

# PROPOSITIONS

## TO THE THESIS

### Hepatic and enteric viral infections:

#### Molecular epidemiology, immunity and antiviral therapy

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1. HEV outbreaks occur repeatedly in many developing countries, especially in India, and became a significant health problem in Asian and African continent, even long before its identification. (*this thesis*)
2. Basal and activated IFN signaling provide effective immunity against rotavirus infection. (*this thesis*)
3. TNF- $\alpha$  exerts anti-rotavirus activity via classical NF- $\kappa$ B signaling, independent of type I IFN production. (*this thesis*)
4. There are knowledge gaps in Indonesia about the burden, epidemiology and strain diversity of norovirus. (*this thesis*)
5. The prevalence of norovirus and rotavirus in children less than five years of age hospitalized with acute gastroenteritis in Indonesia are about 18% and 54%, respectively. (*this thesis*)
6. A strategy of administering a neonatal rotavirus vaccine at birth to target early prevention of rotavirus gastroenteritis may address some of the barriers to global implementation of a rotavirus vaccine. (*Bines JE et al., The New England Journal of Medicine 2018*)
7. Access to vaccines remains unequal and suboptimal, particularly in poorer developing countries. (*Kochhar S et al., Expert Rev Vaccines 2013*)
8. Viral infections have caused far more deaths than all armed conflicts in the world. (*Enserink M, Science 2010*)
9. At every critical step in my scientific journey, I can look back and see the more senior scientist who helped me, whether it was challenging me on my critical thinking, inspiring me to tackle big problems, or reminding me that I needed to ask questions when attending meetings to learn how to become a part of the conversation. (*Stevens B, Cell 2016*)
10. Researchers can train abroad and attend conferences all over the world. The academic sabbatical is a chance to experience a foreign land while maintaining domestic roots. (*Tachibana C, Science 2014*)
11. And that it is He who causes laughter and weeping. And that it is He who gives death and live. (Quran surah An-Najm verse 43-44)