Conference Cochairs:
Fabrice André, Institut Gustave Roussy, Villejuif, France
Sean J. Morrison, UT Southwestern Medical School, Dallas, Texas
Danny R. Welch, University of Kansas Cancer Center, Kansas City, Kansas
Zena Werb†, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA

CME credit is available for in-person attendance for the designated sessions. On-demand presentations are not eligible for CME.

[R]- Remote presentation
[U]- On-demand recording unavailable

MONDAY, NOVEMBER 14, 2022

6:00-7:00 p.m. Welcome and Opening Keynote Lecture [CME Eligible]
Regency Ballroom AB
Session Chair: Sean J. Morrison, UT Southwestern Medical School, Dallas, TX

Welcome from Cochairs
Fabrice André, Institut Gustave Roussy, Villejuif, France
Sean J. Morrison, UT Southwestern Medical School, Dallas, Texas
Danny R. Welch, University of Kansas Cancer Center, Kansas City, Kansas

Metastasis initiating cells and ecosystems
Joan Massagué, Memorial Sloan Kettering Cancer Center, New York, New York

7:00-8:30 p.m. Opening Reception
Regency Ballroom CD

TUESDAY, NOVEMBER 15, 2022

7:00-8:00 a.m. Continental Breakfast
Regency Ballroom CD and Foyer

8:00-10:00 a.m. Plenary Session 1: Metabolic Adaptations During Metastasis [CME Eligible]
Regency Ballroom AB
Session Chair: Sean J. Morrison, UT Southwestern Medical School, Dallas, Texas

Melanoma cells have layered and redundant mechanisms to protect them from oxidative stress during metastasis
8:30-8:45 a.m.  
**Codon-bias and tRNA modifications as drivers of melanoma metastasis**  
Elena Piskounova, Weill Cornell Medicine, New York, New York

8:45-9:15 a.m.  
**Metabolic regulation of breast cancer metastasis**  
Devon A. Lawson, UCI Health Chao Family Comp Cancer Center, Orange, California

9:15-9:30 a.m.  
**Identification of metabolic adaptation mechanisms that drive anoikis suppression and metastasis in Ewing sarcoma**  
Poul H.B. Sorensen, University of British Columbia, Vancouver, BC, Canada

9:30-10:00 a.m.  
**Redox and BACH1 control of lung cancer metastasis**  
Martin O. Bergö, Karolinska Institutet, Stockholm, Sweden

10:00-10:30 a.m.  
Break

10:30 a.m.-12:30 p.m.  
Plenary Session 2: Epigenetic Plasticity and Metastasis [CME Eligible]

10:30-11:00 a.m.  
**Evolutionary dynamics and molecular determinants of metastasis [U]**  
Christina Curtis, Stanford University, Stanford, California

11:00-11:15 a.m.  
**OXPHOS impairing mitochondrial DNA mutations suppress melanoma growth and metastatic progression**  
Spencer Shelton, UT Southwestern Medical Center, Dallas, Texas

11:15-11:45 a.m.  
**EMT-induced tumor plasticity in cancer metastasis**  
Sendurai A. Mani, Legorreta Cancer Center, Brown University, Providence, Rhode Island

11:45 a.m.-12:00 p.m.  
**Mechanistic basis for TGF-β-induced fibrogenic EMTs in metastasis**  
Jun Ho Lee, Memorial Sloan Kettering Cancer Center, New York, New York

12:00 -12:30 p.m.  
**Regulation of metastasis efficiency via mitochondrial genetics**  
Danny R. Welch, University of Kansas Cancer Center, Kansas City, Kansas

*Short talk selected from proffered abstracts
12:30-2:15 p.m.  Lunch Break (lunch on own)

2:15-4:30 p.m.  Plenary Session 3: Circulating Cancer Cells and Spatial Diversity [CME Eligible]
Regency Ballroom AB
Session Chair: Devon A. Lawson, UCI Health Chao Family Comp Cancer Center, Orange, California

2:15-2:45 p.m.  Biology of metastasis-competent circulating tumor cells
Catherine Alix-Panabières, Université de Montpellier, Montpellier, France

2:45-3:00 p.m.  Deep learning-based multimodal integration of histology and genomics improves cancer origin prediction*
Drew F.K. Williamson, Massachusetts General Hospital, Boston, Massachusetts

3:00-3:30 p.m.  Biology and vulnerabilities of circulating tumor cell clusters [R]
Nicola Aceto, ETH Zurich, Zurich, Switzerland

3:30-3:45 p.m.  Fluid shear stress enhances the metastatic potential and rapidly alters metabolism of circulating tumor cells*
Amanda N. Pope, University of Iowa, Iowa City, Iowa

3:45-4:00 p.m.  Comprehensive ctDNA profiling reveals potential metastatic genomic signatures in treatment-naive early-stage breast cancer patients*
Gowhar Shafi, One Cell Dx, Cupertino, California

3:45-4:00 p.m.  Hypomethylation of immune-related loci contribute to prostate tumorigenesis
Daniel A. Haber, Massachusetts General Hospital, Boston, Massachusetts

4:00-4:30 p.m.  Hypomethylation of immune-related loci contribute to prostate tumorigenesis
Daniel A. Haber, Massachusetts General Hospital, Boston, Massachusetts

4:30-6:30 p.m.  Poster Session A/Reception
Regency Ballroom CD

WEDNESDAY, NOVEMBER 16, 2022

7:00-8:00 a.m.  Continental Breakfast
Regency Ballroom CD and Foyer

8:00-10:15 a.m.  Plenary Session 4: Genomic Changes in Metastatic Tumors [CME Eligible]
Regency Ballroom AB
Session Chair: Fabrice André, Institut Gustave Roussy, Villejuif, France

*A short talk selected from proffered abstracts
8:00-8:30 a.m.  Genomic and epigenetic landscape of metastatic breast cancer
Fabrice André, Institut Gustave Roussy, Villejuif, France

8:30-8:45 a.m.  Timing complex copy number gains in whole genome duplicated tumors*
Toby M. Baker, The Francis Crick Institute, London, United Kingdom

8:45-9:15 a.m.  Genetic and spatial properties of metastasising populations
Samra Turajlic, The Francis Crick Institute, London, England

9:15-9:30 a.m.  Integrative pan-cancer genomic and transcriptomic analyses of refractory metastatic cancer*
Sergey Nikolaev, INSERM U981, Gustave Roussy Cancer Campus, Universite Paris Saclay, Villejuif, France

9:30-9:45 a.m.  Multiplex imaging reveals features of organotropism in pancreatic ductal adenocarcinoma*
Jennifer Eng, Oregon Health & Science University, Oregon

9:45-10:15 a.m.  APOBEC mutation signature in cancer explained by the combined enzymatic action of APOBEC3B and APOBEC3A [U]
Reuben Harris, HHMI and UT Health San Antonio, San Antonio, Texas

10:15-10:30 a.m.  Break
Regency Ballroom Foyer

10:30 a.m.-12:30 p.m.  Plenary Session 5: Routes of Metastasis [CME Eligible]
Regency Ballroom AB
Session Chair: Melody A. Swartz, University of Chicago, Chicago, Illinois

10:30-11:00 a.m.  Effects of fluid shear stress on circulating tumor cells
Michael D. Henry, University of Iowa, Iowa City, Iowa

11:00-11:15 a.m.  The glutathione S-transferase, Gstt1 is a robust driver of survival and dissemination in metastases*
Christina M. Ferrer, University of Maryland School of Medicine, Baltimore, MD

11:15-11:45 a.m.  Mechanisms by which tumor lymphangiogenesis promotes metastasis [U]
Melody A. Swartz, University of Chicago, Chicago, Illinois

*Short talk selected from proffered abstracts
11:45 a.m.-12:00 p.m.  A novel, immune-competent, Myc-dependent murine model of rapid metastatic recurrence of pancreatic cancer after resection*
Patrick J. Worth, Oregon Health & Science University, Portland, Oregon

12:00 - 12:30 p.m.  Extracellular vesicles and particles promote metastatic organotropism and systemic disease [U]
David C. Lyden, Weill Cornell Medical College, New York, New York

12:30-2:15 p.m.  Lunch Break (lunch on own)

2:15-4:45 p.m.  Plenary Session 6: Microenvironment and Metastasis [CME Eligible]
Regency Ballroom AB
Session Chair: Luisa Iruela-Arispe, Northwestern University Feinberg School of Medicine, Chicago, Illinois

2:15-2:45 p.m.  The elusive ‘metastasis driver’: Is it hiding in plain sight?
Ben Z. Stanger, Penn Medicine Abramson Cancer Center, Philadelphia, Pennsylvania

2:45-3:00 p.m.  Lymph node colonization promotes distant tumor metastasis through the induction of tumor-specific immune tolerance*
Nathan E. Reticker-Flynn, Stanford University, Palo Alto, California

3:00-3:30 p.m.  Endothelial - Tumor cell interactions during metastasis
Luisa Iruela-Arispe, Northwestern University Feinberg School of Medicine, Chicago, Illinois

3:30-3:45 p.m.  Cytokine mediated epigenetic reprogramming of CRC primary tumors drives liver metastasis*
Jonathan Rennhack, Dana-Farber Cancer Institute, Boston, Massachusetts

3:45-4:15 p.m.  Unique features and dependencies of brain metastases
Michael A. Davies, UT MD Anderson Cancer Center, Houston, Texas

4:15-4:45 p.m.  Improving treatment of primary and metastatic brain tumors: Emerging insights and novel strategies
Rakesh K. Jain, Massachusetts General Hospital, Boston, Massachusetts

4:45-5:15 p.m.  Break

5:15 p.m. – 6:30 p.m.  Keynote Session [CME Eligible]
In honor of Dr. Zena Werb
Regency Ballroom AB

*Short talk selected from proffered abstracts
Session Chair: Danny R. Welch, University of Kansas Cancer Center, Kansas City, Kansas

5:15-6:05 p.m. The dark web of cancer: How neutrophil extracellular traps orchestrate metastasis
Mikala Egeblad, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York

6:05-6:30 p.m. Cell archetypes in human brain metastases: Connecting programs in tumor cells with the microenvironment
Hugo Gonzalez Velozo, University of California, San Francisco, California

6:30 – 8:30 p.m. Poster Session B/Reception
Regency Ballroom CD

THURSDAY, NOVEMBER 17, 2022

7:00-8:00 a.m. Continental Breakfast
Regency Ballroom CD and Foyer

8:00- 9:30 a.m. Plenary Session 7: Dormancy and Overcoming Dormancy [CME Eligible]
Regency Ballroom AB
Session Chair: Melanie G. Hayden Gephart, Stanford Hospital, Stanford, California

8:00-8:30 a.m. Tailored investigation and treatment of the brain metastasis microniche
Melanie G. Hayden Gephart, Stanford Hospital, Stanford, California

8:30-8:45 a.m. Dormant mammary tumors persist long-term despite adaptive immunity by establishing a Treg-dominated niche via DKK3*
Timothy N. Trotter, Duke University, Durham, North Carolina

8:45-9:00 a.m. Carcinoma-associated mesenchymal stem cells promote ovarian cancer metastasis by increasing tumor heterogeneity through direct mitochondrial transfer*
Leonard G. Frisbie, University of Pittsburgh, Pittsburgh, Pennsylvania

9:00-9:30 a.m. Cellular plasticity during metastatic colony formation in patients
Melanie Werner-Klein, University of Regensburg, Regensburg, Germany

9:30-10:00 a.m. Break
Regency Ballroom Foyer

10:00 - 11:30 a.m. Plenary Session 8: Signaling and Genetic Instability [CME Eligible]

*Short talk selected from proffered abstracts
Regency Ballroom AB
Session Chair: George A. Calin, UT MD Anderson Cancer Center, Houston, Texas

10:00-10:30 a.m. About motifs, non-codingRNAs and metastases
George A. Calin, UT MD Anderson Cancer Center, Houston, Texas

10:30-10:45 a.m. Differences in melanoma lipid metabolism among distinct metastatic sites*
Thomas P. Mathews, University of Texas Southwestern Medical Center, Dallas, Texas

10:45-11:00 a.m. Neuropeptide Y as a metastatic factor*
Joanna Kitlinska, Georgetown University, Washington DC

11:00-11:30 a.m. Chromosomal instability as a driver of cancer metastasis
Samuel F. Bakhoum, Memorial Sloan Kettering Cancer Center, New York, New York

11:30-11:45 a.m. Closing Remarks
Fabrice André, Institut Gustave Roussy, Villejuif, France
Sean J. Morrison, UT Southwestern Medical School, Dallas, TX

*Short talk selected from proffered abstracts