9th Mayo Clinic Symposium on Tumor Microenvironment and Immuno-Oncology Crosstalk:
From Translational Research to Precision Therapy: Integration of Novel Technologies

December 9th -11th, 2022
Omni Amelia Island Resort, Florida

Friday, December 9, 2022

7:00 a.m.  Breakfast and Registration
8:00 a.m.  Section I: Welcome and Introduction
Cheryl L. Willman, M.D., Director, Mayo Clinic Comprehensive Cancer
Tushar Patel, M.D., Mayo Clinic Jacksonville
Asher Chanan-Khan, M.D., Mayo Clinic Jacksonville

8:20 a.m.  Section II: Tumor Microenvironment crosstalk and cancer stemness
Chair: Hugo Guerrero Cazares, M.D., PhD., Mayo Clinic Jacksonville
8:30 a.m.  Glioblastoma microenvironment and stem cells
Alfredo Quinones-Hinojosa, M.D., Mayo Clinic Jacksonville
8:50 a.m.  Discussion
8:55 a.m.  The critical role of m6A RNA methylation in cancer cell-brain microenvironment interaction and brain metastasis
Suyun Huang, Ph.D., Virginia Commonwealth University
9:15 a.m.  Discussion
9:20 a.m.  Ex vivo vulnerabilities of human gliomas
Panagiotis Z. Anastasiadis, Ph.D., Mayo Clinic Jacksonville
9:40 a.m.  Discussion
9:45 a.m.  Targeting the Development of Resistance to Stem-Cell Active Drugs in Glioblastoma
Steven Rosenfeld, M.D., Ph.D., Mayo Clinic Jacksonville
10:05 a.m. Discussion
10:10 a.m.  Coffee Break

10:40 a.m.  Section III: Microenvironment and diseases
Chair: Aneel Paulus, M.D., Mayo Clinic Jacksonville
10:50 a.m.  Empowering normal cells against cancer
Vivek Rangnekar, Ph.D., University of Kentucky
11:10 a.m.  Discussion
11:15 a.m.  Pancreatic cancer tumor microenvironment
Peter Storz, Ph.D., Mayo Clinic Jacksonville
11:35 a.m.  Discussion
11:40 a.m.  The good, the bed and the yet to be known about monoclonal anti-CD38 therapy in Multiple Myeloma
Fabio Malavasi, M.D., University of Torino, Medical School & Fondazione Ricerca Molinette, Torino, Italy
11:55 a.m. Discussion

12:00 p.m. Lunch

1:00 p.m.  Section IV: Molecular basis of human diseases
Chair: Krishnendu Pal, PhD., Mayo Clinic Jacksonville
1:10 p.m.  Aberrant PTEN Signaling Causes Cholangitis and Cholangiocarcinoma
Baoan Ji, M.D., Ph.D., Mayo Clinic Jacksonville
1:30 p.m. Discussion
1:35 p.m.  Regulation of the PHD/HIF axis in normoxia
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Resham Bhattacharya, Ph.D., University of Oklahoma

1:55 p.m. Discussion

2:00 p.m. Biomimetic Microbubbles- A Novel Delivery Platform for Immunotherapy and Imaging
Ramasamy Paulmurgan, Ph.D., Stanford University

2:20 p.m. Discussion

2:25 p.m. A new mechanism used by human resilient T cells to avoid exhaustion and retain tumoricidal activity in response to immunotherapy
Dong, Haidong, M.D., Ph.D. Mayo Clinic Rochester

2:45 p.m. Discussion

2:50 p.m. Coffee Break

3:20 p.m. Section V: Microenvironment and Cell Signaling
Chair: Sujit Basu, M.D., Ph.D., Ohio State University,

3:30 p.m. The revolution of immunotherapy in Smoldering Myeloma
Claudio Cerchione, M.D., Ph.D., University of Naples “Federico II”, Italy

3:50 p.m. Discussion

3:55 p.m. Cilia as a biomarker of vascular health
Ramani Ramchandran, Ph.D., Medical College of Wisconsin

4:15 p.m. Discussion

4:20 p.m. The evolving role of epigenetics in renal cell carcinoma
Thai Ho, M.D., Ph.D., Mayo Clinic Arizona

4:40 p.m. Discussion

4:45 p.m. Special Young Investigator Talk

4:50 p.m. Discussion

5:00 p.m. Section VI: Martin and Winifred Ehlers Lectureship
(Named-Professor Lecture)
Chair: Jennifer J. Westendorf, Ph.D., Mayo Clinic Rochester

5:05 p.m. Leveraging the Natural Cellular and Biomolecular Interactions in Blood for the Design of Targeted, Anti-Inflammatory Particle Therapeutics
Omolola Eniola-Adefeso, Ph.D., University of Michigan

5:35 p.m. Discussion

5:45 p.m. Section VII: Virtual Poster Session and Networking

6:15 pm Dinner (Supported by Ehlers Lectureship Honoring Dr. Eniola-Adefeso) and Health Disparities in Cancer Research and Care – Gaps and Opportunities
Chair: Dr. Jennifer J. Westendorf, Ph.D. Chair of Biochemistry & Molecular Biology

Discussants: Dr. Cheryl L. Willman, M.D., Director of Mayo Clinic Comprehensive Cancer Center, and Professor of Laboratory Medicine, and Pathology
Dr. Lewis R. Roberts, M.B., Ch.B., Ph.D., Professor of Medicine MCCCC
Dr. Folakemi T. Odedina, Ph.D., Professor of Oncology MCCCC
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Saturday, December 10, 2022

7:00 a.m.  Breakfast and Registration
8:00 a.m.  Section IX: Joseph Austin McCartney and Ruth McCartney Hauck Named Visiting Professorship Lecture
            Chair: Cheryl L. Willman, M.D., Director, MCCC
8:10 a.m.  von Hippel-Lindau Disease: Insights into Oxygen Sensing, Protein Degradation, and Cancer
            William G. Kaelin M.D., Harvard Medical School and the Dana-Farber Cancer Institute
8:45 a.m.  Discussion
8:55 a.m.  Section X: Microenvironment and growth factors
            Chair: Radisky, Derek C., Ph.D., Mayo Clinic Jacksonville
9:15 a.m.  SDC1 inhibitors as a strategy to target therapeutic resistance cancer
            John “Al” Copland, Ph.D. Mayo Clinic Jacksonville
9:35 a.m.  Discussion
9:40 a.m.  Forkhead (Fox) Transcription Factors in Vascular Formation
            Tsutomu Kume, Ph.D., Northwestern University
10:00 a.m. Discussion
10:05 a.m. Coffee Break
10:35 a.m. Short Talks from Abstracts
10:45 a.m. Short Talks from Abstracts
10:55 a.m. Short Talks from Abstracts
11:05 a.m. Section XI: Vascular-Immune biology and cell signaling
            Chair: Ying Wang, M.D., PhD. Mayo Clinic Rochester
11:15 a.m. Protein Kinase Cc Mediates Immune Suppression in Lung Adenocarcinoma
            Alan Fields, Ph.D., Mayo Clinic Jacksonville
11:35 a.m. Discussion
11:40 a.m. Discovery of small peptide-based checkpoint inhibitors for cancer immunotherapy
            Kun Cheng, Ph.D., University of Missouri - Kansas City
12:00 a.m. Discussion
12:05 p.m. Short Talks from Abstracts
12:15 p.m. Lunch
1:15 p.m.  Section XII: Mini-Symposium – Nanotechnology and System Biology
            Chairs: Priyabrata Mukherjee, Ph.D., and Santanu Bhattacharya, Ph.D.
1:25 p.m.  Harnessing nano properties to improve cancer immunotherapy
            Andrew Wang, M.D., UT Southwestern Medical Center
1:45 p.m.  Discussion
1:50 p.m.  Ultrasmall silica nanoparticles improve anti-tumor pro-inflammatory and cytotoxic responses in immune suppressive microenvironments
            Michelle S. Bradbury, M.D., Ph.D., Memorial Sloan Kettering Institute
2:10 p.m.  Discussion
2:15 p.m. Nanoparticles encapsulated with drugs to reduce stenosis formation in hemodialysis vascular access
Sanjay Misra, M.D., Mayo Clinic Rochester
2:35 p.m. Discussion
2:40 p.m. Image-guided Antiangiogenic Prodrug Therapy
Dipanjan Pan, Ph.D., Pennsylvania State University
3:00 p.m. Discussion

3:05 p.m. Coffee Break

3:35 p.m. Continuous low-dose cancer chemotherapy with oral nanoparticle-paclitaxel
Ravikumar Majeti, Ph.D., The University of Alabama in Tuscaloosa
3:55 p.m. Discussion
4:00 p.m. Probing cellular processes with engineered nanoparticles.
Priyabrata Mukherjee, Ph.D., University of Oklahoma
4:20 p.m. Discussion
4:25 p.m. Special Young Investigator Talk
4:40 p.m. Short Talks from Abstracts
4:50 p.m. Short Talks from Abstracts

5:00 p.m. Section XIII: Virtual Poster Session and Reception and Dinner
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Sunday, December 11, 2022

7:00 a.m. Continental Breakfast and Registration
8:00 a.m. Section XV: Developing precision therapy targeting microenvironment-immune pathways from preclinical to clinical steps
Chair: Roxana S. Dronca, M.D Mayo Clinic Jacksonville
8:10 a.m. Synthetically Lethal Combination of Radiation Therapy and Other Therapies
Sunil Krishnan, M.D., Ph.D., Mayo Clinic Jacksonville
8:30 a.m. Discussion
8:35 a.m. Precision therapy: Immunity and tumor targeting
Lewis R. Roberts, M.B., Ch.B., Ph.D. Mayo Clinic Rochester
8:55 a.m. Discussion
9:00 a.m. NAD metabolism in aging and disease
Eduardo N. Chini, M.D., Ph.D. Mayo Clinic Jacksonville
9:20 a.m. Discussion
9:25 a.m. Liver disease and its microenvironment
Vijay Shah, M.D., Mayo Clinic Rochester
9:45 a.m. Discussion
9:50 a.m. Immune Therapy Clinical Trials and outcomes
Keith L. Knutson, Ph.D., Mayo Clinic Jacksonville
10:10 a.m. Discussion

10:15 a.m. Coffee Break

10:40 a.m. Section XVI: Selected Talks from Abstracts
Chairs: Vijay Shah, M.D. Mayo Clinic Rochester and Leslie T. Cooper, M.D., Mayo Clinic Jacksonville
10:40 a.m. Short Talk from Abstracts
10:50 a.m. Short Talk from Abstracts
11:00 a.m. Short Talk from Abstracts

11:00 a.m. Section XVII: Folkman Lectureship Forum
Chair: Alfredo Quiñones-Hinojosa, M.D., Mayo Clinic Jacksonville
11:10 a.m. Endothelial – Tumor cell interactions during metastasis
Luisa Iruela-Arispe, Ph.D., Northwestern University
11:35 a.m. Discussion
11:40 a.m. Cancer Cells Don’t Live Alone!: Exploring Tumor Neighborhoods
M. Celeste Simon, Ph.D., Univ. of Pennsylvania Perelman School of Medicine
12:05 p.m. Discussion
12:15 p.m. Overview of the symposium
Asher Chanan-Khan, M.D. and Dev Mukhopadhyay, Ph.D., Mayo Clinic Jacksonville
12:25 p.m. Vote of Thanks
Dev Mukhopadhyay, Ph.D., Mayo Clinic Jacksonville
12:30 p.m. Adjourned