2027 FASEB SCIENTIFIC RESEARCH CONFERENCE

Tentative Agenda

"Liver Cancer Biocomplexity: Driving Prevention, Early Detection, and Precision Medicine"

Primary Organizer: Al Sirica, Emeritus, Virginia Commonwealth University School of Medicine, Richmond, VA

Co-Organizers: Huiping Zhou, Virginia Commonwealth University School of Medicine, Richmond, VA; Renumathy Dhanasekaran, Stanford University Medical Center, Stanford, CA

All talk titles are subject to change and updating to best reflect the Session themes and reflect current and emerging advances. Full Talk: 25 minutes plus 5 minutes for questions; Short Talk: 10 minutes plus 2 minutes for questions.

Monday

07:00--TBD - Name Badge Pick-up

06:30--07:50 Breakfast

08:00--08:10 Opening Remarks by Al Sirica, Emeritus, Virginia Commonwealth University School of Medicine, Richmond, VA

08:10--09:45 Session 1: Liver Cancer Risk, Diagnostics, and Prognostics: Translating Biomarker Discoveries into Early Detection, Prognosis, and Treatment Responses, Chair: Yujin Hoshida, University of Texas Southwestern Medical Center, Dallas, TX

08:15--08:45 *Unmet Needs for Liver Cancer Risks, Diagnostic, and Prognostic Biomarkers: What's New on the Horizon*, Yujin Hoshida, University of Texas Southwestern Medical Center, Dallas, TX

08:45--09:15 *Transporter Proteins as Predictive Biomarkers of Treatment Response in Liver Cancer*, Rocio I.R. Macias, University of Salamanca, Salamanca, Spain

09:15--09:45 *Early Detection of HCC Using Cell-Free DNA Methylome,* Jasmine Zhou, University of California Los Angeles, CA

09:45--10:00 Coffee Break

10:00--11:00 Keynote Speaker 1: *Setting the Stage: A New Era of Discovery in Liver Cancer Biology, Prevention and Early Intervention*, Lewis R. Roberts, Mayo Clinic and Graduate School of Medicine, Rochester, MN

11:00--12:00 Career Development Workshop (Moderator: Huiping Zhou) This workshop will employ a moderated panel discussion patterned after the successful model used in the 2023

FASEB SRC on Cholangiocarcinoma. The panel will include equitable representation by established senior, mid-level, and early career researchers, together with a postdoctoral trainee/fellow (selected from the abstract submissions). Specific topics for discussion will include: paths to achieving independence as a liver cancer researcher, including (1) successful grant writing, publishing in high impact journals, professional networking, and establishing an independent laboratory, (2) choosing a mentor and developing as a mentor, and (3) seeking opportunities outside of academia. Also, questions by attendees may be submitted in advance and presented to the panel by the moderator for discussion. Panel Members: TBD

12:00--12:55 Lunch

13:00--15:00 Session 2: Unscrambling Liver Cancer Heterogeneity Utilizing Integrative Multi-Omics and Spatial Profiling, Chair: Michael S. Torbenson, Mayo Clinic and Graduate School of Medicine, Rochester, MN

13:00--13:30: *Morphomolecular Pathology of Hepatobiliary Cancers: Advances in Classification, Detection and Prognosis*, Michael S. Torbenson, Mayo Clinic and Graduate School of Medicine, Rochester, MN

13:30--14:00 *Genetic Landscape, Molecular Subtypes, and Therapeutic Responses in Primary Liver Cancers*: *Clues to Predicting Outcomes,* Daniela Sia, Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

14:00--14:30 *Mapping Spatial Intratumoral Heterogeneity in Liver Cancer*: Unmet Challenges for Curative Intervention, Lichun Ma, National Cancer Institute/Center for Cancer Research, NIH, Bethesda, MD

14:30--15:00 *Genome-wide Dissecting Chemoresistance Pathways in Hepatoblastoma for Novel Therapies*, Jun Yang, St Jude Children's Research Hospital, Memphis, TN

15:00--15:15 Break

15:15--18:00 Poster Session and Reception
Abstract submission is open to all levels of qualified liver cancer researchers.
All abstracts submitted by early career researchers and trainees will be specifically considered for a short talk unless the submitter has indicated during the registration that he/she only wants to present a poster. Conference organizers will review and select the abstracts, with input from Keynote Speakers. The conference organizers and FASEB reserve the right to decline any submitted abstract for a poster presentation or short talk that lacks scientific content or merit, merely announces the availability of a resource or service, is found not in compliance with the Scientific Research Conference abstract, speaker, presenter terms, or otherwise does not meet the requirements of the organizers or FASEB

18:00--20:00 Opening Dinner

Tuesday

07:00--TBD-Name Badge Pick-up

06:30--07:50 Breakfast

07:55--11:15 Session 3: Biocomplexity of the Host-Tumor Microenvironment in Hepatobiliary Cancers Propelling Malignant Development, Progression, and Therapeutic Resistance: Chair: Renumathy Dhanasekaran, Stanford University Medical Center, Stanford, CA

8:00--8:30 *Fibroblasts: Targets for Liver Cancer Prevention and Therapy*, Robert F. Schwabe, Columbia University, New York, NY

8:30--9:00 *The Physical Environment of Hepatocellular Carcinoma: Implications for Early Intervention*, Natalie Török, Stanford University Medical Center, Stanford, CA

9:00--9:30 *Steatotic Liver as a Prometastatic Niche for Hepatic Metastasis*, Ekihiro Seki, Cedars-Sinai Health Sciences University, Los Angeles, CA

9:30--9:45 Coffee Break

9:45--10:15 *The Role of Myeloid Heterogeneity in Tumor Progression and Drug Resistance in Liver Cancer*, Chiara Braconi, University of Glasgow Wolfson Cancer Research Center, Glasgow, UK

10:15--10:45 *Heterogeneity of the Tumor Immune Microenvironment in Hepatocellular Carcinoma*: *A Guide to Therapeutic Decision Making*, Renumathy Dhanasekaran, Stanford Medical Center, Stanford, CA

10:45--11:15 *Altered Metabolic Zonation and HCC: Therapeutic Opportunities,* Satdarshan (Paul) Monga, University of Pittsburgh School of Medicine, Pittsburgh, PA

11:20-12:00 Group Photo

12:00--12:55 Lunch

13:00--15:45 Session 4: Fibro-Inflammation, MASLD/MASH, and Cancer Cell Senescence: A Triad Promoting Liver Cancer Development and Progression,
Chair: Huiping Zhou, Virginia Commonwealth University School of Medicine, Richmond, VA

13:00--13:30 *Evolution, Activation, and Transdifferentiaton of Hepatic Stellate Cells in MASH-HCC, Opportunities for Targeted Prevention and Therapy*, Scott L. Friedman, Institute for Liver Research, Icahn School of Medicine at Mount Sinai, New York, NY

13:30--14:00 *Bile Acids and Sphingolipids in MASH-HCC*, Huiping Zhou, Virginia Commonwealth University School of Medicine, Richmond, VA

14:00--14:30 *3D- Culture Modeling of MASH Progression for Drug Discovery and HCC Prevention*, David B. Brenner, Sanford Burnham Prebys Medical Discovery Institute, San Diego, CA

14:30--14:45 Break

14:45--15:15 *Senescence, MASLD, and Liver Cancer*, Anna Mae Diehl, Duke University School of Medicine, Durham, NC

15:15--15:45 *Multifaceted Protumor Role of Senescent Cancer Cells in Cholangiocarcinoma*, Sumera I. Ilyas, Mayo Clinic and Graduate School of Medicine, Rochester, MN

15:45--16:00 Break

16:00--18:00 Meet the Expert Workshop- "What's Next: Shaping the Future for Liver Cancer Research, Prevention and Therapy" (Moderator: Al Sirica). This interactive platform session will focus on exploring current and future strategies critical to improving primary liver cancer prevention, early diagnosis, and precision-based curative therapies. A panel of 4 leading experts will explore novel approaches and suggestions for advancing scientific discoveries and clinical innovations at integrating high-impact basic, translational, and clinical liver cancer research in the context of liver tumor biocomplexity.

Workshop Panel Speakers:

Mario Strazzabosco, Yale University School of Medicine, New Haven, CT

Augusto Villanueva, NYU Health Perlmutter Cancer Center, New York, NY,

Anjana Pillai, University of Chicago Medicine, Chicago, IL

Natalie Porat-Shliom, National Cancer Institute/Center for Cancer Research, NIH, Bethesda, MD

Speakers will each have 15 minutes to present their insights and vision for promising scientific and clinical research areas and future goals, with the next 60 minutes devoted to questions and interactive discussion.

18:00 Free Time and Dinner on Own

Wednesday

07:00--TBD-Name Badge Pick-up

07:55--10:00 Session 5: AI and Machine Learning in Advancing Patient Risk Stratification, Early Detection, and Drug Discovery in Liver Cancer,
Chair: Julius Chapiro, Yale University School of Medicine, New Haven, CT

08:00--08:30 *Integration of AI Biomarkers, and Liquid Biopsies in the Risk Stratification and Early Detection of Hepatocellular Carcinoma*, Ju Dong Yang.
Cedars-Sinai Medical Center, Los Angeles, CA

08:30--09:00 *AI and Serum Fusion Transcripts for Early Liver Cancer Detection,* Jianhua Luo, University of Pittsburgh Medical Center, Pittsburgh, PA

09:00--09:30 *Deep Learning Analysis of MRI Detection of Liver Malignancies and Recurrence Prediction*, Julius Chapiro, Yale University School of Medicine,
New Haven, CT

09:30--10:00 *Future of AI-Guided Targeted Drug Discovery for Primary Liver Cancer*, Halle Zhang, Insilico Medicine, Cambridge, Medicine

10:00--10:15 Break

10:15--11:15 Keynote Speaker 2: *From Human Virome to Liver Cancer Interception*, Xin Wei Wang, National Cancer Institute/Center for Cancer Research, NIH, Bethesda, MD

11:30--12:15 Business Meeting

12:15--13:20 Lunch

13:25--16:15 Session 6: Advances in Targeted and Immunotherapy for Early and Mid-Stage Primary Liver Cancers, Chair: Nilofer Azad, Sidney Kimmel Cancer Center, Johns Hopkins University School of Medicine, Baltimore, MD

13:30--14:00 *Immunotherapy in Primary Liver Cancers: Playing Now and Coming Attractions*, Nilofer Azad, Sidney Kimmel Cancer Center, Johns Hopkins University School of Medicine, Baltimore, MD

14:00--14:30 *Priming the Immune Microenvironment for Immunotherapy of Early and Mid-Stage Liver Cancers: Mechanisms and Strategies*, Tim F. Greten, National Cancer Institute/center for Cancer Research, NIH, Bethesda, MD

14:30--15:00 *Integrating Immunotherapy into Early-Stage HCC: Transforming its Role from Palliative to Curative*, Ahmed O. Kaseb, University of Texas MD Anderson Cancer Center, Houston, TX

15:00--15:15 Break

15:15--15:45 *Transforming Lessons from Advanced Cholangiocarcinoma into Detection and Precision Therapy of Early- Stage Disease*, Juan Valle, The Cholangiocarcinoma Foundation, Salt Lake City, UT

15:45--16:15 *From Bench to Bedside: Lessons from Patient-Scientist Partnership to Defeat Fibrolamellar HCC*, Sanford M. Simon, Laboratory of Cellular Biophysics, The Rockefeller University, New York, NY

16:15--19:00 Free Time and Dinner on Own

19:15--21:15 Session 7: Early Career Investigator Symposium: (abstract-driven short talks), Chair: Renumathy Dhanasekaran, Stanford University Medical Center, Stanford, CA

Abstracts chosen for this session will be selected by the organizing committee comprised of the co-organizers and the Keynote speakers for originality, relevance, innovation, significance, clarity, and impact. Each presentation will be 10 minutes with and additional two minutes for questions.

Thursday

7:5--9:30 Early Career Awards Breakfast and Final Remarks

End of Conference