



**36<sup>th</sup> International Winter-Workshop  
Clinical, Chemical and  
Biochemical Aspects of Pteridines  
and Related Topics**



**Society for Exploitation of Education and Research in  
Immunology and Infectious Diseases, Innsbruck**  
*in collaboration with*  
**The International Society of Pteridinology**  
*and*  
**The Austrian Society of  
Laboratory Medicine and Clinical Chemistry**

[www.pteridines.org](http://www.pteridines.org) – [www.oeglmkc.at](http://www.oeglmkc.at) - [www.neopterin.net](http://www.neopterin.net)

**February 21<sup>st</sup> – 24<sup>th</sup>, 2017**  
in  
**Innsbruck, Austria**



MEDIZINISCHE UNIVERSITÄT  
INNSBRUCK

**CCB, Innrain 80/82, Seminar Room M01.490 (1<sup>st</sup> floor)**

- Location:** **Center for Chemistry and Biochemistry (CCB)**  
**Innrain 80, Innsbruck, Austria**  
Seminar Room M01.490 (1<sup>st</sup> floor)
- Scientific Committee:** Fuchs D (Innsbruck, A)  
Gostner JM (Innsbruck, Austria)  
Griesmacher A (Innsbruck, A)  
Melichar B (Olomouc, CZ)  
Reibnegger G (Graz, A)  
Strasser B (Innsbruck, A)  
Weiss G (Innsbruck, A)  
Werner ER (Innsbruck, A)
- Honorary Member:** Pfleiderer W (Konstanz, D)
- Scientific Goal:** The purpose of the workshop is to bring together  
researchers  
and clinicians being engaged or interested in a wide  
spectrum  
of issues covering chemistry, enzymology, transport and  
clinical  
aspects of pteridines and folates and related topics.
- Sessions:** Neopterin, biopterin, tryptophan, phenylalanine...  
analysis of  
biochemistry of  
chemistry of  
clinical biochemistry of  
in immunology  
in metabolic disorders  
in disease
- Language:** The official conference language is English
- Presentation:** Beamer (PC)
- Lectures:** 20 minutes (including 5 minutes for discussion)
- Publication:** Abstracts will be published in PTERIDINES (vol. 28, 2017)

## Tuesday, February 21<sup>st</sup>, 2017 – afternoon

1:45 p.m. *Get-Together-Coffee*

2:15 – 3:30 **Chair:** Gostner JM (Innsbruck, Austria), Fuchs D (Innsbruck, Austria)

### *Clinical, Chemical and Biochemical Aspects of Pteridines*

2:15 **Opening remarks**

**What is all about: Neopterin-Biopterin-Tryptophan in Biomedicine**

Fuchs D (Innsbruck, Austria)

2:30 **Measurements of Neopterin and Aromatic Amino Acids in Saliva**

Geisler S, Gostner JM, Schnell T, Fuchs D (Innsbruck, Austria)

2:50 **Altered Neopterin Levels in Sickle Cell Anemia**

Girgin G, Yalcinkaya Y, Öztas YE, Ünal S, Baydar T (Ankara, Turkey)

3:10 **How to Evaluate Michaelis-Menten-Type Data in an Optimum Way? A Monte-Carlo Study**

Reibnegger GJ, Paar M, Schrabmair W, Mairoid M, Öttl K (Graz, Austria)

3:30 – 3:50 *Coffee Break*

3:50 – 5:30 **Chair:** Girgin G (Ankara, Turkey), Engin AB (Ankara, Turkey)

### *Neopterin and Redox Regulation*

3:50 **Fungicidal Activity of N-chlorotaurine is Significantly Enhanced in the Presence of Organic Matter Including Cystic Fibrosis Sputum Medium**

Lackner M, Moser I, Gruber M, Nagl M (Innsbruck, Austria)

4:10 **The Effects of Neopterin on the Proliferation and Motility of Different HCC Cell Lines**

Najjar M, Subashi Y, Valizadeh P, Sara Pournaiem S, Sonia Sanaat S, Sahin G, Kunter I (Famagusta, North-Cyprus, Turkey)

4:30 **Effect of KynA on N-Methyl-D Aspartate Receptor-Coupled Glucose Transporter-3 in SH-SY5Y Dopaminergic Neurons Exposed to High Glucose**

Engin AB, Engin ED, Aral A, Gülbahar Ö, Engin A (Ankara, Turkey)

4:50 **Iron and Redox Metabolism PCBP2- A new Jigsaw Piece in Iron-Dependent Host Defense**

Dichtl S, Hilbe R, Seifert M, Berger S, Lutz O, Nairz M, Weiss G (Innsbruck, Austria)

5:10 **Iron and the Route to Mitochondria: Learning from the Periphery**

Volani C, Haschka D, Demetz E, Doerrier C, Gnaiger E, Paglia G, Weiss G (Innsbruck, Austria & Bolzano, Italy)

## Wednesday, February 22<sup>nd</sup>, 2017 – morning

9:15 – 10:45 **Chair:** Ganzera M (Innsbruck, Austria), Sipahi H (Istanbul, Turkey)

### *Immunotoxicology*

- 9:15 Changes of Inflammation Markers with Occupational Lead Exposure**  
Sipahi H, Girgin G, Palabiyik SS, Tutkun E, Yilm ÖH, Baydar T (Istanbul, Ankara, Erzurum & Yozgat, Turkey)
- 9:35 Evaluation of Urinary Neopterin Levels in Children with Carbon Monoxide Poisoning**  
Girgin G, Sabuncuoglu S, Teksam Ö, Özgünes H (Ankara, Turkey)
- 9:55 Immunotoxicity of Formaldehyde and Formaldehydogenic Compounds**  
Fagundes dos Santos P, Stonig M, Warter A, Geisler S, Fuchs D, Gostner JM (Innsbruck, Austria)
- 10:15 Cellular reactions to VOC exposures**  
Gostner JM, Zeisler J, Alam MT, Martini S, Fagundes dos Santos P, Geisler S, Hermann M, Fuchs D (Innsbruck & Graz, Austria; Warwick, UK)
- 10:35 Urinary Neopterin in Professional Climbers**  
Schauer M, Filzwieser I, Geisler S, Fuchs D, Burtscher M (Innsbruck, Austria)

10:45 – 11:00 **Coffee Break**

11:00 – 12:20 **Chair:** Sperner-Unterweger B (Innsbruck, Austria), Reininghaus B (Bad Hall, Austria)

### *Neuropsychimmunology*

- 11:00 Levels in Neurotransmitter Precursor Amino Acids in Patients with Depressive Syndrome with or without Somatic Comorbidity**  
Sperner-Unterweger B, Egeter J, Kohl C, Oberguggenberger A, Meraner V, Gamper E, Hubalek M, Blauth M, Fuchs D, Hüfner K (Innsbruck, Austria)
- 11:20 Effects of Psychiatric Rehabilitation on the Tryptophan-Kynurenine Axis**  
Reininghaus EZ, Reininghaus B, Dalkner N, Riedrich K, Fuchs D (Graz, Bad Hall & Innsbruck, Austria)
- 11:40 Preliminary Evidence on the Relation between Urinary Kynurenine-Tryptophan Ratios and Sleep Variables in a Healthy Young Woman**  
Singer M, Hannemann J, Ott M, Bliem HR, Fuchs D, Schubert C (Innsbruck, Austria)
- 12:00 Tryptophan Metabolism as a Key Element in Partner Seeking– A Hypothesis**  
Fuchs D, Geisler S, Gostner JM (Innsbruck, Austria)

12:20 **Lunch Break**

## Wednesday, February 22<sup>nd</sup>, 2017 – afternoon

**2:15 – 3:35**    **Chair:** *Schubert C (Innsbruck, Austria), Oberacher H (Innsbruck, Austria)*

### *Immune Activation and Immunosuppression*

- 2:15**    **Installing FVIII Specific Tolerance in Hemophilia via Engagement of the Aryl Hydrocarbon Receptor by Tryptophan Derivatives**  
Matino D, Gargaro M, Scalisi G, Turco A, Quintana FJ, Puccetti P, Iorio A, Fallarino F (Perugia, Italy)
- 2:45**    **Immune Activation May be Associated with Reduced Immune Response to Seasonal Influenza Vaccination in HIV-Infected Adults**  
Kitchen M, Kistner O, Wodal W, Gisinger M, Sarcletti M, Zangerle R (Innsbruck, Austria)
- 3:05**    **On the Functional Interdependencies between Interleukin-6 and Mood, Irritation and Mental Activity in a Breast Cancer Survivor**  
Hagen C, Schubert C (Innsbruck, Austria)
- 3:15**    **Amino Acids and World View: Phenylalanine, Sports, and Crisis of Meaning**  
Vötter B, Geisler S, Fuchs D, Schnell T (Innsbruck, Austria)

**3:35 – 4:00**    *Coffee Break*

**4:00 – 5:40**    **Chair:** *Reibnegger G (Graz, Austria), Melichar B (Olomouc, Czech Republic)*

### *Cancer and Redox*

- 4:00**    **Association of Peripheral Blood Cell Count-Derived Ratios, Biomarkers of Inflammatory Response and Tumor Growth with Outcome in Previously Treated Metastatic Colorectal Carcinoma Patients Receiving Cetuximab**  
Melichar B, Hružová K, Kujovská Krmová L, Javorská L, Pešková E, Solichová D, Hyšpler R, Vošmik M, Bartoušková M, Študentová H (Olomouc & Hradec Králové, Czech Republic)
- 4:20**    **Association between Neopterin and Citrulline, a Biomarker of Gut Function, during Treatment with Nivolumab**  
Bartoušková M, Spisarová M, Vitásková D, Študentová H, Hudcová M, Adam T, Melichar B (Olomouc, Czech Republic)
- 4:40**    **Plasma Metabolite Changes in Chronic Lymphocytic Leukemia (CLL) Patients.**  
Parrak V, Galba J, Forgáčsova A, Katina S, Secnik P, Kovac A (Bratislava, Kosice, Brno & Lucenec, Slovak Republic)
- 5:00**    **Plasma Vascular Endothelial Growth Factor (VEGF) as Potential Marker in Malignant Disease**  
Petrov J (Skopje, Macedonia)
- 5:20**    **Tryptophan Degradation in Pediatric Autoimmune Hepatitis**  
Osiecki M, Woynarowski M, Wozniak M, Cukrowska B, Wierzbicka A, Goliszek M, Socha P, Janczyk W, Dayanakli D, Fuchs D, Kramp S, Fechner K, Scheper T, Mahler M, Bentow C, Abendroth D, Lytton SD (Warsaw, Poland; Ulm, Lubeck & Munich, Germany; San Diego, CA, USA; Innsbruck, Austria)

## Thursday, February 23<sup>rd</sup>, 2017 – morning

**9:15 – 10:55** *Chair: Leblhuber F (Linz, Austria), Parrak V (Bratislava, Slovak Republic)*

### *Inflamed Brain and Gut-Brain Connection*

**9:15** **Changes of Neurotransmitters in Rat Model for Tauopathy - Role of Neuroinflammation**  
Kovac A, Forgacsova A, Galba J, Majerova P, Novak M (Bratislava & Kosice, Slovak Republic)

**9:35** **Biomarker Monitoring in AADvac-1 Phase 1 Clinical Trial**  
Parrak V, Galba J, Kovac A, Forgacsova A, Secnik P, Katina S (Bratislava, Kosice, Brno & Lucenec, Slovak Republic)

**9:55** **Tryptophan Metabolism and its Relationship with Central Nervous System Toxicity in Subjects Switching from Efavirenz to Dolutegravir**  
Keegan MR, Winston A, Higgs C, Fuchs D, Boasso A, Nelson M (London, UK & Innsbruck, Austria)

**10:15** **Gut Microbiota in Neuroinflammation – an Update**  
Leblhuber F (Linz, Austria)

**10:35** **Naturally Occuring Phyllobilins from Plants: An Overlooked Component of Human Nutrition?**  
Moser S, Fuchs D, Kraeutler B, Gostner JM (Innsbruck, Austria)

**10:55 – 11:10** *Coffee Break*

**11:10 – 12:30** *Chair: Kurz K (Innsbruck, Austria), Fuith LC (Eisenstadt, Austria)*

### *Infectious Diseases*

**11:10** **Establishment of a 3D Respiratory Model to Study Airborne Infections**  
Chandorkar P, Posch W, Blatzer M, Lass-Flörl C, Wiiflingseder D (Innsbruck, Austria)

**11:30** **Alterations of Right Heart Function and Iron Metabolism in Patients with Pneumonia**  
Nicosia F, Bellmann-Weiler R, Weiss G, Köhler-Lorsbach A, Mair S, Kurz K (Innsbruck, Austria)

**11:50** **Depression, Quality of Life and Immune-Mediated Changes of Tryptophan and Phenylalanine Metabolism in Patients with Solid Tumors**  
Kurz K, Kink P, Klaunzner M, Willenbacher W, Weiss G, Holzner B, Fuchs D (Innsbruck, Austria)

**12:10** **New Developments in the Transfusion Field - Does Neopterin Testing of Blood Donations still Make Sense?**  
Schennach H (Innsbruck, Austria)

**12:30** *Lunch Break*

## Thursday, February 23<sup>rd</sup>, 2017 – afternoon

**2:00 – 4:00**    **Chair:** Postolache T (Baltimore, MD, USA), Raheja U (Baltimore, MD, USA)

### *Toxoplasma Gondii and Neurotransmitter Metabolism*

- 2:00**    **Inflammation and Suicidal Behavior: Defining Clinical Subgroups for Meaningful Interventional Studies**  
Postolache TT (Baltimore, MD, USA)
- 2:20**    **Immune Function, Adiponectin and Seasonality of Mood and Behavior**  
Raheja U (Baltimore, MD & Atlanta, GA, USA)
- 2:40**    ***Toxoplasma Gondii* and Depression in the Old Order Amish**  
Dagdad A (Baltimore, MD, USA)
- 3:00**    **Toxoplasma Breaks, Lithium Fixes: Does Dopamine Connect Aggression, Impulsivity, and Suicide Effects of Toxoplasmosis**  
Can A (Baltimore, MD, USA)
- 3:20**    **Ketamine: a Rapidly Acting Treatment for Depression and Suicidality**  
Nijaar GV (Baltimore, MD, USA)
- 3:40**    **Overall Discussion - *Toxoplasma Gondii* and Neurotransmitter Metabolism**  
Postolache T, Raheja U (Baltimore, MD, USA)

**4:00 – 4:20**    **Coffee Break**

**4:20 – 5:00**    **Chair:** Fuchs D (Innsbruck, Austria)

### *Transplantation*

- 4:20**    **Biomarkers in Transplantation - How Specific are they?**  
Müller TF (Zurich, Switzerland)
- 4:40**    **Serum Kynurenine as a Prognostic Marker for Adverse Kidney Events after Contrast Media Administration**  
Reichetzedler C, Heunisch F, von Einem G, Alter M, Kraft R, Kellner KH, Dschietzig T, Kretschmer A, Hoher B (Nuthetal; Berlin, Bensheim & Wuppertal, Germany & Changsha, China)
- 5:00**    ***Annual General Assembly of the International Society of Pteridinology (ISP)***  
(ISP-members only)
- 6:30**    **Conference Dinner (Gasthof Anich; Anichstrasse 15)**

## Friday, February 24<sup>th</sup>, 2017

**9:15 – 10:45** *Chair: Werner ER (Innsbruck Austria), Watschinger K (Innsbruck, Austria)*

### *Biochemistry*

**9:15** **Novel Redox Roles of Tetrahydrobiopterin**  
Channon KM (London, UK)

**9:45** **Alkylglycerol Monooxygenase: Impact on 3T3-L1 Adipogenesis**  
Sailer S, Keller MA, Hermetter A, Geley S, Golderer G, Werner-Felmayer G, Zwerschke W, Werner ER, Watschinger K (Innsbruck & Graz, Austria)

**10:05** **Alkylglycerol Monooxygenase Phenotyping in *Dictyostelium Discoideum***  
Seppi D, Golderer G, Hermetter A, Keller MA, Werner-Felmayer G, Watschinger K, Werner ER (Innsbruck & Graz, Austria)

**10:25** **Molecular Architecture of Pterin Deaminase from *Saccharomyces Cerevisiae* 3458**  
Thandeeswaran M, Karuppuswamy V, Kiran KG, Ayub Nawaz KA, Mahendran R, Palaniswamy M, Angayarkanni J (Coimbatore, Tamil Nadu, India)

**10:45 – 11:00** *Coffee Break*

**11:00 – 12:00** *Chair: Kurz K (Innsbruck, Austria), Griesmacher A (Innsbruck, Austria)*

### *Cancer and Immune System*

**11:00** **Signal Integration by the Intrinsically Disordered Protein p27<sup>Kip1</sup>**  
Hengst L, Jäkel H, Masuccio A, Peschel I, Podmirseg SR, Ranches GD, Roilo M, Vosper J (Innsbruck, Austria)

**11:30** **Intratumoral Th2 *Predisposition* Combines with an Increased Th1 Functional Phenotype in Clinical Response to Intravesical BCG in Bladder Cancer**  
Pichler R, Gruenbacher G, Culig Z, Brunner A, Fuchs D, Fritz J, Gander H, Rahm A, Thurnher M (Innsbruck, Austria)

**11:50** **Serum Neopterin Concentrations and Tryptophan Breakdown Rates Correlate with Circulating Tumor Cells in Patients with Ovarian Carcinoma**  
Obermayr E, Gostner JM, Fuchs D, Zeillinger R (Vienna & Innsbruck, Austria)

**12:10** ***Blair-Curtius-Pfleiderer-Wachter AWARD***

### ***Closing remarks***

Fuchs D (Innsbruck, Austria)