

Joint Meeting

31st International Winter-Workshop Clinical, Chemical and Biochemical Aspects of Pteridines

The International Society of Pteridinology
in collaboration with the Austrian Society of
Laboratory Medicine and Clinical Chemistry

www.pteridines.org – www.pteridines.sk - www.oeglmkc.at - www.neopterin.net



and

Exposure to Nanoparticles in Human Populations: Immune System Biomarkers *in vitro* and *in vivo*

www.nanolinen.org



February 26th – March 4th, 2012

in

St.Christoph/Arlberg, Austria

Program

Location: **Arlberg Hospiz Hotel, St.Christoph/Arlberg, Austria**
All scientific sessions take place at the Seminar Room
“**St.Christoph**” (2nd floor, Sporthotel).

Scientific Committee: Bonassi S (Rome, Italy)
Dhawan A (Lucknow, India)
Fuchs D (Innsbruck, Austria)
Griesmacher A (Innsbruck, Austria)
Karahalil B (Ankara, Turkey)
Reibnegger G (Graz, Austria)

Honorary Committee: Pfleiderer W (Konstanz, Germany)

Scientific Goal: The purpose of the workshop series 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. The first part of the 2012 Workshop is devoted to immune system biomarkers in general and their potential application for monitoring effects of nanoparticles in vitro and in vivo.

Sessions: Immune system biomarkers in vitro and in vivo
Influence of nanoparticles on immunocompetent cells
Neopterin, biopterin, tryptophan...
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)

Publication: Abstracts will be published in PTERIDINES

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Sunday, February 26th, 2012

7:00 p.m. Welcome Cocktail at the Chimney-Hall,
Arlberg-Hospiz Hotel

Thereafter, dinner will be served at the
BRUDERSCHAFTSSTUBE

Monday, February 27th, 2012

10:15 a.m. - 6:50 p.m.: Scientific Sessions
Seminar room, Sporthotel

10:15 – 12:30 Chair: Karahalil B (Ankara, Turkey), Fuchs D (Innsbruck, Austria)

10:15 Introduction - NewIndigo / nanoLINEN

Karahalil B (Ankara, Turkey)

Introduction - Biomarker Workshop

Fuchs D (Innsbruck, Austria)

10:30 Multidimensional immunoinflammatory monitoring in acute inflammation and septic states

Faist E (Munich, Germany)

11:10 Applications of immune system biomarkers in clinical studies

Fuchs D (Innsbruck, Austria)

11:30 Immune system biomarkers in cardiovascular disease - A clinical perspective

Kaski JC (London, United Kingdom)

12:00 Identification and application of biomarkers in kidney transplantation

Müller TF (Edmonton, Canada)

12:30 – 3:15 p.m. Break

3:15 – 5:15 Chair: Bonassi S (Rome, Italy), Fuith LC (Eisenstadt, Austria)

3:15 Interferon- γ -induced biochemical pathways - friend and foe in tumor immunology

Brandacher G (Baltimore, MD)

3:45 IL28B polymorphism, IP10 and other biomarkers in patients with hepatitis C virus infection

Zoller H (Innsbruck, Austria)

4:15 Pathophysiological networks and new therapeutic approaches in the anemia of chronic disease

Weiss G (Innsbruck, Austria)

5:45 Innate and adaptive immune system in Alzheimer's disease: therapeutic implications

Blasko I (Innsbruck, Austria)

5:15 – 5:40 Coffee Break

5:40 – 6:50 Chair: Debbage P (Innsbruck, Austria)

5:40 *In-vitro* models for the detection of long-term nanoparticle effects

Froehlich E (Graz, Austria)

6:10 Nano versus bulk toxicity: need for critical human biomarkers

Tripathi A, Roy R, Dwivedi PD, Das M (Lucknow, India)

6:30 Influence of TiO₂ nanoparticles vs. bulk material on human peripheral blood cells and on myelomonocytic cell line THP-1

Schröcksnadel S, Herlin N, Carriere M, Fuchs D (Innsbruck, Austria; Grenoble & Sarclay, France)

Tuesday, February 28th, 2012

10:15 a.m. - 6:40 p.m.: Scientific Sessions
Seminar room, Sporthotel

10:15 – 12:25 Chair: Karakaya A (Ankara, Turkey), Herlin N (Sarclay, France)

10:15 Biomonitoring studies in exposed populations: An epidemiological perspective
Bonassi S (Rome, Italy)

10:45 Biomonitoring of occupational exposure to styrene
Teixeira JP (Porto, Portugal)

11:15 Evidence for short-term hepatotoxicity of gadolinium-bearing albumin-based nanoparticles in a rat model
Debbage P (Innsbruck, Austria)

11:45 Nanoparticle interaction with proteins: Does it co-relate with toxicity?
Dwivedi PD, Roy R, Tripathi A, Das M (Lucknow, India)

12:05 Different patterns of cytotoxicity in titanium dioxide nanoparticle treated cell lines
Engin AB, Karahalil B (Ankara, Turkey)

12:25 – 3:15 p.m. Break

3:15 – 5:15 Chair: Müller TF (Edmonton, Canada), Brandacher G (Baltimore, MD)

3:15 Microarray-based gene expression profiling: possibilities and limitations
Gostner J (Innsbruck, Austria)

3:45 Limitations of LC-tandem mass spectrometry in the clinical laboratory
Seger C (Innsbruck, Austria)

4:15 Neopterin and progress of malignant diseases - a glimpse of host-tumour interaction?
Reibnegger G (Graz, Austria)

4:45 Psychoneuroimmunology of HIV infection
Kurz K, Zangerle R, Weiss G, Fuchs D (Innsbruck, Austria)

5:15 – 5:40 Coffee Break

5:40 – 6:50 Chair: Fröhlich E (Graz, Austria)

5:40 Changes in neopterin levels and tryptophan degradation with silica nanoparticles
Palabiyik SS, Girgin G, Tutkun E, Yilmaz H, Baydar T (Ankara, Turkey)

6:00 Effect of occupational zinc nanoaerosol exposure on neopterin levels and tryptophan degradation
Girgin G, Saraç ES, Baydar T, Aydın A, Şahin G (Ankara, Turkey)

6:20 Evaluation of genotoxicity in infertile men
Coskun E (Ankara, Turkey)

6:40 Closing remarks - NanoWorkshop
Bonassi S (Rome, Italy)

nanoLINEN – Business Meeting
Karahalil B (Ankara, Turkey)

Wednesday, February 29th, 2012

9:00 a.m. - 1:00 p.m.: Meet the Experts
3:15 p.m. - 6:40 p.m.: Scientific Sessions

3:15 – 5:00 Chair: Fuchs D (Innsbruck, Austria), Werner ER (Innsbruck, Austria)

3:15 Welcome Address – Pteridines Workshop

3:20 Impact of stress on urinary 8-hydroxy-2'-deoxyguanosine and neopterin in breast cancer: a time series analysis approach

Schubert C, Engin B, Karahalil B, Haberkorn J, Fuchs D (Innsbruck, Austria; Ankara, Turkey)

3:40 Lead-lag-analysis of urinary sTNFR and ARC in a patient with SLE under real-life conditions

Haberkorn J, Fuchs D, Ocaña-Peinado FM, Schubert C (Innsbruck, Austria; Granada, Spain)

4:00 The active site of alkylglycerol monooxygenase

Werner ER, Watschinger K, Fuchs JE, Yarov-Yarovoy V, Hermetter A, Golderer G, Keller M, Hulo N, Werner Felmayer G (Innsbruck & Graz, Austria; Davis, CA)

4:20 Kinetic and mechanistic properties of recombinant human fatty aldehyde dehydrogenase

Keller M, Kreutz C, Müller T, Watschinger K, Golderer G, Werner-Felmayer G, Kräutler B, Werner ER (Innsbruck & Graz, Austria)

4:40 Recombinant expression of human alkylglycerol monooxygenase fragments in *E. coli*

Meyer M, Keller M, Watschinger K, Werner-Felmayer G, Werner ER, Golderer G (Innsbruck, Austria)

5:00 – 5:20 Coffee Break

5:20 – 6:40 Chair: Liedl K (Innsbruck, Austria), Teigen K (Bergen, Norway)

5:20 Immune system activation in patients with cardiovascular disease correlates with phenylalanine to tyrosine ratios

Schröcksnadel S, Mangge H, Schnedl W, Fuchs D (Graz, Bruck/Mur & Innsbruck, Austria)

5:40 Conformational changes of phenylalanine hydroxylase upon simulated oxidative stress

Fuchs JE, Huber RG, Wallnoefer HG, von Grafenstein S, Spitzer GM, Fuchs D, Liedl KR (Innsbruck, Austria)

6:00 L-Phe treatment stimulates tetrahydrobiopterin synthesis in the ENU1/2 mice

Sarkissian CN, Ying M, Scherer T, Thöny B, Martinez A (Montreal, Canada; Zurich, Switzerland & Bergen, Norway)

6:20 Interplay of 14-3-3 γ , tyrosine hydroxylase and the lipid membrane

Halskau Ø, Skjerveik ÅA, Baumann A, Ying M, Martinez A, Teigen K (Bergen, Norway)

Thursday, March 1st, 2012

9:00 a.m. - 1:00 p.m.: Meet the Experts
3:15 p.m. - 5:35 p.m.: Scientific Sessions
5:45 p.m.: General Assembly of ISP

3:15 – 4:35 Chair: Luyckx VA (Edmonton, Canada), Schobersberger W (Natters, Austria)

3:15 Serum neopterin concentrations vs. systolic blood pressure in 48223 blood donors
Mühlbacher A, Hörtnagl P, Mayersbach P, Schennach H (Innsbruck, Austria)

3:35 High performance rapid dipstick and ELISA testing systems for neopterin
Inness-Turnbull M, Duffin G, Dessi J, Stappenbeck R, Thompson S, Self CH (Newcastle, UK)

3:55 Biomarkers of inflammation in juvenile idiopathic arthritis
Giner T, Fuchs D, Weiss G, Brunner J (Innsbruck, Austria)

4:15 Mediation of multi-organ injury via oncostatin M and its receptor - a stereotyped systemic inflammatory response
Luyckx VA, Cairo LV, Compston CA, Phan WL, Mueller TF (Edmonton, Canada)

4:35-5:00 Coffee Break

5:00 – 5:35 Chair: Leblhuber F (Linz, Austria)

5:00 Phe/Tyr as indicator of neurotransmitter disturbances in patients with depression
Sperner B (Innsbruck, Austria)

5:15 Oxidative stress and tryptophan degradation pattern of acute *Toxoplasma gondii* infection in mice
Engin AB, Dogruman-AI F, Elcin U, Celebi B, Babur C, Bukan N (Ankara, Turkey)

5:45 Annual General Assembly of the International Society of Pteridinology (ISP)
(ISP-members only)

Friday, March 2nd, 2012

9:00 a.m. - 1:00 p.m.: Meet the Experts
3:15 p.m. - 6:35 p.m.: Scientific Sessions

- 3:15 - 4:55 Chair:** Zangerle R (Innsbruck, Austria), Woloszczuk W (Vienna, Austria)
- 3:15 Neopterin in patients with metastatic malignant melanoma during the therapy with Ipilimumab**
Melichar B, Zezulová M, Beneš P, Krčmová L, Kapustová M, Procházková H, Kalábová H, T. Adam T, Solichová D (Olomouc, Czech Republic)
- 3:35 Serum concentrations of neopterin and tryptophan, and survival after thoracic surgery**
Posch F, Fuchs D, Öfner D, Weber M, Müller MR, Watzka SB (Wien, Innsbruck & Salzburg, Austria)
- 3:55 Immune modulating effects of lignans from *Carthamus tinctorius L.***
Kuehnl S, Schroecksnadel S, Schennach H, Schwaiger S, Rollinger JM, Fuchs D, Stuppner H (Innsbruck, Austria)
- 4:15 The antimalarial drug chloroquine exhibits immunomodulatory properties in vitro**
Gostner J, Schröcksnadel S, Jenny M, Schennach H, Überall F, Fuchs D (Innsbruck, Austria)
- 4:35 Ayurvedic myrobalane extracts inhibit LPS-induced tryptophan breakdown in THP-1 cells**
Becker K, Gostner J, Klein A, Schroecksnadel S, Magnus B, Jenny M, Fuchs D, Ueberall F (Innsbruck, Austria)
- 4:55 - 5:15 Coffee Break**
- 5:15 - 6:35 Chair:** Haeger M (Gothenburg, Sweden)
- 5:15 Neopterin and tryptophan breakdown in alcoholism**
Gleissenthall G, Schroecksnadel S, Fuchs D, Mechtcheriakov S (Innsbruck, Austria)
- 5:35 Antiretroviral therapy in patients with HIV-1 infection is associated with an increase of 25-hydroxyvitamin D blood concentrations**
Zangerle R, Haara A, Seger C, Schroecksnadel S, Kitchen M, Sarcletti M, Griesmacher A, Fuchs D (Innsbruck, Austria)
- 5:55 Serum uric acid during therapy with high-dose folinic acid**
Melichar B, Kalábová H, Hyšpler R, Zezulová M, Procházková H, Holečková P (Olomouc, Czech Republic)
- 6:15 TD-GC-MS analysis of volatile metabolites released by *S. aureus*, *P. aeruginosa*, *S. pneumoniae* and *H. influenzae***
Sponring A, Filipiak W, Baur M, Wiesenhofer H, Nagl M, Troppmair J, Amann A (Innsbruck & Dornbirn, Austria)

Saturday, March 3rd, 2012

9:00 a.m. - 1:00 p.m.: Meet the Experts
3:15 p.m. – 6:10 p.m.: Scientific Sessions
6:10 p.m.: Blair-Curtius-Pfleiderer-Wachter AWARD

3:15 – 4:40 Chair: Postolache T (Baltimore, MD), Ledochowski M (Innsbruck, Austria)

3:15 Tryptophan, neopterin and nitrite in allergy
Ciprandi G, Fuchs D (Genova, Italy; Innsbruck, Austria)

3:30 Antioxidant compounds, leukotrienes and allergy
Ledochowski M, Fuchs D (Innsbruck, Austria)

3:50 Impact of sodium sulfite injection on the outcome of vascular allograft survival in mice
Mackovitz M, Sucher R, Kronberger I, Kern B, Steger C, Schneeberger S, Pratschke J, Fuchs D, Brandacher G (Innsbruck, Austria; Baltimore, MD, USA)

4:10 Vitamin D and tryptophan metabolism in patients with Alzheimer's dementia
Leblhuber F, Schröcksnadel S, Fuchs D (Linz & Innsbruck, Austria)

4:30 Phenylalanine to tyrosine ratio in patients with Alzheimer's dementia
Wissmann P, Schröcksnadel S, Leblhuber F, Fuchs D (Linz & Innsbruck, Austria)

4:45 – 5:00 Coffee Break

5:00- 6:10 Chair: Griesmacher A (Innsbruck, Austria)

5:00 Pathogens, the immune system, and suicidal behavior: an update
Postolache T (Baltimore, MD)

5:20 Neopterin and clinical status in patients with chronic lymphocytic leukemia
Parrak V, Secnik P, Mistrik M, Fuchs D (Bratislava & Lucenec, Slovakia; Innsbruck, Austria)

5:30 Kynurenine serum levels for monitoring acute graft-versus-host disease
Kircher B, Schröcksnadel S, Nachbaur D, Fuchs D (Innsbruck, Austria)

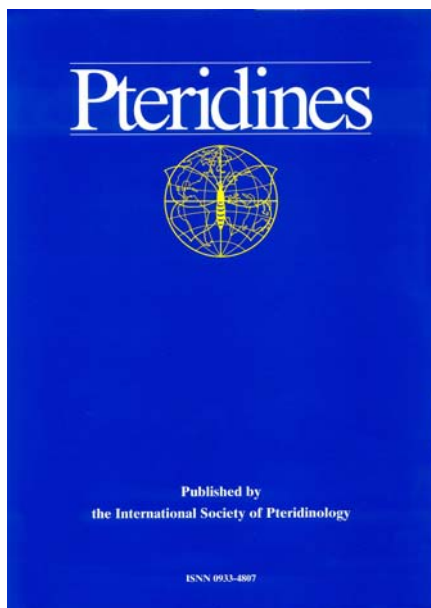
6:00 Can the spear thrust into the crucified Jesus explain his resurrection?
Ledochowski M, Fuchs, D (Innsbruck, Austria)

6:10 Blair-Curtius-Pfleiderer-Wachter AWARD for Pteridine Research

Closing remarks

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PTERIDINES, the official organ of the International Society of Pteridinology, now is in its twenty-third year of publication. The on-line journal bridges the gap between basic, chemical and clinical aspects of pteridinology and publishes work in the fields of:

- Unconjugated and Conjugated Pteridines
- Biochemistry of Pteridines
- Chemistry of Pteridines
- Clinical Chemistry of Pteridines

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Papers, reviews, mini-reviews, commentaries and opinions on controversial subjects will be published regularly. Processing will guarantee competent and fair reviewing as well as fast and high quality publication. Rapid evaluation of manuscripts will be performed, and any effort will be made that decisions about submitted manuscripts are available within four weeks.

Only papers written in English are considered. Manuscripts should be double-spaced with a wide margin, and should be sent electronically as word document with eventual figures incorporated to:

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YOUNG SCIENTISTS AWARDS (€ 1000.-- and € 500.--) provided by the International Society of Pteridinology (ISP):

The best two papers published in PTERIDINES per year by first author scientists younger than 40 years will be awarded!

Please contact the Executive-Editor for further information and for membership of the International Society of Pteridinology (the annual rate is € 50.--).