

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) .

ASCID: Program

- 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 .