

Program International HBV meeting 2024 – Chicago

Title of sessions can be changed according to the content of abstract submission.

Wednesday, September 11, 2024

- 08:00 – 12:00 **Emerging Researchers Workshop**
- 12:00 – 13:00 **Lunch**
- 13:30 – 15:00 **HBF and ICE-HBV Community Forum**
- 16:00 – 16:30 **Welcome address by co-organizers**
Co-organizers: Prof. Matteo Iannacone, San Raffaele Scientific Institute & University and Prof. Alexander Ploss, Princeton University
- 16:30 – 17:00 **Distinguished Award in Hepatitis B Research Lecture - Professor Wenhui Li, PhD, National Institute of Biological Science, Beijing, China**
- 17:00 – 18:00 **Keynote Lecture 1: Clifford Brangwynne, PhD**
- 18:00 – 20:00 **Welcome Reception**

Thursday, September 12, 2024

- 08:30 – 09:00 **Introduction I: Molecular Virology**
- 09:00 – 10:00 **Session I: Molecular Virology I**
- 9:00 – 9:10: **Unveiling the Structure of Double-Stranded DNA in Hepatitis B Virus through Cryo-EM**
Joseph CY Wang
- 9:10 – 9:15 Q&A
- 9:15 – 9:25 **HDAg co-opts host RNA Pol II machinery for HDV replication: a proteomics approach**
Susannah Stephenson-Tsoris
- 9:25 – 9:30 Q&A
- 9:30 – 9:40 **Characterizing the molecular mechanism of hepatitis B virus cccDNA loss following mitosis**
Gaihong Zhao
- 9:40 – 9:45 Q&A
- 9:45 – 9:55 **Precision-cut liver slices as a pre-clinical model for the evaluation of host-targeting agents against hepatitis B virus and hepatitis delta virus infection**
Barbara Testoni
- 9:55 – 10:00 Q&A

10:00 – 10:30 **Coffee Break**

10:30 – 11:30 **Keynote Lecture 2: Mohammed AlQuraishi, PhD**

11:30 – 13:00 **Session II: Molecular Virology II**

11:30 – 11:40 **Multistep mechanism of the hepatitis B virus preS1 domain to establish high affinity NTCP binding**

Chisa Kobayashi

11:40 – 11:45 Q&A

11:45 – 11:55 **Identification of host cell factors associated with HBV virions and subviral particles**

Shangqing Yang

11:55 – 12:00 Q&A

12:00 – 12:10 **A nucleosome switch primes Hepatitis B Virus infection**

Robert Schwartz

12:10 – 12:15 Q&A

12:15 – 12:25 **HBV intracellular HBeAg/p22 binding protein mitochondrial C1QBP inhibits viral replication by reducing nucleocapsid formation and impeding DP-rcDNA nuclear import**

Xiao Peng

12:25 – 12:30 Q&A

12:30 – 12:40 **Investigating HBV DNA integration and its role in genomic instability through HBx expression**

Thomas Tu

12:40 – 12:45 Q&A

12:45 – 12:55 **A novel recombinant HBV-based selection system allows for a systematic genomic knock-out screening and the identification of host factors involved in HBV infection**

Bo-Hung Liao

12:55 – 13:00 Q&A

13:00 – 14:00 **Lunch**

14:00 – 14:30 Introduction II: Immunology

14:30 – 16:00 **Session III: Immunology/Pathogenesis I**

14:30 – 14:40 **Viral control and functional cure of chronic hepatitis B virus infection are associated with distinct HBV-specific T-cell populations**

Martin Feuerherd

14:40 – 14:45 Q&A

14:45 – 14:55 **CD4⁺T cells license Kupffer cells to produce IL-27 and revert the CD8⁺T cell dysfunction induced by hepatocellular priming**

Valentina Venzin

14:55 – 15:00 Q&A

15:00 – 15:10 **A liver immune rheostat limits T cell receptor signaling and impairs function of virus-specific CD8 T cells in chronic viral hepatitis**

Anna Fürst

15:10 – 15:15 Q&A

15:15 – 15:25 **Circulating CD8 T cells are sentinels for intrahepatic T cell responses during HBV infection**

Hannah Wintersteller

15:25 – 15:30 Q&A

15:30 – 15:40 **Highly activated intrahepatic HBV-specific resident-memory T and B cells correlated with acute-on-chronic liver failure**

Yang Cheng

15:40 – 15:45 Q&A

15:45 – 15:55 **Uptake and T Cell Stimulation by BJT-778-HBsAg Immune Complexes: Insights into Anti-HBs Monoclonal Antibody Function**

Adam Gehring

15:55 – 16:00 Q&A

16:00 – 16:30 **Coffee Break**

16:30 – 17:30 **Session IV: Immunology/Pathogenesis II**

16:30 – 16:40 A Mybl2-expressing CD8 T cell hepatic progenitor population fuels interferon induced protective HBV-specific CD8 T cell immunity during chronic infection

Vincent Steinbacher

16:40 – 16:45 Q&A

16:45 – 16:55 Maternal HBeAg by itself is sufficient to train fetal Kupffer cells to support HBV persistence after its mother-to-child transmission.

Qiqi Ning

16:55 – 17:00 Q&A

17:00 – 17:10 Distinct transcriptional landscapes of intrahepatic immune cells associated with differential HBV control across chronic HBV infection and functional cure

Martin Villanueva

17:10 – 17:15 Q&A

17:15 – 17:25 Distinct CD8 T cell immune profiles in people living with HBV and HIV/HBV co-infection

Anucha Preechanukul

17:25 – 17:30 Q&A

17:30 – 19:00 **Poster Session I**

Friday, September 13, 2024

08:30 – 10:00 **Session V: Molecular Virology III**

8:30 – 8:40 Proteomic analysis of empty and pgRNA-containing capsids uncovers cellular proteins that regulate pgRNA packaging and HBV genome replication

Hui Liu

8:40 – 8:45 Q&A

8:45 – 8:55 Characterization of Hepatitis B infected cells which retain covalently closed circular DNA during liver turnover

Henrik Zhang

8:55 – 9:00 Q&A

9:00 – 9:10 SLF2 undergoes phase separation in binding with supercoiled HBV DNA

Zihao Gao

9:10 – 9:15 Q&A

9:15 – 9:25 Characterization of polymerase delta deficiency on hepatitis B virus cccDNA biogenesis in vivo

Andoni Gomez

9:25 – 9:30 Q&A

9:30 – 9:40 HDV RNAs are localized within nuclear speckles and HDV replication requires RNA polymerase II in HDV-infected primary human hepatocytes (PHH)

Beatrice Ary

9:40 – 9:45 Q&A

9:45 – 9:55 The feasibility of establishing a hamster model for HBV infection: in vitro evidence

Hu Zhang

9:55 – 10:00 Q&A

10:00 – 10:30 **Coffee Break**

10:30 – 11:30 **Keynote Lecture 3: Bana Jabri, MD, PhD**

11:30 – 12:45 **Session VI: Immunology/Pathogenesis III**

11:30 – 11:40 Spatial profiling of HBV and HDV infection in human liver samples

Maria Saez-Palma

11:40 – 11:45 Q&A

11:45 – 11:55 Modeling anti-retroviral therapy and liver inflammation in simian-HIV and HBV co-infected rhesus macaques

Sreya Biswas

11:55 – 12:00 Q&A

12:00 – 12:10 **Small hepatitis delta antigen is a potential oncogenic factor in hepatocellular carcinoma (HCC)**

Patrizia Farci

12:10 – 12:15 Q&A

12:15 – 12:25 **Loss of Hepatitis B Virus HBeAg contributes to immune escape from CD8+ T cells directed against the core protein**

Jörg Timm

12:25 – 12:30 Q&A

12:30 – 12:40 **Novel ist-HBV Mouse Model and Insights of Nucleic Acid Therapy from the Model**

Bo Peng

12:40 – 12:45 Q&A

12:45 – 14:00 **Lunch**

14:00 – 16:00 **Session VII: Molecular Virology IV**

14:00 – 14:10 **An acidic cluster in HDAg mimicking the host histones nucleosome acidic patch is crucial for HDV replication**

Massimo Levrero

14:10 – 14:15 Q&A

14:15 – 14:25 **Spatial transcriptomic mapping the HBV infected liver.**

Jane McKeating

14:25 – 14:30 Q&A

14:30 – 14:40 **Spatially resolved quantification of HBV and HDV from archival tissues using probe-based profiling**

Ricardo Ramirez

14:40 – 14:45 Q&A

14:45 – 14:55 **G-quadruplexes control hepatitis B virus replication by promoting cccDNA transcription and phase separation in hepatocytes**

Guillaume Giraud

14:55 – 15:00 Q&A

15:00 – 15:10 **RNA crosslinking stabilizes a CAM-bound capsid**

Nora Gibes

15:10 – 15:15 Q&A

15:15 – 15:25 **A role for 5'-3' exoribonuclease 1 to regulate dsRNA responsive innate immune effectors and to suppress HDV replication**

Senko Tsukuda

15:25 – 15:30 Q&A

15:30 – 15:40 **Structural basis for loss of viral receptor function of macaque-derived NTCP homologue**

Kaho Shionoya

15:40 – 15:45 Q&A

15:45 – 15:55 **Effects of membranes, the precore protein and autophagy on the assembly of HBV core particles**

Yu-Chen Chuang

15:55 – 16:00 Q&A

16:00 – 16:30 **Coffee Break**

16:30 – 17:30 **Session VIII: Molecular Virology V**

16:30 – 16:40 **REP 2139 direct antiviral effect in 2D and 3D HDV infection models**

Massimo Levero

16:40 – 16:45 Q&A

16:45 – 16:55 **An RNA-Sensing and ADAR-Editing Based Reporter System to Study Hepatitis B Virus Infection**

Liudi Tang

16:55 – 17:00 Q&A

17:00 – 17:10 **Comparative analysis of intrinsic and induced interferon responses of HDV and Delta-Like Agents**

Eva Gnimah Gnouamozi

17:10 – 17:15 Q&A

17:15 – 17:25 **Comparative profiling of extrachromosomal circular DNAs (eccDNAs) in HBV-infected primary human hepatocytes and HBV-related hepatocellular carcinoma cell lines**

Andrea Jurado

17:25 – 17:30 Q&A

17:30 – 18:00 **Updates from the Hepatitis B Foundation**
Updates from ICE-HBV

18:00 – 19:00 **Poster Session II**

Saturday, September 14, 2024

08:30 – 10:00 **Session IX: Molecular Virology VI**

8:30 – 8:40 **Mechanistic studies of a first-in-class HBV cccDNA inhibitor in primary human hepatocytes**

Alfred Jiang

8:40 – 8:45 Q&A

8:45 – 8:55 **Characterization of COX6C as a proviral factor in HBV infection and its role in oxidative phosphorylation**

Lea Hansen-Palmus

8:55 – 9:00 Q&A

9:00 – 9:10 **An alphavirus replicon-based method to study hepatitis B virus core variants and drug resistance in high throughput**

Catherine Freije

9:10 – 9:15 Q&A

9:15 – 9:25 **Treatment with pegIFN α inhibits cell division mediated spread of HDV in a humanized mouse model supporting cell proliferation**

Tassilo Volz

9:25 – 9:30 Q&A

9:30 – 9:40 **Simian-tropic hepatitis B virus can infect simian liver chimeric mice**

Yongzhen Liu

9:40 – 9:45 Q&A

9:45 – 9:55 **Hepatitis B Virus capsid demonstrates a unique defense mechanism toward Capsid Assembly Modulators**

Caleb Valkner

9:55 – 10:00 Q&A

10:00 – 10:30 **Coffee Break**

10:30 – 11:30 **TWiV Podcast: Vincent Racaniello, PhD**

11:30 – 12:00 Introduction III: Therapeutics

12:00 – 13:00 **Session X: Therapeutics I**

12:00 – 12:10 **HBV core protein (HBc) modulates HBV RNA biogenesis and can be targeted in this function by HBc assembly modulator.**

Julien Pronost

12:10 – 12:15 Q&A

12:15 – 12:25 **Pre-clinical development of CRMA-1001, an epigenetic editor for the treatment of chronic hepatitis B**

Yesseinia Anglero-Rodriguez

12:25 – 12:30 Q&A

12:30 – 12:40 **Combination treatment with siRNA and therapeutic vaccine induced sustained modification of HBV-specific humoral and cellular immunity in CHB patients.**

Antonio Bertoletti

12:40 – 12:45 Q&A

12:45 – 12:55 **Functional evaluation and mode of action of APY1a novel non-nucleoside drug inhibiting Hepatitis Delta virus.**

Walid El orch

12:55 – 13:00 Q&A

13:00 – 14:00 **Lunch**

14:00 – 16:00 **Session XI: Therapeutics II**

14:00 – 14:10 **A novel oral NTCP inhibitor HH-1270 exhibits favorable properties as a clinical candidate for the treatment of HBV/HDV infection**

Yang Liu

14:10 – 14:15 Q&A

14:15 – 14:25 **Bulevirtide in combination with pegylated interferon alfa-2a shows a sustained off-treatment response in the liver**

Lena Allweiss

14:25 – 14:30 Q&A

14:30 – 14:40 **Development of a multiplex gene editing therapy with paired guide RNAs for the cure of chronic hepatitis B**

Ryo Takeuchi

14:40 – 14:45 Q&A

14:45 – 14:55 **Adenine Base editing of Hepatitis B surface antigen potently inhibits HDV**

Barbara Testoni

14:55 – 15:00 Q&A

15:00 – 15:10 **Development of a pan-genotypic vector, MVA-HBVac, for targeting chronic hepatitis B via therapeutic vaccination**

Anna D. Kosinska

15:10 – 15:15 Q&A

15:15 – 15:25 **Selective harnessing of adaptive NK cells for functional HBV cure**

Jonida Kokici

15:25 – 15:30 Q&A

15:30 – 15:40 **Inhibitors targeting mTOR complex selectively inhibit cccDNA-driven HBV transcription**

Benno Zehnder

15:40 – 15:45 Q&A

15:45 – 15:55 **Discovery of bimodal HBV ribonuclease H and capsid assembly inhibitors**

Daniel Bradley

15:55 – 16:00 Q&A

16:00 – 16:30 **Coffee Break**

16:30 – 17:30 **Session XII: Therapeutics III**

16:30 – 16:40 **In vitro phenotyping of bepirovirsen antiviral activity against clinically identified baseline and treatment-emergent HBV variants**

Alexander Koenig

16:40 – 16:45 Q&A

16:45 – 16:55 **Development of newly-identified small molecules, cccDNA modulators, that specifically activate interferon-related signals and inhibit HBV replication**

Yutaka Furutani

16:55 – 17:00 Q&A

17:00 – 17:10 **PAPD5/7 inhibition reduces poly-A tail length of secreted HBV mRNA**

Andrew Esteves

17:10 – 17:15 Q&A

17:15 – 17:25 **Cryo-EM structural analysis of BAY41-4109 effects on HBV capsids purified from human hepatoma cells**

Shiv Kumar

17:25 – 17:30 Q&A

17:30 - 18:00 **Farewell and 2025 International HBV Meeting Presentation**

18:00 – 19:30 **Break**

19:30 – 21:30 **Gala Dinner**

Sunday, September 15, 2024

09:30 – 12:30 **ICE-HBV Symposium**