10th Annual Scientific Symposium
A CME/CNE – Certified Conference

BRCA1, BRCA2 and Beyond: An Update on Hereditary Cancer

Keynote Speaker and Bassner Global Prize Awardee: Andre Nussenzweig, PhD

Tuesday, May 10 – Wednesday, May 11, 2022

Smilow Center for Translational Research Auditorium/Commons
(enter through Perelman Center for Advanced Medicine)
Program Overview

This symposium is designed to educate researchers, scientists, and health care providers in cancer genetics by presenting cutting-edge data from renowned researchers and clinicians. This symposium will provide new information on progress in cancer screening and prevention, as well as ongoing work in targeted therapy for BRCA1/2 and other mutation carriers through a series of lectures and panel discussions.

PROGRAM OBJECTIVES

At the completion of this symposium, attendees should be able to:

• Discuss new research on the genetic epidemiology of BRCA1/2 and other homologous recombination deficiency (HRD) genes.
• Describe current ethical, legal and social issues associated with carrying a BRCA1/2 mutation.
• Review new approaches to screening and prevention of hereditary breast, ovarian, pancreatic and prostate cancer.
• Discuss new advances in treatment for mutation carriers of BRCA1/2 and other known cancer susceptibility genes.

WHO SHOULD ATTEND

Healthcare providers including medical oncology, surgical oncology, gynecology oncology, OB-GYN, genetic counselors, primary care physicians, physician assistants and nurses/nurse practitioners who are interested in the genetics of BRCA1/2 related cancers.
The Basser Center is honored to announce that Andre Nussenzweig, PhD, of the National Cancer Institute (NCI), is the recipient of the ninth annual Basser Global Prize. Dr. Nussenzweig serves as Branch Chief of the Laboratory of Genome Integrity in the NCI’s Center for Cancer Research. Dr. Nussenzweig’s work on the fundamental aspects of DNA repair, replication, and genome integrity in cells has led to important discoveries that have applications for the development of biomarkers and targeted therapeutics for the treatment of BRCA-mutated cancers. In 2011, Dr. Nussenzweig established a new department at NCI called the Laboratory of Genome Integrity. He is also an elected member of the European Molecular Biology Organization, a National Institutes of Health Distinguished Investigator and a 2019 inductee into the National Academy of Medicine.

Susan Domchek is the Basser Professor in Oncology at the Perelman School of Medicine of the University of Pennsylvania. She serves as Executive Director of the Basser Center for BRCA at the Abramson Cancer Center and Director of the Mariann and Robert MacDonald Cancer Risk Evaluation Program. Her work focuses on the genetic evaluation and medical management of individuals with inherited risk factors for cancer. Dr. Domchek is particularly interested in developing new cancer therapies, such as PARP inhibitors, for patients with genetic risk factors. An elected member of the National Academy of Medicine, Dr. Domchek is also a significant contributor to the oncology literature. She has authored/co-authored more than 350 articles appearing in scholarly journals including the New England Journal of Medicine, the Journal of the American Medical Association and the Journal of Clinical Oncology, among others.
SYMPOSIUM CO-ORGANIZERS

Ronald Drapkin, MD, PhD
Associate Professor of Pathology in Obstetrics & Gynecology
Director, Ovarian Cancer Research Center
Director of Gynecologic Cancer Research, Basser Center for BRCA

Dana Farengo Clark, MS, MS, LCGC
Senior Genetic Counselor
Mariann & Robert MacDonald Cancer Risk Evaluation Center
Basser Center for BRCA

Adam Fredo, PA-C
Physician Assistant
Medical Oncology
Penn Medicine

Roger Greenberg, MD, PhD
Professor of Cancer Biology
Investigator, Penn Center for Genome Integrity
Director of Basic Science, Basser Center for BRCA

Mosetta Harris, CRNP
Nurse Practitioner
Rena Rowan Breast Center
Penn Medicine

Katherine Nathanson, MD
Pearl Basser Professor of BRCA-Related Research
Deputy Director, Abramson Cancer Center
Director of Genetics, Basser Center for BRCA

PENN MEDICINE FACULTY

George Burslem, PhD
Assistant Professor
Department of Biochemistry and Biophysics

Jessica Ebrahimzadeh, MS, LCGC
Genetic Counselor
Mariann & Robert MacDonald Cancer Risk Evaluation Center
Basser Center for BRCA

Kara Maxwell, MD, PhD
Assistant Professor of Medicine and Genetics
Staff Physician, Corporal Michael Crescenz VA Medical Center

Robert H. Vonderheide, MD, DPhil
Director, Abramson Cancer Center
Vice President, University of Pennsylvania Health System
Vice Dean, Perelman School of Medicine
GUEST SPEAKERS

Kara Bernstein, PhD
Associate Professor
Department of Pharmacology Chemical Biology, School of Medicine
University of Pittsburgh School of Medicine

Karlene Cimprich, PhD
Professor of Chemical and Systems Biology
Stanford University School of Medicine

Gillian Hanley, PhD
Assistant Professor
Department of Obstetrics and Gynecology
University of British Colombia, Vancouver Coastal Health Research Institute

Neil Johnson, PhD
Associate Professor of Molecular Therapeutics
Fox Chase Cancer Center

Jos Jonkers, PhD
Professor of Molecular Experimental Oncogenetics and Cancer Therapeutics
University of Leiden, The Netherlands

Serena Nik-Zainal, MD, PhD
Professor of Genomic Medicine and Bioinformatics
University of Cambridge

Elton Zeqiraj, PhD
Sir Henry Dale Fellow
Astbury Centre for Structural Molecular Biology
School of Molecular and Cellular Biology
University of Leeds

Kenneth Offit, MD, MPH
Chief, Clinical Genetics Service
Vice Chair, Department of Medicine (Academic Affairs)
Member, Sloan Kettering Institute
Robert and Kate Niehaus Chair in Inherited Cancer Genomics
Memorial Sloan Kettering Cancer Center

Stephen Pettitt, PhD
Senior Staff Scientist
CRUK Gene Function/Target Validation & DDR Laboratories
Institute of Cancer Research, London

Mark Robson, MD
Chief, Breast Medicine Service
Clinic Director, Clinical Genetics Service
Memorial Sloan Kettering Cancer Center

Agata Smogorzewska, MD, PhD
Associate Professor Genome Maintenance
The Rockefeller University

Andrew Tutt, MB, ChB, PhD, FMedSci
Head of the Breast Cancer Research
Director, Breast Cancer Now Research Centre
The Institute of Cancer Research, London

Lee Zou, PhD
Professor of Pathology, Harvard Medical School
Scientific Co-Director, MGH Cancer Center
James and Patricia Poitras Endowed Chair in Cancer Research
7:30-8:15am  Registration
8:15-8:30am  Welcome and Introductions

**Morning Session**

8:30-9:00am  Jos Jonkers, PhD  
Insights from mouse models of BRCA associated breast cancer

9:00-9:30am  Neil Johnson, PhD  
*BRCA1-PALB2* in DSB repair

9:30-10:00am  Elton Zeqiraj, PhD  
Structure and function relationships of *BRCA1-BARD1* interactions

10:00-10:30am  **BREAK**

10:30-11:00am  George Burslem, PhD  
Chemical tools for the study of ubiquitination

11:00-11:30am  Lee Zou, PhD  
Impacts of transcription and RNAs on DNA break repair

11:30am-12:00pm  Karlene Cimprich, PhD  
RNA-mediated genome instability

12:00-1:15pm  **LUNCH & POSTER RECEPTION**

1:15-1:45pm  Serena Nik-Zainal, MD, PhD  
Recent insights on mutational signatures of *BRCA1* and *BRCA2* defective human cells
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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1:45-2:15pm</td>
<td>Agata Smogorzewska, MD, PhD</td>
<td>Mechanism of tumorigenesis in the setting of DNA interstrand crosslink repair deficiency</td>
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<tr>
<td>2:15-2:45pm</td>
<td>Kara Bernstein, PhD</td>
<td>Mutation cluster in breast and ovarian cancer suppressor \textit{RAD51C} identified by comprehensive analysis of cancer variants</td>
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<td>2:45-3:15pm</td>
<td><strong>BREAK</strong></td>
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<td>3:15-4:30pm</td>
<td>Global Prize presentation and keynote address</td>
<td>Andre Nussenzweig, PhD</td>
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<td>How BRCA proteins promote genome stability</td>
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<td>5:00-6:30pm</td>
<td>Breakthroughs and Discoveries panel moderated by</td>
<td>Susan Domchek, MD and featuring Andre Nussenzweig PhD, Andrew Tutt MB, ChB, PhD, FMedSci, and Kara Maxwell, MD, PhD</td>
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<td>This lay session is open to the public.</td>
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<td>8:30-9:00am</td>
<td>Andrew Tutt, MB, ChB, PhD, FMedSci</td>
<td>Optimising systemic therapy for women with BRCA1/2 mutations and HR deficient breast cancer: Recent data from the clinic and future directions</td>
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<td>9:00-9:30am</td>
<td>Stephen Pettitt, PhD</td>
<td>Targeting PARP inhibitor resistance</td>
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<td>9:30-10:00am</td>
<td>Robert H. Vonderheide, MD, DPhil</td>
<td>Opportunities for immune prevention and interception of mutant BRCA cancers</td>
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<td>Kara Maxwell, MD, PhD</td>
<td>BRCA and prostate cancer – from genetics to clinical care</td>
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<td>11:00-11:30am</td>
<td>Kenneth Offit, MD, MPH</td>
<td>Emerging approaches and regulatory challenges to population genetic testing</td>
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<td>11:30am-12:00pm</td>
<td>Katherine Nathanson, MD</td>
<td>Integration of genetics into the EHR: the PennChart Genomics Initiative</td>
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<td>12:00-1:15pm</td>
<td><strong>LUNCH</strong></td>
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<td>1:15-1:45pm</td>
<td>Gillian Hanley, PhD</td>
<td>Outcomes following ovarian cancer prevention for both those at general population risk for ovarian cancer and those with BRCA mutations</td>
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1:45-2:15pm    Mark Robson, MD
Liquid biopsy for early detection - how close are we?

2:15-2:45pm    Jessica Ebrahimzadeh, MS, LCGC
Year in review: Updates and trends in hereditary cancer genetic counseling

2:45-3:45pm    Case panel moderated by Susan Domchek, MD and
featuring Mark Robson, MD and Basser Center genetic counselor Dana Farengo Clark, MS, MS, LCGC

3:45-4:00pm    Wrap up and Evaluations
Registration Information

For more information, contact Basserinfo@pennmedicine.upenn.edu or call 215.662.4348

This conference is FREE but we strongly recommend registration. Registration is required for continuing education credits.

ACCREDITATION AND DESIGNATION OF CREDIT
In support of improving patient care, Penn Medicine is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the health care team.

NURSE/NURSE PRACTITIONERS The program will award 11.5 NCPD hours.

PHYSICIANS Penn Medicine designates this live activity for a maximum of 11.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

PHYSICIAN ASSISTANTS AAPA accepts certificates of participation for educational activities certified for AMA PRA Category 1 Credits™ from organizations accredited by ACCME or a recognized state medical society. PAs may receive a maximum of 11.5 Category 1 credits for completing this activity.

GENETIC COUNSELORS The National Society of Genetic Counselors (NSGC) has authorized Basser Center for BRCA- University of Pennsylvania to offer up to 1.1 CEUs or 11 Category 1 contact hours for the activity Basser Center 9th Annual Scientific Symposium. The American Board of Genetic Counseling (ABGC) will accept CEUs earned at this program for the purposes of genetic counselor certification and recertification.

CANCELLATION POLICY
The University reserves the right to cancel or postpone any activity due to unforeseen circumstances. In the event of cancellation or postponement, the University will not be responsible for related costs or expenses to participants, including cancellation fees assessed by hotels, airlines, or travel agencies.

SERVICES FOR THE DISABLED
If special arrangements are required for an individual with a disability to attend this meeting, please contact basserinfo@pennmedicine.upenn.edu by April 29, 2022.

SPECIAL REQUESTS
If special requests for food or other logistics are required, contact basserinfo@pennmedicine.upenn.edu by April 29, 2022.

NONDISCRIMINATION STATEMENT
The University of Pennsylvania values diversity and seeks talented students, faculty and staff from diverse backgrounds. The University of Pennsylvania does not discriminate on the basis of race, sex, sexual orientation, gender identity, religion, color, national or ethnic origin, age, disability, or status as a Vietnam Era Veteran or disabled veteran in the administration of educational policies, programs or activities; admissions policies; scholarship and loan awards; athletic, or other University administered programs or employment. Questions or complaints regarding this policy should be directed to: Executive Director, Office of Affirmative Action and Equal Opportunity Programs, 3600 Chestnut Street, Sansom Place East, Suite 228, Philadelphia, PA 19104-6106 or 215.898.6993 (Voice) or 215.898.7803 (TDD).
Visiting Information

PARKING
Parking will not be available on the medical campus, but public self-pay parking lots available in the University City vicinity can be found at:

- Drexel University Parking Lot – 34th and Market Streets
- University of Pennsylvania Parking Lot – 34th and Chestnut Streets
- University of Pennsylvania Parking Lot - 38th and Walnut Streets

For more information, visit http://cms.business-services.upenn.edu/parking/

PUBLIC TRANSPORTATION
The SEPTA Penn Medicine Station (formerly University City Station) is within walking distance of the medical campus. For more information, visit www.septa.org.
The Basser Center for BRCA is the first comprehensive center for the research, treatment and prevention of BRCA-related cancers. Devoted to advancing care for people affected by BRCA mutations, the Basser Center’s unique model provides funding for collaborative research, education and outreach programs around the world.

WE TAKE CANCER PERSONALLY.