

# Joint Meeting

## 31<sup>st</sup> 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](http://www.pteridines.org) – [www.pteridines.sk](http://www.pteridines.sk) - [www.oeglmkc.at](http://www.oeglmkc.at) - [www.neopterin.net](http://www.neopterin.net)



and

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

[www.nanolinen.org](http://www.nanolinen.org)



February 26<sup>th</sup> – March 4<sup>th</sup>, 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**” (2<sup>nd</sup> 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 26<sup>th</sup>, 2012**

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

Thereafter, dinner will be served at the  
**BRUDERSCHAFTSSTUBE**

**Monday, February 27<sup>th</sup>, 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)

**11:00 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), Fuih LC (Eisenstadt, Austria)

**3:15 Interferon- $\gamma$ -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 TiO<sub>2</sub> 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 28<sup>th</sup>, 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 29<sup>th</sup>, 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 IL-6 and sickness behavior 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 $\gamma$ , tyrosine hydroxylase and the lipid membrane**

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

**Thursday, March 1<sup>st</sup>, 2012**

**9:00 a.m. - 1:00 p.m.: Meet the Experts**  
**3:15 p.m. - 5:55 p.m.: Scientific Sessions**  
**6:00 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 – 5:55 Chair:** Leblhuber F (Linz, Austria)

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

**5:15 Pathogens, the immune system, and suicidal behavior: an update**  
Postolache T (Baltimore, MD)

**5:35 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)

**6:00 Annual General Assembly of the International Society of Pteridinology (ISP)**  
(ISP-members only)

Friday, March 2<sup>nd</sup>, 2012

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

3:15 - 4:55 **Chair:** Zangerle R (Innsbruck, Austria), Postolache T (Baltimore, MD)

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 **Vitamin D and tryptophan metabolism in patients with Alzheimer's dementia**

Leblhuber F, Schröcksnadel S, Fuchs D (Linz & Innsbruck, Austria)

4:15 **Phenylalanine to tyrosine ratio in patients with Alzheimer's dementia**

Wissmann P, Schröcksnadel S, Leblhuber F, Fuchs D (Linz & Innsbruck, Austria)

4:35 **Neopterin and tryptophan breakdown in alcoholism**

Gleissenthall G, Schroecksnadel S, Fuchs D, Mechtcheriakov S (Innsbruck, Austria)

4:55 - 5:15 **Coffee Break**

5:15 - 6:15 **Chair:** Haeger M (Gothenburg, Sweden)

5:15 **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)

5:35 **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)

5:55 **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 3<sup>rd</sup>, 2012**

**9:00 a.m. - 1:00 p.m.: Meet the Experts**  
**3:15 p.m. – 5:45 p.m.: Scientific Sessions**  
**5:45 p.m.: Blair-Curtius-Pfleiderer-Wachter AWARD**

**3:15 – 4:35 Chair:** Woloszczuk W (Vienna, Austria), Ledochowski M (Innsbruck, Austria)

**3:15 Antioxidant compounds, leukotrienes and allergy**

Ledochowski M, Fuchs D (Innsbruck, Austria)

**3:35 Immune modulating effects of lignans from *Carthamus tinctorius L.***

Kuehnl S, Schroecksadel S, Schennach H, Schwaiger S, Rollinger JM, Fuchs D, Stuppner H (Innsbruck, Austria)

**3:55 The antimalarial drug chloroquine exhibits immunomodulatory properties in vitro**

Gostner J, Schröcksadel S, Jenny M, Schennach H, Überall F, Fuchs D (Innsbruck, Austria)

**4:15 Ayurvedic myrobalane extracts inhibit LPS-induced tryptophan breakdown in THP-1 cells**

Becker K, Gostner J, Klein A, Schroecksadel S, Magnus B, Jenny M, Fuchs D, Ueberall F (Innsbruck, Austria)

**4:35 – 5:00 Coffee Break**

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

**5:00 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)

**5:20 Neopterin and clinical status in patients with chronic lymphatic leukemia**

Parrak V, Secnik P, Mistrik M, Fuchs D (Bratislava & Lucenec, Slovakia; Innsbruck, Austria)

**5:40 Kynurenine serum levels for monitoring acute graft-versus-host disease**

Kircher B, Schröcksadel S, Nachbaur D, Fuchs D (Innsbruck, Austria)

**6:00 Blair-Curtius-Pfleiderer-Wachter AWARD for Pteridine Research**

**Closing remarks**

## Public Transport schedules to St.Christoph (February 26<sup>th</sup>, 2012):

### Trains (please, check at: [www.oebb.at](http://www.oebb.at)):

Innsbruck	St. Anton am Arlberg	München Hbf	St. Anton/Arlberg
07:54	08:58	09:31	12:58
08:56	10:14	10:48	14:14
11:02	12:54	11:31	14:58
11:54	12:58	12:42	16:54
12:56	14:14	13:31	16:58
13:54	14:58	14:46	18:14
14:56	16:54	15:31	18:58
15:57	17:54	17:31	20:58
17:54	18:58	18:47	23:04
19:54	20:58		
21:54	23:04		

### Zürich Hbf St. Anton/Arlberg

08:40	11:40
10:40	12:57
16:40	18:57
18:40	20:59
20:40	23:40

St. Anton - St. Christoph:  
7km by bus or taxi

### Shuttle bus ([www. Arlbergexpress.com](http://www.Arlbergexpress.com), for actual prices see website):

#### Zurich/Airport St.Christoph

10:00	13:00
13:00	16:00
16:00	19:00
19:00	21:45

One way: Euro 45.-/person  
Round-trip: Euro 75.-/person  
Weekend only! Reservation necessary!

### Bus (daily)

St.Anton (Train station)	St.Christoph	St.Christoph	St.Anton (Train station)
07:35	07:52	08:40	8:54
09:05	09:22	09:30	9:44
10:05	10:22	10:30	10:44
every hour until		every hour until	
21:05	21:22	20:30	20:44