

**THE FIRST WORLD CONGRESS ON WATER CHANNEL PROTEINS
(AQUAPORINS AND RELATIVES) CELEBRATING THE 25TH ANNIVERSARY OF THE
DISCOVERY OF THE FIRST WATER CHANNEL PROTEIN
(LATER CALLED AQUAPORIN 1)**

CLUJ-NAPOCA, ROMANIA, OCTOBER 27-29, 2011

ANNOUNCEMENT AND CALL FOR PAPERS



The first water channel protein (WCP) was discovered in the 1980's during studies of the human red blood cell membrane. In the 1990's it became obvious that WCPs constitute a large family of membrane proteins that are present in all kingdoms of life: plants, microorganisms (archaea, bacteria, yeast, and protozoa), animals and humans. WCPs exist in three subfamilies: (1) aquaporins (AQPs) that are selective for water; (2) aquaglyceroporins (and glycerol facilitators) that convey water and/or other small molecules across membranes; and (3) 'superaquaporins' or subcellular AQPs. WCPs (over 450 members) belong to the superfamily of major intrinsic proteins (MIPs, over 800 members). The atomic structures of some MIPs have been determined and common structure–function relationships are expressed in microorganisms, plants, animal species and humans. The physiological roles of WCPs, and some of their involvement in diseases, are known; thus in the past 25 years WCPs have become a “hot” area of research in biochemistry and molecular cell biology, with wide and increasing implications for human health.

We invite all scholars working in the field, or those interested in the general topic of WCPs, to become valued participants in this First World Congress dedicated to all scientific aspects of WCPs.

PRESIDENT OF THE WORLD CONGRESS:

GHEORGHE BENGA,

Member, Romanian Academy,

Member, Academy of Medical Sciences of Romania,

President, Balkan Clinical Laboratory Federation, The “Gheorghe Benga” Foundation

E-mail: ggbenga@gmail.com

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INVITED LECTURES (CONFIRMED BY JUNE 1, 2011, in alphabetical order of LECTURERS):

Jorge FISCHBARG: Eye water channel proteins in health and disease

Ross P. HOLMES: The role of aquaporins in kidney function and disease

Vincent J. HUBER: Development of biologically relevant aquaporin 4 ligands

Philip W. KUCHEL: Water exchange in red cells: historical comment and NMR studies

Norikazu MAEDA: Metabolic impact of water channel proteins

Christophe MAUREL: Aquaporins and the responses of plants to their challenging environment

Tsutomu NAKADA: Brain science of water molecules

Soren NIELSEN: Aquaporins 7, 9 and 11: Roles in metabolism and kidney function

Helga STAN-LOTTER: Water channel proteins in Archaea

Hartwig WOLBURG: The management of the blood-brain barrier in health and disease

Masato YASUI: Roles of aquaporin-4 in brain disorders

Andrea YOOL: Resolving a controversy: Molecular gating of aquaporin-1 as a dual water and ion channel

The First World Congress is organized under the Auspices of:



➤ IFCC – International Federation of Clinical Chemistry and Laboratory Medicine



➤ WASPaLM – World Association of Societies of Pathology and Laboratory Medicine



➤ Romanian Academy



➤ Academy of Romanian Scientists



➤ “Gheorghe Ionescu-Sisesti” Academy of Agricultural and Forestry Sciences



➤ Cluj City Council



➤ Cluj City Hall

The First World Congress is organized by:

➤ The “Gheorghe Benga” Foundation

In collaboration with (in alphabetical order):



➤ Academy of Romania – Cluj Branch



➤ Academy of Romanian Scientists – Cluj Branch



➤ Academy of Medical Sciences – Cluj Branch



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➤ “Vasile Goldis” Western University Arad

➤ “Victor Babes” University of Medicine and Pharmacy Timisoara

➤ University of Oradea / Faculty of Medicine

SECRETARIAT AND MANAGEMENT OF SERVICES:



➤ Wens Tour: Phone: +4 0264 590 749; Fax: +4 0264 595 755;
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PRELIMINARY SCIENTIFIC TOPICS:

- Major Intrinsic Protein (MIP) Superfamily: Water Channel Proteins, Glycerol Facilitators
- Classification and Phylogenetic Analyses of MIP Channels
- Superaquaporins, Subcellular Aquaporins
- Developmental Patterns of Expression of Water Channel Proteins
- Methods/Techniques in Studying Water Channel Proteins
- Molecular Structures of Water Channel Proteins: - Insights from Crystal Structure, MRI and Ultrastructural Analyses; - Molecular Dynamics and Gating
- Roles of Water Channel Proteins in the Transport of Substrates other than Water
- Water Channel Proteins in Reconstituted Systems
- Water Channel Inhibitors
- Water Channel Proteins as Drug Targets in Various Cells and Diseases
- Intracellular Messenger Modulation of Plant and Animal Water Channel Proteins
- Plant Water Channel Proteins and Their Roles in: - Tissue Hydraulics; - Regulation under Environmental Stresses; - Carbon and Nutrient Assimilation
- Water Channel Proteins in Unicellular Organisms
- Insect and Invertebrate Water Channel Proteins
- Water Channel Proteins in Aquatic Vertebrates, Amphibians, Reptiles, Birds, Mammalians
- Water Channel Proteins and Cell Movements
- Water Channel Proteins in Angiogenesis and Cancer
- Water Channel Proteins and the Nervous System: Physiology and Pathology
- Gastro-intestinal, Liver and Biliary Tract Water Channel Proteins in Health and Disease
- Eye Water Channel Proteins in Health and Disease
- Kidney and Urinary Tract Water Channel Proteins in Health and Disease
- Respiratory Apparatus Water Channel Proteins in Health and Disease
- Water Channel Proteins and the Cardiovascular System: Physiology and Pathology
- Muscle Water Channel Proteins
- Red Blood Cell Water Channel Proteins
- Water Channel Proteins in Secretory Cells: Physiology and Pathology
- Skin Water Channel Proteins in Health and Disease
- Water Channel Proteins and Reproductive System
- Adipose Tissue Water Channel Proteins and Metabolic Syndrome
- Fluid transport in barrier epithelia
- Varia (free communications)

PRELIMINARY PROGRAM

Thursday October 27

- 8:00 - 19:00 Registration
- 9:00 - 11:00 Opening Ceremony, Opening Lecture
- 11:00 – 11:30 Coffee Break
- 11:30 – 13:30 Plenary Lectures
- 13:30 – 15:00 Poster Discussions (and Snack Break)
- 15:00 – 17:00 Plenary Lectures
- 17:00 – 17:30 Coffee Break
- 17:30 – 19:30 Scientific Sessions
- 20:00 Welcome Reception

Friday October 28

- 8:00 - 17:00 Registration

- 09:00 – 11:00 Scientific Sessions
 - 11:00 – 11:30 Coffee Break
 - 11:30 – 13:30 Plenary Lectures
 - 13:30 – 15:00 Poster Discussions (and Snack Break)
 - 15:00 – 17:00 Scientific Sessions
 - 17:00 – 17:30 Coffee Break
 - 17:30 – 19:30 Scientific Sessions
 - 19:30 - Closing Ceremony, Award of Prizes and Certificates of Attendance
 - 20:30 - Gala Dinner
- Saturday October 29*
- Tour of Cluj-Napoca

CALL FOR PAPERS

Participants wishing to contribute to the Scientific Program with Lectures, Oral Communications, Short Communications or Posters are kindly requested to submit their ABSTRACTS, together with the REGISTRATION FORM of at least one author. For the abstract to be included in the final program at least one author should have paid the Registration Fee before sending the ABSTRACT. If the paper is not accepted for presentation, the Registration Fee will be returned, after bank charges and a handling fee of 5 EUR is deducted.

ABSTRACTS should be loaded on the Template Form and submitted as an attachment by E-mail to: aquaporin@wens.ro.

The authors should indicate the preferred form of presentation. The scheduled time is: Lecture (25 min presentation, 5 min discussion), Oral Communication (12 min presentation, 3 min discussion), Short Communication (8 min presentation, 2 min discussion).

For Lectures the dead-line of ABSTRACT submission is September 10.

The final decision regarding the form of presentation will be taken by the ABSTRACT Committee and will be communicated to authors by October 10 (at the latest).

FELLOWSHIPS AND PRIZES

A number of fellowships consisting of free Registration and free accommodation in Student's Hall of Residences (no breakfast) will be awarded to young participants (below 35 years) from underprivileged countries. The selection will be made based primarily on the quality of ABSTRACT; a Letter of Application, a short CV (one page) and a Letter of Recommendation should be E-mailed to ggbenga@gmail.com, until August 20, 2011.

A Prize for the best Oral presentation (Communication or Short Communication), a Prize for the best Poster will be awarded by The "Octavian Fodor" Foundation and other prizes will be awarded by sponsors. Details will be given in the Second Announcement.

DATES TO REMEMBER

October 27-29, 2011: Meeting dates

August 20, 2011: dead-line for payment of "Early Bird" (Reduced) Registration Fee

September 25, 2011: dead-line for for payment of Regular Registration Fee

Late payment: after September 26, 2011

September 10, 2011: dead-line for ABSTRACT submission for Lectures

September 30, 2011: dead-line for ABSTRACT submission for Oral Communications and Posters