investigate the molecular features of epithelial cancers such as prostate, pancreas, mammary, colorectal, and ovarian adenocarcinomas as well as squamous cell lesions of oral cavity, esophagus, lung, cervix, and skin in order to identify biomarkers associated either with early preinvasive neoplastic lesions or with advanced-stage malignant lesions. Of special interest are biomarkers that can be used to aid in determining prognosis, risk assessment, or predicting therapy efficacy. Primarily sponsored by the Cooperative Human Tissue Network, Dr. Grizzle's laboratory has been providing human tissues to support the research of biomedical investigators throughout North America for two decades, pioneering biorepository quality control and database development. He is a member of several professional chemistry, histology, and pathology organizations and has served as President of both the International Society of Biological and Environmental Repositories and the Biological Stain Commission.

Steven Gutman, M.D., M.B.A., is a board certified pathologist with a B.S. from The Ohio State University, an M.D. from Cornell University Medical College, and an M.B.A from the State University of New York at Buffalo. He completed residency training in anatomical pathology at Cornell and clinical pathology at the Mayo Clinic. After 10 years of experience as Clinical Pathologist and Chief of the Laboratory Service at the Buffalo Veterans Administration Medical Center, he joined the Division of Clinical Laboratory Devices at FDA as a medical officer in 1992. He was promoted to Division Director in 1993. In November 2002 he became Director of the Office of In Vitro Diagnostic Device Evaluation and Safety, a new office in the FDA's Center for Devices and Radiological Health.

M. Elizabeth H. Hammond, M.D., FCAP, is Professor of Pathology and Adjunct Professor of Internal Medicine at the University of Utah School of Medicine. She is past Chairman of the Pathology Department at LDS Hospital and currently a member of Intermountain Healthcare Board of Trustees. She is internationally known as a researcher, educator, and expert in transplantation pathology and in predictive cancer factor evaluation. The bulk of her research has been performed within the Utah Transplant Affiliated Hospitals Cardiac Transplant Program and in the emerging field of predictive cancer factor testing. Her leadership efforts and published findings have led to standardized laboratory testing procedures now used throughout the United States, including diagnosis of cardiac transplant rejection, HER2 testing in breast cancer, and summary cancer reports. Dr. Hammond is the author of 3 books, 15 book chapters, and 165 papers in peer-reviewed medical journals. She is currently the editor of an online decision support system for pathologists being developed by a local Utah company (Amirsys, Inc.) in collaboration with other internationally recognized pathologists. She was recently recognized by the College of American Pathologists as the 2005 Pathologist of the Year for "outstanding leadership to the field of pathology and for pathologists, to the programs of the College, and for continued advocacy through her life work dedicated to improving the lives of patients."

Daniel F. Hayes, M.D., is Clinical Director of the Breast Oncology Program at the University of Michigan Comprehensive Cancer Center, where he is also Professor of Internal Medicine. He received his bachelor's and master's degrees at Indiana University and his M.D. from the Indiana University School of Medicine. He subsequently completed a residency in internal medicine at the University of Texas Health Science Center at Dallas, Texas. He served as a fellow in medical oncology and then as a faculty member at Harvard's Dana Farber Cancer Institute (DFCI) in Boston. He later assumed the role of Medical Director of the Breast Evaluation Center at DFCI, which he held until he moved to Georgetown University. Dr. Hayes later joined the University of Michigan Cancer Center. He has been influential in both clinical and laboratory studies of the diagnosis and treatment of breast cancer and is an internationally recognized leader in the use of tumor biomarkers. Dr. Hayes has been Chair of the Solid Tumor Correlative Sciences Committee of Cancer and Leukemia Group B and is now Chair of the Breast Cancer Translational Medicine Committee of the Southwest Oncology Group. He is Chair of the Correlative Sciences Committee of the U.S. Breast Cancer Intergroup, and he cochairs the Expert Panel for Tumor Marker Practice Guidelines for American Society of Clinical Oncology (ASCO). He serves on the editorial boards of several leading cancer journals. In 2007, he was awarded ASCO's Gianni Bonadonna Breast Cancer Award.

Scott Jewell, Ph.D., is Associate Professor in the Department of Pathology at The Ohio State University (OSU) College of Medicine. He also is Executive Director of the Human Tissue Resource Network for the Department of Pathology and Associate Director of Biorepository and Biospecimen Resources for the OSU Comprehensive Cancer Center. These entities support clinical trials and basic science research for the following programs: The NCI Cooperative Human

Tissue Network, the Tissue Procurement Service, Diagnostic Tissue Archive Service, Pathology Core Facility, and the Cancer and Leukemia Group B Pathology Coordinating Office. Quality of biospecimens and biospecimen research are the focus of Dr. Jewell's laboratory, where improvements in the management of biospecimens are made through evidence-based best practices for procurement and banking. Dr. Jewell has served as Chair of the NCI Clinical Trials Group Banking Committee (GBC); currently is Cochair of the GBC Best Practices and Operations Subcommittee; serves as a member of the Biospecimen Subcommittee for the NCI, AACR, and FDA's Critical Path Initiative; and is a member of the International Society of Biological and Environmental Repositories.

Paula Kim is a long-time advocate for cancer patients and multidisciplinary approaches to cancer research who works to harmonize the efforts of clinicians, scientists, public agencies, industry, and patients. She was Founding Chairman and President of the Pancreatic Cancer Action Network, Inc. (PanCAN), the disease's first and, at that time, only national patient advocacy organization. More recently, she created and is CEO of Translating Research Across Communities, or TRAC, a professional services firm that works to advance research progress and interaction among the patient, research, public, and private communities. Ms. Kim recently established the Paula Kim Research Network, a public nonprofit organization serving the needs of the patient and research communities. Ms. Kim regularly contributes to a number of governmental cancer and health initiatives and actively participates with the National Accreditation Program for Breast Centers, the National Coalition for Cancer Research, the National Pancreas Foundation, the National Comprehensive Cancer Network, the American College of Radiology Imaging Network, FasterCures, and C-Change.

Ms. Kim, with her diverse background and varied professional activities, plays an integral role in advancing biospecimen research. She collaborates with the science and patient communities, striving for more focus on the world of biobanking, and encouraging communication and raising awareness about the vital links between biospecimens and cancer research.

Lance Liotta, M.D., Ph.D., is Co-Director of the George Mason University Center for Applied Proteomics and Molecular Medicine, where he also serves as Tenured Distinguished University Professor and Professor of Life Sciences. He received his M.D. and doctorate from Case Western Reserve University. Dr. Liotta is former Chief of the Laboratory of Pathology and Chief of the Section of Tumor Invasion and Metastases at the NCI as well as former Deputy Director for Intramural Research at the NIH. He has devoted his career to the study of the molecular basis of cancer progression and metastasis, the major cause of cancer treatment failure, and was one of the first scientists to investigate this process at a molecular level. Dr. Liotta has invented a series of microdissection technologies and proteomic methods that are routinely used in biomedical research and clinical diagnostics. He holds more than 80 patents for his work and has published more than 650 papers. Dr. Liotta is listed as a highly cited medical researcher by the Institute for Scientific Information.

Christopher J. Logothetis, M.D., Ph.D., is Professor and Chair of the Department of Genitourinary Medical Oncology at The University of Texas M. D. Anderson Cancer Center in Houston, Texas. He is an internationally recognized leader in prostate cancer research and Principal Investigator of the M. D. Anderson Specialized Program of Research Excellence (SPORE) in Prostate Cancer. He has validated clinical biologic markers in prostate cancer. Dr. Logothetis is Director of the Genitourinary Cancer Center and the Prostate Cancer Research Program, multidisciplinary collaborations of physicians and scientists dedicated to genitourinary cancer treatment, research, prevention, and education. Among other responsibilities, Dr. Logothetis is on the advisory boards of a number of companies, including Synta Pharmaceuticals' Oncology Advisory Board, and is a leader in the Therapy Consortium, an active collaborative of researchers involved in the development of innovative therapy for prostate cancer. He has published more than 200 papers in peer-reviewed journals.

Helen M. Moore, Ph.D., directs the NCI Biospecimen Research Network (BRN). Under Dr. Moore's leadership, the BRN has grown from concept stage to a multidimensional program encompassing intramural and extramural research programs, a Web-based biospecimen literature database, and community outreach activities, including the current Advancing Cancer Research Through Biospecimen Science symposium.

Dr. Moore has a broad background in research and product development. She joined the NCI from Celera Genomics, where she led and managed cross-functional teams to develop bioinformatics products focused on comparative genomics and data visualization; developed new drug targets for complex diseases using multiple approaches, including genetic analysis of disease association study data, biological pathways analysis, literature mining, and genomic analysis; and contributed to the assembly and annotation of the human genome map. Helen Moore earned her B.A. at Wellesley College and her Ph.D. at Cornell University. Her research experience includes work on human genomics and bioinformatics, fruit fly signaling, plant molecular biology, Alzheimer's disease, and synthetic skin.

Scott D. Patterson, Ph.D., received his B.S. and Ph.D. from The University of Queensland, Australia, where he held positions of increasing responsibility culminating in that of Senior Research Officer. In 1991 he joined the faculty of Cold Spring Harbor Laboratory, where he established a program in apoptosis and pursued his technical interests in analytical protein chemistry applications. Dr. Patterson first worked at Amgen, Inc., from 1993–2000, progressing from Research Scientist to Department Head and ultimately leading the Department of Biochemistry and Genetics. After leaving Amgen in 2000, he served as Vice President of Proteomics at Celera Genomics and then as Chief Scientific Officer of Farmal Biomedicines, LLC. While at Celera, he established the company's initial foray into protein-based drug target discovery and validation in oncology, bringing together a large group of cell biologists, protein chemists, and mass spectrometrists whose efforts resulted in the identification of cell surface

targets for therapeutic development and diagnostics, a number of which have been licensed to pharmaceutical and biotechnology companies.

Dr. Patterson returned to Amgen in 2003 as Executive Director of Medical Sciences. He is well known in the field of protein chemistry and is one of the pioneers in the field of proteomics. He has published extensively and is a frequent guest lecturer.

David F. Ransohoff, M.D., is Professor of Medicine and Clinical Professor of Epidemiology at the University of North Carolina (UNC) at Chapel Hill. He graduated from Harvard College and Case Western Reserve School of Medicine and did his internship and residency at Dartmouth-Hitchcock. A clinical epidemiology fellowship with Alvan Feinstein in Yale's Robert Wood Johnson Clinical Scholars Program resulted in the establishment of the field of methods for evaluating diagnostic tests. After a fellowship at the University of Chicago, Dr. Ransohoff served on the faculties of Case Western Reserve University, Yale University, and then UNC, conducting research in the diagnosis and management of serious gastrointestinal problems.

Dr. Ransohoff extended his work in clinical epidemiology and diagnosis to include molecular markers for cancer and now collaborates with a number of NCI groups including the Early Detection Research Network and the Clinical Proteomic Technology Assessment for Cancer. At UNC, Dr. Ransohoff directs the NIH-funded K30 clinical research curriculum faculty development program.

Dennis J. Slamon, M.D., Ph.D., is Director of Clinical/Translational Research at the Jonsson Comprehensive Cancer Center and Professor of Medicine and Chief of the Division of Hematology and Oncology at the David Geffen School of Medicine, University of California, Los Angeles. He is an accomplished physician-scientist internationally recognized for his work on the roles of growth factors and oncogenes in cancer. His numerous research accomplishments include demonstration of amplification of the N-myc gene in neuroblastoma; demonstration of amplification of the HER2/neu gene in certain highly aggressive forms of breast and ovarian cancer; the causative role of the HER2/neu amplification in the malignant phenotype of breast cancer; and the development, in collaboration with Genentech, of the HER2 antibody reagent. In 1998, Herceptin was approved by the FDA, and today the drug is used by up to 250,000 women worldwide to treat HER2-positive breast cancer. His research in breast cancer has been recognized by several awards: The American Cancer Society's Medal of Honor, the Rosenthal Family Foundation Award from the American Association of Cancer Research, and awards from the Gairdner Foundation and the National Breast Cancer Coalition, among others. In 2000, Dr. Slamon was appointed to a 2-year term on the President's Cancer Panel.

Gerry Thomas, Ph.D., earned her degree in pharmacology from the University of Bath in 1982, followed by a Ph.D. in pathology at the University of Wales College of Medicine in 1988. She moved to Cambridge in 1992, where she was Joint Head of the Thyroid Carcinogenesis Research Group with Professor Sir Dillwyn Williams. She returned to Wales as a senior lecturer in molecular oncology at Swansea Medical School in 2002, where she and Professor Robert

Leonard, a breast oncologist, headed the Human Cancer Studies Group at the new Swansea Medical School. In July 2007, she took up a new post as Professor of Molecular Pathology at Imperial College, London, and now runs a revitalized Human Cancer Studies Group at Hammersmith Hospital with Professors Leonard and Gordon Stamp. Dr. Thomas's research interests include the effect of age on the biology of thyroid and breast cancer, radiation-induced thyroid cancer, and the development of biological profiles for predicting outcome to treatment in breast cancer patients. She has published extensively on the molecular pathology of thyroid cancer post Chernobyl and is Project Director for the Chernobyl Tissue Bank. Dr. Thomas is also Director of Scientific Services for the Wales Cancer Bank, which started collecting tissue from patients with all types of cancer in Wales in February 2005, and is Honorary Professor of Molecular Oncology at Swansea University.

Paul Waring, M.D., Ph.D., joined Genentech, Inc., in 2004 as Senior Director of Pathology and Diagnostics. He received his M.D. from the University of Western Australia, his Ph.D. from the Walter and Eliza Hall Institute in Melbourne, and trained in Anatomical Pathology in Perth. Prior to joining Genentech, he was Director of Pathology at the Peter MacCallum Cancer Institute in Melbourne and Associate Professor of Pathology at University of Melbourne. His current interests include the development of predictive biomarkers to identify patients who would benefit from targeted therapies. Dr. Waring has published over 60 original papers, review articles, and book chapters in a range of subjects including cytokine biology, genetically engineered mouse models of human disease, cancer genomics, and acquired resistance to targeted therapies. He has held senior positions in professional organizations in Australia including the Royal College of Pathologists of Australasia, the Australian Cancer Council, and the Human Genetics Society of Australasia.

Jim Wittliff, Ph. D., M.D. hc, received his Ph.D. in molecular biology from The University of Texas at Austin. After postdoctoral studies at Oak Ridge National Laboratory, he joined the University of Rochester where he helped develop the Cancer Center as Director of the Section on Endocrine Biochemistry.

Dr. Wittliff then became Professor and Chair of the Department of Biochemistry, University of Louisville. He is also Director of the Institute for Molecular Diversity and Drug Design. He was one of the first to identify a correlation between presence of estrogen receptors in a breast cancer biopsy and response to hormone therapy, which contributed significantly to collaborative studies with the National Surgical Adjuvant Breast Project (NSABP) that established Tamoxifen as an adjuvant therapy. He also developed the first FDA-approved kits for assessing steroid receptors in tumor biopsies, working with New England Nuclear Corporation/DuPont. The NCI designated his laboratory as a National Reference Facility for performing quality assurance surveys of receptor testing for cooperative clinical trial groups in the United States and Canada. He also collaborated with the College of American Pathologists in providing proficiency surveys for these analytes. In recognition of Dr. Wittliff's contributions to the biology and treatment of

cancer, the University of Innsbruck, Austria awarded him Doctor of Medicine honoris causa in 1998. He also received the Award for Outstanding Contributions to Clinical Chemistry in a Selected Area of Research from the American Association for Clinical Chemistry and the Goldsmith Award for Research Excellence from the American Cancer Society.