



PROMOTING GLOBAL COLLABORATION IN HBV CURE RESEARCH

## ICE-HBV Annual Workshop:

### *RNA-targeting therapies: potential determinants of sustained HBV suppression*

#### **Chairs:**

*Adam Gehring (Canada) & Maura Dandri (Germany)*

**Kobe, Saturday 23 September, 09:00 - 11:30 am**

<b>Session 1: Scientific Talks (80 min)</b>	<b>Time (min)</b>
Therapeutic approaches for targeted RNA degradation: Background and strategies to target HBV <i>John Tavis, University of Saint Louis (USA)</i>	15+5
RNAi-mediated secondary mode of action: impact on HBV cccDNA <i>Lena Allweiss, University Medical Center Hamburg-Eppendorf (Germany)</i>	15+5
Prospects of Immune Restoration after Antigen Reduction <i>Matteo Iannacone, San Raffaele Scientific Institute &amp; University (Italy)</i>	15+5
siRNA/ASO strategies to target HDV <i>Julie Lucifora, INSERM, Lyon (France)</i>	15+5
<b>Coffee Break (10 min)</b>	10
<b>Session 2: Company Talks on RNAi drugs (60 min)</b>	
Vir Biotechnology, <i>Florian Lempp</i>	10
GSK ( <i>tbd</i> )	10
Janssen (virtual) <i>Oliver Lenz</i>	10
Panel discussion: <i>Exploring the Rationale for Most Promising Combination Therapies in RNA-Targeting Therapies for Sustained HBV Suppression</i>	30

Talks and discussions will address the following questions:

1. What is important to achieve at the end of treatment (virological/immunological perspective)?
2. What is important to maintain and/or develop during follow-up (virological/immunological perspective)?
3. What is the rationale for the most promising combination therapies with higher chances to achieve sustained HBV suppression?
4. What is the potential and rationale for the most promising RNAi-based therapies in CHD?

**Workshop Description:**

The ICE-HBV Workshop in Kobe, scheduled for September 23rd, 2023, aims to bring together scientists, clinicians, and representatives from the pharmaceutical and diagnostic industry to discuss challenges related to RNA-targeting therapies for sustained hepatitis B virus (HBV) suppression. The workshop will be chaired by Adam Gehring from Canada and Maura Dandri from Germany, leading experts in the field. The event will provide a platform to explore currently known mechanisms and potential determinants of sustained HBV control after RNA-targeting therapies.

**Background and Objectives:**

The pursuit of a functional cure for chronic HBV infections remains a major goal in current HBV cure strategies. This includes the use of direct-acting antivirals and anti-HBV immune-stimulating responses. To prepare for future clinical trials, it is crucial to understand the primary and secondary mode of action induced during RNAi-based therapies and the immunological mechanisms behind these therapies. The ICE-HBV Annual Symposium aims to address these challenges and propose a way forward by drawing upon insights from experts in academia and the industry.

The workshop aims to report current knowledge and discuss the challenges surrounding RNA-targeting therapies for sustained HBV suppression. The objectives include understanding the mechanisms underlying persistent HBV control after RNA-targeting therapies, discussing the prospects of immune restoration after antigen reduction, exploring strategies also to target hepatitis delta virus (HDV), and evaluating the rationale for the most promising combination therapies. Through presentations, panel discussions, and debates, the symposium will facilitate knowledge sharing and identify knowledge gaps in the field. Presentations will be complemented by in-depth discussion panels that will debate these challenges and propose a way forward.

**Programme Outline:** The workshop consists of two sessions and the first session should address the following topics:

- **'Therapeutic approaches for targeted RNA degradation. Background (primary MoA of ASO/siRNA) and strategies to target HBV.'**
- **'Unveiling the Mechanisms of cccDNA suppression: Role of the SMC5/6 Complex, X Protein Targeting, and Possible Implications for maintaining silencing / role of Hepatocyte Reinfection'**
- **'Prospects for Immune Restoration Following Antigen Reduction: Unraveling the Direct Effects on T/B Cells and Exploring Combinatorial Immunotherapies with Checkpoint inhibitors and Vaccines'**
- **'siRNA/ASO Strategies for Targeting HDV through Direct RNA Inhibition and HBV-Mediated Approaches'**