

6th International Symposium
of the
Human Nutrition & Metabolism
Research and Training Center Graz (HNMRC)

Human health:
From laboratory models to clinical studies

Dedicated to the Late Professor Hermann Esterbauer

September 16, 2017

Karl-Franzens University of Graz, Austria
Schubertstrasse 1, Lecture Hall 03.01

Jointly organized by

- HNMRC, Institute of Molecular Biosciences, Karl-Franzens University of Graz, Austria, and
- Clinical Division of Nephrology, Department of Internal Medicine, Medical University of Graz, Austria



We gratefully acknowledge the generous support of our sponsors!



Welcome

Dear Friends and Colleagues,

It is a great pleasure for us to welcome you to the 6th International Symposium of the Human Nutrition & Metabolism Research and Training Center (HNMRC) Graz, which will be held on September 16, 2017, at the Karl-Franzens University of Graz, Austria.

The first part of this year's symposium is devoted to a professional education workshop, focusing on how to successfully publish in scientific journals. For this session, the publisher of Elsevier and Editors-in-Chief of prestigious journals agreed to deliver their views and will be happy to receive questions from the audience and provide answers.

The overall scientific theme of this year's symposium is "Human Health" and the scientific contributions are devoted to the wide range from laboratory models, cohort studies and challenge tests to clinical intervention studies. This symposium is dedicated to the Late Professor Hermann Esterbauer, who passed away 20 years ago, and who already had the vision of bridging the gap between laboratory models and clinical applications.

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.

This year's symposium is held immediately after the HNE Club Hermann Esterbauer Memorial Meeting "Reactive Oxygen Species and Lipid Peroxidation in Human Health and Disease", which takes place at the same venue on September 14–15, 2017, and all participants of the HNE Club Meeting are welcome to also attend the 6th International Symposium of the HNMRC Graz.

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

Brigitte Winklhofer-Roob and Johannes Roob
Symposium organizers

September 2017

07:45 – 08:15

Registration

Session I: Professional Educational Workshop: How to publish in a scientific journal

Chairs: **Josiane Cillard**, President of SFRR-Europe, **Rennes, France** and **Fritz Spener**, Past-Executive Editor of *Biochimica Biophysica Acta (Molecular and Cell Biology of Lipids)*, **Graz, Austria**

08:15 – 08:20

Brigitte Winklhofer-Roob, Graz, Austria

Welcome and Opening

08:20 – 09:20

Anthony Newman, Publisher Elsevier, Amsterdam, The Netherlands,

How to write a great research paper, and get it accepted by a good journal

- **the Publisher's view**

09:20 – 09:50

Giovanni E. Mann, Review Editor, *Free Radical Biology and Medicine*, **London, UK**;

Henry J. Forman, Editor-in-Chief, *Archives of Biochemistry and Biophysics*, **Merced, USA**;

Michael J. Davies, Editor-in-Chief, *Free Radical Research*, **Copenhagen, Denmark**;

Tilman Grune, Editor-in-Chief, *Redox Biology*, **Potsdam, Germany**;

Torsten Bohn, Editor-in-Chief, *International Journal of Vitamin and Nutrition Research*, **Luxembourg, Luxembourg**;

Jan Frank, Editor-in-Chief, *NFS Journal and Co-Editor Europe, Nutrition*, **Hohenheim, Germany**

- **the Editor's view**

09:50 – 10:00

Questions and answers

10:00 – 10:20

Coffee break and poster discussions

Session II: Trapping human health and healthy aging

Chairs: **Jaap Keijer**, Wageningen, The Netherlands, and **Harald Sourij**, Graz, Austria

10:20 – 10:50

Giovanni E. Mann, London, UK

Nrf2-mediated redox signaling in vascular health and disease

10:50 – 11:20

Hannelore Daniel, Munich, Germany

Human metabolic flexibility assessed by plasma metabolomics

11:20 – 11:50

Jose Viña, Valencia, Spain

Transcriptomics of centenarians

Session III: Protein and lipid peroxidation in health and disease

Chairs: **Giovanni E. Mann, London, UK**, and **Ernst Malle, Graz, Austria**

11:55 – 12:25

Michael J. Davies, Copenhagen, Denmark

Extracellular matrix protein oxidation in cardiovascular

disease

12:25 – 12:55

Jaap Keijer, Wageningen, The Netherlands

Compromising mitochondrial ATP production induces intestinal permeability

12:55 – 13:25

Juan Sastre, Valencia, Spain

Obesity, lipid peroxidation and acute pancreatitis

13:25 – 14:35

Group photo, lunch break and poster discussions

Session IV: Muscle health and physical activity

Chairs: Malcolm J. Jackson, Liverpool, UK, and Susanne Klaus, Potsdam, Germany

14:35 – 15:05

Susanne Klaus, Potsdam, Germany

Regulation of myokine expression: Role of exercise and cellular stress

15:05 – 15:35

Mari Carmen Gomez-Cabrera, Valencia, Spain

Role of redox signaling and inflammation in skeletal muscle adaptations to training

15:35 – 16:05

Malcolm J. Jackson, Liverpool, UK

Mechanisms underlying age-related loss of muscle mass and function as a guide to exercise and pharmacological interventions

16:05 – 16:25

Coffee break and poster discussions

Session V: Fat-soluble vitamins and carotenoids in human health

Chairs: Peter Van Dael, Basel, Switzerland, and Ute Obermüller-Jevic, Ludwigshafen, Germany

16:25 – 16:55

M. Luisa Bonet, Palma de Mallorca, Spain

Vitamin A: a player in the metabolic health arena

16:55 – 17:25

Emmanuelle Reboul, Marseille, France

Intestinal absorption of carotenoids: comparison with fat-soluble vitamins

17:25 – 17:55

Torsten Bohn, Luxembourg, Luxembourg

Carotenoids – from dietary intake to bioavailability and to bioactivity: Recent research insights

17:55 – 18:25

Jean-Francois Landrier, Marseille, France

Anti-inflammatory effects of lycopene and tomato products in the cardiometabolic diseases context

18:25 – 18:55

Jan Frank, Hohenheim, Germany

The long chain metabolite α -tocopherol-13'-COOH may be responsible for the induction of xenobiotic enzymes previously attributed to the parent α -tocopherol

18:55 – 19:00

Johannes Roob, Graz, Austria

Concluding remarks

Posters

P01

F. Aberer, N.J. Tripolt, P. Pferschy, H. Scharnagl, A. Oulhaj, T. Stojakovic, H. Sourij. **Polyclonal serum free light chains levels are associated with carotid atherosclerosis in subjects with type 2 diabetes mellitus**

P02

C. Schwab, D. Ivastinovic, A. Haas, G. Seidel, W. Glatz, E.-M. Malle, M. Weger, M. Velikay-Parel, G. Faustmann, A. Wedrich, G. Reibnegger, B.M. Winklhofer-Roob, K. Oettl. **Human mercaptalbumin and ascorbic acid as protective shields in the vitreous humour**

P03

I. Dovinová, E. Hrabárová, E. Jansen. **ADMA production and redox status improvement in exogenous NOS inhibitor 7-NI in spontaneously hypertensive rats.**

P04

M. Kvandová, I. Dovinova, P. Bališ Peter, A. Púzserová, M. Majzúnová, M. Barančík. **PPAR gamma activation influenced changes in cell-signalling and improved redox-sensitive responses of Nrf2 in hypertensive rats.**

P05

S. Zelzer, W. Wonisch, S. Rinnerhofer, T. Niedrist, F. Tatzber, G. Cvirn, G. Wultsch, H. Mangge. **The workload of heavy workers is associated with increased low-grade inflammation, emotional and oxidative stress**

P06

G. Faustmann, A. Meinitzer, C. Magnes, B. Tiran, B. Obermayer-Pietsch, H.-J. Gruber, J. Ribalta, E. Rock, J. M. Roob, B.M. Winklhofer-Roob. **Progesterone-regulated arginine decline at luteal phase of the menstrual cycle and associations with related amino acids and derivatives and nuclear factor kappa B P65 activation.**

P07

B.M. Winklhofer-Roob, G. Faustmann, H. Hafner-Giessauf, P. Kieslinger, J. Grabher, M.C. Sattler, G. Fauler, K. Öttl, B. Tiran, J.M. Roob. **The "super healthy" phenotype in the BIOCLAIMS Cohort.**

P08

B.M. Winklhofer-Roob, G. Faustmann, P. Kieslinger, K. Mattl, H. Hafner-Giessauf, S. Meinitzer, M. Petrogianni, J. Grabher, Andreas Meinitzer, Sieglinde Zelzer, Karl Öttl, Barbara Obermayer-Pietsch, Beate Tiran, Johannes M. Roob. **Habitual dietary intake of n-3 polyunsaturated fatty acids: associations with the metabolic and vascular phenotype in the BIOCLAIMS cohort.**

Meeting Information

Congress Venue

The meeting will be held at the Lecture Hall HS03.01 of the Karl Franzens University of Graz, Schubertstrasse 1, 8010 Graz.

Language

The official language of the Symposium is English.

Call for abstracts

Abstracts will be presented as posters and printed in the abstract volume (with ISBN number): Deadline for abstract submission is September 9, 2017. Please send abstracts (1 A4 page, 12 pts, Times New Roman; including title, authors, affiliations and structured as background, study aims, subjects and methods, results and conclusions) to brigitte.winklhoferroob@uni-graz.at.

Posters

The recommended poster size is A0 (119 x 84 cm, portrait); poster mounting material will be provided.

Registration fee

Advance registration is required and should be done by sending an e-mail to brigitte.winklhoferroob@uni-graz.at no later than September 9, 2017.

Payment is only possible on-site (sorry no credit cards): Full fee: EUR 100.

Students (with confirmation), employees of the Medical University and Karl-Franzens University (with employee card), and participants of the HNE Club Meeting (with name badge): free of charge.

The registration fee covers admission to all scientific sessions, conference materials (final program, abstract volume, list of participants, badge, certificate of attendance), coffee breaks and lunch.

Continuing Medical Education Credits

This symposium has been approved for 10 CME Credits of the Austrian Board of Physicians (DFP, Diplomfortbildungsprogramm der Österreichischen Ärztekammer).

Social program

Friday, September 15, 2017:

3:00 p.m. Guided City Tour of the Old Town of Graz, meeting point: Kunsthaus

7:00 p.m. Speakers Dinner, Restaurant Purberg, Hilmteichschlössl, Hilmteichstrasse 70, within walking distance of the University.

Saturday, September 16, 2017:

8:00 p.m. Conference Dinner, Restaurant Eckstein, Mehlplatz 3, in the old town of Graz, within walking distance of the University and the hotels

Invited speakers and chair persons: free of charge; other participants: city tour: free of charge; dinner: pre-registration and on-site payment required (60 Euro).

For further information please contact:

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