THE CANCER AND BONE SOCIETY (CABS) 2023 CONFERENCE

Eric P. Newman Education Center (EPNEC)
at Washington University in St. Louis
St. Louis, MO, USA
June 7 – 10, 2023
The Cancer and Bone Society Board would like to thank the following sponsors for their generous contributions to the CABS 2023 conference

Rene Schecter Memorial Lectureship in Cancer Research
HISTORY OF CABS

The Cancer and Bone Society (CABS) was initially founded in 2004 by Greg Mundy, Robert Rubens, Etsuro Ogata, Herbie Fleisch, and Jack Martin, with Rob Coleman appointed as the inaugural chairman. The primary mission of CABS was to formally run the cancer-induced bone disease (CIBD) meetings, initiated in 1991, and to promote international collaborations across the cancer and bone field in both clinical and basic research. The CIBD meetings continued to be held every 1-2 years, alternating between the US and Europe to promote international involvement. CABS ran these meetings as an independent society from 2004 until 2011, before becoming incorporated into the International Bone and Mineral Society (IBMS). The CIBD meetings continued under the direction of IBMS through 2015.

In 2016, CABS once more became an independent entity and established a new CABS Board. CABS now manages and facilitates the CIBD meetings as they were originally introduced in 1991 and, where appropriate, partner with other societies that have an interest in bone and cancer. CABS believes these partnerships will enhance research and education in this rapidly developing area of biology and promote the translation of increasing scientific knowledge into clinical practice.

CABS BOARD

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CABS 2023 ONSITE ORGANIZER
CABS 2023 AWARD WINNERS

Young Investigator Awards
Douglas Faget, PhD
Déja Grant
Diego Grinman, PhD
Japneet Kaur, PhD
Ganesh Rout, PhD
Yang Yu, MS

Outstanding Abstract Awards
Janet Brown, FRCP, MD
Julie O’Neal, PhD
Lei Shi, PhD
Xinming Su, PhD

High Scoring Abstract Awards
Rozita Bagheri-Yarmand, PhD
Nadia Benabdallah, PhD
Natalie Bennett
Ryan Bishop, PhD
Emma Briggs, MS, MEng
Breelyn Karno
Subhashis Pal, PhD
Jennifer Zarrer, PhD

CABS 2023 Distinguished Service Award
G. David Roodman, MD, PhD
CABS 2023 SCIENTIFIC PROGRAM

Wednesday, June 7, 2023

Registration desk opens 4:00pm - 6:00pm

5:00pm - 7:00pm Young Investigator Networking Session and Reception, Great Rooms, EPNEC

**ALL CAREER STAGES ARE WELCOME AND ENCOURAGED TO ATTEND**

5:00pm - 5:05pm Welcome by the CABS President

5:05pm - 6:00pm Round Table Professional Development Discussions

6:00pm - 7:00pm Networking Reception (Margaritas, Beer, Taco Bar, Chips, Salsa)

Thursday, June 8, 2023

Registration desk opens 7:30am - 2:00pm
All lectures are held in the EPNEC Auditorium

Posters are in the EPNEC Great Rooms

8:00am - 8:45am Networking Breakfast, EPNEC Lobby (Breakfast may be brought into Auditorium)

8:45am - 8:55am Welcome and Opening Comments, Julie Rhoades, PhD, CABS President

8:55am - 9:05am Welcome to St. Louis, Katherine Weilbaecher, MD, Local Organizer

9:05am - 10:20pm Plenary Symposium: Seminal Advances in Mechanisms of Dormancy and the Bone Marrow Microenvironment

Chairs: Julie Rhoades, PhD, Vanderbilt University Medical Center, Nashville, TN, USA and Jesus Delgado-Calle, PhD, University of Arkansas Medical School, Little Rock, AR, USA

9:05pm - 9:30am Dissecting myeloma cell dormancy one cell at a time, Peter Croucher, PhD, Garvan Institute, Sydney, Australia

9:30am - 9:55am Age related changes drive breast tumorigenesis, Sheila Stewart, PhD, Washington University in St. Louis, St. Louis, MO, USA

9:55am - 10:20am Bone marrow niches as targets of bone metastasis and sources of immunosuppression in breast cancer, Xiang Zhang, PhD, Baylor College of Medicine, Houston, TX, USA

10:20am - 11:00am BREAK, Coffee, tea, and refreshments in EPNEC Lobby

11:00am - 4:20pm Immune Oncology in the Bone Metastatic Setting: Part I

Chairs: Xiang Zhang, PhD, Baylor College of Medicine, Houston, TX, USA and Kristin Kwakwa, PhD, Washington University in St. Louis, St. Louis, MO, USA

11:00am - 11:25am Systemic effects of bone cells and bone derived factors on breast cancer progression, Roberta Faccio, PhD, Washington University in St. Louis, St. Louis, MO, USA

11:25am - 11:50am Immune checkpoint signaling in bone metastatic disease: Mechanistic revelations from the skeletal niche, Rachelle Johnson, PhD, Vanderbilt University Medical Center, Nashville, TN, USA
11:50am - 12:00pm BoHFAB: The impact of adjuvant zoledronate therapy on bone health in postmenopausal patients with early breast cancer, Janet Brown, University of Sheffield, Sheffield, UK *Outstanding Abstract Award

12:00pm - 12:10pm The roles of the FL/FLT3 axis in the development of cancer-induced bone pain mediated by prostate cancer, Yang Yu, Wake Forest University, Wake Forest, NC, USA *YI Award Winner

12:10pm - 1:30pm LUNCH*, **EPNEC Lobby

*1:00pm - 1:25pm Optional: Stretch your legs on a tour of the Washington University in St. Louis Medical Center campus or Musculoskeletal Research Center! Meet tour guides in the foyer.

**CABS Board Meeting - Board members please get lunch and proceed to 309 EPNEC.

1:30pm - 2:20pm Breakthrough Topics in Bone Metastasis

Chairs: Theresa Guise, MD, MD Anderson, Houston, TX, USA and Shreya Patel, Rush University, Chicago, IL, USA

1:30pm - 1:55pm Moving on bone metastases: Exercise as medicine, Tarah Ballinger, MD, Indiana University, Indianapolis, IN, USA

1:55pm - 2:20pm Denosumab in bone metastatic patients – Is it safe to stop treatment?, Michelle McDonald, PhD, Garvan Institute, The University of Sydney, Sydney, Australia

2:20pm - 2:30pm Cancer and Bone Society 2023 Distinguished Service Award Presentation to G. David Roodman, MD, PhD

2:30pm - 3:15pm BREAK*, Coffee, tea, and refreshments in EPNEC Lobby

*2:35pm - 3:00pm Optional: Stretch your legs on a tour of the Washington University in St. Louis Medical Center campus or Musculoskeletal Research Center! Meet tour guides in the foyer.

3:15pm - 4:05pm Bone Anabolic Therapies in Metastasis

Chairs: Katherine Weilbaecher, MD, Washington University in St. Louis, St. Louis, MO, USA and Michelle McDonald, PhD, Garvan Institute, The University of Sydney, Sydney, Australia

3:15pm - 3:40pm To Wnt or not to Wnt: That is the question in Cancer in Bone, Jesus Delgado-Calle, PhD, University of Arkansas Medical School, Little Rock, AR, USA
3:40pm - 4:05pm Anabolic therapy: Should it be used in bone metastasis?, Hanna Taipaleenmaki, PhD, Ludwig-Maximilians-University of Munich, Munich, Germany

4:05pm - 4:35pm BREAK, Coffee, tea, and refreshments in EPNEC Lobby

4:35pm - 5:00pm Lightning Talks (High Scoring Abstract Award Winners)

Chairs: Claire Edwards, PhD, Oxford University, Oxford, UK and Jenna Ollodart, Wake Forest University, Wake Forest, NC, USA

4:35pm - 4:40pm Acid ceramidase (ASAH1) is a key mediator of drug resistance in relapsed/refractory multiple myeloma, Ryan Bishop, The Moffitt Cancer Center, Tampa, FL, USA

4:40pm - 4:45pm Homing of intestinal NK and Th1 cells to the tumor site restraints melanoma bone growth in a gut microbiome dependent manner, Subhashis Pal, Emory University, Atlanta, GA, USA

4:45pm - 4:50pm IL-17A supports osteoblasts to become cancer-associated fibroblasts in breast cancer bone metastases, Jennifer Zarrer, University Medical Center, Hamburg, Germany

4:50pm - 4:55pm Elucidating the Effect of Glutamine Metabolism in Breast-to-Bone Metastasis, Breelyn Karno, Vanderbilt University, Nashville, TN, USA

4:55pm - 5:00pm Activating RET mutations in medullary thyroid cancer cells promotes osteoblastic bone metastasis by inhibiting osteoclastogenesis and stimulating osteoblast activity, Rozita Bagheri-Yarmand, MD Anderson, Houston, TX, USA

5:00pm - 5:05pm Mechanical loading of breast cancer laden bones alters osteocyte mediated bone loss in vivo, Emma Briggs, University of Colorado Boulder, Boulder, CO, USA

5:05pm - 5:10pm Downstream Effects of Gli2 Targeting on Tumor-Immune Cell Crosstalk in Bone Metastatic Breast Cancer, Natalie Bennett, Vanderbilt University, Nashville, TN, USA

5:10pm - 5:15pm Radium-223 Treated Primary Patient Bone Biopsy Analysis: Macro to Microscale Analyses and Dosimetry, Nadia Benabdallah, Washington University in St. Louis, St. Louis, MO, USA

5:00pm - 7:00pm Poster Session and Wine/Cheese Reception, EPNEC Great Rooms, with hot hors d’oeuvres
Friday, June 9, 2023

Registration desk opens 7:30am - 12:00pm

All lectures are held in the EPNEC Auditorium

Posters are in the EPNEC Great Rooms

8:15am - 9:00am Networking Breakfast, EPNEC Lobby (Breakfast may be brought into Auditorium)

9:00am - 10:15am Plenary Symposium: Imaging the Bone Metastatic Niche

Chairs: Hanna Taipaleenmaki, PhD, Ludwig-Maximilians-University of Munich, Munich, Germany and Peter Croucher, PhD, Garvan Institute, Sydney, Australia

9:00am - 9:25am A macrophage-dependent vascular doorway in breast tumors that both induces cancer stem cells and injects them into the systemic circulation, John Condeelis, PhD, Albert Einstein College of Medicine, Bronx, NY, USA

9:25am - 9:50am The trajectory of prostate cancer metastasis: Insights from PSMA imaging, Ken Pienta, MD, Johns Hopkins University School of Medicine, Baltimore, MD, USA

9:50am - 10:15am Perspective of using routine bone metastasis qCT to predict bone strength, Cyrille Confavreux, MD, PhD, Centre Hospitalier Universitaire de Lyon, Lyon, France

10:15am – 11:00am BREAK*, Coffee, tea, and refreshments in EPNEC Lobby

*10:20am - 10:45am Optional: Stretch your legs on a tour of the Washington University in St. Louis Medical Center campus or Musculoskeletal Research Center! Meet tour guides in the foyer.

11:00am - 12:10pm Immune Oncology in the Bone Metastatic Setting: Part II
11:00am - 11:25am Acid signaling promotes immune suppression in breast cancer bone metastases, Katherine Weilbaecher, MD, Washington University in St. Louis, St. Louis, MO, USA

11:25am - 11:50am Tumor transcriptional network drives cancer plasticity and immune inhibitory landscape, Julie Rhoades, PhD, Vanderbilt University Medical Center, Nashville, TN, USA

11:50am - 12:00pm Chemotherapy-induced adipocyte senescence triggers bone loss through RANKL-mediated osteoclastogenesis, Ganesh Raut, PhD, Washington University in St. Louis, St. Louis, MO, USA *YI Award Winner

12:00pm - 12:10pm PTHrP biological domains mediate breast cancer bone osteolysis via TGF-β/SNAI2/ZEB1 pathways; Déja Grant, Vanderbilt University, Nashville, TN, USA *YI Award Winner

12:10pm - 1:40pm LUNCH and Interactive Town Hall Debate Forum: All conference attendees are invited to debate, discuss, and briefly present critical topics in small groups, EPNEC Great Rooms

12:25pm - 12:30pm Group Guidelines and Instructions

12:30pm - 1:40pm Topic Discussions and Presentations

1:40pm - 2:00pm BREAK*, Coffee, tea, and refreshments in EPNEC Lobby

*1:40pm - 2:00pm Optional: Stretch your legs on a tour of the Washington University in St. Louis Medical Center campus or Musculoskeletal Research Center! Meet tour guides in the foyer.

2:00pm - 2:10pm IFMRS and NCRI Updates, Claire Edwards, PhD, CABS Past-President

2:10pm - 2:55pm Young Investigator Plenary Oral Presentations, Session I
2:10pm - 2:25pm Senolytics deplete senescent osteocytes and improve bone health in metastatic breast cancer, Japneet Kaur, PhD, University of Arkansas Medical School, Little Rock, AR, USA *YI Award Winner

2:25pm - 2:40pm Targeting stromal p38MAPKalpha triggers innate-adaptive anti-tumor immunity and sensitizes metastatic breast cancer to immunotherapy, Douglas Faget, PhD, Washington University in St. Louis, St. Louis, MO, USA *YI Award Winner

2:40pm - 2:55pm Cancer-Associated Hypercalcemia Signals Through the Hindbrain to cause Anorexia, Diego Grinman, PhD, Yale University, New Haven, CT, USA *YI Award Winner

2:55pm - 3:15pm BREAK, Coffee, tea, and refreshments in EPNEC Lobby

3:15pm - 4:15pm Speed Mentoring / Networking, EPNEC Great Rooms

Pitch your translational ideas to clinical trialists and clinical researchers or speed network with senior cancer and bone translational scientists!

4:15pm Sessions End

6:00pm - 9:00pm Dinner and Gala at the City Museum, Casual dress recommended, https://www.citymuseum.org/

5:30pm Shuttle to City Museum leaves from Chase Park Plaza Hotel

5:45pm Shuttle to City Museum leaves from DoubleTree Hotel

Shuttles will run continuously; last shuttle at 9:00pm.

Saturday, June 10, 2023

All lectures and panels are held in the EPNEC Auditorium

Posters are in the EPNEC Great Rooms
8:15am - 9:00am Networking Breakfast, EPNEC Lobby (Breakfast may be brought into Auditorium)

9:00am - 10:15am Cellular Profiling and Thinking Beyond the Bone

Chairs: Jitesh Pratap, PhD, Rush University Medical Center, Chicago, IL, USA and Logan Northcutt, Vanderbilt University, Nashville, TN, USA

9:00am - 9:25am Role of RON kinase in immune-modulation of bone metastasis, Alana Welm, PhD, Metastasis Research Society, President-Elect, University of Utah, Salt Lake City, UT, USA

9:25am - 9:50am Profiling the tumour-bone microenvironment, Claire Edwards, PhD, Oxford University, Oxford, UK

9:50am - 10:15am Beyond seed and soil: The adaptive strategies that drive lethal cancer, Sarah Amend, PhD, Johns Hopkins School of Medicine, Baltimore, MD, USA

10:15am - 10:30am BREAK, Coffee, tea, and refreshments in EPNEC Lobby

10:30am - 11:00am PLENARY ORAL PRESENTATIONS, Session II

Chairs: Alana Welm, PhD, University of Utah, Salt Lake City, UT, USA and Greg Clines, MD, PhD, University of Michigan, Ann Arbor, MI, USA

10:30am - 10:40am Bone-derived excess TGF-β release is associated with cognitive dysfunction due to oxidation of RyR, Ca2+ leak and mitochondrial dysfunction, Lei Shi, PhD, MD Anderson Cancer Center, Houston, TX, USA *Outstanding Abstract Award

10:40am - 10:50am Anti-myeloma efficacy of BCMA CAR-iNKT is enhanced with a long-acting IL-7, rhIL-7hyFc, Julie O’Neal, PhD, Washington University in St. Louis, St. Louis, MO, USA *Outstanding Abstract Award

10:50am - 11:00am CDK4/6 inhibitor and doxorubicin synergistically inhibit breast cancer bone metastasis and enhance T-cell targeted therapy; Xinming Su, PhD, Washington University in St. Louis, St. Louis, MO, USA *Outstanding Abstract Award

11:00am - 11:45am Treating Bone Metastases: Ask the Doctor! Clinical Panel

Panelists: Theresa Guise, MD, Bone and Mineral Endocrinologist, MD Anderson Cancer Center, Houston TX, USA; Katherine Weilbaecher, MD, Breast Cancer Medical Oncologist, Washington University School of Medicine, St. Louis, MO, USA; Russell Pachinsky, MD, Prostate Cancer Medical Oncologist, Washington University School of Medicine, St. Louis, MO, USA
11:45am - 12:00pm Award Presentations / Closing Remarks

12:00pm Boxed lunch