

DIMACS workshop Immuno-epidemiology

Closing remarks

Observations

- We had an interesting and lively meeting
 - apparently we have something to say to each other
- Most epidemiology was on within-host dynamics
 - Dietz, Wodarz, Coombs, Ferguson, Medley, Ganusov, Kostova
 - reinforces the need for more crosstalk

Consensus

- We all agree that variability of hosts is crucial
 - Ganusov had variation on (host) parameters but no between host spread.
- Selection pressures within host and between hosts may conflict
 - Coombs. Think of HIV.
- Evolution of virulence influenced by the cycle between immunology and epidemiology

Open Questions

- How to model the variability between hosts?
 - Peters & Kesmir: MHC differences
 - Many other polymorphisms between hosts
- Mechanistic or statistical description of immune response?
 - Dietz was successful in describing Malaria data with simple phenomenological model
- Spatial models generated new selection pressures
- Competition between variants within one host (superinfection) may strongly influence between host transmission
 - Wodarz touched upon this, but this needs more work.
- What is the immune system for (Medley)?

Thanks!

Speakers clear interesting presentations

Audience lively discussion!

DIMACS providing funding, resources, and friendly help

Hans Heesterbeek for the organization