15th Dresden Symposium on Autoantibodies

Autoimmunity in the SARS-CoV-2 Era
Dresden, September 7-10, 2021

6th International Consensus on ANA Pattern (ICAP) Workshop and Workshop on Harmonization of Autoantibody Detection
September 6, 2021

Dresden Fair (Messe Dresden), Messering 6,
Portal (Tor) 3, 01067 Dresden

Final Program
(ICAP) Workshop

Co-Chairs: Edward K.L. Chan (Gainesville, USA)
Luis E.C. Andrade (Sao Paulo, Brazil)

10.30-12.30  6th ICAP WORKSHOP PART I

10.30-10.45 Welcome and agenda
Edward K.L. Chan (Gainesville, USA)

10.45-11.00 International Consensus on ANA pattern (ICAP) in 2021: Status and Future Directions
Edward K.L. Chan (Gainesville, USA)

11.00-11.20 World panoramic survey on HEp-2 IFA patterns
Luis E.C. Andrade, Trischna Martins (Sao Paulo, Brazil)

11.20-11.40 Current laboratory and clinical practices in reporting and interpreting anti-nuclear antibody indirect immunofluorescence (ANA IIF) patterns: results of an international survey
Lieve van Hoovels (Aalst, Belgium)

11.40-12.00 Experience with ICAP’s recommendations in Austria
Werner Klotz, Wilson de Melo Cruvinel, Manfred Herold (Innsbruck, Austria)

12.00-12.15 Translation and implementation of ICAP in Bosnia
Emir Hondo and Amira Cerimagic (Sarajevo, Bosnia-Herzegovina)

12.15-12.30 Improvement of decision trees for routine diagnostics and research
Maria Infantino (Florence, Italy)

12.30-13.20 LUNCH BREAK

13.20-15.10  6th ICAP WORKSHOP PART II

13.20-13.40 Biological and technical aspects of the heterogeneity in HEp-2 IFA results in substrates from different sources
Monica de Jesus, Luis C. Andrade (Sao Paulo, Brazil)

13.40-14.00 An international survey on methodological aspects of ANA testing by indirect immunofluorescence analysis: current practices for method verification

14.00-14.20 How to report rare and mixed pattern?
Manfred Herold (Innsbruck, Austria)

14.20-14.40 Artificial intelligence for pattern recognition according to ICAP by automatic IFA systems
Rico Hiemann (Senftenberg, Germany)
14.40-15.00 Discussion - Questions from ICAP users
   Edward Chan

15.00-15.30 COFFEE BREAK

**Harmonization of Autoantibody Detection**

Co-Chairs: Ulrich Sack (Leipzig, Germany)  
           Martin Blüthner (Karlsruhe, Germany)

15.30-16.00 Harmonization in autoimmune serology  
   Xavier Bossuyt (Leuven, Belgium)

16.00-16.30 Quality aspects of autoimmune diagnostics  
   Ulrich Sack (Leipzig, Germany)

16.30-16.45 Practical issues of dsDNA-antibody detection in laboratory  
   diagnostics and proficiency testing: a ride between Scylla and Charybdis  
   Martin Blüthner (Karlsruhe, Germany)

16.45-17.00 Performance of an indirect immunofluorescence commercial assay  
   for the detection of anti-neuronal antibodies: a prospective study.  
   David Goncalves, V. Rogemond, S. Closs, A.K. Pinto, G. Picard, N. Fabien, J. Honnorat (Lyon, France)

17.00-17.30 Immune cell-subset flow cytometric analysis, autoantibody diagnostic  
   and theranostic testing superiority compared to autoantibody testing alone: from the bench to the clinic  
   Dimitrios Bogdanos, Athanasios Mavropoulos (Larissa, Greece)
08.00-22.00  Registration
10.00-10.30  Welcome and Introduction
                Autoantibodies in Covid-19 - An Introduction
                Karsten Conrad (Dresden, Germany)

10.30-12.00  Plenary Lectures
10.30-11.00  The SARS-CoV-2 as an instrumental trigger of autoimmunity
                Arad Dotan & Yehuda Shoenfeld (Tel Hashomer, Israel)
11.00-11.30  Overview of autoantibodies and complementary biomarkers related to SARS-CoV2
                Marvin J. Fritzler (Calgary, Canada)
11.30-12.00  Innate immunity in COVID-19: useful biomarkers for the clinical management
                Pier Luigi Meroni (Milan, Italy)

12.00-13.30  LUNCH BREAK – POSTER AND EXHIBITION VIEWING

Posters A1 – A19:  Guided poster presentation of selected posters (Autoantibodies in systemic autoimmune diseases) chaired by Ulrich Sack (Leipzig, Germany)

13.30-15.20  AUTOANTIBODIES IN SARS-COV-2 INFECTION AND VACCINATION
            Co-Chairs:  Yehuda Shoenfeld (Tel Aviv, Israel)
                Nils Landegren (Uppsala, Sweden)

13.30-13.55  Molecular mimicry between SARS-CoV-2 and human autoantigens: implications for virus-triggered and vaccine-induced autoantibodies
                Dimitrios Bogdanos (Larissa, Greece)

13.55-14.20  Autoantibodies in Kawasaki disease-like multisystem inflammatory syndrome in children (MIS-C) with COVID-19
                Nils Landegren (Uppsala, Sweden)

                Luis E.C. Andrade (Sao Paulo, Brazil)

14.35-14.50  Autoantibody requesting during the Covid-19 pandemic
                Maria Infantino (Florence, Italy)

14.50-15.05  Anti-prothrombin autoantibodies enriched after infection with SARS-CoV-2 and influenced by strength of antibody response against SARS-CoV-2 proteins
                Marc Emmenegger, Sreedhar Saseendran Kumar, Vishalini Emmenegger, Thomas Büttner, Peter Schierack, Martin F. Sprinzl,
Clemens J. Sommer, Karl J. Lackner, Adriano Aguzzi, Dirk Roggenbuck, Katrin B.M. Frauenknecht (Senftenberg, Germany)

15.05-15.20 Autoantibody signatures in SARS-CoV-2 infected individuals
Kirsten Heiss, Renate Sekul, Fiordiligie Casilag, Volker Stadler (Heidelberg, Germany)

15.20-16.00 COFFEE BREAK

16.00-18.00 AUTOIMMUNE SEROLOGY OF NEUROLOGICAL DISEASES
(sponsored by EUROIMMUN Medizinische Labordiagnostika AG)
Co-Chairs: Andrew McKeon (Rochester, USA)
           Harald Prüß (Berlin, Germany)

16.00-16.30 Autoimmune movement disorders
Andrew McKeon (Rochester, USA)

16.30-17.00 Autoimmune encephalitis and dementia – new disease concepts
Harald Prüß (Berlin, Germany)

17.00-17.20 Identification and interpretation: challenges with neural antibodies
Christian G. Bien (Bielefeld, Germany)

17.20-17.40 Artificial Intelligence: automated immunofluorescence pattern recognition 2.0
Jens Krauth (Lübeck, Germany)

17.40-18.00 Detection methods and strategies for novel neuronal autoantibodies
Lars Komorowski (Lübeck, Germany)

18.00-22.00 WELCOME RECEPTION with traditional and vegetarian Barbecue
IN THE INDUSTRIAL EXHIBITION - POSTER AND EXHIBITION VIEWING
WEDNESDAY  
SEPTEMBER 08

08.30-10.30  AUTOANTIBODY PROFILING IN SYSTEMIC AUTOIMMUNE RHEUMATIC DISEASES  
(sponsored by Werfen)  
Co-Chairs:  Michael Mahler (San Diego, USA)  
Laura Martinez Prat (Barcelona, Spain)  

08.30-09.10  Profiling of antibodies as an aid in the diagnosis of ANA associated rheumatic diseases (AARD) measured using a novel particle-based multi-analyte technology  
Michael Mahler (San Diego, USA)  

09.10-09.30  Autoantibody profiling as an aid in the prediction of ANA associated rheumatic diseases (AARD)  
Savino Sciascia (Turin, Italy)  

09.30-09.50  Multi-center evaluation of myositis specific antibodies measured using a novel particle based multi-analyte technology  
Marvin J. Fritzler (Calgary, Canada)  

09.50-10.10  Anti-PAD antibodies in the serology of rheumatoid arthritis  
Laura Martinez Prat (Barcelona, Spain)  

10.10-10.30  Q&A  

10.30-11.00  COFFEE BREAK - POSTER AND EXHIBITION VIEWING  

11.00-12.15  AUTOANTIBODIES IN PATIENTS WITH NEUROLOGIC MANIFESTATIONS OF COVID-19  
Co-Chairs:  Dirk Reinhold (Magdeburg, Germany)  
Dominique Endres (Freiburg, Germany)  

11.00-11.30  Anti-GPCR antibodies in ME-CSF and Long Covid Syndrome  
Carmen Scheibenbogen (Berlin, Germany)  

11.30-12.00  Cerebrospinal fluid autoantibodies in COVID-19 patients with neurological symptoms  
Harald Prüß (Berlin, Germany)  

12.00-12.15  Neuronal antibodies in the serum and CSF of COVID-19 patients  
Peter Körtvélyessy, Winfried Stöcker, Bianca Teegen, Klemens Ruprecht, Christian Meisel, Helena Radbruch, Dirk Reinhold (Berlin, Germany)  

12.15-14.00  LUNCH BREAK – POSTER AND EXHIBITION VIEWING  

Posters B1 – B15  Guided poster presentation of selected posters of the Candidates for the Dresden Prize chaired by Dirk Reinhold (Magdeburg, Germany)
EASI FORUM MEETING (EASI members only)
Location: Meeting room

NOVEL AUTOANTIBODIES AND AUTOANTIBODY PROFILING IN RHEUMATOID ARTHRITIS
Co-Chairs: Günter Steiner (Vienna, Austria)  
Johan Rönnelid (Uppsala, Sweden)

Anti-modified protein antibodies (AMPA) in Rheumatoid Arthritis
Rene E.M. Toes (Leiden, The Netherlands)

Anti-acetylated peptide antibodies (AAPA): Diagnostic and prognostic value
Günter Steiner (Vienna, Austria)

ACPA multiplexing in RA: Diagnostic and prognostic value
Johan Rönnelid (Uppsala, Sweden)

Three novel autoantibodies for Rheumatoid Arthritis characterise 50% of seropositive patients
Klemens Vierlinger, Lisa Milchram, Ulrike Kegler, Daniela Sieghart, Anela Tosevska, Günter Steiner, Stephan Blüml, Andreas Weinhäusel (Vienna, Austria)

COFFEE BREAK

AUTOIMMUNITY IN NEUROLOGIC AND PSYCHIATRIC DISORDERS
Co-Chairs: Harald Prüß (Berlin, Germany)  
Christian P. Moritz (Lyon, France)

Autoantibodies of the autonomic nervous system
Yehuda Shoenfeld and Gilad Halpert (Tel Aviv, Israel)

Rising from the Death Valley of autoantibody candidates: Argonaute autoantibodies as dysimmune biomarkers in peripheral neuropathies
Christian P. Moritz (Lyon, France)

Novel anti-CNS autoantibodies in the cerebrospinal fluid of patients with psychosis
Dominique Endres (Freiburg, Germany)

Emerging new categories of psychiatric disorders caused by or related to mild neuroinflammation
Karl Bechter (Ulm/Günzburg, Germany)

Ataxia with anti-DNER antibodies: from immunological characterization to new clinical insights
Elise Peter, Le-Duy Do, Salem Hannoun, Sergio Muñiz-Castrillo, Anne-Laurie Pinto, Naura Chounlamountri, Véronique Rogemond, Géraldine Picard, Alexandra Traverse-Glehen, François Cotton, Virginie Desestret, Jérôme Honnorat, Bastien Joubert (Lyon, France)
17.30-17.45 Nation-wide survey on autoantibodies related to autoimmune encephalitis in Brazil – interesting data from hundreds of patients across the country
Livia Dutra, Luis E.C. Andrade (Sao Paulo, Brazil)

17.45-18.00 Slow disease progression and clinical heterogeneity make anti-CASPR2 encephalitis a diagnostic challenge
Jeanne Benoît, Sergio Muñiz-Castrillo, Anne-Laurie Pinto, Géraldine Picard, Véronique Rogemond, Jérôme Honnorat, Bastien Joubert (Lyon, France)

18.00-18.20 Cannabis in autoimmunity
Batsheva Porat Katz (Tel-Aviv, Israel)

18.40-19.00 Departure by shuttle bus from the congress venue to the Social Dinner venue

19.30-22.00 Social Dinner Johanneum Palais (Dresden Transport Museum) at the Neumarkt, Augustusstrasse 1. The Transport Museum was founded after the Second World War in 1952. However, its roots can be traced back to 1877, when the collection that later became the Saxon Railway Museum (from 1902) was started. Today, the Transport Museum brings together exhibitions on the four branches of transport under one roof: road, rail, air and water. Here you can see among other things the only original replica of the “Saxonia”, the first fully functioning German locomotive, which was built in 1839 by the Dresden mastermind Johann Andreas Schubert. (www.verkehrsmuseum-dresden.de).

THURSDAY SEPTEMBER 09

08.30-10.30 NOVEL AUTOANTIGENIC TARGETS AND EMERGING TECHNOLOGIES FOR AUTOANTIBODY DETECTION (sponsored by GA Generic Assays GmbH)
Co-Chairs: Dirk Roggenbuck (Dahlewitz, Germany) Dimitrios Bogdanos (Larissa, Greece)

08.30-08.45 Long-lasting unique autoantibody responses in convalescents after recovering from mildly experienced SARS-CoV-2 infections
Holger Lingel (Magdeburg, Germany)

08.45-09.00 A step-wise approach for autoantibody testing of patients with CPKaeemia, interstitial lung disease, pulmonary fibrosis or myositis: a single center experience on over 1200 patients
Dimitrios Bogdanos (Larissa, Greece)

09.00-09.15 Automated ANA pattern recognition according to ICAP nomenclature - challenges for artificial intelligence
Rico Hiemann (Senftenberg, Germany)

09.15-09.30 IFA automation for small autoimmune laboratories based on artificial intelligence
Werner Klotz. Rico Hiemann, Jonas Noack, Peter Schierack, Dirk Roggenbuck, Manfred Herold (Innsbruck, Austria)
09.30-09.45 Anti-glycoprotein 2 IgA and PR3-ANCA: antibodies to predict severe disease, poor survival and cholangiocarcinoma in primary sclerosing cholangitis
   Ewa Wunsch (Szczecin, Poland)

09.45-10.00 PR3-ANCA detected by sensitive ELISA predicts poor survival and correlates with Mayo risk score in primary sclerosing cholangitis
   Mandy Sowa (Senftenberg, Germany)

10.00-10.15 Human Glycoprotein 2 (GP2) is present in bile and gallstones in cholangiopathies – has the culprit been caught?
   Steffi Lopens (Dahlewitz, Germany)

10.15-10.30 Clinical relevance of antibodies against glycoprotein 2 in identifying patients with Cholangiocarcinoma
   Dirk Roggenbuck (Senftenberg, Germany)

10.30-11.00 COFFEE BREAK - POSTER AND EXHIBITION VIEWING

11.00-12.50 AUTOANTIBODIES IN PATIENTS WITH SEVERE COVID-19
   Co-Chairs: Marvin Fritzler (Calgary, Canada)
   Paul Bastard (Paris, France)

11.00-11.30 The autoimmune Covid virus – Induction of over 15 autoantibodies
   Yehuda Shoenfeld (Tel Aviv, Israel)

11.30-11.55 Autoantibodies against type I Interferons in patients with severe COVID-19
   Paul Bastard (Paris, France)

11.55-12.20 Anti-platelet factor 4 antibodies in patients with thrombotic thrombocytopenia associated with COVID-19 infection or vaccination
   Michel Goldman (Brussels, Belgium)

12.20-12.35 Increased protease-activated receptor 1 autoantibodies are associated with severe COVID-19
   Florian Tran, Alena Scharmacher, Hanna Grasshoff, Kristin Sterner, Susanne Schinke, Nadja Kääbing, Joana P. Bernardes, Neha Mishra, Thomas Bahmer, Jeanette Franzenburg, Bimba F. Hoyer, Andreas Glück, Andre Küller, Derk Frank, Christoph Lange, Jan Rupp, Jan Heyckendorf, Karoline Gaede, Philip Rosenstiel, Yehuda Shoenfeld, Gilad Halpert, Kai Schulze-Forster, Harald Heidecke, Gabriela Riemekasten, Stefan Schreiber (Luckenwalde, Germany)

12.35-12.50 Lack of clinical penetrance for severe COVID-19 despite autoantibodies to type I IFNs in Autoimmune-Polyendocrine-Syndrome Type 1 (APS-1).
12.50-14.00  LUNCH BREAK – POSTER AND EXHIBITION VIEWING

Posters C1-C18: Guided poster presentation of selected posters
(Autoantibodies in organ specific autoimmune diseases) chaired by
Thorsten Krieger

14.00-15.30  EASI SYMPOSIUM:
AUTOANTIBODIES IN THE DISEASE CRITERIA FOR
SYSTEMIC AUTOIMMUNE DISEASES

Co-Chairs:  Jan Damoiseaux (Maastricht, The Netherlands)
           Manfred Herold (Innsbruck, Austria)

14.00-14.25  Autoantibodies in the disease criteria of RA
              Günther Steiner (Vienna, Austria)

14.25-14.45  Autoantibodies in the disease criteria of HUVS
              Elena Borzova (Moscow, Russia)

14.45-15.05  Autoantibodies in the disease criteria of SSc
              Jan Damoiseaux (Maastricht, The Netherlands)

15.05-15.30  Anti-dsDNA autoantibodies in the disease criteria of SLE
              Maria Infantino (Florence, Italy)

15.30-16.00  COFFEE BREAK

16.00-18.05  SYSTEMIC AUTOIMMUNE DISEASES

Co-Chairs:  Elena Csernok (Kirchheim, Germany)
            Rene E.M. Toes (Leiden, The Netherlands)

16.00-16.25  International consensus on ANCA testing beyond systemic
              vasculitis
              Jan Damoiseaux (Maastricht, The Netherlands)

16.25-16.45  Autoantibody profile in eosinophilic granulomatosis and polyangiitis:
              predominance of anti-alpha-enolase antibodies
              Elena Csernok (Kirchheim, Germany)

16.45-17.05  Autoantibody content in circulating immune complexes in lupus
              nephritis
              Johan Rönnelid (Uppsala, Sweden)

17.05-17.20  Protein array screening identifies biomarkers for Systemic Lupus
              Erythematosus (SLE)
              Franziska Werner (Hennigsdorf, Germany)

17.20-17.35  ACPA detection by haemagglutination using an antibody-based
              mediator
              Ilmar C. Kruis, A. van der Heijden, M. Salden, Ger J.M. Pruijn
              (Nijmegen, The Netherlands)

17.35-17.50  Monoclonal antibody therapy that targets phospholipid-binding
              protein delays lupus activity in MRL/lpr mice
              Silviya Bradyanova, Nikolina Mihaylova, Jozsef Prechl, Dobroslav
              Kyurkchiev, Andrey Tchorbanov (Sofia, Bulgaria)
17.50-18.05 Polyautoimmunity Clusters as a New Taxonomy of Autoimmune Diseases.
Manuel Rojas, Carolina Ramírez-Santana, Yeny Acosta-Ampudia, Diana M. Monsalve, Mónica Rodríguez-Jimenez, Elizabeth Zapata, Angie Naranjo-Pulido, Ana Suárez-Avellaneda, Lady J. Rios-Serna, Carolina Prieto, William Zambrano-Romero, Maria Alejandra Valero, Rubén D. Mantilla, Chensong Zhu, Quan-Zhen Li, Carlos Enrique Toro-Gutiérrez, Gabriel J. Tobón, Juan-Manuel Anaya (Bogota, Colombia)

FRIDAY, SEPTEMBER 10

08.30-10.30 IMMUNE PATHOLOGY IN COVID-19 AND AUTOIMMUNE DISEASE
Co-Chairs: Carlos Casiano (Loma Linda, USA)
Felipe Andrade (Baltimore, USA)

08.30-08.50 IgM anti-ACE-2 autoantibodies with angiocentric pathology in severe COVID-19
Felipe Andrade (Baltimore, USA)

08.50-09.10 Epitope specificity and relevance of antiphospholipid antibodies in patients with Covid-19
Pier Luigi Meroni (Milan, Italy)

09.10-09.30 What makes antibodies against G protein-coupled receptors so special? A novel concept to understand chronic disease
Gabriela Riemekasten (Lübeck, Germany)

09.30-09.50 Pain-inducing autoantibodies
Camilla I. Svensson (Stockholm, Sweden)

09.50-10.05 Defining the DFS70/LEDGF interactome with anti-DFS autoantibodies: potential role of this interactome in SARS-COVID-2 infection
Carlos Casiano (Loma Linda, USA)

10.05-10.20 Protein-engineered molecules carrying GAD65 epitopes and targeting CR1 selectively down-modulates disease-associated human B lymphocytes
iliyan Manaylov, Gabriela Boneva, Irini Doytchinova, Nikolina Mihaylova, Andrey Tchorbanov (Sofia, Bulgaria)

10.20-10.50 COFFEE BREAK - POSTER AND EXHIBITION VIEWING
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>10.50-12.30</td>
<td>AUTOIMMUNE SEROLOGY IN CLINICAL PRACTICE</td>
<td>Co-Chairs: Xavier Bossuyt (Leuven, Belgium) Maria Infantino (Florence, Italy)</td>
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<td>10.50-11.15</td>
<td>Likelihood ratio approach and clinical interpretation of lab results</td>
<td>Xavier Bossuyt (Leuven, Belgium)</td>
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<td>11.15-11.40</td>
<td>ANCA testing in clinical practice: From implementation to quality control and harmonization</td>
<td>Jan Damoiseaux (Maastricht, The Netherlands)</td>
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<td>11.40-12.00</td>
<td>Evaluation of PR3- and MPO-ANCA line and dot immunoassays in ANCA-associated vasculitis</td>
<td>Elena Csernok (Kirchheim, Germany)</td>
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<td>12.00-12.15</td>
<td>Comparison of two methods for the detection of anti-aquaporin-4 and anti-myelin oligodendrocyte glycoprotein antibodies</td>
<td>David Goncalves, M. Painsot, A. Ruiz, L. Benyahya, N. Fabien, R. Marignier (Lyon, France)</td>
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<td>12.15-12.30</td>
<td>Routine application of PR3- and MPO-ANCA chemiluminescence immunoassays demonstrates enhanced detection rates.</td>
<td>Joyce van Beers, Jan Damoiseaux, Marloes Jobsen, Cornelia Dönnrich, Alexander Kühnl, Wolfgang Schlumberger (Maastricht, The Netherlands)</td>
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<td>12.30-13.30</td>
<td>LUNCH BREAK – POSTER AND EXHIBITION VIEWING</td>
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<td>13.30-14.30</td>
<td>BIOMARKER ANALYTIC IN AUTOIMMUNE DISEASES AND SARS-COV-2 INFECTION</td>
<td>Co-Chairs: Dirk Reinhold (Magdeburg, Germany) Thorsten Krieger (Hamburg, Germany)</td>
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<td>13.30-13.45</td>
<td>Circulating Calprotectin and anti-SARS-CoV2 IgG as a severity biomarker in a large cohort of Spanish patients with COVID-19</td>
<td>Gary L. Norman, Juan Irure, Alejandra Comins, Roger Albesa, Adriel Roa, Elena Gonzalez, Michael Mahler, Marcos Lopez Hoyos (San Diego, USA)</td>
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<td>13.45-14.00</td>
<td>Differing levels of CD25 / sIL-2R measured with a novel Phadia assay in sera of hospitalized patients with CoViD-19 may correlate to disease severity</td>
<td>Laura Steller, Johannes Schulte-Pelkum (Freiburg, Germany)</td>
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<td>14.00-14.15</td>
<td>Correlation of circulating Calprotectin levels in serum and COVID-19 severity in an Italian cohort</td>
<td>Maria Infantino, Mariangela Manfredi, Maria Grazia Alessio, Giulia Previtali, Valentina Grossi, Maurizio Benucci, Antonio Faraone, Alberto Fortini, Elisa Grifoni, Luca Masotti, Emily FitzGerald, Gary Norman, Roger Albesa, Michael Mahler (Florence, Italy)</td>
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14.15-14.30  Seroconversion after vaccination with SARS-CoV-2 vector or mRNA vaccines
Dirk Lassner, Talena Jarling (Hennigsdorf, Germany)

14.30-15.00  Dresden Prize Award Ceremony & Conclusion

15.00-16.00  FAREWELL COFFEE BREAK
**POSTER EXHIBITION**

**A AUTOANTIBODIES IN SYSTEMIC AUTOIMMUNE DISEASES**

**A1** Screening of extractable antinuclear antibodies in the diagnosis of connective tissue diseases: evaluation of an update of Phadia/Thermofisher “elia symphony” assay. *Nina Olschowka, Nathalie Bardin, Daniel Bertin* (Freiburg, Germany)


**A3** Clinical evaluation and method comparison of Aptiva CTD essential for the detection of antibodies associated with SLE in a multicenter study. *Andrea Seaman, Marychel Tiongson, Douglas Mackey, Michelle Anne Amio, Albert Pérez-Isidr, Estibaliz Ruiz-Ortiz, Gerard Espinosa, Roberto Ríos-Garcés, Ricard Cervera, Odette Viñas, Gabriella Morozzi, Danilo Villalta, Michael Mahler* (San Diego, USA)


**A5** Multicenter study investigating the clinical relevance and method comparison of novel assays for the detection of antibodies associated with Sjögren’s syndrome. *Andrea Seaman, Michelle Anne Amio, Douglas Mackey, Marychel Tiongson, Charles Warren, Kishore Malyavantham, Gabriella Morozzi, Danilo Villalta, A. Selva-O’Callaghan, Michael Mahler* (San Diego, USA)


**A7** Autoantibodies in Dermatomyositis: Experience from a multisite evaluation. *Olivia Springfield, Andrea Seaman, Chelsea Bentow, Kishore Malyavantham, Ignacio Garcia-De La Torre, Mónica Vázquez-Del Mercado, Lilia Andrade-Ortega, Eva Balada, M. Angeles Martinez, Albert Selva-O’Callaghan, Thierry Vincent, Alexandre Jentzer, Didier Bessis, Anna Ghirardello, Andrea Doria, Marvin
A8 Myositis specific and novel myositis associated autoantibodies in a cohort of dermatomyositis patients from France. Olivia Springfield, Thierry Vincent, Andrea Seaman, Chelsea Bentow, Vinit Adani, Grace Kim, Alexandre Jentzer, Didier Bessis, Michael Mahler (San Diego, USA)

A9 Anti-Zo in routine samples - is there a specific IF-pattern? Michael L. Grünwald, Kristina Kamp, W. Meyer (Augsburg, Germany)

A10 Identification of NVL as a novel ANA target in systemic sclerosis. Zitao Zeng, Ramona Miske, Madeleine Scharf, Yvonne Denno, Christian Probst, Bianca Teegen, Anthonina Ott, Lars Komorowski (Lübeck, Germany)

A11 Assessment of anti-Carbamylated protein (anti-CarP) antibodies in combination with 14-3-3 eta, rheumatoid factor (RF), and anti-citrullinated protein (anti-CCP3) antibodies in a referral cohort of a large U.S. autoimmune laboratory. Vincent Ricchiuti, Kelly Y. Chun, Jane M. Yang, Luis Gomez, Michael Mahler (San Diego, USA)

A12 Pathway analysis of IgG immunoreactivity profiles shows similarities of rheumatoid arthritis autoantibody signatures for human and rat. Lisa Milchram, Anita Fischer, Jasmin Huber, Klemens Vierlinger, Stephan Blüml, Daniela Sieghart, Günter Steiner, Andreas Weinhäusel (Vienna, Austria)

A13 Decrease of antigen specific ANAs and composition of cellular subsets predict response to biologic treatment in patients with psoriasis and psoriatic arthritis. Athanasios Mavropoulos, Eleni Patrikiou, Sotirios Tsiogkas, Christos Liaskos, Lazaros I. Sakkas, Dimitrios P. Bogdanos, Efterpi Zafiriou (Larissa, Greece)

A14 The induction of autoantibodies related to inflammatory autoimmune rheumatic diseases in COVID-19 mRNA vaccinated healthcare professionals. Manca Ogrič, Tinka Švec, Polona Žigon, Snežna Sodin Semrl, Saša Čučnik (Ljubljana, Slovenia)

A15 No evidence for short-term induction of antinuclear antibodies by vaccination with BNT162b2 and mRNA-1273. Robert Markewitz, Daniela Pauli, Justina Dargvainiene, Katja Steinhagen, Sarah Engel, Victor Herbst, Dorinje Zapf, Christina Krüger, Shahpour Sharifzadeh, Benjamin Schomburg, Frank Leypoldt, Jan Rupp, Siegfried Görg, Ralf Junker, Klaus-Peter Wandinger (Kiel, Germany)

A16 Prognostic value of circulating calprotectin levels on the clinical course of COVID-19 differs between serum, heparin, EDTA and citrate sample types. Louis Nevejan, Thomas Strypens, Mathias Van Nieuwenhove, An Boel, Lien Cattoir, Peter Meeus, Xavier Bossuyt, Nikolaas De Neve, Lieve Van Hooves (Aalst, Belgium)

ANA testing in Austria during SARS-CoV-2 pandemic. Werner Klotz, Ulrike Demel, Andrea Griesmacher, Jörg Hofmann, Manfred Herold (Vienna, Austria)

The production of anti-PF4 antibodies in anti-phospholipid antibody positive patients is not affected by COVID-19 vaccination. Paola A. Lonati, Caterina Bodio, Mariangela Scavone, Giuliana Martini, Elisa Pesce, Alessandra Bandera, Andrea Lombardi, Maria Gerosa, Franco Franceschini, Angela Tincani, Gianmarco Podda, Sergio Abrignani, Renata Grifantini, Marco Cattaneo, Maria Orietta Borghi, Pier Luigi Meroni (Milan, Italy)

B CANDIDATES FOR THE DRESDEN PRIZE

B1 Using machine learning to improve agreement of automated fluorescence microscope results with digital reading by end user in indirect immunofluorescent assays. Carolina Auza, Carlos Melus, Andrea Seaman, Michael Mahler (San Diego, USA)

B2 Slow disease progression and clinical heterogeneity make anti-CASPR2 encephalitis a diagnostic challenge. Jeanne Benoît, Sergio Muñiz-Castrillo, Anne-Laurie Pinto, Géraldine Picard, Véronique Rogemond, Jérôme Honnorat, Bastien Joubert (Lyon, France)

B3 Protein array screening identifies biomarkers for Systemic Lupus Erythematosus (SLE). Franziska Werner (Hennigsdorf, Germany)


B5 Multiplex bead assay for the assessment of IgG antibody titers after COVID-19 vaccination. Jasmin Huber, Manuela Hofner, Miriam Klausberger, Mark Dürkop, Klemens Vierlinger, Dieter Mitteregger, Herbert Tillhof, Andreas Weinhäusel (Vienna, Austria)

B6 Clinico-neuropathological spectrum in a large cohort of anti-Drebrin autoantibody positive patients with suspected limbic encephalitis. Chiara A. Hummel, Delara Kamalizade, Valerie Borger, Theodor Rüber, Rainer Surges, Albert J. Becker, Julika Pitsch (Bonn, Germany)

B7 Experimentally induced CD8+ T-cell driven limbic encephalitis results in temporal lobe epilepsy with hippocampal sclerosis and chronic seizures. Delara Kamalizade, Karen M.J. van Loo, Ann-Kathrin Baumgart, Vadym Gnatkovsky, Thoralf Opitz, Rainer Surges, Christian Kurts, Susanne Schoch, Albert J. Becker, Julika Pitsch (Bonn, Germany)


B9 IgG immunoreactivity profiling on high density protein and peptide arrays reveals novel autoantibody signatures for rheumatoid
arthritis. Lisa Milchram, Klemens Vierlinger, Jasmin Huber, Stephan Pabinger, Regina Soldo, Daniela Sieghart, Anita Fischer, Stephan Blüml, Günter Steiner, Andreas Weinhäusel (Vienna, Austria)

B10 Role of ANA screening in patients with Celiac Disease. Dante Pio Pallotta, F. Tovoli, A. Giamperoli, A. Granito (Bologna, Italy)

B11 Ataxia with anti-DNER antibodies: from immunological characterization to new clinical insights. Elise Peter, Le-Duy Do, Salem Hannoun, Sergio Muñiz-Castrillo, Anne-Laurie Pinto, Naura Chounlamountri, Véronique Rogemond, Géraldine Picard, Alexandra Traverse-Glehen, François Cotton, Virginie Desestret, Jérôme Honnorat, Bastien Joubert (Lyon, France)


B13 Mapping the DFS70 interactome using anti-DFS autoantibodies: defining the DFS70/GR/Beta-catenin axis. Evelyn S. Sanchez-Hernandez, Greisha L. Ortiz-Hernandez, Michael Mahler, Carlos A. Casiano (Loma Linda, USA)

B14 Enhancing assay standardization: Generation of a customized biomaterial with defined specific activity and levels of anti-tTG and anti-DGP IgA. Ingrid González, Cristina García, Patricia Rogniat, Laura Martínez-Prat, Erin Miller, Marychel Tiongson, Todd Parker, Andrea Seaman, David Lucia, Michael Mahler (LLica d’Amunt, Spain)

B15 Lack of clinical penetrance for severe COVID-19 despite autoantibodies to type I IFNs in Autoimmune-Polyendocrine-Syndrome Type 1 (APS-1). Olga Staudacher, Christian Meisel, Bengisu Akbil, Erwin Lankes, Victor M. Corman, Tim Meyer, Nadine Unterwalder, Uwe Kölsch, Christian Drosten, Marcus A. Mall, Tilmann Kallinich, Dirk Schnabel, Christine Goffinet, Horst von Bernuth (Berlin, Germany)

C AUTOANTIBODIES IN ORGAN SPECIFIC AUTOIMMUNE DISEASES

C1 Detection of anti-AK5 autoantibodies in patients with limbic encephalitis in indirect immunofluorescence assay and line blot. Ramona Miske, Swantje Mindorf, Anthonina Ott, Kathrin Borowski, Dominik Jäger, Jérôme Honnorat, Andrew McKeon, Christian Probst, Lars Komorowski (Lübeck, Germany)

C2 Parallel detection of antibodies against CDR2L and CDR2 increases the diagnostic specificity in serological diagnostics of paraneoplastic cerebellar degeneration. Anthonina Ott, Madeleine Scharf, Ramona Miske, Dominik Jäger, Jérôme Honnorat, Lars Komorowski, Thomas Schep, Wolfgang Meyer (Lübeck, Germany)

C3 Strategy for the detection of anti-septin antibodies by indirect immunofluorescence assay. Madeleine Scharf, Ramona Miske,
Yvonne Denno, Christian Probst, Dominik Jäger, Kathrin Borowski, Bianca Teegen, Lars Komorowski (Lübeck, Germany)

C4 Novel fully automated immunoassay for the diagnosis of anti-IA-2 autoantibodies in type 1 diabetes. Daniel Filchtinski, Johannes Schulte-Pelkum (Freiburg, Germany)

C5 Novel fully automated immunoassay for the diagnosis of anti-GAD65 autoantibodies in type 1 diabetes. Daniel Filchtinski, Johannes Schulte-Pelkum (Freiburg, Germany)

C6 Selective silencing of disease-associated B and T lymphocytes by chimeric molecules in humanized NSG murine model of Hashimoto’s thyroiditis. Nikola Ralchev, Aleksandar Markovski, Nikolina Mihaylova, Irini Doytchinova, Alexander Shinkov, Andrey Tchorbanov (Sofia, Bulgaria)

C7 Cell-based immunofluorescence test applying recombinant laminin 332 for serological diagnostics of pemphigoid. Stephanie Goletz, Christian Probst, Lars Komorowski, Wolfgang Schlumberger, Detlef Zillikens, Winfried Stöcker, Enno Schmidt (Lübeck, Germany)


C9 Relevance of anti-PLA2R levels in therapy decision and prediction of therapy outcome using cyclophosphamide and steroids treatment in patients with membranous nephropathy. Coralien Vink, Anne-Els van de Logt, Alexander Kühnl, Cornelia Dähnrich, Wolfgang Schlumberger, Jack Wetzels (Lübeck, Germany)

C10 Detection of conventional and novel autoimmune liver antibodies, including hexokinase 1 and KLHL12 (KL-p) by particle-based multi-analyte technology in a French cohort of patients with primary biliary cholangitis. Gary L. Norman, Eric Ballot, Yannick Chantran, Simone Choi, Carolina Auza, Erika Aron, Silvia Casas, Chelsea Bentow, Andrea Seaman, Kishore Malyavantham, Charles Warren, Marychel Tiongson, Michael Mahler, Catherine Johanet (San Diego, USA)

C11 Novel chemiluminescence immunoassays for serological diagnostics of coeliac disease. Danilo Villalta, Maria Grazia Alessio, Giulia Previtali, Maria Infantino, Mariangela Manfredi, Lisa Agatea, Enrico Favaro, Alexander Kühnl, Cornelia Dähnrich, Wolfgang Schlumberger (Lübeck, Germany)

C12 Celiac disease-associated autoantibody profile of samples with discordant tissue transglutaminase and endomysial IgA antibody results from laboratory routine screening. Mary Ann Aure, Maria Infantino, Mariangela Manfredi, Chelsea Bentow, Vinit Adani, Andrea Seaman, Gary L. Norman, Michael Mahler (San Diego, USA)

C13 Clinical performance of non-invasive diagnostic strategies on Celiac disease cohorts utilizing the novel particle-based multi-analyte technology: results of a multi-center study. Marcos Lopez Hoyos, Juan Irure, Mary Ann Aure, Maria Grazia Alessio, Giulia Previtali,
C14 Necessity of Harmonization of Tissue Transglutaminase IgA Antibody Tests to Align Clinical Decision Making in Coeliac Disease. Louis Nevejan, Pieter Dobbels, Xavier Bossuyt, Lieve Van Hoovels (Aalst, Belgium)

C15 A new chemiluminescence immunoassay for the detection of faecal calprotectin. Maria Grazia Alessio, Giulia Previtali, Lisa Agatea, Enrico Favaro, Piera de Gaspari, Piero Novel, Alessandro Confettura, Benjamin Dilberger, Anika Wenderoth, Victor Herbst (Lübeck, Germany)

C16 Pre-analytical recommendations and reference values for circulating calprotectin are sample type and assay dependent. Louis Nevejan, Marnix Mylemans, Bert Vander Cruyssen, Muriel Stubbe, Stefanie Van Den Bremt, Laura Hofman, Maria Infantino, Xavier Bossuyt, Lieve Van Hoovels (Aalst, Belgium)

C17 Circulating calprotectin as a predictive and severity biomarker in patients with COVID-19. Gary L. Norman, Sherwin A. Navaz, Yogendra Kanthi, Roger Albesa, Michael Mahler, Jason S. Knight, Yu Zuo (San Diego, USA)