

Berkeley

 School of
Public Health



Forum for
Collaborative HIV Research

HBV Forum 1
November 15th 2016
Hyatt Regency Hotel
Boston

www.hivforum.org

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**Eradication of HBV:
Singapore Translational Clinical
Research (TCR) Grant
Prof. Seng Gee Lim**

Eliminate-B



**Eradication of HBV:
Singapore Translational
Clinical Research (TCR)
Grant
awarded 2015
for USD 20M over 5 years**

Principal Investigator: Seng Gee Lim

Chronic Hepatitis B: A global health problem

World health assembly 2010

World Health Assembly resolution 63.18

Calls for comprehensive approach to viral hepatitis by all nations

- **Disease burden**

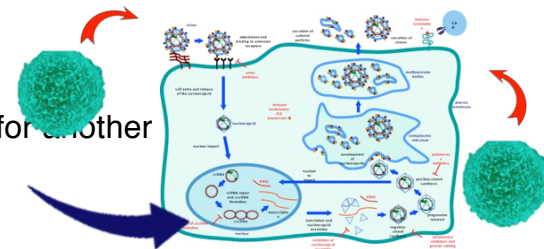
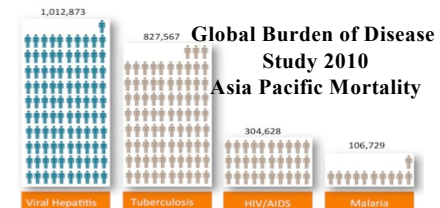
- 350 million chronic patients globally
- Large burden of liver failure, liver cancer
- Leads to >800,000 deaths in Asia Pacific yearly

- **Pathogenesis: complex**

- Virus-immune interaction : not well understood
- Viral persistence via minichromosome

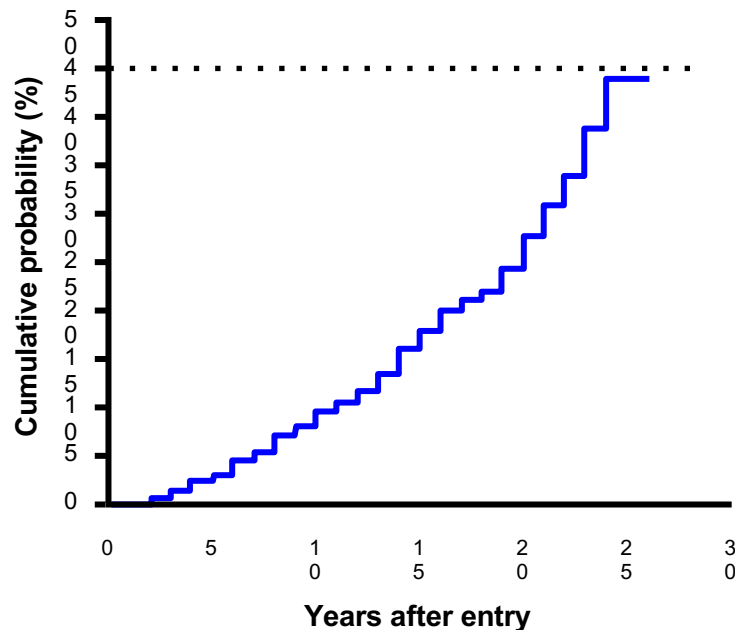
- **Control**

- Good vaccine but will not affect disease burden for another 30-50 years
- Existing therapies can control, not eradicate



Can Chronic Hepatitis B be cured?

- The accepted definition of functional cure of Chronic hepatitis B is loss of HBsAg
- In a long term study of inactive Chronic Hepatitis B carriers, 45% lost HBsAg.....but it took 25 years!
- Thus, it is proven that Chronic Hepatitis B can be cured, but it takes a long time
- The HBV TCR program aims to find means to compress this time to as little as 1-2 years

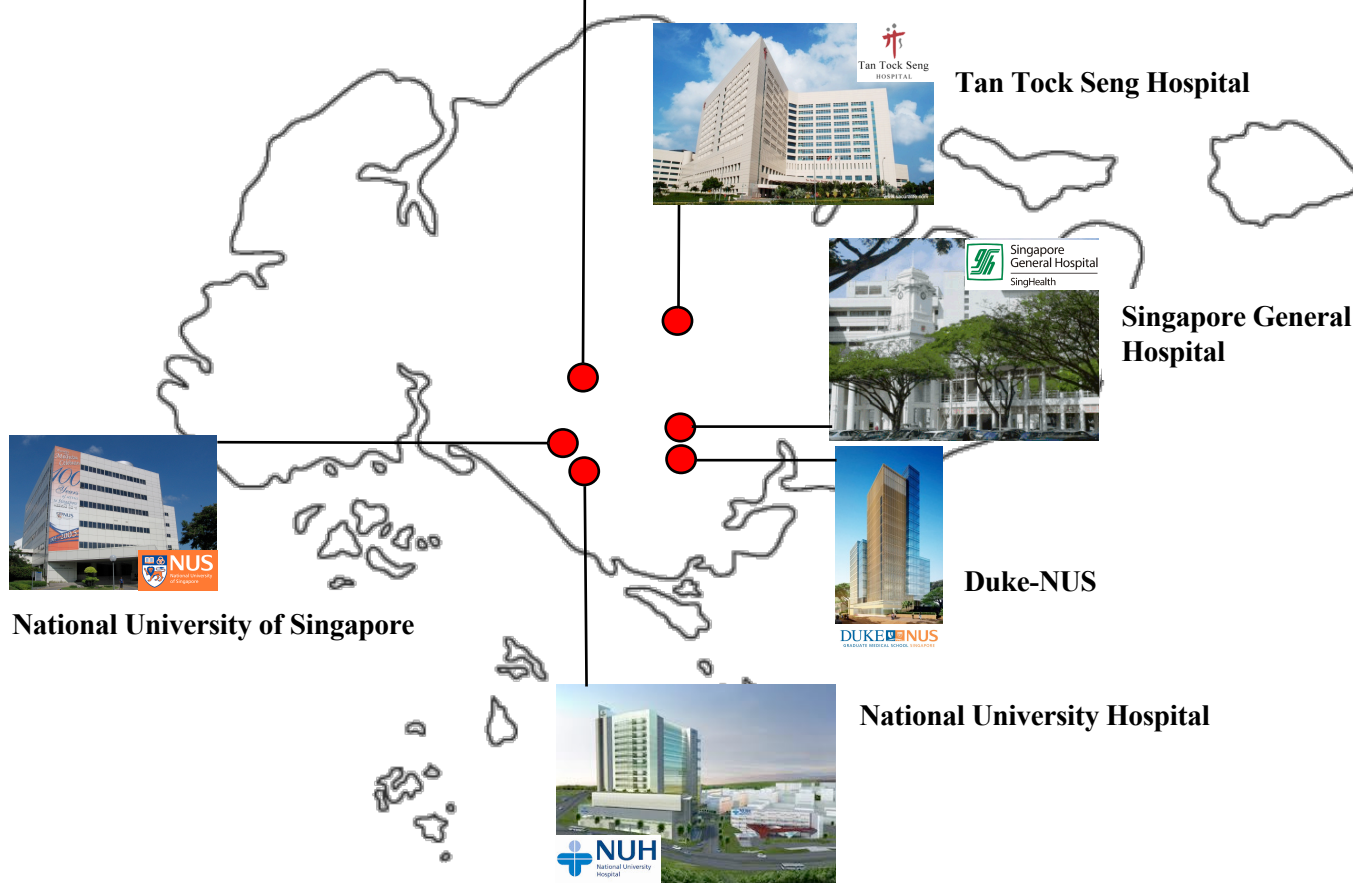


Chu, Liaw. Hepatology 2007;45:1187-1192:

**Institute of Molecular & Cell Biology
Genome Institute of Singapore
Singapore Immunology Network
Singapore Clinical Research Institute**



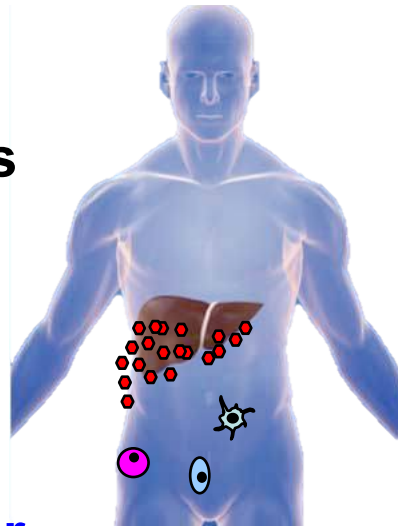
NATIONWIDE COLLABORATION



Strategy for HBV eradication: A TCR application

Theme 1: Define

- Gene
 - Immune
 - Virus
- } interactions



Theme 3: Develop Therapeutics

- Humanised mouse model
- Clinical studies

Theme 2: Discover

- New Targets

HBV eradication = HBsAg loss

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THE SCIENCE OF HBV CURE

2-3 JUNE 2017

Organising Committee

Seng Gee Lim



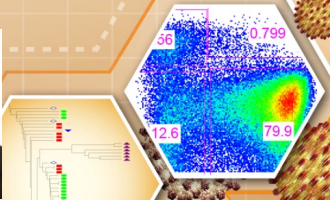
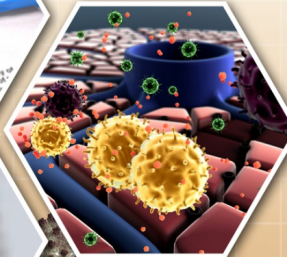
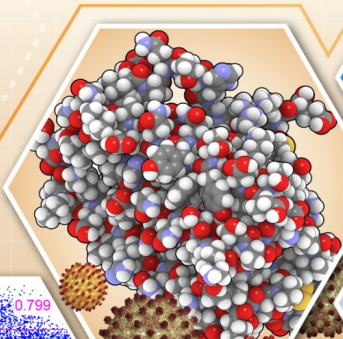
Stephen Locarnini



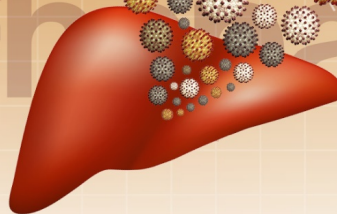
Peter Revill



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Day 1: June 2

Time	Programme
11:00 - 11:10	Opening address Definitions of cure: do we have consensus?
11:10 - 11:20	International Coalition to Eliminate Hepatitis B Virus (ICE-HBV)
11:20 - 11:30	HBV Forum: Consortium of academia, industry and regulators
11:30 - 12:00	Lessons from a HIV cure program
12:00 - 12:15	Q&A
12:15 - 13:00	Lunch
Viral Host Interaction	
13:00 - 13:20	The role of viral evolution in HBV
13:20 - 13:50	Free paper 1 with Q&A
Virology	
13:50 - 14:10	Viral lifecycle overview and potential therapeutic targets
14:10 - 14:40	Free Paper 2 with Q&A
14:40 - 15:00	Approaches to management of cccDNA
15:00 - 15:30	Free paper 3 with Q&A
15:30 - 15:50	Coffee break
Viral Entry and transcription	
15:50 - 16:10	Early events in establishment of HBV infection
16:10 - 16:25	Free paper 4 with Q&A
16:25 - 16:45	Transcription targets for HBV
16:45 - 17:00	Free paper 5 with Q&A
17:00 - 17:20	microRNA and CHB
17:20 - 17:35	Free paper 6 with Q&A
17:35	End of Day 1

Day 2: June 3

Immunology	
08:30 - 08:50	Role TLR in viral clearance in CHB
08:50 - 09:20	Free paper 7 with Q&A
09:20 - 09:40	NK cells in CHB and HBV clearance
09:40 - 10:10	Free paper 8 with Q&A
10:10 - 10:30	Chemokines and cytokines involved in CHB
10:30 - 10:45	Free paper 9 with Q&A
10:45 - 11:00	Coffee break
11:00 - 11:20	T cells in CHB: missing or exhausted?
11:20 - 11:50	Free paper 10 with Q&A
11:50 - 12:10	B cells in CHB: are they important?
12:10 - 12:25	Free paper 11 with Q&A
12:25 - 13:15	Lunch
Strategies	
13:15 – 13:25	Animal models in CHB
13:25 - 13:45	Therapeutic approaches to immune based therapy for CHB
13:45 - 14:05	Can we eradicate HBV using non-immune antiviral therapy alone?
14:05 - 14:20	Q&A
14:20 – 14:30	Tea Break
New Therapies in CHB	
14:30 - 17:10	Proposed sessions from the industry <i>(each company will give a 20-minute presentation of their preclinical/ clinical trial data. Format: 15mins presentation with 5mins Q&A)</i>
16:50 - 17:10	Q&A
17:10 - 17:45	Combination Therapy Forum: which combinations can lead to a HBV cure: all industry presenters
17:45 – 18:00	Return to main meeting room for closing remarks from Chairman