



STATENS
SERUM
INSTITUT



Danmarks
Grundforskningsfond
Danish National
Research Foundation

3rd OPTIMMUNIZE WORKSHOP

Venue: Copenhagen – Hotel "SP34" (www.brochner-hotels.dk/our-hotels/sp34/)

DRAFT PROGRAM

Monday 17 November 2014

"What has happened since our last meeting in August 2012"

10: Welcome, morning buffet, coffee, tea

10.30-12.45: Since last meeting (Chair: Hilton Whittle)

Christine Benn: The WHO/SAGE review (www.who.int/wer/2014/wer8921/en/) – results and implications (30 min)

Peter Aaby: Non-specific effects of vaccines – new epidemiological results (50 min)

Christine Benn: Non-specific effects of vitamin A – new epidemiological results (20 min)

Time for discussion

12.45-13.30: Lunch at the hotel

13.30-15: New results – BCG and within-vaccine-variation (Chair: Mihai Netea)

Mihai Netea/Bas Blok/Rob Arts: Effects of vaccines and vitamins on innate training (40 min)

Nelly Amenyogde: Results of murine BCG studies (10 min)

Kristoffer Jensen: Impact of variation in the production of BCG on non-specific effects (10 min)

Katie Flanagan: BCG-Russia versus BCG-SSI (10 min)

Discussion of the results, including the importance of vaccine strains for non-specific effects (20 min) (Introduced by *Frank Shann*)

15-15.30: Coffee break

15.30-16.30: More new results – testing new hypotheses (Chair: Ofer Levy)

Katie Flanagan: Sex-differential immunological effects of measles vaccine and DTP vaccine may explain negative effects of DTP in females in The Gambia (20 min)

Sarah Prentice: Non-specific effects and iron metabolism – results from The Gambia (10 min)

Ofer Levy: BCG induces distinct neonatal immunologic and metabolomic responses *in vitro* and *in vivo* (30 min)

16.30-17.10: Newcomers with new perspectives – each 15 min + 5 min for discussion (Chair: Christine Benn)

Natalie Mielcarek: Non-specific effects of a new live attenuated vaccine against whooping-cough

David Furman: Embracing variability in the response to influenza vaccination in humans

17-18: Wine hour

19: Dinner at "Bar Moritz" at the hotel

Tuesday 18 November 2014

Ongoing cohorts; useful methodologies; immunological markers
The way forward – formulation of a research strategy

8.30-9: Summary of yesterday's presentations (TBC)

9-11 (Coffee break 10-10.30): Ongoing vaccine trials with possibility for nested immunological studies (Chair: Nigel Curtis)

Thomas Nissen/Nina Eriksen: Status, the Danish BCG trial (15 min)

Nigel Curtis/Katie Flanagan: Status, the Australian BCG trial (30 min)

Siva Namachivayam: The Indian BCG trial – plans for immunological substudies (15 min)

Peter Aaby/Ane Fisker: The ongoing vaccine trials in Guinea-Bissau (30 min)

11-12.15: Overview of technologies /platforms available (Chair: Arnaud Marchant)

E.g. transcriptoms, metabolomics, immunoarrays, immunophenotyping, whole genome sequencing, microbiome analyses.

Three short presentations:

Magda Plebanski: The advantage of functional assessment of cells (10 minutes)

Eleanor Fish: The application of novel unbiased immunotechnologies to characterize signature immune cell profiles in blood and other tissues (10 min)

Tobias Kollmann: A new BCG study in Guinea-Bissau using an “omics” approach (10 min)

Discussion: Which outcomes should we opt for – specific outcomes or shotgun approach?

12.15-12.30: *Magda Plebanski*: New generation vaccines also have non-specific effects

12.30-13.15: Lunch at the hotel

13.15-14.15: Immunological markers of beneficial versus harmful effects of vaccines in both sexes (Chair: Frank Shann)

General discussion: We desperately need one or more immunological markers for beneficial versus harmful non-specific effects so we can compare different schedules and vaccines in small numbers of girls and boys and say that all-cause mortality is likely to be lower with schedule A rather than schedule B. How do we get these predictive tests?

Liisa Selin: Using gene array, microRNA and TcR repertoire to compare crossreactive T cell responses to cognate responses

14.15-17 (Coffee break 15-15.30): Discussion of all presentations and formulation of research strategy: “Which findings should we prioritise to pursue” (Chair: Sabra Klein)

Subsequent definition of working group subjects

Suggested topics:

- Ongoing BCG trials in neonates – immunological substudies – coordination, synergies
- Sex differences in immunity
- The role of maternal antibodies for the response to live vaccines
- The role of boosting with live vaccines
- Can the epidemiological 2- and 3-ways interactions be explained/studied immunologically: E.g. interactions between vitamin A and sex; negative interactions between ‘beneficial’ interventions (e.g. early measles vaccine (MV) and vitamin A; early MV and OPV)
- Season

17-18: Wine hour

19.00: Dinner at “Oliver and the Black Circus” (<http://oliverandtheblackcircus.com/>)

Wednesday 19 November 2014

Work in working groups, how to proceed

9.00- 14.00: Working groups. Aim to coordinate efforts and plan proposal writing

14-15: Status from working groups

15-17: Action plan (Chair: Eleanor Fish)

Aim: to put in place the collaborations that will undertake the studies to address the concerns and outstanding immunological areas related to the SAGE review - and our collective interests.