

**FINAL PROGRAM**

**2<sup>nd</sup> Annual International Conference**

# **Immunotherapy Radiotherapy Combinations**

**September  
21, 22, 23**

**2017**

**NEW YORK CITY**

- Speakers from renowned European and North American institutions and leading groups in the fields of Radiation Oncology and Immunotherapy
- Current research, challenges and novel therapeutic options

**Conference Partners:**



**Weill Cornell Medicine**

**NewYork-Presbyterian**



Society for Immunotherapy of Cancer



**SOCRATE**

Stratified Oncology Cell DNA Repair  
And Tumor Immune Elimination



**Weill Cornell Medicine**  
Sandra and Edward  
Meyer Cancer Center

September 21, 2017

Dear Colleague,

## Welcome to our 2<sup>nd</sup> Annual International Conference on Immunotherapy Radiotherapy Combinations!

This Conference provides attendees with an overview of the latest developments in the field investigating the effects of ionizing radiation on tumor immunogenicity and response to immunotherapy. Topics include basic research findings on the intersection between tumor immunology and radiation biology, and results of clinical trials translating the most promising combinations of radiotherapy and immunotherapy to patients. The sessions are designed to foster exchange of information and collaborations between oncologists, radiation biologists and immunologists. This conference will alternate annually between the Institut Gustave Roussy campus in Paris, and the Weill Cornell Medicine campus in New York, to foster broad international participation and knowledge sharing.

This year's Conference, hosted here in NYC by Weill Cornell Medicine, Sandra and Edward Meyer Cancer Center, and the NewYork-Presbyterian Hospital, features distinguished speakers from leading European and North American institutions. The program offers one-half day Primer on Tumor Immunology and Immunotherapy, followed by two days of lectures and discussions on important topics such as modulating the tumor and host environment, immunological biomarkers for patient selection, and innovative clinical trial design. Program attendees will have an opportunity to learn from, and interact with today's leading scientific innovators in academia.

Thank you again for joining us at this exciting Conference. We look forward to your continuing support and participation in our future Conferences.

### Conference Co-Chairs



**Silvia C. Formenti, MD**

*Sandra and Edward Meyer Professor of Cancer Research  
Chair, Department of Radiation Oncology  
Associate Director, Sandra and Edward Meyer Cancer Center, Weill Cornell Medicine  
Radiation Oncologist-in-Chief, NewYork-Presbyterian Hospital/Weill Cornell*



**Eric Deutsch, MD, PhD**

*Chairman, Department of Radiation Oncology  
at Gustave Roussy  
& INSERM 1030 Molecular Radiotherapy  
South Paris University Professor of Radiation Oncology*

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### Conference Sponsors

Thank you to all our Conference Sponsors for their generous support of the Conference through their grants and in-kind contributions.



2<sup>nd</sup> Annual International Conference

# Immunotherapy Radiotherapy Combinations

**September  
21, 22, 23**

Thurs., Fri., Sat. 1/2 day

**2017**

**NEW YORK CITY**

## COURSE INFORMATION

### Location

Uris Auditorium, 1300 York Avenue, New York City (East 69th Street at York Avenue).

### Educational Objectives

Upon completion of this program, participants will be able to:

- Describe the role of the immune system in tumor development and progression
- Describe the role of innate and adaptive immunity in response to immunotherapy
- Explain the barriers in the tumor microenvironment to tumor rejection
- Appropriately use currently approved immunotherapies in clinical practice
- Provide an overview of immunotherapy agents in development
- Explain the various cancer immunotherapy options to patients

### Target Audience

Radiation oncologists, radiation oncologists-in-training, oncologists, tumor immunologists, radiation and cancer biologists, residents, fellows and graduate students.

### Physician Continuing Medical Education (Accreditation)

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Postgraduate Institute for Medicine and the Society for Immunotherapy of Cancer. The Postgraduate Institute for Medicine is accredited by the ACCME to provide continuing medical education for physicians.

The Postgraduate Institute for Medicine designates this live activity for a maximum of **3.0 AMA PRA Category 1 Credit(s)**<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

### Disclosure of Conflicts of Interest

Postgraduate Institute for Medicine (PIM) requires instructors, planners, managers and other individuals who are in a position to control the content of this activity to disclose any real or apparent conflict of interest (COI) they may have as related to the content of this activity. All identified COI are thoroughly vetted and resolved according to PIM policy. PIM is committed to providing its learners with high quality CME activities and related materials that promote improvements or quality in healthcare and not a specific proprietary business interest of a commercial interest.

This CME-session is provided by an educational grant from AstraZeneca.

## **COURSE INFORMATION** *continued*

### **Disclosures**

#### **I. Faculty**

The following CME speakers have disclosed the following:

Silvia C. Formenti, MD

- Grants/Research support: BMS, Varian, Janssen, Regeneron, Eisai, Merck
- Honoraria: BMS, Varian, Elekta, Janssen, Regeneron, GlaxoSmithKline, Eisai, Dynavax AstraZeneca, Merck
- To discuss off label use and or investigational use in presentation : Ipilimumab

Karolina Palucka, MD, PhD

- Consulting Fees: Cue Biopharma
- Contracted Research: Merck
- Ownership Interest: Cue Biopharma

Alan B. Frey, PhD has nothing to disclose

Charles G. Drake, MD, PhD

- Royalties: AZ Medimmune, BMS, Janssen
- Consulting Fees: Agenus, Dendreon, NexImmune, Lilly, Merck, Pierre Fabre, Roche/Genentech
- Contracted Research: BMS, Janssen, Aduro Biotech
- Ownership Interest: Compugen, NexImmune, Potenza, Tizona

Timothy A. Chan, MD, PhD

- Consulting Fees: Illumina
- Contracted Research: BMS
- Ownership Interest: Gritstone Oncology

Michael A. Postow, MD

- Consulting Fees: Novartis, BMS, Merck
- Contracted Research: Array Biopharma, BMS, Infinity, RGenix

Robert H. Vonderheide, MD, DPhil

- Contracted Research: Lilly, Janssen

#### **II. Planners and Managers**

The PIM planners and managers, Trace Hutchison, PharmD, Samantha Mattiucci, PharmD, CHCP, Judi Smelker-Mitchel, MBA, MSN, RN, and Jan Schultz, MSN, RN, CHCP have nothing to disclose. The SITC planners and managers have nothing to disclose.

#### **Disclosure of Unlabeled Use**

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. The planners of this activity do not recommend the use of any agent outside of the labeled indications.

The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of the planners. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications, and warnings.

## **COURSE INFORMATION** *continued*

### **Disclaimer**

Participants have an implied responsibility to use the newly acquired information to enhance patient outcomes and their own professional development. The information presented in this activity is not meant to serve as a guideline for patient management. Any procedures, medications, or other courses of diagnosis or treatment discussed or suggested in this activity should not be used by clinicians without evaluation of their patient's conditions and possible contraindications and/or dangers in use, review of any applicable manufacturer's product information, and comparison with recommendations of other authorities.

### **Recording Devices**

Use of cell phones or video/audio recording during the lectures is strictly prohibited.

### **For More Information**

Participants with special needs or questions about the conference, please contact:

Ms. Jane Yuen, Weill Cornell Medicine

phone: 212.746.9707 • email: [jay2009med.cornell.edu](mailto:jay2009med.cornell.edu)

website: <http://radiationoncology.weillcornell.org>

For questions about the accreditation of this CME session, please contact:

Postgraduate Institute for Medicine at: [inquiries@pimed.com](mailto:inquiries@pimed.com) or 303.799.1930.



8:15-8:30 am ..... **Welcome**

**Lewis C. Cantley, PhD**

Weill Cornell Medicine, New York, NY, USA

### **Introduction**

**Silvia C. Formenti, MD**

Weill Cornell Medicine, New York, NY, USA

### **3.0 AMA PRA Category 1 Credit(s)™**

#### **PRIMER ON CANCER IMMUNOLOGY AND IMMUNOTHERAPY**

This educational session is jointly provided by  
Postgraduate Institute for Medicine and Society for Immunotherapy of Cancer.



Postgraduate Institute  
for Medicine



Society for Immunotherapy of Cancer

#### ► **SESSION I: BASIC IMMUNOLOGY**

8:30-9:00 am ..... **Introduction to Innate Immunity**

**Karolina Palucka, MD, PhD**

The Jackson Laboratory Cancer Center, Farmington, CT, USA

9:00-9:30 am ..... **Overview of Adaptive Immunity**

**Alan B. Frey, PhD**

New York University School of Medicine, New York, NY, USA

#### ► **SESSION II: TUMOR IMMUNOLOGY**

9:30-10:00 am ..... **Role of the Immune System in Tumor Development and Progression**

**Charles G. Drake, MD, PhD**

Columbia University Medical Center, New York, NY, USA

10:00-10:30 am ..... *Coffee Break*

10:30-11:00 am ..... **Immunotherapy: What's Genes Got To Do With It?**

**Timothy A. Chan, MD, PhD**

Memorial Sloan Kettering Cancer Center, New York, NY, USA

#### ► **SESSION III: CANCER IMMUNOTHERAPY**

11:00-11:30 am ..... **Overview of the Immunotherapy Landscape**

**Michael A. Postow, MD**

Memorial Sloan Kettering Cancer Center, New York, NY, USA

11:30-12:00 pm ..... **The Case for Priming, Not Check Point**

**Robert H. Vonderheide, MD, DPhil**

University of Pennsylvania, Philadelphia, PA, USA

12:00-1:30 pm ..... *Lunch*

## MAIN PROGRAM

► **SESSION I: JUMP STARTING THE IMMUNE RESPONSE WITH RADIATION**

1:30-2:00 pm ..... **The Mechanistic Basis of In Situ Vaccination By Radiotherapy**

**Sandra Demaria, MD**

Weill Cornell Medicine, New York, NY, USA

2:00-2:30 pm ..... **Non-cell Autonomous Death and Radiotherapy**

**Jean-Luc Perfettini, PhD**

Institut Gustave Roussy, Paris, France

2:30-3:00 pm ..... **Autophagy and Radiation**

**Lorenzo Galluzzi, PhD**

Weill Cornell Medicine, New York, NY, USA

3:00-3:30 pm ..... **Radiation-induced Neoantigens Enhance Immunotherapy Efficacy in Cancers With Low Mutational Loads**

**Danielle M. Luissier, PhD**

Washington University, St. Louis, MO, USA

3:30-4:00 pm ..... *Coffee Break*

► **SESSION II: OBSTACLES TO THE IMMUNOGENIC EFFECTS OF RADIATION**

4:00-4:30 pm ..... **Monocyte and Macrophages Trafficking During Tumor Response to Radiation**

**Michele Mondini, PhD**

Institut Gustave Roussy, Paris, France

4:30-5:00 pm ..... **Targeting Macrophages as a Strategy to Enhance the Therapeutic Ratio of Radiotherapy**

**Eric Deutsch, MD, PhD**

Institut Gustave Roussy, Paris, France

5:00-5:30 pm ..... **Differential Implication of Tissue-Resident and Recruited Tumor-Associated Macrophages in Lung Metastasis Development**

**Alexandre Boissonnas, PhD**

INSERM Université Pierre et Marie Curie, Paris, France

5:30-6:00 pm ..... **Adenosine Signaling in the Regulation of Radiation-induced Anti-tumor Immunity**

**Erik Wennerberg, PhD**

Weill Cornell Medicine, New York, NY, USA

6:30-8:00 pm ..... **Poster Reception**

## ► SESSION III: CLINICAL IMPLICATIONS OF PRE-CLINICAL FINDINGS

8:30-9:00 am .....

**Combining Radiotherapy and Immunotherapy  
in the Clinic: Barriers and Opportunities**  
**Silvia C. Formenti, MD**

9:00-9:30 am .....

**Immuno-oncology and Radiotherapy Trials at the DKFZ**  
**Peter Huber, MD, PhD**  
German Cancer Research Center DKFZ, Heidelberg, Germany

9:30-10:00 am .....

**Radiation Immunotherapy Progress: Opportunities and  
Suggested Pathways and Partners**  
**David Raben, MD**  
University of Colorado Anschutz Medical Campus, Aurora, CO, USA

10:00-10:30 am .....

**Increasing Systemic Anti-tumor Immunity with Radiation  
Treatment using Immunotherapy Combinations**  
**Tim Illidge, BSc, PhD, MRCP, FRCR, FRCPath**  
Institute of Cancer Sciences, University of Manchester, Manchester, UK

10:30-11:00 am .....

*Coffee Break*

11:00-11:45 am .....

**DEBATE - Proposed: The Immune System Plays No Role in  
Radiation Cancer Therapy**  
**William H. McBride, PhD, DSc**  
University of California, Los Angeles, CA, USA  
**David Brenner, PhD, DSc**  
Columbia University, New York, NY, USA

11:45-1:00 pm .....

*Lunch*

1:00-1:45 pm .....

**KEYNOTE LECTURE**  
**The Future of Radiation Oncology**  
**Ralph R. Weichselbaum, MD**  
University of Chicago Medicine, Chicago, IL, USA

## ► SESSION IV: EMERGING COMBINATIONS OF RADIOTHERAPY AND IMMUNOTHERAPY

1:45-2:15 pm .....

**Tumor-targeting Antibodies/Immunocytokines and Radiation  
as an In Situ Cancer Vaccine**  
**Paul M. Sondel, MD, PhD**  
University of Wisconsin, Madison, WI, USA

2:15-2:45 pm .....

**Ultrasound Priming for Radiation In Situ Tumor Vaccines**  
**Chandan Guha, MBBS, PhD**  
Montefiore Medical Center, Albert Einstein College of Medicine, New York, NY, USA

2:45-3:15 pm .....

**Role of the TGFbeta Family Members in Hindering  
the Pro-immunogenic Effects of Radiotherapy**  
**Claire Vanpouille-Box, PhD**  
Weill Cornell Medicine, New York, NY, USA

3:15-3:45 pm .....

*Coffee Break*

## ► SESSION V: MODULATING THE TUMOR AND HOST ENVIRONMENT

3:45-4:15 pm .....

**Role of Microbiome in Cancer**  
**Giorgio Trinchieri, MD**  
Center for Cancer Research, NCI, NIH, Bethesda, MD, USA

4:15-4:45 pm .....

**Targeting IL-1 in Breast Cancer**  
**Karolina Palucka, MD, PhD**  
The Jackson Laboratory Cancer Center, Farmington, CT, USA

4:45-5:15 pm .....

**Understanding the Role of Adrenergic Stress on the Sensitivity  
of Tumors to Radiation and Anti-Tumor Immunity**  
**Elizabeth Repasky, PhD**  
Roswell Park Cancer Institute, Buffalo, NY, USA



**► SESSION VI: CUTTING-EDGE BIOMARKERS**

9:00-9:30 am ..... **Prediction and Evaluation of Therapy Response with Imaging:  
Is Radiomics the Solution?**

**Philippe Lambin, MD, PhD**

University of Maastricht and MAASTRO Clinic, Maastricht, NL

9:30-10:00 am ..... **A Novel Biomarker Platform to Predict Responses to IT**  
**Olivier Elemento, PhD**

Weill Cornell Medicine, New York, NY, USA

10:00-10:30 am ..... **Phosphopeptides Displayed by MHC Molecules as Next  
Generation Cancer Immunotherapy Targets**

**Victor Engelhard, PhD**

University of Virginia School of Medicine, Charlottesville, VA, USA

10:30-11:00 am ..... *Coffee Break*

**► SESSION VII: ACCELERATING PROGRESS IN THE TRANSLATION TO THE CLINIC**

11:00-11:30 am ..... **Radiation and Immunotherapy Combinations in Lung Cancer**

**James W. Welsh, MD**

University of Texas, MD Anderson Cancer Center, Houston, TX, USA

11:30-12:00 pm ..... **Using Oncolytic Virotherapy to Enhance the Effects  
of Radiotherapy**

**Kevin Harrington, PhD**

The Institute of Cancer Research, London, UK

12:00-12:30 pm ..... **Radiotherapy and Immunotherapy Combinations in  
Hematologic Malignancies**

**Joshua Brody, MD**

Icahn Mount Sinai School of Medicine, NY, USA

12:30-1:00 pm ..... **Concluding Remarks**

**Silvia C. Formenti, MD**

Weill Cornell Medicine, New York, NY, USA

1:00 pm ..... *Adjourn*

**Reserve these dates!**

**September 20, 21, 22, 2018**

**3rd Annual International Conference  
Immunotherapy Radiotherapy Combinations**

**Location:**

Institut Gustave Roussy, Paris, France

**For more information:**

<https://www.gustaveroussy.fr/en>

**PRESENTERS**  
In order of appearance



**Karolina Palucka, MD, PhD**

*The Jackson Laboratory Cancer Center, Farmington, CT, USA*

Dr. Karolina Palucka is a clinical oncologist and cancer immunologist, specializing in human immunology with a particular focus on experimental cancer immunotherapy. Her research exploits dendritic cells, which control the body's immune response to tumors, as the basis for new vaccines against melanomas and other human cancers. She has pioneered the field of ex vivo-generated DC-based vaccines and immunotherapy, including clinical trials for metastatic melanoma, breast and pancreatic cancer as well as HIV. Most recently, she has focused on the pathways by which cancer cells modulate DC function to drive pro-tumor inflammation and metastasis in breast cancer and melanoma. Dr. Palucka joined The Jackson Laboratory for Genomic Medicine (JAX) as professor and associate director of cancer immunology in 2014. Prior to joining JAX, Palucka was the Michael A.E. Ramsay Chair for Cancer Immunology Research and director of the Ralph M. Steinman Center for Cancer Vaccines at the Baylor Institute for Immunology Research in Dallas. She was also a professor of oncological sciences and clinical immunology at Mt. Sinai School of Medicine in New York.

Thursday, September 21, 2017 • 8:30-9:00 am / Introduction to Innate Immunity  
Friday, September 22, 2017 • 4:15-4:45 pm / Targeting IL-1 in Breast Cancer



**Alan B. Frey, PhD**

*New York University School of Medicine, New York, NY, USA*

Cancers are infiltrated with antitumor CD8<sup>+</sup> T cells that arise during tumor growth but are defective in effector phase functions because of the suppressive micro-environment. Lytic dysfunction in CD8<sup>+</sup> tumor infiltrating lymphocytes (TIL) permits tumor growth since reactivation of TIL can result in tumor destruction. Like all memory T cells, TIL express inhibitory signaling receptors (aka immune checkpoint inhibitor molecules) that down regulate TCR-mediated signal transduction upon TIL interaction with cells expressing cognate ligands therein restricting cell activation and preventing the effector phase. Previously we identified a novel murine TIL inhibitory signaling receptor, protocadherin-18, and showed that it interacts with p56lck kinase therein abrogating proximal TCR signaling. pcdh18 is expressed in all CD8<sup>+</sup> and CD4<sup>+</sup> Effector memory T cells (not only in TIL) and is not expressed in: B cells, NK cells, naive CD8<sup>+</sup> T cells, or primary CD8<sup>+</sup> effector cells, and kinetics of its transcriptional regulation upon TCR ligation are that of an immediate early response gene. Recently we have shown that TIL in mice deleted in protocadherin-18 have enhanced antitumor activity and also that co-blockade of another immune checkpoint inhibitor (PD-1) together with protocadherin-18 in wild type mice significantly enhances TIL effector phase functions. These results define an important role for protocadherin-18 in antitumor T cell function and regulation of the antitumor effector phase by the action of pcdh18 suggests a point of possible therapeutic intervention, which the lab is pursuing.

Thursday, September 21, 2017 • 9:00-9:30 am / Overview of Adaptive Immunity



**Charles G. Drake, MD, PhD**

*Columbia University Medical Center, New York, NY, USA*

Charles George Drake, MD, PhD, is a professor of oncology and immunology at the Columbia University Herbert Irving Comprehensive Cancer Center, where he directs the Genitourinary Cancer Program, and co-directs the Immunotherapy Program. Additionally serving as the associate director for clinical research in the Irving Cancer Center, Dr. Drake's areas of expertise include basic and translational cancer immunology, and the treatment of genitourinary cancers. With degrees in electrical and biomedical engineering, Dr. Drake earned a PhD in immunology from the National Jewish Center for Immunology. He completed an MD at the University of Colorado Health Sciences Center. Following a residency

in internal medicine on the Osler Service and a fellowship in medical oncology, both at Johns Hopkins. Dr. Drake joined the Johns Hopkins faculty. He moved to Columbia University in 2016. Dr. Drake has published extensively, winning awards and honors for his research and scholarship. He holds several patents, several of which have been translated to patients in Phase I clinical trials. His laboratory focuses on understanding the immune response to cancer, using both cutting-edge animal models and patient samples.

Thursday, September 21, 2017 • 9:30-10:00 am  
Role of the Immune System in Tumor Development and Progression



**Timothy A. Chan, MD, PhD**

*Memorial Sloan Kettering Cancer Center, New York, NY, USA*

Timothy A. Chan is a cancer geneticist and physician scientist with an interest in immunogenomics and immunotherapy. He is currently Vice Chair of the Department of Radiation Oncology and the PaineWebber Chair in Cancer Genetics at the Memorial Sloan Kettering Cancer Center (MSKCC). He is a member/professor in the Human Oncology and Pathogenesis Program at MSKCC and director of the Immunogenomics and Precision Oncology Platform (IPOP), a program focused on precision immuno-oncology. Dr. Chan obtained an MD and PhD in genetics from the Johns Hopkins School of Medicine. He went on to complete a residency in radiation oncology and a postdoctoral fellowship in epigenetics. His main interests are utilizing cancer genomics, functional genomics, and statistical genetics to dissect the molecular determinants of tumor aggressiveness and response to cancer therapies. He led the team that first described mutational burden as a determinant of clinical benefit to immunotherapy and showed that mutational landscapes help determine response to immune checkpoint blockade. His lab is developing pioneering approaches to examine neoantigens and the genomic foundations of response to cancer immunotherapy.

Thursday, September 21, 2017 • 10:30-11:00 am / Immunotherapy: What's Genes Got To Do With It?



**Michael A. Postow, MD**

*Memorial Sloan Kettering Cancer Center, New York, NY, USA*

Dr. Michael Postow is a physician on faculty at Memorial Sloan Kettering Cancer Center in the Melanoma and Immunotherapeutics Oncology Service. He completed medical school at New York University School of Medicine and internal medicine residency training at Brigham and Women's Hospital/Harvard Medical School. He then returned to New York City for his fellowship in medical oncology at Memorial Sloan Kettering Cancer Center where he conducted clinical research with Dr. Jedd Wolchok in melanoma and immunotherapy. He joined the faculty at Sloan Kettering Cancer Center in 2013 and has been leading clinical trials involving immunotherapeutic agents, including the combination of nivolumab and ipilimumab in melanoma which led to FDA approval and combinations of radiotherapy and immune checkpoint blockade. He also holds an appointment in the phase I immunotherapy clinical trials group where he studies early phase immunotherapy agents alone and in new combinations for patients with multiple malignancies. He is the Editor-In-Chief for the journal, *Clinical Skin Cancer* and also serves on the editorial board of the *Journal for the Immunotherapy of Cancer*. In his spare time, he enjoys playing guitar and piano, skiing, sailing, and trying to keep up with his wife as she trains for triathlons.

Thursday, September 21, 2017 • 11:00-11:30 am / Overview of the Immunotherapy Landscape



**Robert H. Vonderheide, MD, PhD**

*University of Pennsylvania, Philadelphia, PA, USA*

Robert H. Vonderheide, MD, DPhil, is Director, Abramson Cancer Center, Perelman School of Medicine at the University of Pennsylvania and the John H. Glick, MD Abramson Cancer Center's Director Professor. Dr. Vonderheide graduated from Oxford University as a Rhodes Scholar, and Harvard Medical School. He completed training

in internal medicine and medical oncology at the Massachusetts General Hospital and the Dana Farber Cancer Institute. Dr. Vonderheide is a distinguished scientist and clinician who has deciphered mechanisms of cancer immune surveillance and developed novel cancer therapeutics, particularly in pancreatic cancer. He is well-recognized for driving the development of agonist CD40 antibodies, now in later stage clinical trials as potential immune therapy of cancer. Dr. Vonderheide discovered telomerase as a universal tumor antigen and has led the efforts to develop telomerase vaccination for both therapy and the prevention of cancer in healthy individuals. He has helped lead a team to show that stereotactic radiation therapy in combination with dual checkpoint blockade represents a synergistic path for immune activation in cancer. Dr. Vonderheide merges his clinical investigations with rigorous studies in mouse models or other laboratory systems. Dr. Vonderheide has been continuously funded by the NCI, and his high-impact findings have been published in *Nature*, *Science*, *Cell* and the *New England Journal of Medicine*.

Thursday, September 21, 2017 • 11:30-12:00 pm / The Case for Priming, Not Check Point



**Sandra Demaria, MD**  
*Weill Cornell Medicine, New York, NY, USA*

Sandra Demaria, MD, a native of Turin, Italy, obtained her MD from the University of Turin, and then moved to New York for her postdoctoral training in immunology as a Damon Runyon-Walter Winchell Cancer Research Fund awardee, followed by a residency in anatomic pathology at NYU School of Medicine (NYU SoM). She remained on the faculty at NYU SoM until 2015 raising to the rank of Professor. She is currently Professor of Radiation Oncology and Pathology at Weill Cornell Medicine in New York City. Dr. Demaria is internationally known for her studies demonstrating the synergy of local radiation therapy with different immunotherapeutic agents in pre-clinical models of cancer. She was the first to show that radiotherapy can convert tumors unresponsive to immune checkpoint inhibitors into responsive ones, a finding being translated in several clinical trials at multiple institutions. Her current work is funded by the US National Cancer Institute and several private foundations and is aimed at identifying the molecular mechanisms that regulate ionizing radiation's ability to generate an in situ tumor vaccine in both preclinical tumor models as well as cancer patients treated in clinical trials testing various combinations of radiation and immunotherapy. As a breast cancer pathologist Dr. Demaria has also studied the immunological microenvironment of breast cancer in patients, and therapeutic strategies to modulate the immune infiltrate in pre-clinical breast cancer models. She holds leadership positions in national professional societies, including the Society for Immunotherapy of Cancer (SITC) where she currently serves on the Board, and served as a member of the Steering Committee of AACR Cancer Immunology Working Group. She is an elected member of the European Academy for Tumor Immunology (EATI), and serves in the editorial board of several journals, including *Radiation Research*, *The Journal of Immunology*, *Clinical Cancer Research*, and *Journal for ImmunoTherapy of Cancer*.

Thursday, September 21, 2017 • 1:30-2:00 pm / The Mechanistic Basis of In Situ Vaccination By Radiotherapy



**Jean-Luc Perfettini, PhD**  
*Institut Gustave Roussy, Paris, France*

Jean-Luc Perfettini is currently "Director of Research" at the "French Medical Research Council" (INSERM), deputy director of the research unit "Molecular Radiotherapy" INSERM U1030, Director of "Cell Death and Aging" team at Gustave Roussy comprehensive cancer center (CCR), deputy member of the steering committee of "Infectious Disease Models and Innovative Therapies (IDMIT) National Center" and member of the council of the Laboratory of Excellence in Research on Medication and Innovative Therapeutics (Labex LERMIT). Jean-Luc Perfettini has earned his expertise in the fields of immunology, microbiology and cellular biology in the laboratories of Alice Dautry and Philippe Kourilsky at the Pasteur Institute. He obtained his "Advanced Immunology" diploma at Pasteur Institute in 1998 and then his PhD in Immunology from University of Paris VII in 2002. From 2002 to 2006, Jean-Luc Perfettini received his post-doctoral training in Guido Kroemer's laboratory. In 2006, Jean-Luc Perfettini became a senior scientist at INSERM in Guido Kroemer's laboratory and obtained his accred-

itation to direct research in 2010. Since 2013, Jean-Luc Perfettini is "Director of Research" at INSERM, at Gustave Roussy CCR, at IDMIT center and at Labex LERMIT. Jean-Luc Perfettini is currently developing an integrative research program, in the field of radiation oncology, that aims at characterizing IR-induced cell death and senescence modalities, developing preclinical mouse models to study the immune responses elicited by anti-cancer treatments, and identifying innovative therapeutic approaches that could improve the effectiveness of anti-cancer treatments. Jean-Luc Perfettini is an internationally recognized expert in the field of cell death processes and innate immunity (particularly with regard to their roles in microbial infection and cancer), and is author of more than 68 publications (including articles in *Nat Immunol*, *Nat Med*, *Nat Cell Biol* and *JEM*). He has also filled patents related to the modulation of cell death processes (5 patents) and the innate immune response (4 patents).

Thursday, September 21, 2017 • 2:00-2:30 pm / Non-cell Autonomous Death and Radiotherapy



### **Lorenzo Galluzzi, PhD**

*Weill Cornell Medicine, New York, NY, USA*

Lorenzo Galluzzi (born 1980) is currently Assistant Professor of Cell Biology in Radiation Oncology at the Department of Radiation Oncology of the Weill Cornell Medical College (New York, USA), and Honorary Associate Professor at the Faculty of Medicine of the Paris Descartes University (Paris, France). Prior to joining Weill Cornell Medical College (2017), Lorenzo Galluzzi was a Junior Scientist of the Research Team "Apoptosis, Cancer and Immunity" at the Cordeliers Research Center (Paris, France; 2012-2016). Lorenzo Galluzzi did his post-doctoral training at the Gustave Roussy Comprehensive Cancer Center (Villejuif, France; 2009-2011), after receiving his PhD from the Paris Sud University (Le Kremlin-Bicetre, France; 2005-2008). He is also Associate Director of the European Academy for Tumor Immunology (EATI), and Founding Member of the European Research Institute for Integrated Cellular Pathology (ERI-ICP). Lorenzo Galluzzi is best known for major experimental and conceptual contributions to the fields of cell death, autophagy, tumor metabolism and tumor immunology. In particular, he provided profound insights into the links between adaptive stress responses in cancer cells and the activation of a clinically relevant tumor-targeting immune response in the context of chemotherapy and radiation therapy. Lorenzo Galluzzi has published more than 330 scientific articles in international peer-reviewed journals. According to a survey published by Lab Times, he is currently the 6th and the youngest of the 30 most-cited European cell biologists (relative to the period 2007–2013). Lorenzo Galluzzi currently operates as Editor-in-Chief of three journals: *Oncolmmunology* (which he co-founded in 2011), *International Review of Cell and Molecular Biology*, and *Molecular and Cellular Oncology* (which he co-founded in 2013). In addition, Lorenzo Galluzzi currently serves as Section Chief Editor for *Oncotarget* (Autophagy and Cell Death section), Founding Editor for *Microbial Cell* and *Cell Stress*, and Associate Editor for *Cell Death and Disease*.

Thursday, September 21, 2017 • 2:30-3:00 pm / Autophagy and Radiation



### **Danielle M. Lussier, PhD**

*Washington University, St. Louis, MO, USA*

Dr. Danielle M. Lussier is currently a postdoctoral fellow within Dr. Robert Schreiber's lab at Washington University in Saint Louis with a particular focus on broadening tumor types susceptible to immunotherapies using mutagenic treatments. She received her PhD in Arizona, under the mentorship of Dr. Joseph Blattman, studying T cell exhaustion within metastatic osteosarcoma. She has published several articles related to T cell activation and exhaustion in the tumor microenvironment, and three book chapters related to cancer immunoediting. She was awarded the Cancer Research Institute postdoctoral fellowship based on her work utilizing low dose irradiation to induce de novo T cell responses against irradiation neoantigens.

Thursday, September 21, 2017 • 3:00-3:30 pm

Radiation-induced Neoantigens Enhance Immunotherapy Efficacy in Cancers With Low Mutational Loads

**Michele Mondini, PhD***Institut Gustave Roussy, Paris, France*

Michele Mondini obtained his PhD in Immunology and Cellular Biology from the University of Turin, Italy in 2006. He has been a lecturer at the University of Eastern Piedmont from 2006 to 2011, as well as founder and scientific coordinator of Notopharm, a start-up company that aimed at the diagnosis and therapy of immune-related disorders. Michele Mondini joined the U1030 "Molecular Radiotherapy Unit" in 2011. He is in charge of research projects concerning the development of new combination strategies to improve the therapeutic index of radiotherapy, with a focus on the role of the immune system. He leads collaborative projects with pharmaceutical companies. He is author of 36 peer-reviewed articles and named inventor of 4 patent applications.

Thursday, September 21, 2017 • 4:00-4:30 pm

Monocyte and Macrophages Trafficking During Tumor Response to Radiation

**Eric Deutsch, MD, PhD***Institut Gustave Roussy, Paris, France*

Eric Deutsch, MD, PhD, is full professor of oncology, option radiotherapy at the Paris-Sud University. He was trained in Paris, had a PhD on the influence of the tyrosine kinase activity of BCR-ABL on genetic instability, went for a postdoctoral fellowship at University of Pennsylvania, USA. Since then, he leads the preclinical and translational research in radiotherapy at Gustave Roussy and heads the INSERM 1030 "Molecular Radiotherapy" research unit. His clinical activities have been focused on translational and early phase  $\frac{1}{2}$  clinical trials and was one also part of the phase I department of Gustave Roussy where he has a transdisciplinary role bridging radiation and medical oncology. He has been the PI of several phase I trials evaluating novel drugs, the majority of which are immune targeting agents in association with radiotherapy. He is strongly involved in scientific societies and collaborative groups such as ESTRO, EORTC, UNICANCER.

Thursday, September 21, 2017 • 4:30-5:00 pm

Targeting Macrophages as a Strategy to Enhance the Therapeutic Ratio of Radiotherapy

**Alexandre Boissonnas, PhD***INSERM Université Pierre et Marie Curie, Paris, France*

Alexandre Boissonnas is an immunologist with a tenured position in the French National Institute of Medical Research (Inserm). During his PhD until 2004, he studied the role of the antigen in the homeostasis of peripheral T lymphocytes. He then joined Sebastian Amigorena's lab at Institut Curie-Paris to develop a new approach on the study of leukocyte dynamic using two-photon live imaging. Since 2009 he joined the Inserm at CIMI-Paris and now focus his investigations on the role of the mononuclear phagocyte system in inflammatory pathologies. Using multimodal non-linear optical imaging in mouse models, he works on the distinct roles between monocyte-derived cells and tissue-resident macrophages and tracks their respective behaviors in their physiological environment. Based on this technical innovation he aims proposing a spatio-temporal integrative schema of tumor-associated macrophage origin and function in the course of tumor development and in response to various cancer therapies.

Thursday, September 21, 2017 • 5:00-5:30 pm

Differential Implication of Tissue-Resident and  
Recruited Tumor-Associated Macrophages  
in Lung Metastasis Development





**Erik Wennerberg, PhD**

*Weill Cornell Medicine, New York, NY, USA*

My research experience has largely been within the tumor immunology field with an emphasis towards translational research and therapy development. During my PhD studies at Karolinska Institutet I studied several aspects of natural killer (NK) cell function and development of NK cell adoptive transfer therapy in cancer patients. In collaborative projects with other research groups at Karolinska Institutet as well as at NIH in Bethesda and University of Chile in Santiago, we focused primarily on NK cell's migratory and cytotoxic function against tumor cells but also how NK cells interact with dendritic cells and suppressive myeloid cells. In addition, we pursued anaplastic thyroid cancer (ATC) as a potential novel target for NK-cell based therapy. After joining Dr. Sandra Demaria's lab in 2014 my research focus has shifted to studying changes in the immunomodulatory components of the tumor micro-environment following radiation therapy (RT) and how they can impact the success rate of radiation-induced in situ tumor vaccination. My main project is centered on discerning the role of adenosine signaling in RT-induced immunity and how we can pharmacologically prevent the skewing of adenosine signaling from immune stimulation to immune suppression following RT. Moreover, we are studying how exercise can modulate the anti-tumor immune response in mice.

Thursday, September 21, 2017 • 5:30-6:00 pm

Adenosine Signaling in the Regulation of Radiation-induced Anti-tumor Immunity



**Silvia C. Formenti, MD**

*Weill Cornell Medicine, New York, NY, USA*

Dr. Formenti is the Chair of Radiation Oncology at Weill Cornell Medical College and the Associate Director of the Cancer Center. Trained as a medical and radiation oncologist she devoted her career to translate novel preclinical information to the clinic. Key to her formation was a year spent in Malcolm Mitchell's laboratory at USC, in cancer immunology. Her initial research on how to best combine radiation and systemic therapy, both pre-clinically and clinically evolved on focusing on the systemic effects of radiotherapy, particularly on the immune system. Her lab's original demonstration that the abscopal effect of radiotherapy is immune-mediated has opened a fertile field of research to understand the immune-stimulatory and immune-suppressive effects of ionizing radiation, and to develop strategies directed at harnessing anti-tumor immunity in irradiated subjects. This work has introduced a paradigm shift in radiation and cancer biology. In this novel application, radiotherapy contributes at recovering an immuno-logical equilibrium in the setting of metastatic cancer, by converting an irradiated metastasis into an in situ, individualized vaccine in the presence of immune checkpoint blockade (anti-CTLA4, anti-PDL-1). Once successfully immunized against the irradiated site, the host can develop an anti-tumor immune response capable to reject the other metastases. In some patients with metastatic disease the combination of radiation and immune checkpoint blockade has resulted in complete remissions, sustained for years after treatment (without any other additional interventions). Dr. Formenti's work has been funded by grants from NIH, DOD, ACS and Breast Cancer Research Foundation and is currently leading four investigator-initiated clinical trials of immunotherapy and radiotherapy.

Friday, September 22, 2017 • 8:30-9:00 am

Combining Radiotherapy and Immunotherapy in the Clinic: Barriers and Opportunities



**Peter Huber, MD, PhD**

*German Cancer Research Center DKFZ, Heidelberg, Germany*

Peter Huber MD, PhD, is Professor of Radiation Oncology and an attending radiation oncologist at the Department of Radiation Oncology of the Heidelberg Medical Center, Germany. He is the head of the Division CCU Molecular Radiation Oncology at the German Cancer Research Center (dkfz) in Heidelberg, Germany. He holds a PhD in physics and an MD degree from the University of Heidelberg. His research interests include clinical,

translational and preclinical radiation oncology research. This involves physical driven approaches such as IGRT, particle radiotherapy or functional imaging as well as biological approaches including molecular effects of high and low LET radiation on tumor and normal cells such as endothelial and mesenchymal stem cells, studies on DNA damage, angiogenesis, fibrosis or immune effects and drug combinations targeting these biological processes.

Friday, September 22, 2017 • 9:00-9:30 am  
Immuno-oncology and Radiotherapy Trials at the DKFZ



**David Raben, MD**

*University of Colorado Anschutz Medical Campus, Aurora, CO, USA*

David Raben, MD is currently faculty at the University of Colorado where he is a board-certified Professor of Radiation Oncology. He received a BA in Psychology from Duke University in 1985 and completed his MD at Wake Forest University/Bowman Grey School of Medicine in 1990. After graduation, he completed residency in Radiation Oncology at the Johns Hopkins Hospital from 1991-1994, serving as a chief resident in 1994. Dr. Raben has developed nationally recognized clinical expertise over the past 20 years in the management of head and neck cancer (HNC), lung cancer and prostate/bladder cancers. From a research perspective, his focus has been on laboratory discoveries and innovative clinical trials in areas such as high risk, heavy smoker HNC patients and has explored approaches that inhibit cancer DNA repair or growth factor signaling. Dr. Raben recently completed the first Phase I clinical trial in the US with and oral DNA repair inhibitor (PARP inhibitor) and radiation for heavy smokers when combined with intensity modulated radiation (IMRT). His efforts currently center around evaluation of TGFb inhibition in HNSCC as well as the use of radiation to stimulate activity of immune enabling drugs. Dr. Raben serves on the NRG Oncology head and neck steering committee as well as co-chairing the Developmental Therapeutics Co-Chair at the NRG. He is an ad hoc reviewer for high impact journals such as *Journal of Clinical Oncology*, *JAMA Oncology*, *Oral Oncology*, *Head and Neck*, *Int. Journal of Radiation Oncology Biology Physics*, *Clinical Cancer Research* and *Cancer Research*. He has authored over 140 publications.

Friday, September 22, 2017 • 9:30-10:00 am  
Radiation Immunotherapy Progress: Opportunities and Suggested Pathways and Partners



**Tim Illidge, BSc, PhD, MRCP, FRCR, FRCPath**

*Institute of Cancer Sciences, University of Manchester, Manchester, UK*

Dr. Illidge completed his undergraduate degree in Biochemistry (BSc, London University), before his medical degree (MB, BS) from Guy's Hospital, London. His PhD (University of Southampton) was in antibodies and radiotherapy combinations. In 1994 he was appointed a Cancer Research UK clinical fellow and in 1999 a CRUK senior clinical fellow/senior lecturer at University of Southampton. In 2004 he was appointed Professor of Targeted Therapy and Oncology at University of Manchester and leads the translational Targeted Therapy Group, Cancer Research UK Manchester Institute. The translational research programme is based around radiotherapy and immunotherapy combinations, funded by CRUK programme grant. He is currently Head of Division of Molecular and Clinical Cancer Sciences at the University of Manchester, Manchester Academic Health Sciences Centre.

Friday, September 22, 2017 • 10:00-10:30 am  
Increasing Systemic Anti-tumor Immunity with Radiation Treatment using Immunotherapy Combinations



**William H. McBride, PhD, DSc**

*University of California, Los Angeles, CA, USA*

Dr. McBride received his PhD and DSc in immunology from the Department of Bacteriology, University of Edinburgh Medical School, Scotland and was a senior faculty member when he was recruited to UCLA as a Professor of Radiation Oncology in 1984. He directed the department's Division of Molecular and Cellular Oncology from 1994 to 2015 and recently resigned from the post as an Assistant Vice Chancellor for

Research at UCLA. Dr. McBride is an expert in the effects of radiation on tumor and normal tissue immunology and radiobiology. He received the Failla Gold Medal from the Radiation Research Society in 2003 and the ASTRO Gold Medal in 2010. He has published extensively and has been the recipient of multiple grants in the fields of immunology and radiation biology relevant to radiation therapy. He has led the UCLA Center for Medical Countermeasures Against Radiation (CMCR), a NIAID supported program, for the last 12 years.

Friday, September 22, 2017 • 11:00-11:45 am

DEBATE - Proposed: The Immune System Plays No Role in Radiation Cancer Therapy



**David J. Brenner, PhD, DSc**  
*Columbia University, New York, NY, USA*

David J. Brenner is the Director of the Columbia University Center for Radiological Research, which is the oldest and largest radiation biology center in the US. He is also director of the Columbia University Radiological Research Accelerator Facility. Brenner's research focuses on mechanistic models for the effects of ionizing radiation on living systems. He divides his research time between the effects of high doses of ionizing radiation (relating to radiation therapy) and the effects of low doses of radiation (relating to radiological, environmental, and occupational exposures). At low doses, he was the first to quantify potential risks associated with the rapidly increasing usage of CT scans. At high doses, his proposal to use large-fraction radiotherapy for prostate cancer (hypo-fractionation) is increasingly being used in the clinic, with several randomized trials now published. Dr. Brenner has published more than 300 peer-reviewed papers and is the author of two books on radiation for the lay person: "Making the Radiation Therapy Decision" and "Radon, Risk and Remedy." Dr. Brenner is a recent recipient of the Failla gold medal, the annual award given by the Radiation Research Society for contributions to radiation research, and the Weldon Prize, from Oxford University for the "development of mathematical or statistical methods applied to problems in biology." He is a member of the US National Academies Nuclear and Radiation Studies Board.

Friday, September 22, 2017 • 11:00-11:45 am

DEBATE - Proposed: The Immune System Plays No Role in Radiation Cancer Therapy



**Ralph R. Weichselbaum, MD**  
*University of Chicago Medicine, Chicago, IL, USA*

Ralph R. Weichselbaum has devoted his career to translational cancer research. While a fellow in the laboratory of John B. Little and later a faculty member at Harvard, Weichselbaum helped define the role of intrinsic radio-sensitivity and potentially lethal radiation damage repair in the survival of human tumor cells following x-irradiation. He also co-led a team of investigators that were the first to use induction chemotherapy combined with radiotherapy (RT) in the treatment of head and neck cancer. After moving to The University of Chicago, his laboratory (in collaboration with Donald Kufe) made seminal discoveries in basic signal transduction mechanisms following RT, and mechanisms of RT resistance and sensitivity mediated in part by cytokine activation in tumors. Combining these concepts, Weichselbaum and colleagues thus conceived "genetic radiotherapy." Commercialized as TNFerade (GenVec), this genetic construct has been studied in clinical trials. In collaboration with Bernard Roizman, Weichselbaum also discovered that genetically modified Herpes Virus could be induced to replicate within the radiation field. In 1995, Samuel Hellman and Weichselbaum posited that a limited form of metastasis—"oligometastasis"—exists that can be cured by RT and/or surgery; they are currently investigating its molecular basis. Weichselbaum also collaborated with Nikolai Khodarev to discover that genes in the Stat1/interferon pathway mediate radioresistance and chemoresistance, and contribute to metastasis. A subset of these genes forms the basis for a predictive gene signature for women with breast cancer who receive adjuvant RT and/or chemo-radiotherapy. Most recently, Weichselbaum and Yang-Xin Fu are investigating the basis of the interaction between radiation and the immune system. Weichselbaum is the Daniel K. Ludwig Distinguished Service Professor and Chairman of The Department of Radiation and Cellular Oncology and co-Director of

the Ludwig Center for Metastasis Research. He is a member of the National Academy of Medicine and has over 800 publications.

Friday, September 22, 2017 • 1:00-1:45 pm / KEYNOTE LECTURE The Future of Radiation Oncology



**Paul M. Sondel, MD, PhD**

*University of Wisconsin, Madison, WI, USA*

Paul Sondel, MD, PhD is the Reed and Carolee Walker Professor of Pediatrics, Human Oncology and Genetics and Director of Research for the Division of Pediatric Hematology, Oncology and Bone Marrow Transplant at the University of Wisconsin–Madison (UW). His career has focused on basic, translational and clinical cancer immunotherapy since beginning lab-studies in 1969. Following BS-1971 and PhD-1975 (UW, mentored by BMT pioneer, Fritz Bach, MD), MD-1977 (Harvard Medical School) and residencies at the Universities of Minnesota and Wisconsin, he joined the UW faculty in 1980. He was Head of Pediatric Hematology-Oncology and Bone Marrow Transplant from 1990-2016, and helped lead cancer immunology research at the UW Carbone Cancer Center (UWCCC) since 1990. His laboratory has pursued strategies for enabling immune responses to impact on cancer; some have moved into clinical testing in adults at the UWCCC and in children through the Children's Oncology Group (COG), with some demonstrating clinical benefit. This includes collaborative development of an immunotherapy regimen (dinutuximab+interleukin-2+granulocyte-macrophage-colony-stimulating-factor) for children with high-risk neuroblastoma, approved by the US-FDA in 2015. He has held multiple committee/leadership roles, including at The NIH/NCI, American Cancer Society, Children's Oncology Group, and St. Jude's Children's Research Hospital. He has been a scholar of the Leukemia Society of America, recently received a 7-year Outstanding Investigator Award from the NCI, and the SITC's Smalley Award for 2017. He has published more than 380 scientific articles and chapters, and has trained more than 60 graduate students and post-doctoral fellows in his lab. He also enjoys biking and canoeing; but most of all, he and his wife of 44 years (Sherie) love being parents and grandparents.

Friday, September 22, 2017 • 1:45-2:15 pm

Tumor-targeting Antibodies / Immunocytokines and Radiation as an In Situ Cancer Vaccine



**Chandan Guha, MBBS, PhD**

*Montefiore Medical Center, Albert Einstein College of Medicine, New York, NY, USA*

Chandan Guha, MBBS, PhD obtained his MBBS from the University of Calcutta, India and his PhD in Immunology at the Medical University of South Carolina, Charleston. Dr. Guha is currently Professor and Vice Chairman of Radiation Oncology and Professor of pathology and urology at Montefiore Medical Center, Albert Einstein College of Medicine, NY. He is also the chair of the Translational Research Program of gastrointestinal malignancies for the NRG oncology cooperative group and a member of the Cancer Research Institute-Focused Ultrasound Foundation (CRI-FUSF) Advisory Committee. He is a visiting faculty of the Institute of Liver and Biliary Sciences, Delhi, India and the Shanghai Proton and Heavy Ion Center (SPHIC). As the First Director of Translational Oncology and Radiation Sciences at SPHIC, Dr. Guha has been awarded a NCI-sponsored, BAA contract to conduct a randomized trial of Carbon ion therapy versus photon therapy for patients with locally advanced, unresectable pancreatic cancer. Beginning in the 1990s, Dr. Guha initiated investigation of immunomodulation of radiation therapy and demonstrated that irradiated tumors can act as autologous in situ tumor vaccines. He is the founding Director of the Einstein Institute for Onco-Physics, where principles of medical physics and imaging are being applied in the investigations of cancer biology and regenerative medicine. The Institute is spearheading research in ionizing and non-ionizing radiation biology, tumor immunobiology and functional imaging by scientists and clinicians working together to translate research from bench-to-bedside by designing novel combination clinical trials of immunotherapy and radiation therapy. Dr. Guha has obtained multiple grants from the National Institutes of Health, Department of Defense and the American Cancer Society. He has several patents, including the invention of an ultrasound device (SonoImmune®) for therapeutic in situ tumor vaccination.

Friday, September 22, 2017 • 2:15-2:45 pm / Ultrasound Priming for Radiation In Situ Tumor Vaccines

**Claire Vanpouille-Box, PhD**

*Weill Cornell Medicine, New York, NY, USA*

Claire Vanpouille-Box received her PhD in Experimental Pharmacology in 2011 from the University of Angers, France. Determined to pursue an academic career and intrigued by the emerging role of radiation in cancer immunotherapy, she decided to join the lab of Dr. Demaria in 2011 to conduct her postdoctoral training. Claire is currently holding a junior faculty position as an instructor in the Radiation Oncology Department at Weill Cornell Medicine where she is focusing her research to study how the TGF-beta superfamily members interact with the immune system to prevent radiation-induced in situ vaccination. Additionally, Claire is also leveraging her multidisciplinary background to better understand how radiation should be administered to induce anti-tumor immunity. She has published 17 articles in peer-reviewed scientific journals and has received grants from the Department of Defense (DOD) and the Anna-Maria and Stephen Kellen Foundation. Claire was also awarded with many prestigious awards among which the 2014-Marie Curie Award from the Radiation Research Society (RRS), the 2015-AACR Susan G Komen Scholar-in-training award from the American Association for Cancer Research (AACR) and the 2017-AAI Early Career Faculty travel grant from the American Association of Immunologists (AAI). Claire's long-term career goal is to become an independent investigator in a new field of investigation that aims to understand the crosstalk between radiation and the immune system.

Friday, September 22, 2017 • 2:45-3:15 pm

Role of the TGFbeta Family Members in Hindering the Pro-immunogenic Effects of Radiotherapy

**Giorgio Trinchieri, MD**

*Center for Cancer Research, NCI, NIH, Bethesda, MD, USA*

Giorgio Trinchieri, MD, has been the Director of the Cancer and Inflammation Program, CCR, NCI since 2006. He received his MD from the University of Torino. After serving as Assistant Professor of Medical Genetics at that University, as well as a member of the Basel Institute for Immunology, Dr. Trinchieri moved to Philadelphia where he raised to the rank of Hilary Koprowski endowed Professor and Chair of the Wistar Institute's Immunology Program as well as Wistar Professor of Medicine at the University of Pennsylvania Medical School. He then served as Director of the Schering-Plough Laboratory for Immunological Research in Dardilly, France, and as an NIH Fogarty Scholar in the Laboratory for Parasitic Diseases at the National Institute of Allergy and Infectious Diseases. Dr. Trinchieri is an international authority on the roles of cells and cytokines in the innate immune response to infections and cancer. He discovered Interleukin-12 (IL-12), a cytokine that plays a pivotal role in the induction of innate and adaptive cellular immunity. His laboratory's main focus is the role of inflammation, innate resistance, immunity, and commensal microbiota in carcinogenesis, cancer progression, and prevention or destruction of cancer. His many awards and honors include the W. B. Coley Award for Distinguished Research in Basic and Clinical Immunology, the Richard V. Smalley, MD, Memorial Award, the Milstein Award from the International Society for Interferon and Cytokine Research, the Honorary Membership in the Italian Society of Immunology and Allergy, and the Lifetime Honorary Membership Award from the International Cytokine Society.

Friday, September 22, 2017 • 3:45-4:15 pm / Role of Microbiome in Cancer

**Elizabeth Repasky, PhD**

*Roswell Park Cancer Institute, Buffalo, NY, USA*

Dr. Elizabeth Repasky is a Professor of Oncology, the William Huebsch Professor of Immunology, and a Program Leader for the Cell Stress and Biophysical Therapies Program at Roswell Park Cancer Institute (RPCI). Dr. Repasky's translational research program focuses on exploration of stress and physiological responses which can be manipulated to alter the tumor microenvironment and improve the efficacy of cancer therapies, including radiation, chemotherapies and immunotherapies. A major passion for her has been to understand the role of body temperature and the impact of mild thermal stress (hyperthermia and heat



shock response) on efficacy of ionizing radiation, anti-tumor immune activity, vascular function and metabolism. Her most recent work has focused on the role of adrenergic stress signaling in the tumor microenvironment and its impact on immunosuppression and resistance to cytotoxic therapies. During her career, she has authored or co-authored over 170 cited publications. Dr. Repasky is a recent awardee of the J. Eugene Robinson Award from the Society for Thermal Medicine. Training and mentorship have been very important to her during her career and she has served as major advisor to 21 PhD students and 12 Postdoctoral Fellows, nearly all of whom have gone on to become successful members of the research, academia or bio-tech communities.

Friday, September 22, 2017 • 4:45-5:15 pm

Understanding the Role of Adrenergic Stress on the Sensitivity of Tumors to Radiation and Anti-Tumor Immunity



**Philippe Lambin, MD, PhD**

*University of Maastricht and MAASTRO Clinic, Maastricht, NL*

Philippe Lambin is a Clinician, Radiation Oncologist, “ERC advanced grant laureate” from 2016 and pioneer in translational research with a focus on tumour hypoxia and Decision Support Systems. He has a PhD in Radiation Biology and is Professor at the University of Maastricht (Radiation Oncology). He is co-author of more than 429 peer reviewed scientific papers (Hirsch Index: 64 scopus 24-04-2017, 78 Google scholar), co-inventor of more than 18 patents (filed or submitted) of which 5 are in the (pre) commercialization phase and (co) promoter of more than 42 completed PhD’s (2 with cum laude). Moreover, Prof. P. Lambin has extensive experience with clinical trials and he is leading several clinical trials (see [www.clinicaltrials.gov](http://www.clinicaltrials.gov): his name is mentioned as Principal Investigator in 35 clinical trials). He is currently involved in several successful European grants (e.g. Artforce, Radiate, Quick-Concept, Requite, BD2decide) including ImmunoSABR (6 millions €) and the Marie Curie Training network PREDICT of which he is the initiator and the coordinator and two NIH grant (“Radiomics”) from the US. His main areas of interest are directed towards translational research in Radiation Biology with a specific focus on tumour hypoxia, functional imaging (Radiomics), lung and head and neck cancer. More recently, his interests have been directed towards hypoxia targeting during immuno-therapy and the development of a “treatment decision support system” based on multiparametric databases containing clinical, imaging, biological and therapeutic information, and taking into account patient preferences. The website he launched, [www.predictcancer.org](http://www.predictcancer.org), with validated predictive models has had more than 16.000 visitors from more than 133 countries. He is one of the inventor of “Distributed learning” a revolutionary Big Data approach for health care (watch the animation of a project he managed) and “Radio-mics” (watch the animation).

Saturday, September 23, 2017 • 9:00-9:30 am

Prediction and Evaluation of Therapy Response with Imaging: Is Radiomics the Solution?



**Olivier Elemento, PhD**

*Weill Cornell Medicine, New York, NY, USA*

Olivier Elemento, PhD is Acting Director of Englander Institute for Precision Medicine, Associate Director of the Institute for Computational Medicine, Director of the Laboratory of Cancer Systems Biology, Co-Leader of the Genetics, Epigenetics and Systems Biology Program in the Meyer Cancer Center at Weill Cornell Medicine. He is also Co-Assistant Dean for Scientific Computing and Associate Professor in the Department of Physiology and Biophysics. His group combines Big Data with experimentation and genomic profiling to accelerate the discovery of cancer cures. He and his group have published over 150 scientific papers in the area of genomics, epigenomics, computational biology and drug discovery. Dr. Elemento and his group have developed new assays and analytical pipelines for cancer genome and epigenome analysis, clinical sequencing and precision medicine. He led the development the first New York State approved whole exome sequencing test for oncology. He and his group developed new methods for assessing tumor driving pathways, the immune landscape of tumors and predicting immunotherapy responders. In addition he developed methodologies to repurpose existing drugs to target specific pathways, predict drug toxicity



and identify synergistic drug combinations. He has also developed augmented reality approaches for visualizing complex biomedical information. His research has been highlighted in several broad audience media outlets, including Popular Science, CBS, Gizmodo, Huffington Post. Dr. Elemento has mentored over 15 graduate students and postdoctoral fellows, several of which have become faculty members or joined pharmaceutical companies. In 2016 two of his graduate students were chosen as 30 under 30 in Healthcare by Forbes Magazine. Finally, Dr. Elemento is the recipient of several awards including the NSF CAREER Award, the Hirschl Trust Career Scientist Award, the Walter B Wriston Award, the Deadalus Award.

Saturday, September 23, 2017 • 9:30-10:00 am / A Novel Biomarker Platform to Predict Responses to IT



**Victor Engelhard, PhD**

*University of Virginia School of Medicine, Charlottesville, VA, USA*

Victor Engelhard received his BS in Biochemistry from Rice University and his MS and PhD in Biochemistry from the University of Illinois. During his postdoctoral fellowship at Harvard University with Jack Strominger, he studied the molecular requirements for antigen recognition by T lymphocytes. He is currently Professor of Microbiology, Immunology, and Cancer Biology, Beirne B. Carter Professor in Immunology, and Director of the Beirne Carter Center for Immunology Research. He is also Co-Leader of the Immunology and Immunotherapy Program of the University of Virginia Cancer Center, and Co-Director of the Human Immune Therapy Center. He has trained over 50 graduate students, postdoctoral fellows, and visiting scientists. He was awarded the Robert J. Kadner Distinguished Teaching Award in 2008, and the David A. Harrison Distinguished Educator Award in 2006. He is currently Director of the Immunology Training Program, and PI of its NIH-sponsored Training Grant. He served on the Experimental Immunology Study Section (1986-90), the Tumors Transplantation and Tolerance Study Section (2005-08), the NIAID Expert Panel on Transplantation Tolerance (1995), and the NIAID Epitope Discovery Working Group (2006-09). He has been a Section Editor for the *Journal of Immunology*, Advisory Editor of the *Journal of Experimental Medicine*, Associate Editor of *Immunity*, and a member of the *Faculty of 1000 Immunology Section*. The work of his laboratory over the last 36 years has been broadly concerned with the recognition of antigens by CD8 T lymphocytes. In the last 20 years, that work has focused on tumor-derived antigens and cancer immunology. His research activities have led to 190 peer-reviewed and invited publications. Current activities in the laboratory are concerned with phosphorylated peptides as tumor antigens, homing and organization of immune cells in tumors, and the role of lymphatic endothelial cells in peripheral immune tolerance.

Saturday, September 23, 2017 • 10:00-10:30 am

Phosphopeptides Displayed by MHC Molecules as Next Generation Cancer Immunotherapy Targets



**James W. Welsh, MD**

*University of Texas, MD Anderson Cancer Center, Houston, TX, USA*

James W. Welsh, MD, is a Tenured Physician Scientist at The University of Texas MD Anderson Cancer Center. Dr. Welsh started his oncology career in the Department of Molecular Oncology at Genentech Inc., at an exciting time when some of the first personalized target therapies were developed. While at Genentech he helped to discover and clone the Wnt-Induced secreted proteins (WISP) family of oncogenes. He later attended Dartmouth Medical School and completed a residency in radiation oncology at the University of Arizona, where he helped develop a novel drug targeting c-Met kinase (MP-470). At MD Anderson he is the director of the immune radiation program, with the goal of using radiation to turn the tumor into an “in-situ” vaccine to prime T cells, turning radiation into a systemic therapy. Being able to both see patients and run a lab has provided insights on how to improve patient care which has resulted in the founding of three new companies Healios Oncology, MolecularMatch and OncoResponse. MolecularMatch is founded on a belief that patients and doctors should have free real-time access to which drugs and trials are best matched to them based on their unique genomic information.

Saturday, September 23, 2017 • 11:00-11:30 am / Radiation and Immunotherapy Combinations in Lung Cancer

**Kevin Harrington, PhD***The Institute of Cancer Research, London, UK*

Professor Kevin Harrington specialises in developing new treatments with a specific focus on head and neck cancer and melanoma. His twin research interests are in oncolytic virotherapy/immunotherapy and in targeted radiation sensitisers. In the field of oncolytic virotherapy, he has been involved in the development of talimogene laherparepvec (T-VEC), reovirus (pelareorep), coxsackie A21 (Cavatak) and vaccinia virus. His laboratory interests include analysis of combination regimens of oncolytic virotherapy and conventional/targeted therapies. He also leads a programme of pre-clinical and clinical research in targeted radiosensitisers (Chk1i, HSP90i and ATRi), including a first-in-man phase I study of the ATR inhibitor AZD6738. In addition, he is chief investigator for a series of studies of anti-PD1 immunotherapy in combination with radiotherapy/chemoradiotherapy. In 2016, he was appointed as a NIHR Senior Investigator. He is Joint Leader of the Division of Radiotherapy and Imaging at The Institute of Cancer Research/Royal Marsden Hospital and Biomedical Research Centre theme lead for radiotherapy research. He leads a team of 15 researchers in the Targeted Therapy Team in the Division of Radiotherapy and Imaging. He is also an Honorary Consultant Clinical Oncologist at The Royal Marsden NHS Foundation Trust. Prof. Harrington studied medicine at St Bartholomew's Hospital, London and conducted PhD studies on liposomal drug targeting at Hammersmith Hospital. He completed postdoctoral research in Professor Richard Vile's laboratory in the Molecular Medicine Program at the Mayo Clinic, Minnesota before joining the ICR in 2001 as leader of the Targeted Therapy Team. Prof. Harrington is a Fellow of the Royal College of Physicians and a Fellow of the Royal College of Radiologists. He has published 434 peer-reviewed papers, 45 book chapters and has edited 3 books.

Saturday, September 23, 2017 • 11:30-12:00 pm

Using Oncolytic Virotherapy to Enhance the Effects of Radiotherapy

**Joshua Brody, MD***Icahn Mount Sinai School of Medicine, NY, USA*

Our research develops novel approaches to induce anti-tumor immunity, in pre-clinical models in my lab and in early-phase clinical trials in our patients with lymphomas and other tumor types including breast cancer, head/neck cancer, and lung cancer. Specifically, we have developed an approach called Flt3L-primed in situ vaccination, in which immune stimulants are administered directly into a patient's tumor to teach their immune system how to recognize tumor-associated antigens and then eliminate tumor cells systemically. We are also developing an "immunotransplant" approach, combining immunotherapy with stem cell transplantation to treat patients with chemotherapy- refractory aggressive lymphoma as well as collaborating with colleagues in industry to develop new applications and safer implementation of chimeric antigen receptor (CAR) T cell therapy for lymphoma and leukemias.

Saturday, September 23, 2017 • 12:00-12:30 pm

Radiotherapy and Immunotherapy Combinations in Hematologic Malignancies



