

# 15th Dresden Symposium on Autoantibodies

**Autoimmunity in the SARS-CoV-2 Era**

**Dresden, September 7-10, 2021**

**6<sup>th</sup> 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**

MONDAY  
SEPTEMBER 06

## (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 und 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

*Martine Vercammen, C. Bonroy, S. Broeders, L. Andrade, N. Bizzaro, D. Bogdanos, E.K. Chan, W. Coucke, J. Damoiseaux, W. de Melo Cruvine, A. Kozmar, L. Kuhi, L. Lutteri, M.J. Rego de Sousa, S. Schouwens, L. Van Hoovels, X. Bossuyt (Brugge, Belgium)*

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)*

TUESDAY  
SEPTEMBER 07

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)*

14.20-14.35

Long-term assessment of autoantibodies in Covid-19  
*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 Körtvelyessy, 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)

- 12.30-14.00** **EASI FORUM MEETING** (EASI members only)  
Location: Meeting room
- 14.00-15.30** **NOVEL AUTOANTIBODIES AND AUTOANTIBODY PROFILING IN RHEUMATOID ARTHRITIS**  
Co-Chairs: Günter Steiner (Vienna, Austria)  
Johan Rönnelid (Uppsala, Sweden)
- 14.00-14.30 Anti-modified protein antibodies (AMPA) in Rheumatoid Arthritis  
*Rene E.M. Toes (Leiden, The Netherlands)*
- 14.30-14.50 Anti-acetylated peptide antibodies (AAPA): Diagnostic and prognostic value  
*Günter Steiner (Vienna, Austria)*
- 14.50-15.10 ACPA multiplexing in RA: Diagnostic and prognostic value  
*Johan Rönnelid (Uppsala, Sweden)*
- 15.10-15.30 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)*
- 15.30-16.00 COFFEE BREAK
- 16.00-18.10** **AUTOIMMUNITY IN NEUROLOGIC AND PSYCHIATRIC DISORDERS**  
Co-Chairs: Harald Prüß (Berlin, Germany)  
Christian P. Moritz (Lyon, France)
- 16.00-16.25 Autoantibodies of the autonomic nervous system  
*Yehuda Shoenfeld and Gilad Halpert (Tel Aviv, Israel)*
- 16.25-16.40 Rising from the Death Valley of autoantibody candidates: Argonaute autoantibodies as dysimmune biomarkers in peripheral neuropathies  
*Christian P. Moritz (Lyon, France)*
- 16.40-16.55 Novel anti-CNS autoantibodies in the cerebrospinal fluid of patients with psychosis  
*Dominique Endres (Freiburg, Germany)*
- 16.55-17.15 Emerging new categories of psychiatric disorders caused by or related to mild neuroinflammation  
*Karl Bechter (Ulm/Günzburg, Germany)*
- 17.15-17.30 Ataxia with anti-DNER antibodies: from immunological characterization to new clinical insights  
*Elise Peter, Le-Duy Do, Salem Hannoun, Sergio Muñoz-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](http://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 CPKemia, 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 Käding, 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). *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)*

- 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. Ríos-Serna, Carolina Prieto, William Zambrano-Romero, María Alejandra Valero, Rubén D. Mantilla, Chengsong 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 Manoylov, Gabriela Boneva, Irini Doytchinova, Nikolina Mihaylova, Andrey Tchorbanov (Sofia, Bulgaria)*

10.20-10.50 COFFEE BREAK - POSTER AND EXHIBITION VIEWING

**10.50-12.30****AUTOIMMUNE SEROLOGY IN CLINICAL PRACTICE**

Co-Chairs: Xavier Bossuyt (Leuven, Belgium)  
Maria Infantino (Florence, Italy)

10.50-11.15

Likelihood ratio approach and clinical interpretation of lab results  
*Xavier Bossuyt (Leuven, Belgium)*

11.15-11.40

ANCA testing in clinical practice: From implementation to quality control and harmonization  
*Jan Damoiseaux (Maastricht, The Netherlands)*

11.40-12.00

Evaluation of PR3- and MPO-ANCA line and dot immunoassays in ANCA-associated vasculitis  
*Elena Csernok (Kirchheim, Germany)*

12.00-12.15

Comparison of two methods for the detection of anti-aquaporin-4 and anti-myelin oligodendrocyte glycoprotein antibodies  
*David Goncalves, M. Poinso, A. Ruiz, L. Benyahya, N. Fabien, R. Marignier (Lyon, France)*

12.15-12.30

Routine application of PR3- and MPO-ANCA chemiluminescence immunoassays demonstrates enhanced detection rates. *Joyce van Beers, Jan Damoiseaux, Marloes Jobsen, Cornelia Dähnrich, Alexander Kühnl, Wolfgang Schlumberger (Maastricht, The Netherlands)*

12.30-13.30

LUNCH BREAK – POSTER AND EXHIBITION VIEWING

**13.30-14.30****BIOMARKER ANALYTIC IN AUTOIMMUNE DISEASES AND SARS-COV-2 INFECTION**

Co-Chairs: Dirk Reinhold (Magdeburg, Germany)  
Thorsten Krieger (Hamburg, Germany)

13.30-13.45

Circulating Calprotectin and anti-SARS-CoV2 IgG as a severity biomarker in a large cohort of Spanish patients with COVID-19  
*Gary L. Norman, Juan Irure, Alejandra Comins, Roger Albesa, Adriel Roa, Elena Gonzalez, Michael Mahler, Marcos Lopez Hoyos (San Diego, USA)*

13.45-14.00

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  
*Laura Steller, Johannes Schulte-Pelkum (Freiburg, Germany)*

14.00-14.15

Correlation of circulating Calprotectin levels in serum and COVID-19 severity in an Italian cohort  
*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)*

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

TUESDAY  
SEPTEMBER 7  
(12.30) until  
FRIDAY,  
SEPTEMBER 10  
(13.30)

## 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)*

**A2** Assessment of classical and novel connective tissue disease markers utilizing a novel multi-analyte assay for the diagnosis of systemic sclerosis on a Spanish cohort. *Odette Viñas, Albert Pérez-Isidro, Sergio Prieto-González, Fernanda Hernández-González, Michael Mahler, Chelsea Bentow, Andrea Seaman, Grace Kim, Vinit Adani, Michelle Amio, Karl Norvell, Mary Ann Aure, Ricard Cervera, Estíbaliz Ruiz-Ortiz, Gerard Espinosa (Barcelona, Spain)*

**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, Estíbaliz Ruiz-Ortiz, Gerard Espinosa, Roberto Ríos-Garcés, Ricard Cervera, Odette Viñas, Gabriella Morozzi, Danilo Villalta, Michael Mahler (San Diego, USA)*

**A4** Meta-Analysis of the diagnostic test specificity of anti-dsDNA testing for Systemic Lupus Erythematosus: Relevance in context of the 2019 EULAR/ACR Classification Criteria and practical Implications. *Michelle E. Orme, Anja Voreck, Redha Aksouh, Veena Joy, Rosalind Ramsey-Goldman, Marco W.J. Schreurs (Rotterdam, The Netherlands)*

**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)*

**A6** Evaluation of anti-SS-A autoantibody concentration as a marker for disease activity in Sjogren's síndrome. *Gábor Nagy, Antónia Szántó, Zsófia Aradi, Beáta Lajszné Tóth, Róza Vargáné Földesi, Gáborné Török, Edit Gyimesi, István Csípő, Péter Antal-Szalmás (Debrecen, Hungary)*

**A7** Autoantibodies in Dermatomyositis: Experience from a multi-site 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 Martínez, Albert Selva-O’Callaghan, Thierry Vincent, Alexandre Jentzer, Didier Bessis, Anna Ghirardello, Andrea Doria, Marvin*

*Fritzer, Franco Franceschini, Ilaria Cavazzana, Micaela Fredi, Erminia Garrafa, Michael Mahler (San Diego, USA)*

**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, Werfen)*

**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. Boqdanos, 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, Dorinja Zapf, Christina Krüger, Shahpour Sharifzadeh, Benjamin Schomburg, Frank Leyboldt, 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 Hoovels (Aalst, Belgium)*

**A17** Antibody reactivity against antigens of *helicobacter pylori* in patients with psoriatic diseases: relevance to disease pathogenesis. *Eleni Patrikiou, Christos Liaskos, George Efhtymiou, Niki Ntavari, Efterpi Zafiriou, Theodora Simopoulou, Thomas Scheper, Wolfgang Meyer, Aggeliki Roussaki-Schulze, Dimitrios P. Boqdanos (Larissa, Greece)*

**A18** ANA testing in Austria during SARS-CoV-2 pandemic. *Werner Klotz, Ulrike Demel, Andrea Griesmacher, Jörg Hofmann, Manfred Herold (Vienna, Austria)*

**A19** 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 Muñoz-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)*

**B4** Performance of an indirect immunofluorescence commercial assay for the detection of anti-neuronal antibodies: a prospective study. *David Goncalves, V. Rogemond, S. Closs, A.L. Pinto, G. Picard, N. Fabien, J. Honnorat (Lyon, France)*

**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)*

**B8** Lentivirus-mediated generation of autoantigen-overexpressing human cell lines for immunofluorescence-based diagnostics of autoimmune diseases. *Susanne Köhler, S. Kammerer, N. Herzog, C. Schulz, S. George, M. Sowa, N. Röber, K. Conrad, D. Roggenbuck, J.-H. Küpper (Senftenberg, 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 Muñoz-Castrillo, Anne-Laurie Pinto, Naura Chounlamountri, Véronique Rogemond, Géraldine Picard, Alexandra Traverse-Glehen, François Cotton, Virginie Desestret, Jérôme Honnorat, Bastien Joubert (Lyon, France)*

**B12** 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. Ríos-Serna, Carolina Prieto, William Zambrano-Romero, María Alejandra Valero, Rubén D. Mantilla, Chengsong Zhu, Quan-Zhen Li, Carlos Enrique Toro-Gutiérrez, Gabriel J. Tobón, Juan-Manuel Anaya (Bogota, Colombia)*

**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 Scheper, 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)*

**C8** Comparison of different assays for serum anti-type VII collagen reactivity of patients with epidermolysis bullosa acquisita. *M.M. Holtsche, N. van Beek, T. Hashimoto, G. Di Zenzo, D. Zillikens, C. Prost-Squarcioni, M. Titeux, A. Hovnanian, E. Schmidt, S. Goletz (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 Dährnich, 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 Dährnich, 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,*

*Andrea Seaman, Edward Wahl, Daniel Leffler, Chris Mulder, Maria Papp, Chelsea Bentow, Gary L. Norman, Michael Mahler Mahler (San Diego, USA)*

**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 Brecht, 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)*

**C18** Autoimmunity *without* autoantibodies: Facets of autoimmune disease in a cohort of distinct inborn errors of immunity. *Julia Körholz, M. Bienias, C. Kastl, M. Niemuth, F. Taube, J. Roesler, M. Laaß, C. Vogelberg, B. Mayer, N. Röber, K. Conrad and Catharina Schuetz (Dresden, Germany)*