

# CONFERENCE PROGRAM

## THURSDAY, SEPTEMBER 27

6:00 p.m.–7:00 p.m.

### OPENING KEYNOTE SESSION

Presidential Ballroom

#### Welcome Remarks and Session Chair:

**Anil Rustgi**, University of Pennsylvania, Philadelphia, PA

#### **Lgr5 stem cell-based organoids in cancer research**

Hans Clevers, Hubrecht Institute, Utrecht, The Netherlands

7:00 p.m.–9:00 p.m.

### WELCOME RECEPTION

Congressional and Senate Ballrooms

## FRIDAY, SEPTEMBER 28

7:00 a.m.–8:00 a.m.

### CONTINENTAL BREAKFAST WITH MENTORING ROUNDTABLES

Senate Ballroom

8:00 a.m.–10:00 a.m.

### PLENARY SESSION 1: INTESTINAL STEM CELLS — BIOLOGY TO MODEL SYSTEMS TO OPPORTUNITIES FOR THERAPEUTICS I

Presidential Ballroom

**Session Chair: Owen Sansom**, Beatson Institute for Cancer Research, Glasgow, United Kingdom

#### **Targeting transformed intestinal stem cells in vivo**

Owen Sansom

#### **Intestinal lineage tracing from mouse stem cells to human mutation burden**

Douglas Winton, Cancer Research UK Cambridge Institute, Cambridge, United Kingdom

#### **Msi proteins and the stem cell origins of colon cancer**

Christopher Lengner, University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA

#### **Real-time in vivo imaging of the intestinal epithelium reveals that stem cell and crypt dynamics affect mutation accumulation\***

Lotte Bruens, Netherlands Cancer Institute, Amsterdam, The Netherlands

#### **LGR4 is mechanistically different from LGR5 in potentiating Wnt/ $\beta$ -catenin signaling\***

Soohyun Park, University of Texas Health Science Center at Houston, Houston, TX

*\*Short talk from proffered abstract*

# CONFERENCE PROGRAM

10:00 a.m.–10:30 a.m.

## **BREAK**

Capital Terrace

10:30 a.m.–12:30 p.m.

## **PLENARY SESSION 2: INTESTINAL STEM CELLS — BIOLOGY TO MODEL SYSTEMS TO OPPORTUNITIES FOR THERAPEUTICS II**

Presidential Ballroom

**Session Chair: Anil Rustgi**, University of Pennsylvania, Philadelphia, PA

### **Epigenetic control of intestinal stem and progenitor cell states**

Ramesh A. Shivdasani, Dana-Farber Cancer Institute, Boston, MA

### **Targeting macrophages facilitates reduction of cancer stem cells and tumor regrowth**

Linheng Li, Stowers Institute. for Medical Research, Kansas City, MO

### **Dynamic regulation of cellular identity in normal and cancerous tissues**

Kim B. Jensen, University of Copenhagen, Copenhagen, Denmark

### **HMGA1 is upregulated by procarcinogenic bacteria within the microbiome to expand the colon stem cell pool and drive tumorigenesis\***

Linda Resar, The Johns Hopkins University School of Medicine, Baltimore, MD

### **Injury-induced Paneth cell plasticity\***

Nan Gao, Rutgers University, Newark, NJ

12:30 p.m.–3:00 p.m.

## **POSTER SESSION A / LUNCH**

Congressional and Senate Ballrooms

3:00 p.m.–5:00 p.m.

## **PLENARY SESSION 3: SIGNALING PATHWAYS AND THE STEM CELL NICHE**

Presidential Ballroom

**Session Chair: Christina Curtis**, Stanford University, Stanford, CA

### **A novel, non-germline role for the PIWI component, *Aubergine*, in intestinal stem cell proliferation during tissue regeneration**

Julia Cordero, University of Glasgow, Glasgow, United Kingdom

### **Gremlins in the crypt: BMP signaling in colorectal tumorigenesis**

Simon Leedham, University of Oxford, Oxford, United Kingdom

### **Immune evasion and metastasis in colorectal cancer**

Eduard Batlle, Institute for Research in Biomedicine, Barcelona, Spain

### **Cancer cell plasticity drives metastasis in colorectal cancer\***

Arianna Fumagalli, NKI-AvL, Oncode Institute, Amsterdam, The Netherlands

### **Epithelial Notch1 drives metastasis by controlling neutrophil chemotaxis in novel late stage colorectal cancer genetically engineered mouse models\***

Rene Jackstadt, Cancer Research UK Beatson Institute, Glasgow, United Kingdom

*\*Short talk from proffered abstract*

# CONFERENCE PROGRAM

## SATURDAY, SEPTEMBER 29

7:00 a.m.–8:00 a.m.

**CONTINENTAL BREAKFAST WITH MENTORING ROUNDTABLES**

Senate Ballroom

8:00 a.m.–9:00 a.m.

**KEYNOTE LECTURE**

Presidential Ballroom

**Session Chair: Hans Clevers**, Hubrecht Institute, Utrecht, The Netherlands

**The mutational landscape of normal colorectal epithelium**

Michael Stratton, Wellcome Trust Sanger Institute, Cambridge, United Kingdom

9:00 a.m.–10:30 a.m.

**PLENARY SESSION 4: GENETIC AND GENOMIC ALTERATIONS IN COLON CANCER I**

Presidential Ballroom

**Session Chair: Christina Curtis**, Stanford University, Stanford, CA

**Quantifying the evolutionary dynamics of colorectal cancer progression**

Christina Curtis

**RNA-binding proteins and colon cancer pathogenesis**

Anil Rustgi, University of Pennsylvania, Philadelphia, PA

**Defining sensitivity and resistance to WNT inhibitors using CRISPR editing in intestinal organoids and in vivo models\***

Lukas Dow, Weill Cornell Medicine, New York, NY

**Trajectory space analysis: Leveraging computational models and single-cell RNAseq to understand genetic programs defining intestinal lineages and infer colon stem cells in mouse\***

Denis Dermadi Bebek, Stanford University, Palo Alto, CA

10:30 a.m.–11:00 a.m.

**BREAK**

Capital Terrace

*\*Short talk from proffered abstract*

# CONFERENCE PROGRAM

11:00 a.m.–1:00 p.m.

**PLENARY SESSION 5: GENETIC AND GENOMIC ALTERATIONS IN COLON CANCER II**

Presidential Ballroom

**Session Chair: Anil Rustgi**, University of Pennsylvania, Philadelphia, PA

**Microbiome in PTEN hamartoma tumor syndrome**

Charis Eng, The Cleveland Clinic, Cleveland, OH

**Organoid modeling of tumor cells and their microenvironment**

Calvin J. Kuo, Stanford University, Stanford, CA

**Clonal competition and collaboration in colorectal cancer**

Eric R. Fearon, University of Michigan Comprehensive Cancer Center, Ann Arbor, MI

**Intestinal cancer initiation using ENU mutagenesis\***

Filipe Lourenco, CRUK Cambridge Institute, University of Cambridge, Cambridge, United Kingdom

**PLAGL2 is a let-7 target that drives intestinal stem cell fate and transformation\***

Blair Madison, Washington University in St. Louis, St. Louis, MO

1:00 p.m.–3:30 p.m.

**POSTER SESSION B / LUNCH**

Congressional and Senate Ballrooms

3:30 p.m.–5:30 p.m.

**PLENARY SESSION 6: RISK STRATIFICATION AS A BASIS FOR TARGETED THERAPY IN COLON CANCER**

Presidential Ballroom

**Session Chair: Owen Sansom**, Beatson Institute for Cancer Research, Glasgow, United Kingdom

**New predictive biomarkers for colorectal cancer**

Timothy Maughan, CRUK/MRC Oxford Institute for Radiation Oncology, Oxford, United Kingdom

**Risk stratification as a basis for targeted therapy in colon cancer**

Rodrigo Dienstmann, Vall d'Hebron University Hospital, Barcelona, Spain

**The molecular underpinnings of sidedness in determining cancer therapy: What is “right”?**

Nilofer S. Azad, Johns Hopkins Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD

**KRAS-IRF2 axis drives immune suppression and immune therapy resistance in colorectal cancer\***

Y. Alan Wang, The University of Texas MD Anderson Cancer Center, Houston, TX

**Ex vivo pharmacogenomic heterogeneity of colorectal liver metastases\***

Kushtrim Kryeziu, Institute for Cancer Research and K.G. Jebsen Colorectal Cancer Research Centre, Oslo University Hospital, Oslo, Norway

*\*Short talk from proffered abstract*

# CONFERENCE PROGRAM

## SUNDAY, SEPTEMBER 30

7:00 a.m.–8:00 a.m.

**CONTINENTAL BREAKFAST WITH MENTORING ROUNDTABLES**

Senate Ballroom

8:00 a.m.–10:00 a.m.

**PLENARY SESSION 7: TARGETED AND COMBINATION THERAPIES**

Presidential Ballroom

**Session Chair: Johanna C. Bendell**, Sarah Cannon Research Institute, Nashville, TN

**The who, what, when, and why of adjuvant therapy for colon cancer**

Johanna C. Bendell

**Therapeutic resistance and tumor heterogeneity in colorectal cancer**

Ryan Corcoran, Massachusetts General Hospital Cancer Center, Boston, MA

**Targeting intestinal stem cells in cancer**

Frederic J. de Sauvage, Genentech, South San Francisco, CA

**New therapeutic strategies to target colon cancer stem cells**

Heinz-Josef Lenz, University of Southern California Norris Comprehensive Cancer Center, Los Angeles, CA

10:00 a.m.–10:15 a.m.

**BREAK**

Capital Terrace

10:15 a.m.–12:15 p.m.

**PLENARY SESSION 8: TECHNOLOGY, THERAPY, AND TRIALS**

Presidential Ballroom

**Session Chair: Hans Clevers**, Hubrecht Institute, Utrecht, The Netherlands

**Patient-derived organoids en route to the clinic**

Nicola Valeri, Royal Marsden Hospital Institute of Cancer Research, Sutton, United Kingdom

**Inactivation of DNA repair triggers immune surveillance in colorectal cancers**

Alberto Bardelli, University of Torino, Torino, Italy

**The colorectal cancer microbiome**

Matthew Meyerson, Dana-Farber Cancer Institute, Boston, MA

**Circulating tumor DNA in colorectal cancer management: Assessing minimal residual disease and treatment response**

Scott Kopetz, The University of Texas MD Anderson Cancer Center, Houston, Texas

12:15 p.m.

**CLOSING REMARKS**

Presidential Ballroom