



MUCOSAL IMMUNOLOGY WORKSHOP

Methods and assays used in mucosal research; focusing on the practical issues

29-30 April 2009

Stockholm, Karolinska Institutet, campus Solna, Nobels väg 1, Nobel Forum

Scientific organizing committee: *Robin Shattock, Donata Medaglini, Vicky Jespers, Eric Sandström, Anna-Lena Spetz*

Programme

Wednesday, 29th April 2009

8.50 **Welcome introduction**
Robin Shattock

Session 1

Early events and innate responses in mucosa

Chairs: *Gabriella Scarlatti, Christiane Stahl-Hennig*; Discussants: *Jose Alcami, Jan Albert*

9.00-9.45 **First hours-days after transmission, foreskin**

Tom Hope, Northwestern University, Chicago, US

9.45-10.30 **Innate immune responses in acute HIV-1 infection**

Seph Borrow, University of Oxford, UK

10.30 *Coffee*

Session 2

Innate responses and cytokines in mucosa

Chairs: *Jan Andersson, Willy Bogers*; Discussants: *Klaus Überla, Raul Gomez Roman*

11.00-11.30 **Innate responses in sero-negative multiple exposed individuals**

Kristina Broliden, Karolinska Institutet, Sweden

11.30-12.10 **Assessment of markers of inflammation after vaginal product use**

Christine Mauck and *Gustavo Doncel*, CONRAD, Eastern Virginia Medical School, US

12.10-12.40 **Normative values for cytokines in the genital tract: Variables affecting immunoassay recovery of cytokines**

Raina Fichorova, Harvard Medical School, US

12.40-13.40 *Lunch*

Session 3

T and B cell responses in mucosa

Chairs: *Francesca Chiodi, Jorma Hinkula*; Discussants: *Montserrat Plana, Neil Almond*

13.40-14.20 **Mucosal HIV-1 antibody responses**

Georgia Tomaras, Duke University School of Medicine, US

14.20-15.00 **HIV-1 specific T cells in the female genital tract**

Joanne Passmore, University of Cape Town, South Africa

15.00-15.30 *Coffee*

15.30-16.15 **Epidermal immunization**

Behazine Combadiere, Universite Pierre et Marie Curie, France

16.15-17.00 **Mucosal responses in non-human primates**

Roger LeGrand, CEA, France

19.00 *Dinner at SMI*

Session 4

Immunization routes-safety and efficacy

Chairs: *Ali Harandi, Anna-Lena Spetz*

Discussants: *Erik Sandström, Gustavo Doncel*

- 8.30-9.00 **Innate anti-viral factors and immune memory in mucosal and allo-immunization**
Thomas Lehner, Kings College London, UK
- 9.00-9.30 **Nasal Immunization**
David Lewis, St George's, University of London, UK
- 9.30-9.45 Electroporation
Anna-Karin Roos, Cyto Pulse, Solna, Sweden
- 9.45-10.00 **Tonsillar Immunization**
Britta Wahren, Karolinska Institutet
- 10.00-10.30 *Coffee*
- 10.30-11.00 **Vaginal Immunization, cervical and rectal ex-vivo methods**
Robin Shattock, St George's, University of London, UK
- 11.00-11.30 **Mucosal immunology in vaginal microbicide safety trials; an overview of what is measured and how.**
Vicky Jespers, Pronce Leopold Institute for Tropical Medicine, Belgium
- 11.30-12.30 **Discussion breakout sessions - 3 different groups:**
Small-animals Chair: *A-L Spetz*, Rapporteur: *Donata Medaglini*
Non-human primates Chair: *Christiane Stahl-Hennig*, Rapporteur: *Roger LeGrand*
Human beings Chair: *Eric Sandström*, Rapporteurs: *David Lewis, Janneke van de Wijgert*
- 12.30-13.30 *Lunch*
- 13.30-14.15 Discussion breakout sessions (3 groups as above) continues
- 14.15-14.45 *Coffee*

Session 5

14.45-16.00 Discussion forum

Chair: *Robin Shattock*

Panel: *Roger LeGrand, Thomas Lehner, Joanne Passmore, Georgia Tomaras, Raina Fichorova, Kristina Broliden, Seph Borrow, Tom Hope, Chris Mauck*

Rapporteur: *Vicky Jespers*

General Objective:

- To come up with a common strategy to assess mucosal responses

Specific Objectives

- To define **what** kind of mucosal responses/biomarkers are measured in mucosal immunology and related research and look at differences across different loci (nasal, vaginal, rectal, sub-lingual,...)
- To define **how** the mucosal responses/biomarkers are measured and/or the assays and sampling methods used
- To identify pitfalls, challenges and solutions

Methods

Small group discussion to discuss the following topics for different species:

- What is measured; how measured (assays, reagents); sampling methods used; type of sample; storage of sample/preservation/transfer time; what did not work; yield (number of cells/biopsy size and quality); routinely/or not routinely used assays; quality control aspects available or not;
- Baseline information on each of the topics will be provided to the groups. Information will be sought from participants in advance, from EUROPRISE partners through a survey and from the literature.

Outcome

- Written summary or report describing the current state of the art in assessing mucosal responses
- Cross fertilisation activities between the different mucosal specialties in Europe and internationally