

Hotel Eden Roc, Punta de Port Salvi, s/n  
17220 Sant Feliu de Guíxols Girona, Spain

# Antibodies & Complement

May 20-25, 2019

## PROGRAM



[www.mdc-berlin.de/antibodies-complement-2019](http://www.mdc-berlin.de/antibodies-complement-2019)

HELMHOLTZ

**MDC** MAX DELBRÜCK CENTER  
FOR MOLECULAR MEDICINE  
IN THE HELMHOLTZ ASSOCIATION

# 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 Kramer**, 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. Rooijackers**

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 Rooijackers, 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-HMGR 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 Rooijackers, 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 OmCI and RaCI

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

09:00 Sarel J. Fleishman, Weizmann Institute, Israel  
Computational design of antibodies

09:40 Selected abstract: Jordan Dimitrov, INSERM, Paris, France  
Eccentric associations: interaction of antibodies with cofactors

10:00 Selected abstract: Mikhail Lebedin, MDC, Berlin, Germany  
Antibody diversification through non-VDJ insertions

10:15 Selected abstract: Christin Brueckner, FAU Erlangen-Nuremberg, Germany  
Investigating the mechanisms of IVIg mediated resolution of autoimmune inflammation

---

10:30 Coffee break

---

11:00 Andrea van Elsas, Aduro Biotech Europe, Oss, The Netherlands  
Cancer immunotherapy beyond PD1: novel immunomodulatory antibodies

11:40 Selected abstract: Aaron Meyer, UCLA, USA  
A Multivalent Binding Model Predicts FcγR Regulation and Effector Cell-Elicited Killing

12:00 Brandon de Kosky, Kansas University  
Interpreting antibody sequence and function on a repertoire scale

---

12:40 Lunch and social time

---

---

**Chairs:** Suzan Rooijackers, 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 und 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

---



SUPPORTED BY

ADURO  
BIOTECH™ 

**REGENERON**  
*science to medicine®*

**MDC** MAX DELBRÜCK CENTER  
FOR MOLECULAR MEDICINE  
IN THE HELMHOLTZ ASSOCIATION

**ANTI  
BODY  
SOCI  
.ETY**

 **antibodies**  
an open access journal by 

European Journal of  
**Immunology**

**EFIS** European  
Federation of  
Immunological  
Societies

  
Institut Pasteur

  
*Diagnostics*

  
SANOFI

  
University Medical Center  
Utrecht