

# Program

**Monday, March 25, 2012**

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8:00 – 8:30 a.m. **Registration and Poster Set-up** (All posters in Session I must be set-up during registration)

8:30 – 9:00 a.m. **Plenary Session** (Main Auditorium)

**Opening Remarks from the CCR Office of Training and Education**

**Jonathan Wiest, Ph.D.,**

Associate Director, Office of Training and Education, Center for Cancer Research, NCI

**Opening Remarks and CCR-FYI Overview**

**Majda Hazndar, Ph.D. and John Simmons,**

Co-chairs, CCR-FYI Steering Committee

9:00– 9:30 a.m. **CCR Office of the Director Address** (Main Auditorium)

**Robert Wiltout, Ph.D.,**

Director, Center for Cancer Research, NCI

9:30 – 10:30 a.m. **Keynote Speaker I: "A pivotal role for the transcription factor, HOXB7, in breast cancer"**  
(Main Auditorium)

**Saraswati Sukumar, Ph.D.,** Co-Director The Sidney Kimmel Comprehensive Cancer Center  
at Johns Hopkins University

*Moderator: Barbara H. Rath, Ph.D.*

10:30 – 11:45 a.m. **Concurrent Oral Presentations I**

**I. Immunology I** (Room 1206)

10:30 **Stephanie Chen**, Human Retrovirus Section

*Heterodimeric IL-15/IL-15 Receptor alpha Complexes Reduce Tumor Burden In Mice*

10:45 **Duane H. Hamilton**, Laboratory of Tumor Immunology and Biology

*High levels of expression of the transcription factor Brachyury induce resistance of human carcinoma cells to immune-mediated attack*

11:00 **Jason A. Horton**, Radiation Oncology Branch

*Systemic Infusion of Bone Marrow Derived Mesenchymal Stem Cells Inhibits Cutaneous Radiation-induced Fibrosis by Suppressing Chronic Inflammation*

11:15 **Sandra Li**, Laboratory of Molecular Immunoregulation

*The alarmin HMGN1 is an effective DNA vaccine adjuvant and prevents mouse melanoma tumor formation when delivered by gene gun or bioject technology*

11:30 **Fanching Lin**, Laboratory of Experimental Immunology

*IFN-gamma causes aplastic anemia by altering HSC composition and interrupting lineage differentiation*

*Moderators: Kimberly Boelte, Ph.D. and Miranda Hanson, Ph.D.*

**II. Molecular and Cell biology, Virology, Bioinformatics I** (Room 1203)

10:30 **Andrea Rivera**, Carcinogen DNA Interactions

*AZT-induced aneuploidy is mediated by Aberrant Stathmin 1 Expression*

10:45 **Lei Sun**, Basic Research Program

*Id2 Expression Determines Cell Fate in Multipotent Progenitor Cells*

- 11:00 **Vijay Walia**, Laboratory of Cell and Developmental Signaling  
*LPA-PI3K-Akt Signaling Network Regulates Primary Cilium Assembly*
- 11:15 **Steven Hatch**, Viral Recombination Section  
*HIV-1 RNA Trafficking in Polarized T cells*
- 11:30 **Sagar B. Kudchodkar**, Virus-Cell Interaction Section  
*Mutations in a Pro-Rich Loop in the N-Terminal Domain of HIV-1 Capsid Impair Particle Assembly and Abolish Virus Infectivity.*
- Moderators: Joanna Sztuba-Solinska, Ph.D. and Smita Kakar, Ph.D.

### **III. Cancer Prevention, Carcinogenesis, and Cancer Stem Cells (Room 1206)**

- 10:30 **Weidong Li**, Laboratory of Cancer Prevention  
*Berberine suppress the colon cancer proliferation through activating AMPK*
- 10:45 **Shakir Saud**, Nutritional Science Research Group  
*Chemopreventive activity of plant flavonoid Isorhamnetin in Colorectal Cancer*
- 11:00 **Krist Aploks**, Laboratory of Human Carcinogenesis  
*The Effects of p53 and the Tumor Microenvironment on Asymmetric Chromosomal Division in Lung Cancer*
- 11:15 **Hong Sug Kim**, Neuro-Oncology Branch  
*Gliomagenesis Arising from Pten- and Ink4a/Arf-Deficient Neural Progenitor Cells Is Mediated by the p53-Fbxw7/Cdc4 Pathway, Which Controls c-Myc*
- 11:30 **Bruce Huang**, Laboratory of Tumor Immunology and Biology  
*The T-box transcription factor Brachyury blocks cell cycle progression and mediates tumor resistance to chemotherapy and radiation*
- Moderators: Maria Cristina Rangel, Ph.D. and Ishminder Mann, Ph.D.

### **IV. Genetics, Genomics, and Proteomics (Room 1108)**

- 10:30 **Michael D. Hall**, Cancer and Developmental Biology Laboratory  
*Conditional Deletion of Signal Transducer and Activator of Transcription-3 in the Mesoderm Results in Dysregulation of Skeletogenesis*
- 10:45 **Bau-Lin Huang**, Cancer and Developmental Biology Laboratory  
*Interdigital mesoderm is the signaling center instructing digit joint formation*
- 11:00 **Christiane Kuschal**, Dermatology Branch  
*Effect of aminoglycosides and non-aminoglycosides on readthrough of stop codons in xeroderma pigmentosum group C cells*
- 11:15 **Eunwoo Shim**, Carcinogen-DNA Interactions Section  
*Overexpression of PGC-1 $\alpha$  in rat cardiomyocytes protects against nucleoside reverse transcriptase inhibitor (NRTI)-induced mitochondrial toxicity*
- 11:30 **Hui Yang**, Gene Regulation and Chromosome Biology Laboratory  
*Selectively Amplify and Enrich DNA Palindromes from Genomic DNA*
- Moderators: Barbara H. Rath, Ph.D. and Majda Haznadar, Ph.D.

### **V. Cancer Models, Metastasis, Microbiology, and Biophysics (Main Auditorium)**

- 10:30 **Min-Hyung Lee**, Mouse Cancer Genetics Program  
*The potential male-specific oncogenic function of CDCA7L in astrocytoma*

- 10:45 **Young H. Lee**, Urologic Oncology Branch  
*First Immortalized Human Tumor Cell Line Derived from Hereditary Papillary Renal Cell Carcinoma*
- 11:00 **Amber Giles**, Pediatric Oncology Branch  
*Bone marrow-derived progenitor cells develop into myeloid-derived suppressor cells at metastatic sites*
- 11:15 **Kuppusamy Balamurugan**, Laboratory of Cell and Developmental Signaling  
*The tumor suppressor C/EBPdelta promotes hypoxia-induced EMT and expression of stem cell markers through inhibition of FBXW7alpha: Implications for mammary tumor metastasis*
- 11:30 **K. Leigh Greathouse**, Laboratory of Human Carcinogenesis  
*Analysis of the colon cancer microbiome using PhyloChip*
- Moderators: Bethanie Morrison, Ph.D. and Jacqueline Salotti, Ph.D.*

11:45 – 12:00 noon

**BREAK**

12:00 – 1:30 p.m.

**Poster Session I: (Atrium)**

- 12:00-12:45 p.m. *Odd-numbered Posters - presenter must be present*  
12:45-1:30 p.m. *Even-numbered Posters - presenter must be present*

- Immunology I
- Molecular and Cell Biology, Virology, and Bioinformatics I
- Chemistry, Pharmacology, and Structural Biology
- Genetics, Genomics, and Proteomics
- Cancer Models, Metastasis, Microbiology, and Biophysics

1:30 – 2:30 p.m.

**Special Highlight Presentation: "Cancer Survivorship" (Main Auditorium)**  
**Noreen Fraser**, Founder, Noreen Fraser Foundation

*Moderator: Leigh Greathouse, Ph.D.*

2:30 – 2:45 p.m.

**Break**

2:45 – 4:15 p.m.

**Concurrent Workshops I**

**1. Transition to Academia (Main Auditorium)**

**Michal Legiewiz, Ph.D.**, Research Scientist at Yale University

**Pam Ohashi, Ph.D, FRSC**, Professor, Departments of Medical Biophysics and Immunology, University of Toronto

**Savan Ram, Ph.D.**, Assistant Professor, Department of Immunology, University of Washington.

**M Raza Zaidi, Ph.D.**, Assistant Professor, Fels Institute for Cancer Research and Molecular Biology, Temple University

*Moderators: Fanching Lin, Ph.D. and Jessie Kiu, Ph.D.*

**2. Careers in Public Health (Conference room 1206)**

**Tala Fankhour, Ph.D.**, Epidemic Intelligence Service Officer, Centers for Disease Control and Prevention (CDC)

**Nina Hasen, Ph.D.**, Senior HIV Prevention Advisor, Office of the Global AIDS Coordinator

**Gwen Murphy, Ph.D.**, Research Fellow, Division of Cancer Epidemiology and Genetics, NCI, NIH

**Jo Ann Zujewski, Ph.D.**, Head of Breast Cancer Therapeutics, Clinical Investigations Branch, NCI, NIH

*Moderators: Anne Noonan, M.D. and Adeola Makinde, Ph.D.*

**3. Tech transfer and Patents (Conference room 1201)**

**Melissa Maderia, Ph.D.**, Technology Transfer Specialist, NCI Technology Transfer Center, NIH

**Mita Mukherjee, Ph.D., J.D.**, Corporate Counsel, MedImmune, LLC

**Mark Rohrbaugh, Ph.D., J.D.**, Director, Office of Technology Transfer, NIH

**Arvinder Singh, Ph.D.**, Senior Scientist, Patent Agent, Kirax Corp. Bonita Springs, FL

*Moderators: Willie Wilson, Ph.D. and Barbara H. Rath, Ph.D.*

**4. Science Education** (Conference room 1203)

**Adam C. Berger, Ph.D.**, Senior Program Officer and Director of the Roundtable on Translating Genomic-Based Research for Health in the Board on Health Sciences Policy, Institute of Medicine

**Jeanne Gargarino, Ph.D.**, Director of Science Outreach, The Rockefeller University

**Karobi Moitra, Ph.D.**, Clare Boothe Luce Assistant Professor of Molecular Biology, Trinity Washington University

**Connie Noguchi, Ph.D.**, Dean of FAES Graduate School

*Moderators: Julie Heinecke, Ph.D. and Nadia Castro, Ph.D.*

4:15 – 4:30 p.m.

**Break**

4:30 – 5:30 p.m.

**Keynote Speaker II: "New Approaches to Drug Resistance in Cancer"** (Main Auditorium)

**Michael Gottesman, Ph.D.**, Chief, Laboratory of Cell Biology, CCR, NCI

*Moderator: Kimberly Boelte, Ph.D.*

5:30 p.m.

**ADJOURN**

5:45 p.m.

**Social Networking** (Brewer's Ally Restaurant and Brewery, Market St, Frederick, MD)

## Tuesday, March 26, 2013

8:00 – 8:30 a.m.

**Registration and Poster Set-up** (All posters in Session II must be set-up during registration)

8:30 – 10:00 a.m.

**Poster Session II: (Atrium)**

8:30-9:15 a.m. Odd-numbered Posters - presenter must be present

9:15-10:00 a.m. Even-numbered Posters - presenter must be present

- Immunology II
- Molecular and Cell Biology, Virology, and Bioinformatics II
- Translational, Clinical, and Epidemiology Research
- Signal Transduction, Transcription, and Chromatin
- Cancer Prevention, Carcinogenesis, and Cancer Stem Cells
- Core Services

10:00 – 11:00 a.m.

**Keynote Speaker III: "Regulation of CD8 immunity"** (Main Auditorium)

**Pamela Ohashi, Ph.D, FRSC**, Department of Immunology, Campbell Family Institute, University of Toronto

*Moderator: Vijay Walia, Ph.D.*

11:00 – 11:15 a.m.

**Break**

11:15 – 12:30 p.m.

**Concurrent Oral Presentations II**  
**I. Immunology II (Room 1201)**

11:15 **Adrienne H. Long**, Pediatric Oncology Branch

*Evaluating the susceptibility of solid tumors to chimeric antigen receptor modified T cell therapies*

- 11:30 **Geraldine M O'Connor**, Cancer and Inflammation Program  
*Molecular Dissection of the Functional Bifurcation of KIR3DL1 allotypes: Implications for HLA discrimination and HIV escape peptide recognition*
- 11:45 **Elise Sylar**, Pediatric Oncology Branch  
*Exploring the use of anti-CD19 CAR-expressing T stemcell memory cells as a treatment for relapsed, refractory pediatric ALL*
- 12:00 **Zhewei Tang**, Antibody Therapy Section  
*A human single-domain antibody elicits potent anti-tumor activity by targeting an epitope in mesothelin close to the cancer cell surface*
- 12:15 **Yichuan Wang**, Vaccine Branch  
*Vaginal type-II mucosa acts as an inductive site during the generation of primary CD8+ T cell mucosal immune responses*
- Moderators: Fanching Lin, Ph.D. and Miranda Hanson, Ph.D.

## **II. Molecular and Cell biology, Virology, BioinformaticsII (Main Auditorium)**

- 11:15 **Mesfin Gomit**, Laboratory of Cancer Prevention  
*A Novel Role For 3'UTR Sequences in Regulating the Activity of the c-Myc Oncoprotein*
- 11:30 **Christine Kettenhofen**, Lobaratoy of Cell and Developmental Signaling  
*EHD1 knock-down in zebrafish embryos disrupts cilia formation*
- 11:45 **Julie L Heinecke**, Radiation Biology Branch  
*Induction of iNOS in Breast Cancer and its Regulation of Poor Prognosis Indicators*
- 12:00 **Jessica Smith**, Viral mutation section  
*Identification of Determinants for Interactions Between HIV-2 Vif and Human APOBEC3 Proteins*
- 12:15 **Anne Noonan**, Translational Genomics Section  
*Birinapant, a Novel Smac Mimetic, Activates Apoptosis in NF- $\kappa$ B Dependent Gynecologic Cancer (GC) Cell Lines*
- Moderators: Steven Hatch, Ph.D. and Jessica Sine, Ph.D.

## **III. Translational, Clinical, and Epidemiology Research (Room 1206)**

- 11:15 **Dominic Moon**, Medical Oncology Branch  
*A Positive BRCA1/2 Mutation Status is an Independent Risk Factor for Carboplatin Hypersensitivity Reactions in Ovarian Cancer Patients*
- 11:30 **Emily Place**, Cancer Prevention Fellowship Program  
*Newborn folate levels and child's early diet in risk for childhood acute lymphoblastic leukemia*
- 11:45 **Benjamin Gamache**, Lab of Cancer Biology and Genetics  
*Molecular Synergy Identified for Combined mTOR/HDAC Inhibition by Transcriptional Co-Expression Analysis*
- 12:00 **Paola Lopomo**, Pediatric Oncology Branch  
*Development of a chimeric antigen receptor (CAR) to target Ewing's sarcoma via CD276*

12:15 **Jennifer C. Jones**, Vaccine Branch  
*nanoFACS: Sorting Exosomes and Microparticles*  
Moderators: *Majda Haznadar Ph.D. and Nadia Castro, Ph.D.*

#### **IV. Signal Transduction, Transcription, and Chromatin (Room 1108)**

11:15 **Fabiola Cecchi**, Urologic Oncology Branch  
*Targeted Disruption of Heparan Sulfate Interaction with Hepatocyte and Vascular Endothelial Growth Factors Blocks Normal and Oncogenic Signaling*

11:30 **Christopher Switzer**, Radiation Biology Branch  
*Tumor microenvironment nitric oxide activates multiple oncogenic signaling pathways in basal-like/triple negative breast cancer.*

11:45 **Ashley Denney**, Gene Regulation and Chromosome Biology Laboratory  
*Novel RNA Polymerase II Mutants in *Saccharomyces cerevisiae* with Decreased Fidelity of Transcription and Altered Promoter Start Site Selection*

12:00 **Wei Liu**, Metabolism and Cancer Susceptibility Section  
*Proline Biosynthesis Augments MYC-induced Aerobic Glycolysis and Cell Growth*

12:15 **Prachi Mishra**, Laboratory of Human Carcinogenesis  
*2-Hydroxyglutarate: A Candidate Oncometabolite in Breast Cancer*  
Moderators: *Bethanie Morrison, Ph.D. and Jacqueline Salotti, Ph.D.*

#### **V. Chemistry, Pharmacology and Structural Biology (Room 1203)**

11:15 **Emily L. Whitson**, Molecular Targets Laboratory  
*Evaluation of Marine Natural Products from a Sea Hare and Two Sponges that Selectively Inhibit the Growth of NF1 Null Cells*

11:30 **Darshan Desai**, Experimental Retrovirology Section  
*Evaluation of HIV-1 protease inhibitors against a clinical isolate HIV-1 protease (PR-A02) using enzyme inhibition assays*

11:45 **Carole Sourbier**, Urologic Oncology Branch  
*Englerin A stimulates PKC $\theta$  to Inhibit insulin signaling and to simultaneously activate HSF1: an example of pharmacologically induced synthetic lethality*

12:00 **Joanna Sztuba-Solinska**, Reverse Transcriptase Biochemistry Section  
*Deciphering structural complexity of Dengue untranslated regions: the role of cis-acting RNA motifs and pseudoknot interaction in modulating functionality of the viral genome.*

12:15 **Dongwen Zhou**, Macromolecular Crystallography Laboratory  
*Structural basis of trypsin inhibition by a plant serine protease inhibitor involved in the inhibition of tumor cell adhesion and invasion: complex structure of Ect1 and bovine trypsin*

Moderators: *Maria Cristina Rangel, Ph.D. and Smita Kakar, Ph.D.*

12:30 – 1:15 p.m.

**Break**

11:00 – 4:30 p.m.

**Career Fair**

1:15 – 2:15 p.m.

**Keynote Speaker IV: "Raf Kinase Signaling in Normal and Disease States: The Details DO Matter!" (Main Auditorium)**

**Deborah K. Morrison, Ph.D.**, Chief, Laboratory of Cell and Developmental signaling, CCR, NCI

*Moderator: Ishminder Mann, Ph.D.*

2:15 – 2:30 p.m.

**Break**

2:30 – 4:00 p.m.

**Concurrent Workshops II**

**1. Science Culture in Industry (Main Auditorium)**

**Johanna Abend, Ph.D.**, Investigator, Drug Discovery, Novartis Institutes of BioMedical Research

**Emily Leproust, Ph.D.**, Director Applications and Chemistry R&D – Genomics  
Agilent Technologies, Inc

**Zora Modrusan, Ph.D.**, Senior Scientist, Genentech

**Bhanu Singh, Ph.D.**, Scientific Director, Janssen Research & Development

*Moderators: Ishminder Mann, Ph.D. and Julie Heinecke, Ph.D.*

**2. Federal Careers (Conference room 1206)**

**Wen Chen, Ph.D.**, Program Director, Sensory/Motor Disorders of Aging Section, NIA, NIH

**Kristin Fabre, Ph.D.**, Scientific Program Manager, NCATS

**Huong Huynh, Ph.D.**, Pharmacologist and Reviewer, FDA

**Ashutosh Rao, Ph.D.**, Researcher/Reviewer, FDA

*Moderators: Jianfei (Jeffrey) Zhao, Ph.D. and Yang Zhou, Ph.D.*

**3. International Opportunities (Conference room 1201)**

**Kevin Bialy, M.A.A.**, Program Officer, Fogarty International Center, NIH

**Shawn Mullen, Ph.D.**, Deputy Director, NIH/OITE Office of Postdoctoral Services

**Candelario Zapata, M.A.**, Director, Division of International Services (DIS)

*Moderators: Ravikiran Yedidi, Ph.D. and Cristina Maria Rangel, Ph.D.*

**4. Careers in Science Writing (Conference room 1203)**

**Christine Borowski, Ph.D.**, Scientific Editor, Nature Biotechnology

**Rebecca Cerio, Ph.D.**, Health Science Policy Analyst, Office of Scientific Program and  
Policy Analysis, NIDDK

**Chhavi Chauhan, Ph.D.**, Scientific Editor, American Society for Investigative Pathology

**Kendall Powell, M.S.**, Freelance Science Writer & Editor, Kendall Powell SciWriting, LLC

*Moderators: Smita Kakar, Ph.D. and Ravindra Veeranna, Ph.D.*

4:00 – 4:15 p.m.

**Break**

4:15 – 5:15 p.m.

**Postdoctoral Keynote Speaker: "An Integrative and Translational Approach to Lung Cancer Research" (Main Auditorium)**

**Brid Ryan, Ph.D., M.P.H.**, Research Fellow, Laboratory of Human Carcinogenesis, NCI

5:15 – 5:30 p.m.

**Closing Address/ TRAVEL AWARDS (Main Auditorium)**

**\*The attendance of winners is required to receive award**

5:30 p.m.

**ADJOURN**

6:00 p.m.

**Social Networking (Brewer's Ally Restaurant and Brewery, Market St, Frederick, MD)**