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Keynote Speakers
Cezmi Akdis (Davos, Switzerland)
Bart Lambrecht (Ghent, Belgium)
Hans-Gustaf Ljunggren (Stockholm, Sweden)
Claudia Mauri (London, UK)
Juan Rivera (Maryland, USA)
Maria Grazia Roncarolo (Milan Italy)

Faculty
Edward Knol (Utrecht, The Netherlands)
Carsten Schmid-Weber (Munich, Germany)
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Liam O´Mahony (Davos, Switzerland)
Frode Jahnsen (Oslo, Norway)
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Local Organising Committee
Gunnar Nilsson (Stockholm, Sweden)
Edward Knol (Utrecht, The Netherlands)

EAACI Headquarters
Sladjana Scepan (Zurich, Switzerland)
Dear colleagues and friends,

Welcome to the 10th EAACI-GA²LEN Immunology Winter School “Basic Immunology Research in Allergy and Clinical Immunology” in Åre, Sweden.

Since 2001 the Immunology Section of the EAACI has been organizing meetings for young doctoral and postdoctoral scientists who are active in allergy and clinical immunology research. The aim of these meetings has always been to increase the impact of basic immunology research in the fields of allergy and clinical immunology. The previous Immunology Winter Schools have always been a great success both from its scientific quality, but also from the point of its interactive character. With the generous support from the EAACI Executive Committee we were are now able to organize the 10th EAACI-GA²LEN Immunology Winter School in the Hotel Diplomat Åregården in Åre. This is the first time that the Winter School will be in Scandinavia and not in the Alps. Åre is the biggest winter sport area in Sweden. The skiing slopes are excellent and appealing with frequent World cup races, but also many other Winter activities can be experienced in Åre. Moreover, the scenic Scandinavian surrounding is inspiring for an excellent Winter school.

The meeting includes 5 oral sessions in which selected participants will present their work. These oral sessions are Immune responses in allergic diseases models, B- and T-cell responses in allergic diseases, Mast cell and basophil functions, Immune responses in models of allergic inflammation and New therapeutic developments for allergic diseases.

Directly after the welcome reception and before each session there will be a keynote lecture. The list of excellent keynote speakers this year includes: Cezmi Akdis, Davos, Switzerland, Hans-Gustaf Ljunggren, Stockholm, Sweden, Claudia Mauri, London, U.K., Bart Lambrecht, Ghent, Belgium, Juan Rivera, Bethesda, U.S.A. and Maria Grazia Roncarolo, Milan, Italy. This is the 10th anniversary of the EAACI Winter Schools and hosts two special keynote speakers. Firstly, Cezmi Akdis who is the initiator of the EAACI Winter Schools and currently the president of the EAACI. Secondly, Bart Lambrecht who was one of the young scientists participating at the first Winter School in 2001 and is now a distinguished researcher in the field.

We have received a large number of outstanding abstracts which were reviewed by an international panel of 7 experts. Based on the scientific quality of the submitted abstract, 70 participants were selected and invited. 25 abstracts will be presented as oral presentations. In addition, two poster sessions with dessert and drinks will be arranged in which participants have the opportunity to discuss their data with the keynote lecturers, EAACI Immunology board members and with each other. During the day, there will be time for winter sports, other activities or sightseeing in beautiful Åre.

The goal of the meeting is to create a warm scientific environment in which allergy and asthma-related immunological concepts can be covered with ample time for discussions and in which young scientists have the opportunity to directly interact with well-known excellent researchers in the field. All keynote speakers and the faculty will stay during the entire meeting for further discussions - let it be on the ski slopes or other afternoon activities, during lunch or dinner or in the evenings at the poster session. Remember, the meeting is a great opportunity to make friends with young scientists from all over the world!

The organisers are looking forward to a successful meeting.

On behalf of the Organising Committee

Gunnar Nilsson     Edward Knol
PROGRAMME

Sunday, 12 February 2012

18:00  Welcome reception

18:45  Opening
Gunnar Nilsson (Stockholm, Sweden)
Edward Knol (Utrecht, The Netherlands)

19:00  Introductory KEYNOTE lecture:
Chairperson: Edward Knol (Utrecht, The Netherlands)
Mechanisms of allergy immune therapy
Cezmi Akdis (Davos, Switzerland)

20:00  Dinner

Monday, 13 February 2012

08:00 – 11:00  Session I
Chairpersons: Hans-Gustaf Ljunggren (Stockholm, Sweden)
Liam O´Mahony (Davos, Switzerland)

08:00 – 09:00  KEYNOTE Lecture:
New features of natural killer cells - no longer just a cell that kills
Hans-Gustaf Ljunggren (Stockholm, Sweden)

09:00 – 09:20  Break

09:20 – 11:00  Immune responses in allergic diseases models (oral presentations)

1. Sphingosine 1 phosphate homeostasis affects intestinal allergen uptake and oral sensitization in a mouse food allergy model
Susanne Diesner (Vienna, Austria)

2. Barrier functions of epidermal toll-like receptor 2 (TLR2) and its relevance for atopic dermatitis
I-Hsin Kuo (Rochester, USA)

3. The role of IL-33 in virus-induced exacerbations in a house dust mite mouse model of asthma
Suzanne Bal (Amsterdam, The Netherlands)

4. Pulmonary innate lymphoid cells are major producers of IL-5 and IL-13 in allergic asthma
Roel Klein Wolterink (Rotterdam, The Netherlands)

5. Does IL-4 receptor alpha signalling through CD4+ T cells play a role in ovalbumin-induced allergic airway disease?
Jaisubash Jayakumar (Cape Town, South Africa)

11:00 – 16:30  Break
16:30 – 19:30  **Session II:**

**Chairpersons:** Claudia Mauri (London, UK)
Carsten Schmidt-Weber (Munich, Germany)

16:30 – 17:30  **KEYNOTE Lecture:**

Functions of regulatory B cells
Claudia Mauri (London, UK)

17:30 – 17:50  Break

17:50 – 19:30  **B- and T-cell responses in allergic diseases (oral presentations)**

6. Reduced B cell IL-10 in response to LPS in Allergic Asthma patients: an impaired Breg function?
Luciën van der Vlugt (Leiden, The Netherlands)

7. Human allergen-specific T cell clones show high heterogeneity and plasticity within the Th2 lineage
Nora Zulehner (Vienna, Austria)

8. Characterization of IL-22 producing T cells from human palatine tonsils
Marcin Wawrzyniak (Davos, Switzerland)

9. Der P 1 induces FOXP3+GATA-3+ T cells in allergic individuals
Lieke Reubsaet (Utrecht, The Netherlands)

10. Activin-A is a novel inducer of human regulatory T cells that suppress allergen-driven T helper
responses
Sofia Tousa (Athens, Greece)

19:30  Dinner

21:00  **Poster session I**

**Chairpersons:** Bart Lambrecht (Ghent, Belgium)
Juan Rivera (Bethesda, USA)
Claudia Mauri (London, UK)
Liam O´Mahony (Davos, Switzerland)

**Mouse models**

11. Mice deficient in an asthma candidate gene have increased epithelial denudation, remodeling and
airway hyperresponsiveness in a model of airway epithelial damage
Simon G Royce (Parkville, Australia)

12. Naso-ocular interaction in a mouse model of rhinoconjunctivitis
Ina Callebaut (Leuven, Belgium)

13. Defective anti-bacterial immunity in the allergic lung
Maryam Habibzay (London, UK)

14. Combined nasal exposure to hypochlorite and ovalbumin induces airway hyperreactivity in mice
through activation of the TRPA1 channel and mast cells
Valerie Hox (Leuven, Belgium)

15. The role of placental growth factor in allergic asthma
Sonja Bobic (Leuven, Belgium)
16. Impact of cutaneous exposure in the development of IgE-mediated allergy to cow’s milk
Sophie Wavrin (Paris, France)

17. Application of small dose of Hsp70 is able to prevent manifestation of allergic airway inflammation in an animal model of asthma
Ekaterina Servuli (Moscow, Russia)

**Food allergy**

18. Influence of the Maillard reaction on immunogenicity and allergenicity of food allergens
Monika Heilmann (Langen, Germany)

19. Pru p 3 is transported intact across gastrointestinal epithelia—An essential step towards the induction of food allergy?
Leticia Tordesillas Villuendas (Madrid, Spain)

20. Validation of a murine cow’s milk allergy model to assess the potential allergenicity of cow’s milk based infant hydrolysates – first results of a ring trial
Prescilla Jeurink (Utrecht, The Netherlands)

21. IgE cross-reactivity between Bet v 1 and the mung bean proteins cytokinin-specific binding protein and Vig r 1 in patients with birch pollen-associated allergy to mung bean sprouts Eva Elisabeth Guhsl (Vienna, Austria)

**Mast cells and basophils**

22. Effects of IL-4 and IgE on the surface expression of FcepsilonRI on peripheral blood-derived human mast cells
Inge Kortekaas Krohn (Copenhagen, Denmark)

23. Can respiratory infections recruit mast cell progenitors, and if so, does this contribute to the common exacerbations of allergic asthma seen after respiratory infections?
Cecilia Söderberg (Uppsala, Sweden)

24. Induction of IL-4 by active Def f 1 in bone marrow-derived basophils
Myung-hee Yi (Seoul, Korea)

**Immune responses**

25. Comparison of complement activation and regulatory protein levels in asthmatic and COPD sputa
Zsoka Weiszhar (Budapest, Hungary)

26. Immune response of human leukocytes to the xenogenic molecule Neu5Gc
Remo Frei (Davos, Switzerland)

27. Investigation of the interaction between c-type lectin receptors and arabinogalactans
Patrick Guidato (Bochum, Germany)

28. The activity and expression of the immunomodulatory enzyme, Indoleamine 2,3 dioxygenase, in asthma, allergic rhinitis and chronic rhinosinusitis
Annika Luukkainen (Tampere, Finland)

29. Cytosolic phospholipase A2 group IVA is activated by hyaluronan in murine macrophages and in primary human monocytes
Milena Sokolowska (Bethesda, USA)
30. Role of Treg in allergic inflammation by Aspergillus fumigatus
Claudio Henríquez (Valdivia, Chile)

31. NetMHCcons: a consensus method for the major histocompatibility complex class I predictions
Edita Karosiene (Kgs. Lyngby, Denmark)

Skin inflammations

32. Impact of proteasome inhibitor treatment on allergen induced atopic eczema mice
Kiran Kumar Mudnakudu (Berlin, Germany)

33. Patients with chronic mucocutaneous candidiasis are characterized by gain-of-function STAT1 mutations
Julia Hiller (Munich, Germany)

Tuesday, 14 February 2012

08:00 – 11:00 Session III
Chairpersons: Bart Lambrecht (Ghent, Belgium)
Claudia Traidl-Hoffmann (Munich, Germany)

08:00 – 09:00 KEYNOTE Lecture:
Dendritic cells and epithelial cells as regulators of allergic airway inflammation
Bart Lambrecht (Ghent, Belgium)

09:00 – 09:20 Break

09:20 – 11:00 Immune responses in models of allergic inflammation (oral presentations)

34. Regulation of Bronchial Epithelium Integrity and Tight Junctions by Regulatory T cells in allergic airway disease
Kerstin Wanke (Davos, Switzerland)

35. Mast cell-engraftment of the peripheral lung increases airway hyperresponsiveness in an asthma model
Lisa Sjöberg (Stockholm, Sweden)

36. CD11c+ cells are required for mast cell progenitor recruitment to lung in a mouse model of allergic airway inflammation
Joakim Dahlin (Uppsala, Sweden)

37. Alternative activation of macrophages during allergic airway inflammation alters their antigen presenting capacities
Carla Winkler (Hannover, Germany)

38. Signaling at the level of dendritic cells upon specific recognition of the major birch pollen allergen
Bet v 1 indicates different response mechanisms in allergic and healthy individuals
Ursula Smole (Vienna, Austria)

11:00 – 16:30 Break
16:30 – 19:30  **Session IV:**

**Chairpersons:** Juan Rivera (Bethesda, USA)
Gunnar Nilsson (Stockholm, Sweden)

16:30 – 17:30  **KEYNOTE Lecture:**
Regulatory and effector functions of mast cells
Juan Rivera (Bethesda, USA)

17:30 – 17:50 Break

17:50 – 19:30  **Mast cell and basophil functions (oral presentations)**

Federica D’Incà (Udine, Italy)

40. Human mast cell responses to injured airway epithelial cells - implications for chronic airway inflammation
Mattias Enoksson (Stockholm, Sweden)

41. Increased mast cell numbers in alveolar parenchyma in infants with respiratory viral infections
Cecilia Andersson (Lund, Sweden)

42. Human basophils do not act as antigen-presenting cells for the major birch pollen allergen Bet v 1
Claudia Kitzmueller (Vienna, Austria)

43. Human basophils produce IL-5 and IL-9 by IgE-independent mechanisms
Britta Poulsen (Copenhagen, Denmark)

19:30 Dinner

**21:00 Poster session II**

**Chairpersons:** Hans-Gustaf Ljunggren (Stockholm, Sweden)
Francesco Annunziato (Florence, Italy)
Cezmi Akdis (Davos, Switzerland)
Frode Jahnsen (Oslo, Norway)

**Allergens**

44. Adjuvant activity of low molecular-weight, non-protein fraction of aqueous birch pollen extracts - an in vivo analysis
Stefanie Gilles (Munich, Germany)

45. Structural and immunological characterization of Phl p 4, a major pollen allergen
Domen Zafred (Graz, Austria)

46. Analysis of the complement activating ability of different types of allergens
Dorottya Csuka (Budapest, Hungary)

47. Grafting of Bet v 1 epitopes onto its celery homologue Api g 1 reveals patient-specific IgE recognition profiles
Barbara Gepp (Vienna, Austria)

48. Defining the significance of IgE epitopes on the surface of the major birch pollen allergen Bet v 1 using scFv antibodies
Daniela Ackerbauer (Vienna, Austria)

49. Crystal structure of the first allergenic lipid-transfer protein from pollen: Artv3 as role model to resolve conformational epitopes relevant for LTP-allergic patients
Eva Vejvar (Salzburg, Austria)

50. Characterization of Red Kidney Bean (Phaseolus vulgaris L.) Allergens and Their Allergenic Potential Using BALB/c Mice and Allergic Patients
Sandeep Kumar (Lucknow, India)

51. Dog saliva – a source of allergens
Konrad Wadén (Stockholm, Sweden)

**Immunotherapy**

52. Pru p 3 mutants exhibit low IgE- binding capacity: a good strategy for specific peach immunotherapy
Cristina Gómez-Casado (Madrid, Spain)

53. Generation of a hybrid protein as a novel therapeutic for Fagales immunotherapy
Ulrike Pichler (Salzburg, Austria)

54. Diversity of epitope recognition of IgG4 antibodies induced by birch-pollen specific immunotherapy
Brinda Subbarayal (Vienna, Austria)

55. Evaluation of Immunogenicity and safety aspects of Adeno-associated virus-like particles (AAVLPs) as carriers for B-cell vaccines in an OVA-allergy model
Josef Singer (Vienna, Austria)

56. Treatment with synthetic β-lactoglobulin peptides can prevent clinical symptoms in a mouse model for cow’s milk allergy
Laura Meulenbroek (Utrecht, The Netherlands)

57. Predictions of conformational B-cell epitopes using 3 dimensional protein structures
Jens Kringelum (Copenhagen, Denmark)

58. Anti-inflammatory effects of a polyglycerolsulfate on allergic type I and type IV reactions in mice
Julia Trosien (Berlin, Germany)

**Diagnostics and monitoring**

59. The role of alpha-Gal in systemic allergic reactions to meat
Dagmar Kollmann (Vienna, Austria)

60. Detection of auto-reactive IgE in young children using a high-throughput screening assay
Tanja Seher (Munich, Germany)

61. Short-time cold dry air exposure represents a useful diagnostic tool for nasal hyperresponsiveness, and is associated with mast cell degranulation in AR patients.
Laura Van Gerven (Leuven, Belgium)

62. High basophil allergen sensitivity (CD-sens) is associated with severe allergic asthma in children
Jon Konradsen (Stockholm, Sweden)

63. IgA2 in saliva correlates with reduced severity of clinical symptoms to house dust mite allergens
Gerco den Hartog (Wageningen, The Netherlands)

64. Study of cAMP changes during specific IgE desensitization
Ibon Eguíluz (Madrid, Spain)

65. High β-defensin levels in colostrum are associated with the emergence of allergy in children
Emma Savilahti (Helsinki, Finland)
**Wednesday, 15 February 2012**

**08:00 – 11:00**  
**Session V**  
**Chairpersons:** Maria Grazia Roncarolo (Milan, Italy)  
Francesco Annunziato (Florence, Italy)

**08:00 – 09:00**  
**KEYNOTE Lecture:**  
Regulatory T cell immunotherapy  
Maria Grazia Roncarolo (Milan, Italy)

**09:00 – 09:20**  
Break

**09:20 – 11:00**  
**New therapeutic developments for allergic diseases (oral presentations)**

66. Effects of vitamin D deficiency during early life on the development of neonatal house dust mite induced allergic airways disease  
Jessica Vasiliou (London, UK)

67. A high fat diet prevents oral tolerance induction and enhances allergic symptoms in a mouse model for cow’s milk allergy  
Lieke van den Elsen (Utrecht, The Netherlands)

68. Recombinant Modified Vaccinia Virus Ankara as an Allergy Vaccine Candidate  
Christof Bohnen (Langen, Germany)

69. Transcutaneous immunisation with the TLR 7 ligand R848 combined with birch pollen allergen Bet v 1 prophylactically suppressed allergen-specific IgE production by induction of predominant TH1 responses  
Susanne Siebeneicher (Langen, Germany)

70. Exosomes loaded with alpha-galactosylceramide amplify innate and adaptive immunity via iNKT cells  
Stefanie Hiltbrunner (Stockholm, Sweden)

**11:00 – 11:30**  
Wrap up and Farewell