

INTERNATIONAL COALITION TO ELIMINATE HBV – TIME FOR A CURE

Peter Revall¹, Capucine Penicaud¹, ICE-HBV Governing Board members, Fabien Zoulim²

¹Victorian Infectious Diseases Reference Laboratory, Royal Melbourne Hospital at the Peter Doherty Institute of Infection and Immunity, Melbourne, Australia; ²Cancer Research Center of Lyon, INSERM U1052 and CNRS 5286, Lyon University, and Hospices Civils de Lyon, 151 Cours Albert Thomas, 69003, Lyon, France.

DESCRIPTION

Over 250 million people worldwide are chronically infected with hepatitis B and even though a prophylactic vaccine and effective antiviral therapies are available, no cure currently exists. Recent advances in the field, such as the identification of the NTCP receptor for viral entry, facilitate a new era in HBV research.

The International Coalition to Eliminate Hepatitis B (ICE-HBV) was created in 2016 to accelerate HBV cure research. ICE-HBV aims to support discovery of a safe, affordable, scalable and effective cure, available to all persons living with CHB including children.

ICE-HBV's vision is to develop an international, independent, research-based and patient-centered forum in order to coordinate and foster collaborative partnerships working towards a cure for HBV. International working groups on virology, immunology, innovative tools and clinical studies composed of leading HBV research experts from around the world were created to identify HBV cure research gaps and perform the research needed to address these gaps.

Researchers are preparing scientific recommendations to inform long-term research policy and programming in order to accelerate the optimization of diagnostics and treatment regimens.

PUBLIC HEALTH IMPACT

Given recent scientific advances and the momentum created by HCV cure discoveries, the HBV scientific community believes that governments, foundations and other research sponsors should work together to make a substantial investment in HBV cure research now.

Recent advances in the field, such as the identification of the NTCP receptor for viral entry, improved cell culture and animal models, the characterization of the function of HBx and increased knowledge of HBV minichromosome biology are all elements facilitating a new era in HBV research.

A combination of strategies which target both the viral replication cycle and enhance the immune response to viral antigens will most likely be required.

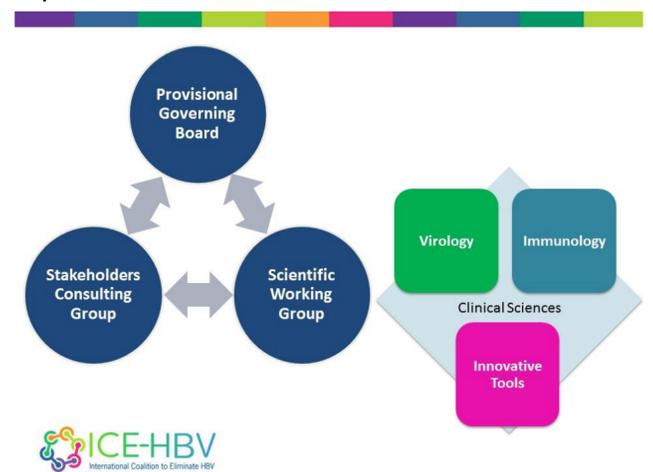
HBV research has been largely underfunded compared to other diseases; enhanced investments could make a big difference and create important resources savings from treatment scale-up. Furthermore, scaling-up deployment of the current treatments is not enough to prevent adverse outcomes in all patients; a substantial risk of liver cancer remains.

Curative regimens are expected not only to improve the quality of life of people living with HBV but also to allow substantial cost-savings for health systems.

WHY IS THIS INNOVATIVE?

A global collaborative approach to HBV cure, using a science-driven and patient-focused approach inspired by learnings from the HIV field, has never occurred before.

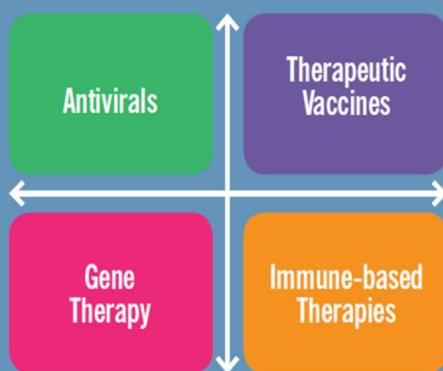
ICE-HBV working groups collaborate closely with representatives from key HBV stakeholders, including patient representatives, to ensure that the needs of people living with CHB are addressed appropriately.



PARTNERS



HBV CURE STRATEGIES



CONCLUSIONS

Through its global network, cure-focused objective and strong scientific, clinical, stakeholder and institutional linkages, ICE-HBV is striving to promote effective collaboration and facilitate opportunities that can produce a cure of chronic HBV infection as quickly and efficiently as possible.

Coupled with scaling-up effective HBV prevention, care and treatment programmes, an HBV cure could help eliminate Hepatitis B within the 21st century, thus ending the psychosocial and economic burden that infection and life-long therapy imposes on health systems and individuals.

REFERENCES

- Institute for Health Metrics and Evaluation, Global Burden of Disease Data Tool, <http://www.healthdata.org/gbd-data-tool> (accessed August 2017).
- Zeisel, M. B. et al. Towards an HBV cure: state-of-the-art and unresolved questions-report of the ANRS workshop on HBV cure. *Gut*, doi:10.1136/gutjnl-2014-308943 (2015).
- Revall, P., Testoni, B., Locarnini, S. & Zoulim, F. Global strategies are required to cure and eliminate HBV infection. *Nature reviews. Gastroenterology & hepatology* (2016).
- Nayagam, Shevanthi et al. Requirements for global elimination of hepatitis B: a modelling study. *The Lancet Infectious Diseases*, Volume 16, Issue 12, 1399 – 1408 (2016)
- Arends P, Sonneveld MJ, Zoutendijk R, Carey I, Brown A, Fasano M, et al.; VIRGIL Surveillance Study Group. Entecavir treatment does not eliminate the risk of hepatocellular carcinoma in chronic hepatitis B: limited role for risk scores in Caucasians. *Gut*;64:1289-1295 (2015)

CONFLICTS OF INTEREST

ICE-HBV does not receive funding from industry.

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Contact Information

NAME: Capucine Penicaud

TEL: +33 7 69 87 00 42

Contact: info@ice-hbv.org

 @ICE_HBV

