

**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<sup>†</sup>, 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**

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**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*

6:00-6:15 p.m.

**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

6:15-7:00 p.m.

**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**

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**7:00-8:00 a.m. Continental Breakfast**

Regency Ballroom CD and Foyer

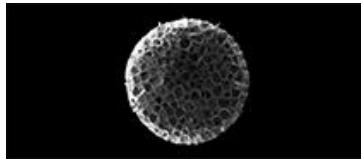
**8:00-10:00 a.m. Plenary Session 1: Metabolic Adaptations During Metastasis [CME Eligible]**

Regency Ballroom AB

*Session Chair: Sean J. Morrison, UT Southwestern Medical School, Dallas, Texas*

8:00-8:30 a.m.

**Melanoma cells have layered and redundant mechanisms to protect them from oxidative stress during metastasis**



Sean J. Morrison, UT Southwestern Medical School, Dallas, Texas

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**

Regency Ballroom Foyer

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

Regency Ballroom AB

*Session Chair: Danny R. Welch, University of Kansas Cancer Center, Kansas City, Kansas*

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.

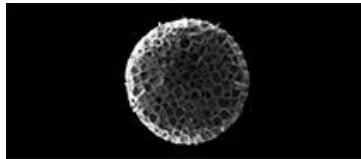
**Mechanistic basis for TGF- $\beta$ -induced fibrogenic EMTs in metastasis\***

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



**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-naïve early-stage breast cancer patients\***  
Gowhar Shafi, One Cell Dx, Cupertino, California
- 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

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## **WEDNESDAY, NOVEMBER 16, 2022**

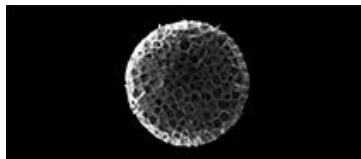
**7:00-8:00 a.m.**                      **Continental Breakfast**

Regency Ballroom CD and Foyer

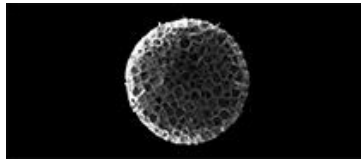
**8:00-10:15 a.m.**                      **Plenary Session 4: Genomic Changes in Metastatic Tumors [CME Eligible]**

Regency Ballroom AB

*Session Chair: Fabrice André, Institut Gustave Roussy, Villejuif, France*



8:00-8:30 a.m.	<b>Genomic and epigenetic landscape of metastatic breast cancer</b> Fabrice André, Institut Gustave Roussy, Villejuif, France
8:30-8:45 a.m.	<b>Timing complex copy number gains in whole genome duplicated tumors*</b> Toby M. Baker, The Francis Crick Institute, London, United Kingdom
8:45-9:15 a.m.	<b>Genetic and spatial properties of metastasising populations</b> Samra Turajlic, The Francis Crick Institute, London, England
9:15-9:30 a.m.	<b>Integrative pan-cancer genomic and transcriptomic analyses of refractory metastatic cancer*</b> Sergey Nikolaev, INSERM U981, Gustave Roussy Cancer Campus, Université Paris Saclay, Villejuif, France
9:30-9:45 a.m.	<b>Multiplex imaging reveals features of organotropism in pancreatic ductal adenocarcinoma*</b> Jennifer Eng, Oregon Health & Science University, Oregon
9:45-10:15 a.m.	<b>APOBEC mutation signature in cancer explained by the combined enzymatic action of APOBEC3B and APOBEC3A [U]</b> Reuben Harris, HHMI and UT Health San Antonio, San Antonio, Texas
<b>10:15-10:30 a.m.</b>	<b>Break</b>
Regency Ballroom Foyer	
<b>10:30 a.m.-12:30 p.m. Plenary Session 5: Routes of Metastasis [CME Eligible]</b>	
Regency Ballroom AB	
<i>Session Chair: Melody A. Swartz, University of Chicago, Chicago, Illinois</i>	
10:30-11:00 a.m.	<b>Effects of fluid shear stress on circulating tumor cells</b> Michael D. Henry, University of Iowa, Iowa City, Iowa
11:00-11:15 a.m.	<b>The glutathione S-transferase, Gstm1 is a robust driver of survival and dissemination in metastases*</b> Christina M. Ferrer, University of Maryland School of Medicine, Baltimore, MD
11:15-11:45 a.m.	<b>Mechanisms by which tumor lymphangiogenesis promotes metastasis [U]</b> Melody A. Swartz, University of Chicago, Chicago, Illinois



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

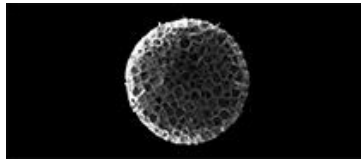
3:30-3:45 p.m. **Cytokine mediated epigenetic reprogramming of CRC primary tumors drives liver metastasis\***  
Jonathan Rennhack, Dana-Farber Cancer Institute, Boston, Massachusetts

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



*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

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**THURSDAY, NOVEMBER 17, 2022**

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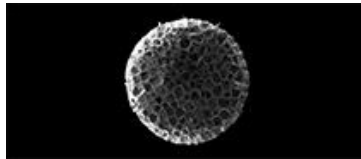
**7:00-8:00 a.m.**      **Continental Breakfast**  
Regency Ballroom CD and Foyer

**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]**



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. Bakhom, Memorial Sloan Kettering Cancer Center, New York, New York

11:30-11:45 a.m.

Regency Ballroom AB

**Closing Remarks**

Fabrice André, Institut Gustave Roussy, Villejuif, France  
Sean J. Morrison, UT Southwestern Medical School, Dallas, TX