Biomarkers in Human Health and Disease

1st Reunion Meeting of the BIOCLAIMS Consortium and 5th International Symposium of the Human Nutrition & Metabolism Research and Training Center (HNMRC) Graz

October 9-10, 2015
Graz, Austria

Jointly organized by

BIOCLAIMS Consortium,
HNMRC, Institute of Molecular Biosciences, University of Graz and Clinical Division of Nephrology, Department of Internal Medicine, Medical University of Graz

BIOCLAIMS.eu
Supporting health claims on food

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Welcome

Dear Friends and Colleagues,

It is a great pleasure for us to welcome you to the 1st Reunion Meeting of the BIOCLAIMS Consortium and 5th International Symposium of the Human Nutrition & Metabolism Research and Training Center (HNMRC) Graz, which will be held on October 9-10, 2015, at the Medical University of Graz, Austria.

The overall theme of this international symposium is “Biomarkers for health claims on food: where to go from here?” and the scientific contributions are devoted to biomarkers in human health and disease.

Internationally recognized guest speakers have agreed to share their knowledge and latest research and deliver state-of-the-art lectures that will help bridge the gap between basic science and patient care. There will also be plenty of time for stimulating formal and informal discussions.

The majority of speakers are members of the consortium of BIOCLAIMS, a 5-year FP7 research project on biomarkers for health claims on food that has just been successfully completed in 2015.

The time we have chosen for our symposium is the pleasant and usually sunny harvest season with its special influence on foods and wine produced in the vicinity of Graz.

We will do our best to make your stay fruitful and enjoyable and wish you a rewarding time in Graz.

Andreu Palou, coordinator of BIOCLAIMS
Brigitte Winklhofer-Roob and Johannes Roob, symposium organizers

October 2015
Friday, October 9th, 2015 - Morning

08:30 – 09:00  Registration

Welcome and opening
09:00 – 09:10  Andreu Palou, Palma de Mallorca, Spain and Brigitte Winklhofer-Roob, Graz, Austria

Session I: Biomarkers for health claims: where to go from here?
Chairs: Luisa Bonet, Palma de Mallorca, Spain & Helen M. Roche, Dublin, Ireland

09:10 – 09:40  Andreu Palou, Palma de Mallorca, Spain
BIOCLAIMS: biomarkers for health claims: where to go from here?

09:40 – 10:10  Brigitte M. Winklhofer-Roob, Graz, Austria
The BIOCLAIMS cohort: what are the characteristics?

10:10 – 10:40  Nalia Rabbani, Warwick, UK
Application of machine learning for biomarker-based diagnostic algorithm development in health screening

10:40 – 11:10  Helen M. Roche, Dublin, Ireland
Metabolic diversity in relation to inflammation and insulin sensitivity: Some personalised nutrition perspectives

11:10 – 11:30  Coffee break and poster discussions

Session II: Biomarkers tested in animal models of BIOCLAIMS
Chairs: Jaap Keijer, Wageningen, The Netherlands & Susanne Klaus, Potsdam, Germany

11:30 – 12:00  Susanne Klaus, Potsdam, Germany
Role of FGF21 as a myokine in a mouse model of healthy aging

12:00 – 12:15  Mario Ost, Potsdam, Germany
Muscle mitohormesis promotes cellular survival via serine/glycine pathway flux

12:15 – 12:45  Jan Kopetzky, Prague, Czech Republic
Early differences in metabolic flexibility between obesity-resistant and obesity-prone mice

12:45 – 13:15  Jaap Keijer, Wageningen, The Netherlands
Non-invasive challenge tests are effective tools to show that a difference in fatty acid composition of isocaloric high-fat diets alters metabolic flexibility in male C57BL/6JOlaHsd mice

13:15 – 14:45  Lunch and group photo
Friday, October 9th, 2015 - Afternoon
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**Session III: Biomarker responses to metabolic challenges and alterations in humans**
Chairs: Hannelore Daniel, Munich, Germany & Jan Kopecky, Prague, Czech Republic

14:45 – 15:15  
Hannelore Daniel, Munich, Germany  
The beauty of challenge tests to characterise normal human metabolism

15:15 – 15:30  
Gernot Faustmann, Graz, Austria  
Dynamic changes and robustness of relations of circulating adipokines and body fat with NF-kB activation in peripheral blood mononuclear cells across the menstrual cycle

15:30 – 16:00  
Harald Sourij, Graz, Austria  
Biomarkers in diabesity – research concepts and use in clinical practice

16:00 – 16:30  
Aldona Dembinska-Kiec, Krakow, Poland  
Is the quantity or quality of fasting blood FFAs responsible for the obesity complications?

16:30 – 16:45  Coffee break and poster discussions

**Session IV: Biomarker responses to impaired vascular, metabolic and renal function**
Chairs: Sean Strain, Ulster, UK & Peter Weber, Basel, Switzerland/Stuttgart, Germany

16:45 – 17:15  
Antoni Caimari, Tarragona, Spain  
Are lysophospholipids suitable early biomarkers of human diseases?

17:15 – 17:30  
Juana Sanchez, Palma de Mallorca, Spain  
Towards the identification of peripheral blood transcript-based biomarkers of metabolic health in humans from transcriptome studies in rodents

17:30 – 18:00  
Johannes Roob, Graz, Austria  
Thresholds of renal function affecting vitamin status and metabolic biomarkers

18:00 – 18:30  
Gunther Marsche, Graz, Austria  
Uremia alters HDL metabolism, composition and function

**Session V: Poster session: Biomarkers in health and disease**
Chairs: Naila Rabbani, Warwick, UK, and Catalina Pico, Palma de Mallorca, Spain

18:30 – 19:30
Saturday, October 10th, 2015 - Morning

Session VI: Biomarkers of early programming of adult health
Chairs: Andreu Palou, Palma de Mallorca, Spain & Regina Ensenauer, Munich, Germany

09:00 – 09:30 Sean Strain, Ulster, UK
Maternal nutrition and child development: Findings from the Seychelles Child Development Study

09:30 – 10:00 Catalina Pico, Palma de Mallorca, Spain
Perinatal nutrition and metabolic programming

10:00 – 10:30 Regina Ensenauer, Munich/Düsseldorf, Germany
Adipogenic programing of metabolic disease risk: the prospective PEACHES mother-child cohort

10:30 – 10:45 Coffee break and poster discussions

Session VII: Biomarker responses to vitamins and other bioactive compounds
Chairs: Paul Thornalley, Warwick, UK & Maret G. Traber, Corvallis, OR, USA

10:45 – 11:15 Paul Thornalley, Warwick, UK
Nrf2 transcriptional system regulation and development of improved dietary bioactive-based functional foods

11:15 – 11:45 Maret Traber, Corvallis, OR, USA
CEHC as a marker of vitamin E status in metabolic syndrome

11:45 – 12:15 Manfred Eggersdorfer, Basel, Switzerland/Groningen, The Netherlands
Vitamin E – a need to rethink recommendations?

12:15 – 12:45 Götz Schlotterbeck, Muttenz, Switzerland
Automated dried blood spot instrumentation coupled to HLPC-QqQ mass spectrometry – A vitamin D and E case study

12:45 – 13:15 Karin Amrein, Graz, Austria
Vitamin D status and outcome of patients in the intensive care unit

13:15 – 13:30 Amal Ashour, Warwick, UK
Resveratrol corrects dicarbonyl stress in periodontal ligament fibroblasts in model hyperglycaemia in vitro

Closing remarks
13:30 – 13:45 Andreu Palou, Palma de Mallorca, Spain, and Johannes Roob, Graz, Austria
P-01
Alaa Shafie; Mingzhan Xue, Paul J Thornalley and Naila Rabbani
GLO1 copy number increase in the lexicon glyoxalase 1 mutant mouse preserved the wild type phenotype.
Warwick Medical School, Clinical Sciences Research Institute, University of Warwick, University Hospital, Coventry CV2 2DX, U.K.

P-02
Verena Coleman1, Mario Ost1, Anja Voigt1, Evert M. van Schothorst2, Antonia Graja3, Tim J. Schulz1, Jaap Keijer2, Susanne Klaus1
Role and function of mitochondrial stress-induced Fibroblast-growth-factor 21 (FGF21).
1German Institute of Human Nutrition (DIfE), Research Group Physiology of Energy Metabolism, Potsdam Rehbruecke, Germany.
2Human and Animal Physiology, Wageningen University, Wageningen, The Netherlands
3German Institute of Human Nutrition (DIfE), Junior Research Group Adipocyte Development, Potsdam Rehbruecke, Germany.

P-03
Andreas Meinitzer1, Sabine Konstantinik1, Stefan Pitz2, Andreas Tomaszitz3,4, Sieglinde Zelzer1, Brigitte M. Winklhofer-Roob5, Harald Mangge1, Hans-Bernd Rotenhausler6, Andreas Baranyi6
Kynurenic acid is essential for the assessment of patients with drug induced depression.
1Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Graz, Graz, Austria
2Department of Endocrinology and Metabolism, Medical University of Graz, Graz, Austria
3Department of Cardiology, Medical University of Graz, Graz, Austria
4Specialist Clinic for Rehabilitation PV Bad Aussee, Bad Aussee, Austria
5Human Nutrition & Metabolism Research and Training Center, Institute of Molecular Biosciences, Karl-Franzens University of Graz, Austria
6Department of Psychiatry, Medical University of Graz, Graz, Austria

P-04
Sieglinde Zelzer1, Andreas Meinitzer1, Wolfgang J Schnedi2, Daniel Weghuber3, Dietmar Enko4, Harald Mangge1
High levels of branched chain amino acids: Novel risk factors for cardio metabolic disease independent of body mass index?
1Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Graz, Graz, Austria
2General Practice for Internal Medicine, Bruck an der Mur, Austria
3Obesity Research Unit, Paracelsus Medical University, Salzburg, Austria
4Department of Medical Cell Biology, Uppsala University, Sweden

P-05
Christina Haas1, Lusik Balayan1, Brigitte M. Winklhofer-Roob4, Wolfgang Erwa1, Günter Fauler1
Comparison of two LC-MS based screening methods for free carnitine and acylcarnitine.
1LKH/ Medical University Graz, Clinical Institute of Medical and Chemical Laboratory Diagnosis, Graz, Austria;
2Human Nutrition & Metabolism Research and Training Center, Institute of Molecular Biosciences, Karl-Franzens University, Graz, Austria
Meeting Information

Congress Venue
The meeting will be held at the Pathologie-Hörsaal of the Medical University of Graz, LKH-Universitätsklinikum, Auenbruggerplatz 25, 8036 Graz

Language
The official language of the Symposium is English.

Call for abstracts
Deadline for abstract submission is September 23, 2015. Please submit abstracts to brigitte.winklhofer-roob@uni-graz.at

Posters
Poster size is A0: 119 x 84 cm; poster mounting material will be provided.

Registration fee
Full fee: EUR 100
Students (with confirmation): free of charge
Members of the Medical University and Karl-Franzens University (with employee card): free of charge

The registration fee covers
Admission to all scientific sessions
Conference materials (final programme, abstract volume, list of participants, badge, certificate of attendance)
Coffee breaks

Continuing Medical Education Credits
This symposium has been approved for 17 DFP Credits

For further information please contact:
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