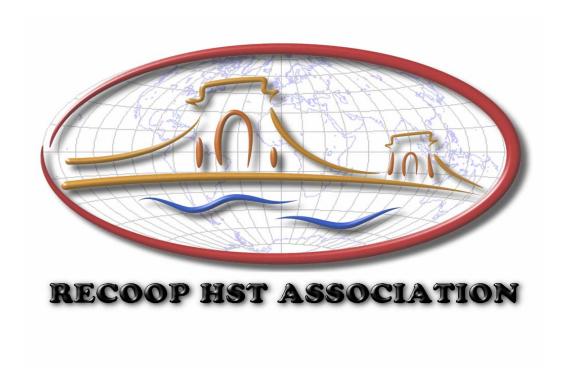
# Bridges in Life Sciences 8<sup>th</sup> Annual Scientific Conference "Laugh and Be the Best in Research and Patient Care" <sup>TM</sup>



# Hotel ILF Prague April 5–7, 2013 RECOOP HST Association

Association for Regional Cooperation in the Fields of Health, Science and Technology







Visegrad Fund

# Sponsored by

Cedars-Sinai Medical Center, Los Angeles, California, USA

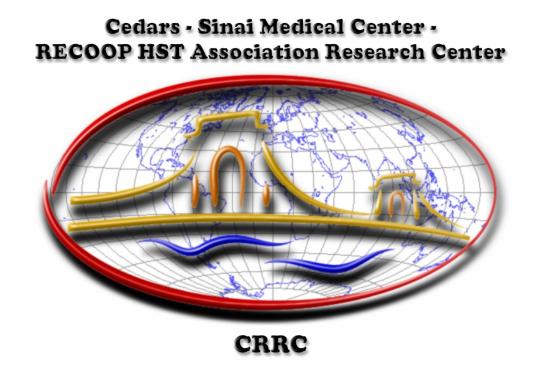
University of Debrecen, Hungary

The International Visegrad Fund Strategic Grant (31110035) "Future of Visegrad Four Families Depends on Healthy Women and Children".

University of Pecs, Hungary

The International Visegrad Fund Standard Grant "Prevention of preterm birth in the Visegrad Group and Eastern Partnership (EaP) countries" ID 21250023.

Center for Experimental Medicine - IKEM, Prague, Czech Republic



In 2012 the RECOOP HST Association is integrated the multidisciplinary, multicenter research studies of the RECOOP Research Networks in the RECOOP Life Science Research Platform and formed 17 **CSMC RECOOP Research Centers (CRRC)** from 7 countries (Croatia, Czech Republic, Hungary, Poland, Romania, Slovak Republic, and Ukraine) working on translational and clinical research in the field of Genomics – Proteomics, Epigenetics, Metagenomics, Molecular Biology, Metabolomics and Nano-biotechnology.

#### The CSMC - RECOOP Research Centers (CRRC):

Cardiovascular Disease and Women's Health: Genomic Cardiology Jan Pitha M.D., Ph.D., Head of Laboratory for Atherosclerosis Research Department of Cardiology, IKEM - Institute for Clinical and Experimental Medicine, Prague, Czech Republic

Cardiovascular Disease and Women's Health: Myocardial contractile dysfunction Attila Borbely, M.D., Ph.D., Cardiologist, Institute of Cardiology, Medical and Health Science Center, University of Debrecen, Hungary

Cardiovascular Disease and Women's Health: The role of myofilamentary protein changes in diastolic dysfunction of newborns, Zoltan Papp, M.D., Ph.D., D.Sc., Institute of Cardiology, Clinical Physiology Department, University of Debrecen, Hungary

Cardiovascular Disease and Women's Health: Impact of Obesity and Stress on Cardiovascular Function, Professor Marija Heffer MD, PhD, Department of Biology and Neuroscience, School of Medicine University Josip Juraj Strossmayer Osijek;

Cardiovascular Disease and Women's Health: Vascular responses to various physiological conditions. Professor Ines Drenjancevic MD, PhD, Department of Physiology and Immunology, School of Medicine University Josip Juraj Strossmayer Osijek

Cardiovascular Disease and Women's Health: Role of semicarbazide sensitive amine oxidase (SSAO) in Cardiovascular Diseases (endothelial cells and/or adipocytes) Professor Éva Szökő, Ph.D., D. Sc., Department of Pharmacodynamics, Faculty of Pharmacy, Semmelweis University

Mother and Child Health: Human Microbiome Study in Preterm Birth, Dr. Marian Kacerovsky, MD, Department of Obstetrics and Gynecology, University Hospital in Hradec Kralove; Czech Republic

Mother and Child Health: Viral infection in mother, neonate, infants and follow up in child development, Professor Shubhada Bopegamage, Head, Entervirus Laboratory, Virology Department, Slovak Medical University, Bratislava, Slovak Republic

Mother and Child Health: Animal models to study preterm birth, Professor Gyorgy Falkay, PhD, DSc, Department of Pharmacodynamics and Biopharmacy, Faculty of Pharmacy, University of Szeged, Hungary

Mother and Child Health: Iron intake and preterm birth, Chander P. Arora, PhD, Cedars-Sinai Medical Center International Research and Innovation Management Program, RECOOP HST Association Scientific Manager and Iuliana Ceausu, M.D., Ph.D, the Department of Obstetrics and Gynecology of "Dr. I. Cantacuzino" Hospital, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

RECOOP LSRP: The role of Vitamin D in ischemic heart disease and preterm birth Professor Martin Gajdoš, M.D, Ph.D. and Dr. Zora Krivosikova, PhD Medical Faculty, Dept. of Clinical and Experimental Pharmacotherapy, Slovak Medical University, Bratislava, Slovakia

RECOOP LSRP: Vitamin D deficiency and effect on neurotransmitters in diabetes, ischemic heart disease and preterm birth. Tatiana Borisova, Department of Neurochemistry, Palladin Institute of Biochemistry NAS of Ukraine

NanoBioTech and Cancer: The role of transcriptional and epigenetic regulation in cervical carcinogenesis, Professor József Kónya, MD, PhD, Department of Medical Microbiology, Faculty of Medicine, University of Debrecen, Hungary

NanioBioTech and Cancer: Nanoparticles for monitoring different diseases, (regenerative medicine, cardiovascular and cancer), Professor Daniel Horák, Ph.D. Head of the Department of Polymer Particles, Institute of Macromolecular Chemistry, Academy of Sciences, Prague, Czech Republic

NanioBioTech and Cancer: Translational NanoBioTech Studies, Professor Rostyslav Stoika, PhD, D.Sc., Department of Regulation of Cell Proliferation and Apoptosis, Institute of Cell Biology, National Academy of Sciences of Ukraine

NanioBioTech and Cancer: Targeted Drug Delivery for Cancer Treatment Professor Roman Bogdanovych Lesyk, Ph.D., D. Sc, Department of Pharmaceutical, Organic and Bioorganic Chemistry, Danylo Halytsky Lviv National Medical University, Lviv Ukraine

NanioBioTech and Cancer: Inorganic Markers for Bio-imaging, Artur Podhorodecki, Ph. D. Institute of Physics, Wroclaw University of Technology, Wroclaw, Poland

The participating CRRCs from the member universities and research organizations implemented research programs for Medical and Ph.D Students.

RECOOP Life Science Research Platform already realized short term (1–2 years) pilot research studies. The Networks continue the translational and clinical research studies in midterm (5 years), and the RECOOP HST Life Science Research Platform shall plan to continue the clinical research studies for minimum 20–30 years and follow up the women, men and newborns registered in the Electronic Data Entry Forms (EDEF) started in 2011.

# The Association for Regional Cooperation in the Fields of Health, Science and Technology – RECOOP HST Association

# Introduction

In 2006 Cedars–Sinai Medical Center (CSMC) with eleven CEE universities and academic organizations from six countries (Croatia, Czech Republic, Hungary, Romania, Slovakia, and Ukraine) formed the Regional Cooperation for Health, Science and Technology (RECOOP HST) Consortium.

In 2012 CSMC converted the Consortium into the Association for Regional Cooperation in the Fields of Health, Science and Technology is registered by the Court of Debrecen in Hungary under the registry number 4160 on May 10, 2012, TAX ID: 18299140-1-09.

Members of the Association from 9 countries (Croatia, Czech Republic, Denmark, Hungary, Romania, Slovak Republic, Ukraine and USA) and 16 higher education or research organizations.

# Members of the RECOOP HST Association:

- 1. Cedars Sinai Medical Center, Los Angeles, USA
- 2. School of Medicine University J. J. Strossmayer Osijek, Croatia
- 3. IKEM Institute for Clinical and Experimental Medicine, Prague, Czech Republic
- 4. Institute of Macromolecular Chemistry Academy of Sciences, Czech Republic
- 5. Faculty of Military Health Sciences, University of Defense, Hradec Kralove, Czech Republic
- 6. Faculty of Pharmacy, University of Copenhagen, Denmark
- 7. University of Debrecen, Hungary
- 8. University of Pecs, Hungary
- 9. University of Szeged, Hungary
- 10. Carol Davila University of Medicine and Pharmacy, Bucharest, Romania
- 11. Slovak Medical University, Bratislava, Slovakia
- 12. Amosov National Institute of Cardiovascular Surgery, Academy of Medical Sciences of Ukraine, Kyiv, Ukraine
- 13. Institute of Molecular Biology and Genetics, National Academy of Science of Ukraine, Kyiv, Ukraine
- 14. Palladin Institute of Biochemistry, National Academy of Sciences of Ukraine, Kyiv, Ukraine
- 15. Institute of Cell Biology, National Academy of Sciences of Ukraine, Lviv, Ukraine
- 16. Danylo Halytsky Lviv National Medical University, Lviv, Ukraine

# **International Partnerships of CSMC RECOOP HST Consortium**

# **World Health Organization (WHO)**

RECOOP HST Mother and Child Health Network one of the partners of the International *PRE*term *BIr*th *C*ollaborative (PREBIC <a href="www.prebic.net">www.prebic.net</a>) of the World Health Organization, Department of Reproductive Health and Research (<a href="http://www.who.int/reproductive-health/index.htm">http://www.who.int/reproductive-health/index.htm</a>).

#### **World Intellectual Property Organization (WIPO)**

Beside research opportunities the RECOOP Consortium inspires young scientists and clinical researchers for creative thinking, and helps to learn how to make decision on "publish and disclose" or "publish and protect". The Consortium is working with the World Intellectual Property Organization (WIPO <a href="http://www.wipo.int">http://www.wipo.int</a>) to train faculty members, managers, young scientists, clinicians and for Ph.D. students for innovation management and technology transfer from the RECOOP HST Consortium. The members of the participating organizations are taking the WIPO World Wide Academy (WWA) Distance Learning (DL) courses and until 2011 more than 500 faculty members were trained from the Consortium.

#### **National Institutes of Health (NIH)**

The first "Bridges in Life Sciences" regional networking meeting was organized in October 2003 by Cedars–Sinai Medical Center (CSMC) with four Hungarian Universities along with the Fogarty International Center (FIC) at the National Institutes of Health (NIH) in Budapest, Hungary.

On June 4, 2008 the representative of the RECOOP Consortium meet with the representatives of the Division of International Relations, John E. Fogarty International Center for Advanced Study in Health Sciences, NIH, DHHS, USA and agreed to continue the "Bridges in Life Sciences" regional networking meeting organized in October 2003.

The 4<sup>th</sup> Annual Scientific Meeting took place in Debrecen, Hungary on April 4–5, 2009 with the Visegrad Group's (V4) academic organizations and NIH funded PIs from the USA with robust collaborative works in the CEE Countries. The host organization University of Debrecen on the behalf of the Consortium applied for a Standard Grant and CSMC provided the matching fund.

The Bridges in Life Sciences US-CEE Regional Networking Meeting provided opportunity for 60 CEE RECOOP young scientists selected from more than 100 abstracts by the Scientific Advisory Board of the RECOOP Consortium and additional 20 young Ukrainian scientists was selected for the Young Scientists Forum with the support of California Association to Aid Ukraine (CAAU).

#### The U.S. Government Global Health Initiative

Ms. Lois Quam, Executive Director of U.S. Government Global Health Initiative, U.S. Department of State in her letter sent to the Bridges of Life Sciences 7<sup>th</sup> Annual Conference recognized the RECOOP HST Consortium Networks' research activities as valuable assets of Global Health Initiative.

#### Visegrád Group (V4)

From 2008 the members of the RECOOP HST Consortium with the financial support of Cedars—Sinai Medical Center applied for 20 Standard Grants and won 14, also one Strategic Grants.

During the last four years the RECOOP HST Consortium won 14 Standard Grants (20810243, 20820016, 20820040, 20820041, 20910138, 20920001, 20920002, 20920023, 20920024, 20910138, 21010083, 21010070, 21020052, and 21110096) to support the formation and

management of research networks and multinational – multidisciplinary research projects. Also the IVF Standard Grants helped to build support networks for Biosafety and Biosecurity, Animal use in Research, Clinical Research Management, Research and Innovation Management Training.

The buildup of the RECOOP Life Science Research Platform sponsored by **the International Visegrad Fund Strategic Grant** (31110035) "Future of Visegrad Four Families Depends on Healthy Women and Children".

The last five years IVF and CSMC-RECOOP extended activities toward the EU Eastern Partnership, the Visegrad+ Western Balkans and the RECOOP HST Association is building bridges to United States Global Health Initiative.

The IVF grants won by CSMC – RECOOP also helped the International Visegrad Fund to move toward to the 21<sup>st</sup> Century and broaden the scope of funded activities in the Visegrad Group to involve more young scientists into the new biotechnology developments, could create innovative ideas, new medical treatment modalities and jobs in the region.

# **Research Capacity Building**

The RECOOP HST Association's main goal is to enhance research collaboration and provide platforms for scientific networking in life sciences within the Visegrad Four Countries, Central - Eastern Europe, and Western Balkan. The research priority of the Consortium is women's and child's health in the Visegrad Four European Macro-Region (Czech Republic, Hungary, Poland and Slovakia) and the neighboring countries (Belarus, Bosnia and Herzegovina, Croatia, Moldova, Macedonia, Montenegro, Romania, Serbia and Ukraine). The Association paves the way toward GLOBAL Research Programs of the National Institutes of Health, the World Health Organization and private funds (Gates, Clinton).

In the last six years the RECOOP HST Consortium/Association implemented translational and retro- prospective clinical research in the Mother and Child Health (M&CH), the Women's Health and Cardiovascular Diseases (WH&CVD) and in the NanoBioTechnology (NBT) Research Networks.

The Mother and Child Health and the Women's Health and Cardiovascular Diseases retro and prospective clinical research studies are using web based electronic data entry forms (EDEF <a href="http://www.flexiform.hu/">http://www.flexiform.hu/</a>).

Beside the management of research networks for multinational – multidisciplinary research projects, the RECOOP HST Consortium also built support networks for Biosafety and Biosecurity, Animal use in Research, Clinical Research Management, Research and Innovation Management Training.

In the RECOOP Research Networks 147 scientists are working in 18 research projects in clinical, basic and translational research studies to investigate biological pathways leading to gender differences in cardiovascular diseases, preterm birth, breast, cervical and brain tumors.

The Association inspires young scientists and clinical researchers for creative thinking, and helps to learn how to make decision on "publish and disclose" or "publish and protect". RECOOP provides training for young scientists to learn proper and scientifically sound communication of their research results in their manuscripts and presentation. The Consortium provides practical training on the presentation of data in the manuscript from the "Introduction, Methods, Results

and Discussion" to the "Conclusion" sections of the manuscript and guides the young scientists how to organize data in tables and graphs, presenting results of statistical analysis.

The RECOOP HST Association organizes annually the Bridges in Life Sciences Conferences to review the scientific progress in the Consortium. During the Bridges in Life Sciences Annual Meeting the Scientific Advisory Board selects the top ten young scientists.

The RECOOP scientific works were published in the Annual Scientific Review Journal the Biopolymers and Cell (<a href="www.biopolymers.org.ua">www.biopolymers.org.ua</a>) 2010. Vol. 26. N 2 & N 2 supplementary; 2011. Vol. 27. N 2 & N 2 Supplementary; 2012. Vol. 28. N 2 supplementary.

The winner gets the Cedars–Sinai RECOOP Scholar Grant to visit Los Angeles for two weeks with her/his supervisor. They are visiting research groups and laboratories and presenting their scientific work during research seminars.

The top ten young scientists selected during the Bridges in Life Sciences Annual Conferences have the opportunity to apply for International Visegrad Fund (IVF) Scholarship and receive the RECOOP Young Scientists Matching Fund. The Visegrad Scholarship is the Visegrad Four European Macro-Region's Fulbright Program. Therefore it could be important to link the Visegrad Scholarship and the Fulbright Foreign Student Program.

CSMC–RECOOP Research Centers (CRRC) the Center of Excellences of the RECOOP HST Association. They host young scientists, Ph.D. students with CSMC – RECOOP (IVF–CSMC–RECOOP) Scholarship. The RECOOP HST Association Scientific Advisory Board selects the young scientists could compete for IVF–CSMC–RECOOP Scholarship.

The selected young scientists (preferably Ph.D. students) will spend maximum four semesters receive: € 2,300 / semester and the corresponding host universities/institutes receive € 1,500/semester/scholar. The host CRRC will get € 1,000 for laboratory expense and consumables from CSMC–RECOOP HST Association.

RECOOP activities compliment the U.S. Government's commitment to the Global Health Initiative "the way U.S. Government agencies conduct global health activities, building on successful bipartisan leadership in global health and expanding their impact for sustainable results around the world."

"The RECOOP HST Association explores and enhances LOCAL scientific outputs of the partner organizations, creates critical mass of scientifically sound innovative research at REGIONAL level and exploits the research outcomes at GLOBAL level to improve the prevention and treatment of major public health problems." TM

The RECOOP Research Networks could be a model for geographical regions have lingual, cultural, historical, economic and political common ground worldwide in regions in Africa, Asia, North and South America to improve women's and children's health.

# DR. SANDOR G. VARI, MD

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# Bridges in Life Sciences 8th Annual Conference &

# **RECOOP HST Association 3rd General Assembly**

#### **Organizing Committee**

#### USA

## Cedars-Sinai Medical Center, Los Angeles, California, USA

**Edward Prunchunas** 

Senior Vice President for Finance and Chief Financial Officer, & Chairman of the Governing Council of the RECOOP HST Consortium

Sandor G. Vari

Director, International Research and Innovation Management Program

& General Manager of the RECOOP HST Consortium

#### Chander P. Arora

Research Project Adviser, International Research and Innovation Management Program, Cedars-Sinai Medical Center and RECOOP HST Association Research Project Management

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#### Hungary

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Tibor Ertl

Professor of Department of Obstetrics and Gynecology, Vice Dean, Medical School, University of Pécs

Tamás Bene

Legal advisor, Knowledge and Technology Transfer Office, University of Debrecen

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Innovation Manager, Knowledge and Technology Transfer Office, University of Debrecen

#### Ukraine

Iryna Tykhonkova

Head of editorial staff "Biopolymers and cell" Journal; Senior Researcher, Department of Cell Signaling, Institute of Molecular Biology and Genetics of the NASU