XXIII International Bile Acid Meeting
Bile Acids as Signal Integrators and Metabolic Modulators

October 8 – 9, 2014
Konzerthaus Freiburg
Freiburg, Germany

Preliminary Program
CME credits for the Falk Symposium 194 have been applied for at the European Union of Medical Specialists (UEMS) – European Board of Gastroenterology (EBG). The number of credits awarded will be printed in the final program.
Preface

Since the last International Bile Acid Meeting in Vienna in 2012, bile acid research has continued to flourish and bile acid signaling has become an important area of research. New insights have been gained into bile acid effects and signaling, demonstrating that bile acids act as signal integrators and metabolic modulators not only in the liver but also in extrahepatic organs. The finding that bile acids interact with the intestinal microbiome offers novel aspects on the pathogenesis of liver diseases such as hepatocellular carcinoma or intestinal disorders such as inflammatory bowel disease.

The XXIII International Bile Acid Meeting will be dedicated to both, basic and clinical aspects of bile acid research with focus on the role of bile acids as signal integrators and metabolic modulators in a variety of organs as well as in liver and intestinal diseases. Novel therapeutic strategies arising from these discoveries are another focus of the conference. The latest findings will be presented by leading scientists and clinicians in this field.

During the symposium a poster session will also take place. In line with the tradition of the International Bile Acid Meeting some of the best poster abstracts will be selected by the scientific committee and the authors will be invited for oral presentations. The organizers of the XXIII International Bile Acid Meeting look forward to welcome you in Freiburg.

Dieter Häussinger
(Chairman of the Organizing Committee)
XXIII International Bile Acid Meeting
Bile Acids as Signal Integrators and Metabolic Modulators

October 8 – 9, 2014
Konzerthaus Freiburg
Freiburg, Germany

Registration:
Tuesday, October 7, 2014
16.00 – 21.00 h
at the congress office

Scientific Organization:
D. Häussinger, Düsseldorf (Germany)
U. Beuers, Amsterdam (The Netherlands)
V. Keitel, Düsseldorf (Germany)
M. Trauner, Vienna (Austria)

Congress Venue:
Konzerthaus Freiburg
Konrad-Adenauer-Platz 1
79098 Freiburg
Germany

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Official Language:
English.
Simultaneous translation into German.

Posters:
For details see page 12

Publication Date of the Final Program:
October 2014
The final program will be available on the homepage www.falkfoundation.org one week before.
Wednesday, October 8, 2014

8.30  Welcome  

D. Häussinger,  
Düsseldorf

Session I  
Bile acids as signal integrators

Chair: S. Kliewer, Dallas; A. Moschetta, Bari

8.40  Progesterone metabolites act as FXR inhibitors  

C. Williamson,  
London

9.00   TGR5 in the biliary epithelium in health and disease  

V. Keitel,  
Düsseldorf

9.20  Bile acid signaling via TGR5 and TRP channels in the nervous system  

N. W. Bunnett,  
Parkville

9.40  Regulation of FGF15-dependent bile acid synthesis by Diet1  

K. Reue,  
Los Angeles

10.00  Oral presentation selected from poster abstract submission  

N. N.

10.20  Coffee break with poster session

Session II  
Bile acids and liver regeneration

Chair: V. Keitel, Düsseldorf; D. Keppler, Heidelberg

10.45  The bile acid receptor TGR5: role for liver regeneration  

T. Tordjmann,  
Orsay

11.05  The role of Beta-Klotho in the mechanism of action of FGF15 and FGF21  

D. J. Mangelsdorf,  
Dallas

11.25  Bile acids and stellate cells  

C. Kordes,  
Düsseldorf

11.45  Humanization of the murine bile acid pool: an attractive model to study human bile acid effects  

R. P. J. Oude Elferink,  
Amsterdam

12.05  Oral presentation selected from poster abstract submission  

N. N.

12.25  Lunch break with poster session
Wednesday, October 8, 2014

14.00 Presentation of the Adolf Windaus Prize
   D. Häussinger, Düsseldorf

14.10 Adolf Windaus Prize Lecture
   N. N.

Session III
Interaction of bile acids and the gut microbiome

Chair: U. Beuers, Amsterdam; A. F. Hofmann, La Jolla

14.30 Gut microbiota regulate bile acid metabolism
   J. S. Bajaj, Richmond

14.50 Relationship between obesity, gut microbiome and HCC development
   E. Hara, Tokyo

15.10 The impact of gut-flora modification with probiotics and the gut-liver FXR-FGF-CYP7A1-axis
   A. Moschetta, Bari

15.30 Interaction between diet, bile acid metabolism, gut microbiota and IBD
   E. B. Chang, Chicago

15.50 Oral presentation selected from poster abstract submission
   N. N.

16.10 Coffee break with poster session

Session IV
Bile acids as metabolic modulators

Chair: R. P. J. Oude Elferink, Amsterdam; M. Trauner, Vienna

16.35 Bile acid induced cholemic nephropathy
   P. Fickert, Graz

16.55 Inhibition of ASBT modulates triglyceride and glucose metabolism
   M. Rudling, Stockholm

17.15 Inhibition of ileal apical but not basolateral bile acid transport reduces atherosclerosis in apoE(-/-) mice
   P. A. Dawson, Atlanta

17.35 Oral presentation selected from poster abstract submission
   N. N.
Thursday, October 9, 2014

Session V
Clinical relevance of bile acid metabolism and transport

Chair: P. L. M. Jansen, Amsterdam; D. J. Mangelsdorf, Dallas

8.30 NTCP acts as receptor for the hepatitis B virus  W. Li, Beijing
8.50 The biliary HCO$_3^-$umbrella: an update  U. Beuers, Amsterdam
9.10 Genetic contributions and modifiers of biliary atresia  S. J. Karpen, Atlanta
9.30 Nuclear receptor variants in liver disease  F. Lammert, Homburg
9.50 Oral presentation selected from poster abstract submission  N. N.
10.10 Coffee break with poster session

Session VI
Therapeutic potential of bile acids and bile acid receptor agonists

Chair: G. Paumgartner, Munich; R. Poupon, Paris

10.40 Presentation of Poster Prizes  D. Häussinger, Düsseldorf
10.50 FXR ligands and NAFLD  A. J. Sanyal, Richmond
11.10 Potential of NorUDCA in cholestatic and metabolic diseases  M. Trauner, Vienna
11.30 Bile acid receptors and intestinal secretion-targets for antidiarrheal therapies  S. J. Keely, Dublin
11.50 Oral presentation selected from poster abstract submission  N. N.
12.10 Lunch

End of the meeting
Adolf Windaus was born on Christmas Day in 1876 in Berlin, where his father owned a factory. Even as a young student in the Berlin gymnasium, he was fascinated by the epochal discoveries of Koch and Pasteur, and by his 18th birthday he had decided on a scientific career. He entered medical school, taking his pre-clinical year at the University of Freiburg and his clinical years in Berlin. However, he soon realized, especially during the lectures of Emil Fischer, that biological processes could be understood only when the chemical structure of organisms was known. Therefore, as soon as he had finished medical school, he returned to Freiburg to study chemistry under the supervision of Heinrich Kiliani. In 1899, he completed his first research project which dealt with the chemical composition of digitalis. He then spent two years in compulsory military service in Berlin. During this time he also worked in the laboratory of Emil Fischer, carrying out studies on derivatives of aniline. On completing his military service, Windaus returned to the University of Freiburg where he began his life-long work on the structure of cholesterol. His thesis, which qualified him for the position of docent, had the simple title „Über Cholesterin“. The choice of this research topic originated from Windaus’ logical belief that any substance which was so widely distributed in animal and plant tissues must have an important biological function, and that understanding of its structure and function might lead to unifying concepts, a hypothesis he would subsequently prove so brilliantly. In addition to initiating studies on cholesterol, he and his colleague Knoop soon discovered that an amino acid containing the imidazole ring, histidine, was present in proteins, and could be decarboxylated to give histamine. The discovery of histamine opened a vast area of pharmacological research.

In 1913, Adolf Windaus accepted a call to direct the prestigious Institute of Medical Chemistry in Innsbruck, Austria, where earlier Pregl had founded microanalytical chemistry. Two years later, in 1915, he was called to be Director of the Chemical Laboratories of the University of Göttingen, laboratories rich in tradition since the time of Wöhler. Here, he could pursue his work on elucidating the structure of cholesterol in a series of integrated investigations that were truly Herculean in scope. In the year 1919 a most significant discovery was made. Windaus found that coprostane could be oxidized to cholanic acid. With the knowledge of this transformation, came the realization of the close structural similarity of cholesterol and bile acids; one could now apply the existing knowledge of cholesterol structure to that of bile acids and that of bile acids to cholesterol. The work of elucidating the exact structure of the condensed steroid rings of steroids was extraordinarily difficult. To understand the structural isomerism of the A / B ring juncture, it was necessary to study the simplest model compounds, cis and trans decalin. This was done with Hueckel, who later became one of the world’s greatest physical chemists.

In the twenties, Adolf Windaus, with his pupils, established the relationships between cholesterol and other important steroids such as sitosterol, the saponins, and the various classes of cardiac steroids. He showed that all shared the cyclopentanophenanthrene nucleus. Inspired by Windaus, his pupil Butenandt isolated and determined the structure of the adrenal steroids whose origins from cholesterol had not been suspected by anyone. Butenandt was able to rapidly determine the structure of estrone, androsterone, and progesterone, for which he received the Nobel Prize in 1939.

Probably the climax in the extraordinary research output of Adolf Windaus was his elucidation of the structure and biosynthesis of vitamin D. Hess in New York had made the observation that ultraviolet radiation of a lipid extract induced the formation of active vitamin D. In the next 8 years, Adolf Windaus and his students succeeded in identifying the provitamin as ergosterol and 7-dehydrocholesterol and also in clarifying the structure of vitamin D2 and vitamin D3. The complex steps in photoactivation of the vitamin were clarified, and each intermediate was crystallized and its structure determined.

Adolf Windaus (1876-1959)
Thus, the research area of the chemical structure of cholesterol, which Adolf Windaus had selected when still a young docent in Freiburg led to studies spanning over 30 years – studies which opened up a vast – almost limitless field that continues to be active today. His work has been of inestimable significance for the practice of medicine. Adolf Windaus, however, insisted that his research was not aimed at applications, but only at understanding the mysteries of nature.

Adolf Windaus had a legendary reputation among his colleagues and students. He was a man of infinite energy and extraordinary insight, who could reduce scientific problems to their essence. He had the art to ask the right question and do the definitive experiment. Nature disclosed her secrets quickly to a man of such talent. His former associates had continuous admiration for his clarity of speech, both in conversation and scientific discussion. He was a man of modesty and dignity who combined the highest scientific standards with great personal generosity.

For his many discoveries, Adolf Windaus received many honors and awards. Under his leadership, the Chemical Institute in Göttingen became known throughout the world. He was honored by being chosen to receive the Nobel Prize for chemistry in 1928, and his lecture is a masterpiece of erudition, clarity and modesty.

W. Gerok
Adolf Windaus Prize

The “Adolf Windaus Prize” was founded by the Falk Foundation e. V. and will, for the eighteenth time, be presented on the occasion of the XXIII International Bile Acid Meeting, on October 8, 2014. The prize amounts to € 15,000 and is awarded for outstanding contributions in the field of bile acid research.

Members of the Prize Committee:
U. Beuers (Amsterdam)
D. Häussinger (Düsseldorf)
R. P. J. Oude Elferink (Amsterdam)
A. Parés (Barcelona)
R. Poupon (Paris)
M. Trauner (Vienna)

Windaus Prize Winners:
1980 - C. Einarsson (Stockholm) & K. Hellstrom (Stockholm)
1982 - E. H. Mosbach (New York) & H. Danielsson (Uppsala)
1984 - M. C. Carey (Boston)
1986 - I. Bjorkhem (Huddinge)
1988 - J. L. Boyer (New Haven)
1990 - P. B. Hylemon (Richmond) & P. J. Meier-Abt (Zurich)
1992 - K. Okuda (Hiroshima)
1994 - Z. R. Vlahcevic (Richmond)
1996 - W. Kramer (Frankfurt)
1998 - P. A. Dawson (Winston-Salem)
2000 - D. J. Mangelsdorf (Dallas)
2002 - D. W. Russell (Dallas)
2004 - K. D. R. Setchell (Cincinnati)
2006 - R. Poupon (Paris)
2008 - N. Ballatori (Rochester)
2010 - J. Auwerx & K. Schoonjans (Lausanne)
2012 - G. Paumgartner (Munich)

Coordinator of the Prize Committee:
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**Poster Session**

Posters will be exhibited on October 8 – 9, 2014, at the “Konzerthaus Freiburg” in Freiburg. The authors will be in attendance during coffee and lunch breaks on both days.

**Call for Posters**

Please submit your poster abstract before **June 30, 2014**. Only one-page abstracts not exceeding 300 words, written in English and saved in Microsoft Word format will be accepted.

Abstracts must be submitted via our Internet Abstract Submission System (http://www.falkfoundation.org/poster) where further information regarding the submission format and the submission process will be available.

The abstracts will be selected by the scientific organizers, preference being given to those thematically related to one of the sessions of the program.

The accepted abstracts will be printed and distributed to the participants of the congress together with the documents of the meeting.

The authors will receive notification about acceptance and further instructions in **July 2014**.

Contact address for further information on the poster session:

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Congress Department
Leinenweberstr. 5
79108 Freiburg (Germany)
Telephone: +49 (0)761/1514-0
Telefax: +49 (0)761/1514-359
Web address for submitting poster abstracts:
http://www.falkfoundation.org/poster

For the **first author** of an accepted **poster**, expenses for accommodation (October 7 – 10, 2014) and fees for the scientific program and evening activities will be covered during the Falk Symposium 194. **Travel expenses will not be covered.**

**Poster Prizes**

Three prizes will be awarded for the best presentations. Prize winners will be presented with a certificate and prize money for € 1,500, € 1,000 and € 500, respectively. Travel expenses will be covered additionally for the first author of prize winning posters.
List of Speakers, Moderators and Scientific Organizers

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**General Information**

**Prior** to the opening of the congress in Freiburg

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**Congress Office**

**During** Falk Symposium 194

kp.iTel) 175/7795327

Konzerthaus Freiburg  
Konrad-Adenauer-Platz 1  
79098 Freiburg  
Germany

**Opening Hours:**

- **Tuesday, October 7, 2014**  
  16.00 – 21.00 h
- **Wednesday, October 8, 2014**  
  7.30 – 17.45 h
- **Thursday, October 9, 2014**  
  8.00 – 17.30 h

**Congress Fees**

- **Scientific program of the Falk Symposium 194**  
  € 150.00
- **Students and residents**  
  € 75.00

**Day ticket**, October 8, 2014  
- **Students and residents**  
  € 60.00

**Half day ticket**, October 9, 2014  
- **Students and residents**  
  € 30.00

**Employees of pharmaceutical companies and their guests**

| Falk Symposium 194 | € 450.00 |

**The congress fees include:**

- Welcome Evening on October 7, 2014
- Refreshments during coffee breaks
- Lunch on October 8 and 9, 2014
- A copy of the abstract volume
- Parking at the “Konzerthaus Freiburg”
Registration

Congress registrations must reach the Falk Foundation e. V. by July 31, 2014 at the latest. Congress fees may be paid by cheque payable to the Falk Foundation e. V. or by bank transfer to Volksbank Freiburg e. G., Germany, Bank No. 680 900 00, Account No. 145 2010, IBAN DE33 6809 0000 0001 4520 10, BIC Genode 61 FR1. Please mark bank transfers with “Falk Symposium 194”.
To ensure correct registration, participants are asked to send in their registration and the fee remittance together.
After receipt of registration form, each participant will be provided with confirmation of his registration. On presentation of this confirmation at the congress office in Freiburg participants will receive the congress folder containing name badges, admission tickets and the abstract volume.
In the event of registration cancellations, a handling fee of € 20 will be deducted from the refund. All participants will receive a written confirmation of attendance at the end of the meeting.

Admission to Scientific Events

For admission to scientific events your name badge should be clearly visible.

Congress Report

The official congress report of Falk Symposium 194 „Bile Acids as Signal Integrators and Metabolic Modulators” will be published in English in the first half of 2015 by Karger, Switzerland. Orders for this book at a reduced subscription price of € 35 can be placed at the Congress Office during the congress in Freiburg.

Hotel Accommodation

Freiburg Tourist Information: www.freiburg.de
Or contact:

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Fax +49 (0) 761/88581-149
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**Airports**

**EuroAirport Basel-Mulhouse-Freiburg**  

**Frankfurt International Airport**  
www.frankfurt-airport.com

**Airport Transfer**  
http://www.freiburger-airportservice.de/en/

**Train Connections**  
http://www.bahn.com

**Directions to Konzerthaus Freiburg**

From the North or the South, take A5 autobahn/motorway Frankfurt-Basel along the Rhine Valley, exit ”Freiburg Stadtmitte”. Stay on the autobahn feeder road ”Mitte” until the Konzerthaus Freiburg (10 min.), follow signs to the Konzerthaus Freiburg.  
A81 Stuttgart-Singen autobahn/motorway or B31 (Höllental), Donaueschingen, Titisee-Neustadt.

Go through Freiburg on the Schwarzwaldstrasse, this becomes Schreiberstrasse, direction of the autobahn feeder road ”Mitte”. There are road signs to the Konzerthaus Freiburg.

Connections to the French and Swiss autobahn/motorway networks. 950 parking places in the underground car park at the Konzerthaus and central train station (Hauptbahnhof).
Directions to the Konzerthaus Freiburg
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