

Scientific program

Sunday June 28

9.30-11.00 Session A: Genetics, Structure and Functions

Chairs: Zvi Fishelson (Tel Aviv/Israel) Peter Gál (Budapest/Hungary)

#19 Structure and medical implications of the Factor H-sialic acid complex

Bärbel Blaum, Johnathan P. Hannan, Andrew P. Herbert, David Kavanagh, Dusan Uhrin, and Thilo Stehle (Tübingen/Germany)

#129 The crystal and solution structures of C4b and its complexes

Sofia Mortensen, **Gregers Andersen** (Aarhus/Denmark)

#130 The flexible solution structures of mannose-binding lectin-associated serine proteases-1 and -2 provide novel insight on lectin pathway activation

Ruodan Nan, Christopher Furze, David Wright, Jayesh Gor, Russell Wallis, **Stephen Perkins** (London/UK)

#157 Rare loss-of-function mutation in C3 provides insight into molecular and pathophysiological determinants of alternative pathway activity

Daniel Ricklin, Georgia Sfyroera, Edimara Reis, Hui Chen, Emilia Wu, Yiannis Kaznessis, Kristina N Ekdahl, Bo Nilsson, John D Lambris (Philadelphia/USA)

#248 Structural Epitope Mapping of Eculizumab using Cell Surface Display Allows Improved Stratification of Responders

Anna-Luisa Volk, Magnus Berglund, Erik Nordling, Mathias Uhlen, Patrik Strömberg, **Johan Rockberg** (Stockholm/Sweden)

#97 Structural studies on complement activation by pattern recognition complexes

Troels Kjær, Søren Degn, Lisbeth Jensen, Annette Hansen, Jens Jensenius, Le Le, Bjørn Sander, Monika Golas, Jan Skov Pedersen, Gregers Andersen, **Steffen Thiel** (Aarhus/Denmark)

11.00-11.30 Coffee & Poster viewing (Session 1)

11.30-13.00 Session B: Renal Disease

Chairs: Veronique Fremeaux-Bacchi (Paris/France), Matthew Pickering (London/UK)

#4 Unbalanced levels of complement factor H in relation to factor H-related 1 associate with progressive IgA nephropathy.

Jaouad Anter, Alfons Segarra, Mario Espinosa, Miquel Blasco, Eduardo Gutiérrez, Elena Roman, Sheila Pinto, Agustín Tortajada, Santiago Rodríguez de Córdoba (Madrid/Spain)

#13 Renin cleavage of C3: a kidney-specific mechanism of complement activation

Zivile Békássy, Ann-Charlotte Kristoffersson, Johan Rebetz, Ramesh Tati, Anders Olin, Diana Karpman (Lund/Sweden)

#53 Complement activation and consumption in secondary HUS/TTP: correlation with decreased ADAMTS13 activity and 30-day mortality

Peter Farkas, Dorottya Csuka, Balint Mikes, György Sinkovits, Marienn Reti, **Zoltan Prohaszka** (Budapest/Hungary)

#59 Inhibition of the C5a Receptor by CCX168 Markedly Reduces the Thrombogenic Effect of Serum from Patients with atypical Hemolytic Uremic Syndrome on Microvascular Endothelial Cells

Sara Gastoldi, Israel F Charo, Daniel Dairaghi, Pirow Bekker, Thomas J Schall, Ariela Benigni, **Marina Noris**, Giuseppe Remuzzi, Miriam Galbusera (Bergamo/Italy)

#64 Complement factor H-related protein 5 binding to heparan sulphate increases factor H de-regulation in vitro

Frederick Gyapon-Quast, Wengang Chai, Yan Liu, Matthew C. Pickering, Ten Feizi (London/UK)

#117 Genetic Screening of the Complement Cascade in a Large C3G Cohort

Bertha Martín, Fengxiao Bu, Nicolo Ghiringhelli Borsa, Rossella Piras, Hela Azaiez, Kai Wang, Erika Takanami, Kathy Frees, Carla M Nester, Richard Smith (Iowa City/USA)

13.00-14.00 Lunch & Poster viewing (Session 1)

13.00-14.00 ICS Board Meeting

14.00-15.45 Session C: Deficiencies and Dysregulation

Chairs: Pilar Sanchez-Corral (Madrid/Spain), Seppo Meri (Helsinki/Finland)

#21 Genetically defined low MASP-2 serum levels increase the susceptibility to HIV/HBV/HCV infection in patients from Southern Brazil

Angelica Beate Winter Boldt, Márcia Holsbach Beltrame, Vera Lúcia Pereira dos Santos, Sandra Jeremias dos Santos Catarino, Caroline Grisbach, Regina Tizzot, Iara José de Messias-Reason (Curitiba/Brazil)

#26 Dual role of the complement system in pre-eclampsia

Roberta Bulla, Gérard Chaouat, Claudio Tripodo, Reinhard Würzner, Maria Grazia De Simoni, Marina Botto, Francesco Tedesco (Trieste/Italy)

#39 The role of complement factor H-like and factor H-related proteins in age-related macular degeneration

Simon Clark, Laura Fleming, Richard Unwin, Isabel Riba Garcia, Paul Bishop (Manchester/UK)

#115 Prevalence and characteristics of anti-factor B and anti-C3 autoantibodies in a cohort of C3 glomerulopathy and membranoproliferative glomerulonephritis type I

Maria Chiara Marinozzi, Lubka Roumenina, Sophie Chauvet, Marie-Agnès Dragon-Durey, Veronique Fremeaux-Bacchi, **Moglie Le Quintrec** (Paris/France)

#123 The Natural History of Patients with Primary p.Cys89Tyr mutation in the CD59 gene
Dror Mevorach (Jerusalem/Israel)

#143 Mannose-binding lectin is involved in endothelial damage and vascular dysfunction following ischemia

Franca Orsini, Stefano Fumagalli, Eszter Csaszar, Daiana De Blasio, Rosalia Zangari, Nikolett Lenart, Ádám Dénes, *Maria-Grazia De Simoni* (Milano/Italy)

#161 Inhibition of the alternative pathway of complement accelerates recovery from smoke-induced functional and morphological ocular injury

Baerbel Rohrer, Alex Woodell, Sarah Casey, Tucker Williamson, Bryan Jones, Stephen Tomlinson, Carl Atkinson (South Carolina/USA)

15.45-16.45 Coffee & Poster viewing (Session 1)

15.45-16.45 Standardization Committeé for Complement Analysis

16.45-18.15 Session D: Cardiovascular Disease and Miscellaneous

Chairs: Peter Garred (Copenhagen/Denmark), Marten Trendelenburg (Basel/Switzerland)

#22 Ex vivo human-to-pig limb xenoperfusions: simultaneous inhibition of plasma cascade systems by transgenic expression of human CD46 on pig endothelium

Anjan Bongoni, David Kiermeir, Jonas Schnider, Hansjörg Jenni, Pavan Garimella, Andrea Bähr, Nikolai Klymiuk, Eckhard Wolf, Jörg Seebach, Esther Vögelin, Mihai Constantinescu, *Robert Rieben* (Bern/Switzerland)

#31 Complement modulation of anti-aging factor Klotho in Ischemia/Reperfusion injury and Delayed Graft Function

Giuseppe Castellano, Intini Angelica, Stasi Alessandra, Divella Clara, Oortwin Beatrijs, van Amersfort Edwin, Accetturo Matteo, Zito Anna, Fiorentino Marco, Montinaro Vincenzo, Grandaliano Giuseppe, Gesualdo Loreto (Bari/Italy)

#74 The complement regulator Cartilage Oligomeric Matrix Protein (COMP) contributes to the development and metastasis of breast cancer

Emelie Holmquist, Michael Bartoschek, Bart Reitsma, Astrid Escudero-Esparza, Pernilla Katra, Karin Leandersson, Catharina Medrek, Marcin Okroj, Karin Jirström, Kristian Pietras, Anna Blom (Malmö/Sweden)

#99 The lectin complement pathway serine proteases bridges the complement and the coagulation systems in thrombotic diseases

Huda Kozarcanin, Christian Lood, Lea Munthe-Fog, Kerstin Sandholm, Osama A Hamad, Mikkel-Ole Skjoedt, Anders Bengtsson, Markus Huber-Lang, Peter Garred, Kristina N Ekdahl, Bo Nilsson (Uppsala/Sweden)

#106 C5a regulates the development of experimental allergic asthma independent of neutrophils and macrophages

Yves Laumonnier, Fanny Ender, Anna V. Wiese, Inken Schumde, Christian M. Karsten, Julia Figue, Tillman Vollbrandt, Peter König, Jörg Köhl (Lübeck/Germany)

#193 The molecular sequence of events leading to complement-dependent-cytotoxicity (CDC) is accelerated for CD20 antibodies harboring mutations that enhance hexamer formation

Ronald Taylor, Margaret Lindorfer, Erika Cook, Clive Zent, Richard Burack, Frank Beurskens, Janine Schuurman, Paul Parren (Virginia/USA)

Monday June 29

09.00-10.30 Session E: Activation, Regulation and Experimental Models

Chairs: **Marina Noris** (Bergamo/ Italy), **Steffen Thiel** (Aarhus/Denmark)

#30 Deficiency of complement alternative pathway activation in the recipient protects from ischemia/reperfusion injury and reduces t-cell alloreactivity to kidney transplant

Federica Casiraghi, Regiane Aparecida Cavinato, Marta Todeschini, Nadia Azzolini, Paola Cassis, Samantha Solini, Giuseppe Remuzzi, **Marina Noris** (Bergamo/Italy)

#65 Contact activation of C3 enables tethering between activated platelets and polymorphonuclear leukocytes via CD11b/CD18

Osama A Hamad, Ioannis Mitroulis, Karin Fromell, Huda Kozarcenin, Triantafyllos Chavakis, Daniel Ricklin, John D Lambris, Kristina N Ekdahl, Bo Nilsson (Uppsala/Sweden)

#111 Complement activation as contributor and therapeutic target in sepsis-induced organ failure

Florea Lupu, Mark Coggeshall, Steve DeMarco, John D Lambris (Oklahoma/USA) Move to Sunday Session E

#166 Functional differences between human CR3 (CD11b/CD18) and CR4 (CD11c/CD18): CD11b dominates iC3b mediated phagocytosis, while CD11c prevails adherence

Noémi Sándor, Szilvia Lukácsi, Rita Salánki, Norbert Orgován, Bálint Szabó, Róbert Horváth, Anna Erdei, Zsuzsa Bajtay (Budapest/Hungary)

#173 Factor H modulates the activation of human neutrophil granulocytes and the generation of neutrophil extracellular traps

Andrea E. Schneider, Noémi Sándor, **Mihály Józsi** (Budapest/Hungary)

#218 Factor D deficiency in a genetically mutant mouse strain that lacks adipose tissue

Xiaobo Wu, Irina Hutson, Antonina Akk, Christine Pham, Dennis Hourcade, Charles Harris, John P. Atkinson (Washington/USA)

10.30-11.00 Coffee & Poster viewing (Session 2)

11.00-12.30 Session F: Therapeutics

Chairs: Daniel Ricklin (Pennsylvania/USA), Richard Smith (Iowa/USA)

69 A novel targeted anti-complement strategy reduces secondary neuronal damage and promotes neurologic recovery after traumatic brain injury in mice

Marieta Ruseva, Valeria Ramaglia, B. Paul Morgan, Claire Harris (London/UK)

#156 Development of RA101348, a Potent Cyclic Peptide Inhibitor of C5 for Complement-Mediated Diseases

Alonso Ricardo, Michelle Arata, Steven DeMarco, Ketki Dhamnaskar, Robert Hammer, Kristopher Josephson, Kathleen Seyb, Sylvia Tobe, Zhaolin Wang, Hong Zheng, Douglas Treco (Cambridge/MA, USA)

#175 Evaluation of clinical- and preclinical-stage C3-opsonin targeted complement inhibitors for treatment of paroxysmal nocturnal hemoglobinuria reveals molecular features that are crucial for controlling complement activation on diseased host cells.

Christoph Schmidt, Markus Harder, Eva-Maria Nichols, Mario Hebecker, Markus Anliker, Thomas Simmet, Ádám Csincsi, Daniel Ricklin, John D Lambris, Hubert Schrezenmeier, Mihály Józsi, Kevin Marchbank (Ulm/Germany)

#219 APT070 (Mirococept), a membrane-localizing C3 convertase inhibitor, attenuates early human islet allograft damage in vitro and in vivo in a humanized mouse model

Fang Xiao, Liang Ma, Min Zhao, Guocai Huang, Anthony Dorling, Richard Smith, Robert Lechler, Giovanna Lombardi (London/UK)

#220 Soluble CR1 Gene therapy corrects renal phenotypes in a murine model of C3G

Xue Xiao, Yuzhou Zhang, Janice Staber, Sanjeev Sethi, Paul McCray, Carla Nester, Richard Smith (Iowa/ USA)

#246 A Subcutaneously Administered RNAi Therapeutic (ALN-CC5) Targeting Complement C5 for Treatment of PNH and Complement mediated diseases: Interim Phase 1 Study Results in Healthy Volunteers

Benny Sorensen, Jorg Taubel, James Bush, **Anna Borodovsky**, Noryuiki Kawahata, David Salant, Banda Nirmal, Christine Powell, Linda Kusner, Henry Kaminski, Akshay Vaishnav, Pushkal Garg (Cambridge/MA,USA)

12.45 Bus to Stockholm (lunch bag) Excursion and Dinner

Tuesday June 30

09.00-10.30 Session G: Mechanisms and Biosurfaces

Chairs: Jörg Köhl (Lübeck/Germany), Robert Rieben (Bern/Switzerland)

#43 Mechanism of platelet activation and hypercoagulability by anti-thymocyte globulins (ATG).

Arun Cumpelik, Estelle Gerossier, Julie Jin, Dimitrios Tsakiris, Michael Dickenmann, Jurg Schifferli, Daniel Zecher (Basel/Switzerland)

#45 Complement regulator-acquiring surface protein 12 (CRASP12) from Candida albicans binds to CD4+ T cell via the complement receptor CD46 and blocks T cell function

Prasad Dasari, Shanshan Luo, Niklas Beyersdorf, John Atkinson, Christine Skerka, Peter Zipfel (Jena/Germany)

#121 Heme-induced complement activation on endothelial cells is dependent on G protein coupled receptor and TLR-4 signaling.

Nicolas Merle, Tania Rybkine, Rémi Noé, Olivia May, Romain Paule, Veronique Fremeaux-Bacchi, Lubka Roumenina (Paris/France)

#187 C3a receptor stimulates neural plasticity after experimental brain ischemia

Anna Stokowska, Alison Atkins, Scott Barnum, Rick Wetsel, Mike Draganow, **Marcela Pekna** (Gothenburg/Sweden)

#192 A novel interaction between complement inhibitors C4b-binding protein and plasminogen that enhances plasminogen activation

Simone Talens, Vaibhav Agarwal, Alexander M. Grandits, Anna M. Blom (Malmö/Sweden)

#194 Recruitment of Human Complement Regulator Factor H as a Novel Complement Evasion Strategy for Blood Stage Plasmodium Falciparum Infection

Wai-Hong Tham, Alexander Kennedy, Christoph Schmidt, Paul Barlow, Tana Taechalertpairsan, Jenny Thompson, Paul Gilson, Brendan Crabb, Alan Cowman (Melbourne/Australia)

10.30-11.00 Coffee & Poster viewing (Session 2)

11.00-12.30 Session H: Infectious Disease

Chairs: Christine Skerka (Jena/Germany), Reinhard Würtzner (Innsbruck/Austria)

#50 The anti-inflammatory effect of combined complement and CD14 inhibition is preserved during escalating bacterial load

Kjetil H. Egge, Andreas Barratt-Due, Stig Nymo, Julie K. Lindstad, Anne Pharo, Corinna Lau, Terje Espevik, Ebbe B. Thorgersen, Tom E. Mollnes (Oslo/Norway)

#51 GAS infections in humanized C4BP transgenic mice: human IgG up-regulates C4BP binding to GAS and accentuates disease

David Ermert, Antonin Weckel, Jutamas Shaughnessy, Peter A. Rice, Matthias Mörgelin, Lars Björck, Sanjay Ram, Anna M Blom (Lund/Sweden)

#67 Binding of Properdin to Myeloperoxidase and Neisseria meningitidis is C3-dependent

Morten Harboe, **Per H. Nilsson**, Christina Johnson, Julie K. Lindstad, Anne Pharo, Bernt Christian Hellerud, Stig Nymo, Tom Eirik Mollnes (Oslo/Norway)

#68 Binding of Plasmodium falciparum merozoite protein PfRh4 to complement receptor 1 impairs decay accelerating activity by modulating the interaction with the C3-convertase fragment Bb

Markus Harder, Nicholas Lim, Alexander Kennedy, Wai-Hong Tham, **Christoph Schmidt** (Ulm/Germany)

#119 Pneumococcal aHUS isolates show enhanced complement regulator binding and express a new PspC variant

Christian Meinel, Franziska Hörhold, Giuseppina Spartà, Rainer König, Sven Hammerschmidt, Peter F. Zipfel (Jena/Germany)

#128 C5aR1 enhances CCR5-mediated entry of HIV into macrophages

Maria E. Moreno-Fernandez, Julio Aliberti, Sander Groeneweg, **Jörg Köhl**, Claire A. Chougnat (Cincinnati/USA)

12.30-13.30 Lunch & Poster viewing (Session 2)

12.30-13.30 ECN Board Meeting

13.30-15.00 Session I: Autoimmunity: Clinical and Diagnostic

Chairs: Markus Huber-Lang (Ulm/Germany), [Leendert Trouw \(Leiden/The Netherlands\)](#)

#197 Anti-C1q autoantibodies from SLE patients induce a pro-inflammatory phenotype in macrophages

Sophia Thanei, Marten Trendelenburg (Basel/Switzerland)

#42 Neutrophil microvesicles resolve gout by inhibiting C5a-mediated priming of the inflammasome.

Arun Cumpelik, Barbara Ankli, Daniel Zecher, Jurg Schifferli (Basel/Switzerland)

#101 Complement receptor type 1 (CD35) regulates TLR-mediated human B cell functions - a novel cross-talk between complement, TLRs and adaptive immunity occurring also in SLE patients

Mariann Kremlitzka, Bernadett Mácsik-Valent, Anna Polgár, Emese Kiss, Gyula Poór, Anna Erdei (Budapest/Hungary)

#153 miRNAs as novel biomarkers of disease status in atypical haemolytic uremic syndrome

Sunniyat Rahman, Sheila Pinto, Nabil Hajji, Santiago Rodríguez de Córdoba, **Elena Goicoechea de Jorge** (London/UK)

#238 Complement activation in Autoimmune Hemolytic Anemia solely mediated by classical pathway

Elisabeth Meulenbroek, Gerard van Mierlo, Conny Brouwer, Claudia Folman, Masja de Haas, Sacha Zeerleder, **Diana Wouters** (Amsterdam/The Netherlands)

15.00-16.30 Closing Ceremony

Award of the ECN Medals

Travel Awards

Presentation of the 26th ICW, Kanazawa, Japan, Sept 4-8, 2016

Presentation of the 16th EMCHD, Copenhagen, Denmark, Sept 8-12, 2017

Bo Nilsson, Farewell and Closing Remarks