Antibodies & Complement
May 20-25, 2019

PROGRAM

www.mdc-berlin.de/antibodies-complement-2019
Antibodies & Complement

May 20-25, 2019

Speakers

Doryen Bubeck, Imperial College, London (United Kingdom)
Christian Busse, German Cancer Research Center, Heidelberg (Germany)
Tineke Cantaert, Institut Pasteur, Phnom Penh (Cambodia)
Michael Carroll, Harvard Medical School, Massachusetts (USA)
Michel Cogné, University of Limoges (France)
Davide Corti, Humabs BioMed SA, Bellinzona (Switzerland)
Brandon de Kosky, University of Kansas (USA)
Sarel J. Fleishman, Weizmann Institute, Rehovot (Israel)
Piet Gros, Utrecht University (The Netherlands)
Claudia Kemper, National Institute of Health, Bethesda (USA)
Florian Krammer, Icahn School of Medicine at Mount Sinai, New York (USA)
Heidi Ling, Imperial College, London (United Kingdom)
Brinda Prasad, Regeneron Pharmaceuticals, New York (USA)
Daniel Ricklin, University Basel (Switzerland)
Janine Schuurman, Genmab Utrecht (The Netherlands)
Ron Taylor, University of Virginia (USA)
Francesco Tedesco, University of Trieste (Italy)
Marjolein van Egmond, VU University Medical Center (The Netherlands)
Andrea van Elsas, Aduro Biotech Europe, Oss (The Netherlands)
Taia Wang, Stanford University, California (USA)

TOPICS

• antibody & complement (novel) functions
• human antibody repertoires
• complement structure and subcellular localization
• novel technologies
• complement and antibody therapies

Scientific Organizers

Pierre Bruhns
Institut Pasteur, Paris, France

Falk Nimmerjahn
University of Erlangen-Nuernberg, Germany

Suzan H.M. Rooijakkers
University Medical Center Utrecht, The Netherlands

Kathrin de la Rosa
Max Delbrück Center for Molecular Medicine in the Helmholtz Association Berlin, Germany
Program

Monday, May 20, 2019

14:00  Registration

16:30  Welcome & Introductions by Pierre Bruhns and Kathrin de la Rosa

Antibodies & Complement I

Chairs:  Pierre Bruhns, Institut Pasteur, Paris, France
         Kathrin de la Rosa, Max Delbrück Center for Molecular Medicine, Berlin, Germany

16:40  Michael Carroll, Harvard Medical School, Massachusetts, USA
       Complement in adaptive immunity

17:20  Selected abstract: Christian Lehmann, University Hospital Erlangen, Germany
       Antigen targeting of Fc receptors induces strong and functional relevant T cell responses in vivo independent of ITAM signaling but dependent on dendritic cell subsets

17:40  Selected abstract: Kasia Kready, Institut Pasteur, Paris, France
       Tracking Temporal and Spatial Affinity Maturation of Antibodies from Single-Cells in a mouse model of autoimmunity

17:55  Selected abstract: Steven de Taeye, Sanquin, Amsterdam, The Netherlands
       Polymorphic variant of IgG2 is less efficient in complement activation

18:10  Brinda Prasad, Regeneron Pharmaceuticals, New York, USA
       Enhancing Pathogen and Cellular Clearance with a Bispecific C1q Antibody

19:00  Welcome Reception – Networking

20:00  Dinner
Antibodies & Complement II

Chairs: Suzan Rooijakkers, University Medical Center Utrecht, The Netherlands
Falk Nimmerjahn, FAU Erlangen-Nuremberg, Germany

09:00 Janine Schuurman, Genmab, Utrecht, The Netherlands
Translating basic science to antibody therapeutics

09:40 Selected abstract: Jürgen Strasser, University of Applied Sciences Upper Austria, Linz, Austria
The molecular pathways of IgG oligomerization and classical complement activation on antigenic surfaces

10:00 Selected abstract: Ben Goldberg, Dartmouth College, Hanover, USA
Squaring in vitro complement assays with in vivo results: case studies in anti-HIV-1 complement activity

10:15 Selected abstract: Seline Zwarthoff, UMC, Utrecht, The Netherlands
Proteases C1r and C1s affect binding of C1q to certain human IgG subclasses

10:30 Coffee break

11:00 Heidi Ling, Imperial College, London, UK
Complement in autoimmune diseases

11:40 Selected abstract: Eva Conde Garcia, Institut Pasteur, Paris, France
Anti-IL-4 and anti-IL-13 dual vaccination using Kinoid technology prevents development of allergic airway inflammation in mice

12:00 Selected abstract: Cécile Bergua, IRIB Normandy, Rouen, France
In vivo pathogenicity of IgG from patients with anti-SRP or anti-HMGCR autoantibodies in immune-mediated necrotising myopathy

12:15 Selected abstract: Pablo Canales Herrerias, Institut Pasteur, Paris, France
Characterizing autoantibody-producing cells in thrombocytopenic patients for secretion rate and affinity for a platelet autoantigen

12:30 Lunch and social time
Chairs: Pierre Bruhns, Institut Pasteur, Paris, France
Janine Schuurman, Genmab, Utrecht, The Netherlands

15:00 Ron Taylor, University of Virginia, USA
The mechanism of antibody-induced complement-mediated lysis of tumor cells

15:40 Selected abstract: Haoyang Zhuang, University of Florida, USA
A Novel Mechanism for Generating the Interferon Signature in Lupus: Opsonization of Dead Cells by Complement and IgM

15:55 Selected abstract: Simone Oostindie, Genmab, Utrecht, The Netherlands
DuoHexaBody-CD37: a novel CD37-specific antibody that demonstrates superior complement-dependent cytotoxicity in pre-clinical B-cell malignancy models

16:10 Marjolein van Egmond, VU University Medical Center Amsterdam, The Netherlands
IgA therapeutic antibodies

16:50 Selected abstract: Sina Bondza, Uppsala University, Sweden
Characterization of Rituximab and C1q interactions on living cells in real-time

17:05 Selected abstract: Delphine Sterlin, Institut Pasteur, Paris, France
Human IgA coat a wide range of gut commensals

17:30 Poster Session I (P1-P28)

20:00 Dinner
Antibodies in infectious diseases

Chairs: Kathrin de la Rosa, Max Delbrück Center for Molecular Medicine, Berlin, Germany
Bart Bardoel, University Medical Center Utrecht, The Netherlands

09:00 Davide Corti, VIR, Bellinzona, Switzerland
Novel therapeutic antibodies in infectious diseases

09:40 Selected abstract: Leire Aguinagalde, UMC, Utrecht, The Netherlands
Complement-enhancing monoclonal antibodies as a therapeutic strategy against Streptococcus pneumoniae

10:00 Selected abstract: Elizabeth Aitken, University of Melbourne, Australia
Identifying functional antibodies that protect pregnant women against placental malaria infection

10:15 Selected abstract: Harry Schroeder, University of Alabama at Birmingham, USA
Pneumococcal vaccination elicits public B-cell repertoires and serum antibody clonotypes derived from the IgM+IgD+CD27+ memory B cell compartment

10:30 Coffee break

11:00 Tineke Cantaert, Institut Pasteur, Phnom Penh, Cambodia
Protective antibody response in dengue infections

11:40 Selected abstract: Timothée Bruel, Institut Pasteur, Paris, France
Complement activation at the surface of HIV-1-infected cells

12:00 Selected abstract: Priscilla Kerkman, UMC, Utrecht, The Netherlands
Extracellular ATP can mediate cleavage of CD27 to generate CD27-IgD- B cells in circulation of hantavirus patients.

12:15 Florian Krammer, Icahn School of Medicine at Mount Sinai, New York, USA
Antibody responses to conserved influenza virus epitopes

12:55 Lunch and social time
Chairs: Falk Nimmerjahn, FAU Erlangen-Nuremberg, Germany
       Florian Krammer, Icahn School of Medicine at Mount Sinai, New York, USA

18:00 Christian Busse, German Cancer Research Center, Heidelberg, Germany
       Anti-malaria Abs and repertoires analysis

18:40 Selected abstract: Peter Rice, UMASS, Massachusetts, USA
       Complement alone drives efficacy of a chimeric anti-gonococcal monoclonal antibody

19:00 Selected abstract: Timon Damelang, University of Melbourne, Australia
       Importance of functional antibodies in protection of pregnant women from malaria

19:15 Taia Wang, Stanford University, USA
       Fucosylation on anti-dengue antibodies

20:00 Dinner
Complement

Chairs: Suzan Rooijakkers, University Medical Center Utrecht, The Netherlands
        Doryen Bubeck, Imperial College, London, UK

09:00  Piet Gros, Utrecht University, The Netherlands
       Antibody and complement structures

09:40  Selected abstract: Ravit Netzer, Weizmann Institute of Science, Rehovot, Israel
       Automated design of ultrahigh specificity protein binders

10:00  Selected abstract: Rolf Spirig, CSL Behring AG, Bern, Switzerland
       Inhibition of Ab-complex mediated inflammation by recombinant IgG1 Fc hexamer

10:15  Selected abstract: Dennis Doorduijn, UMC, Utrecht, The Netherlands
       Bacterial killing by MAC pores requires immediate assembly of C5b-7

10:30  Coffee break

11:00  Daniel Ricklin, University Basel, Switzerland
       The Renaissance of Complement Therapeutics: Taming a Host Defense Pathway Gone Astray

11:40  Selected abstract: Alex Macpherson, UCB Pharma, Slough, UK
       A VHH-assisted study of the C5 inhibitory mechanisms of OmCl and RaCl

11:55  Selected abstract: Immaculada Margarit Y Ros, GSK Vaccines, Siena, Italy
       The Streptococcus agalactiae CIP Complement Inhibitory Protein at the interface between innate and acquired immunity

12:10  Selected abstract: Dani Heesterbeek, UMC, Utrecht, The Netherlands
       Disruption of Gram-negative bacteria by human serum requires complement and lysozyme

12:25  Lunch and social time
Chairs: Pierre Bruhns, Institut Pasteur, Paris, France
          Daniel Ricklin, University Basel, Switzerland

15:00 Doryen Bubeck, Imperial College, London, UK
       Cryo-EM structures of MAC

15:40 Claudia Kemper, National Institutes of Health, Bethesda, USA
       Unexpected roles for the complosome in cell metabolism

16:20 Michel Cogné, University of Limoges, France
       IgG5, the new human IgG subclass

17:30 Poster Session II (P29-P56)

20:00 Dinner
# Antibody features

**Chairs:** Kathrin de la Rosa, Max Delbrück Center for Molecular Medicine, Berlin, Germany  
David Humphreys, UCB Pharma, Slough, UK

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker/Institution</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Sarel J. Fleishman, Weizmann Institute, Israel</td>
<td>Computational design of antibodies</td>
</tr>
<tr>
<td>09:40</td>
<td><strong>Selected abstract:</strong> Jordan Dimitrov, INSERM, Paris, France</td>
<td>Eccentric associations: interaction of antibodies with cofactors</td>
</tr>
<tr>
<td>10:00</td>
<td><strong>Selected abstract:</strong> Mikhail Lebedin, MDC, Belin, Germany</td>
<td>Antibody diversification through non-VDJ insertions</td>
</tr>
<tr>
<td>10:15</td>
<td><strong>Selected abstract:</strong> Christin Brueckner, FAU Erlangen-Nuremberg, Germany</td>
<td>Investigating the mechanisms of IVlg mediated resolution of autoimmune inflammation</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00</td>
<td>Andrea van Elsas, Aduro Biotech Europe, Oss, The Netherlands</td>
<td>Cancer immunotherapy beyond PD1: novel immunomodulatory antibodies</td>
</tr>
<tr>
<td>11:40</td>
<td><strong>Selected abstract:</strong> Aaron Meyer, UCLA, USA</td>
<td>A Multivalent Binding Model Predicts FcγR Regulation and Effector Cell-Elicited Killing</td>
</tr>
<tr>
<td>12:00</td>
<td>Brandon de Kosky, Kansas University</td>
<td>Interpreting antibody sequence and function on a repertoire scale</td>
</tr>
<tr>
<td>12:40</td>
<td></td>
<td>Lunch and social time</td>
</tr>
</tbody>
</table>
Chairs:  Suzan Rooijakkers, University Medical Center Utrecht, The Netherlands  
Falk Nimmerjahn, FAU Erlangen-Nuremberg, Germany

18:00  David Humphreys, UCB Pharma, Slough, UK  
Studies with Fc-multimers: hexameric Fc and on-target hexameric IgG

18:40  Selected abstract: Simone Mader, LMU, Munich, Germany  
In utero exposure to anti-Aquaporin-4 antibodies alters brain vasculature and results in dysfunction of spatial cognitive function

19:10  Francesco Tedesco, Istituto Auxologico Italiano, Milan, Italy  
Alternative roles of C1q in cancer and tissue remodeling

20:00  Dinner

22:00  Social entertainment