ASCID

Antwerp Study Centre for Infectious Diseases

First ASCID Evening Symposium - 28 April 2016
ASCID
Antwerp Study Centre for Infectious Diseases

• One of the 9 centres of excellence of the University of Antwerp
• Joins the efforts on infectious diseases of groups within
  – VaxInfectio, Faculty of Medicine & Health Sciences:
    • Centre for the Evaluation of Vaccination (CEV, Pierre Van Damme)
    • Centre for Health Economics Research & Modelling of Infectious Diseases (CHERMID, Philippe Beutels)
    • Division of Hematology and of the Laboratory for Experimental Hematology (LEH, Zwi Berneman)
  – Department of Biology, Faculty of Sciences
    • Evolutionary Ecology Group (EVO, Herwig Leirs)
ASCID: Realizations (I)

• CEV:
  – coordinating multicenter vaccine trials and conducting unique phase 1 trials (9-valent HPV vaccines, therapeutic HPV vaccine, Noro-virus vaccine, candidate Meningococcal vaccines, ...)
  – epidemiology and surveillance of infectious diseases; creation of sero-epidemiological databases and the combination with vaccine coverage data
  – maternal immunization and passive protection of young infants
  – infectious disease agents in body fluids → diagnostic possibilities and tools for identification of sexually-transmitted infections (e.g. HPV, Chlamydia, ...) in easily accessible human specimens (urine & saliva samples) and for better understanding the transmission dynamics for air and saliva borne (e.g., influenza, varicella-zoster), vector-borne (e.g. dengue), feco-orally transmitted infections (e.g. hepatitis A, rotavirus) and sexually transmitted infections (e.g. STI).
ASCID: Realizations (II)

• CHERMID:
  – economic research on infectious diseases (incl. determinants of antibiotic consumption and antimicrobial resistance)
  – mathematical models of infectious diseases, conducting and analysing large scale surveys (incl. in infectious disease outbreak situations)

• LEH:
  – containment of antibiotic resistance in hematological patients
  – dendritic cell vaccination against HIV-1 and CMV
  – GMP microbiological control of ATMP (dendritic cell vaccines and limbal epithelial cells)

• EVO:
  – ecology of viruses (hantaviruses, arenaviruses, also Marburg and Ebola filovirus), bacteria (*Yersinia pestis*, leptospira, mycobacteria), worms (*Echinococcus multilocularis*), ectoparasites (fleas). 
The ‘One Health’ concept, now widely adopted internationally, recognizes that human health (including the microbiome), animal health and environmental conditions are closely interconnected.

ASCID: within host individual (including host characteristics and immunology), between host-individuals in a single species, and across species, and all this at individual as well as population level.

New vaccine trials (including dendritic cell vaccination trials for CMV, cancer and MS), with expanded state-of-the-art immunomonitoring.

Modelling of:
- infectious disease dynamics of immunological response within human and animal hosts
- epidemic spread between human and animal hosts
- antibiotic resistance through antibiotic consumption and infectious disease interactions between human and animal hosts
- cost-effectiveness of therapeutic anti-cancer vaccines