Brief Report of the 2010 IARU Congress

The IARU Congress on Aging, Longevity and Health, held on 5-7 October 2010 in Copenhagen, was hosted by Rector Ralf Hemmingsen, University of Copenhagen and Dean Ulla Wewer, Faculty of Health Sciences, University of Copenhagen and was organized by Center for Healthy Aging (CEHA) under the leadership of CEHA Managing Director Lene Juel Rasmussen and Prof Vilhelm Bohr, National Institute on Aging, NIH, Baltimore, USA (associated to CEHA).

The purpose of the Congress was to provide an opportunity for researchers from the IARU Aging, Longevity and Health Network and others to exchange data and ideas, and to plan, initiate or extend collaborative research projects.

At the Congress, 123 delegates from participating IARU countries/universities discussed their ongoing research activities. The presentations at the Congress were very diverse, including molecular and cellular studies as well as population-based and sociological studies. Researchers discovered their existing complimentary research activities and identified novel opportunities for new coordinated, and/or synergistic research projects. Opportunities and plans for future workshops, doctoral research projects and doctoral and post-doctoral training programs were also discussed.

Further information on the Congress is available at healthyaging.ku.dk/activities/iarucongress, where an article describing the IARU Congress in great detail will also be posted in the near future.

The IARU Aging, Longevity and Health research project is co-founded by Peking University and the University of Copenhagen.
An exciting public installation, that lies on the “art-science” interface, was inaugurated by Director of Medical Museion Thomas Söderqvist at the Faculty of Health Sciences, during the opening session of the IARU Congress. The purpose was to raise awareness of the IARU collaboration at the University as well as to create a nice aesthetic commentary to the IARU Congress. The installation was produced by Medical Museion, the Faculty’s science communication research and museum unit.

The idea for this installation emerged from the changing patterns of age structure diagrams presented in the “Oldetopia” exhibition at Medical Museion a few years ago. That installation, in turn, was inspired by the early 20th century German philosopher of science Otto Neurath’s notion of “pictorial statistics”, which were put to practice in the Deutsche Hygiene Museum in Dresden in the interwar years. The curatorial team for “Oldetopia” took Neurath’s idea a step further by creating physical age structure diagrams to illustrate global demographic change. “Oldetopia” is described further in IARU News #1, 2008 (healthyaging.ku.dk/international/iarunews).

Medical Museion’s outreach curator Bente Vinge Pedersen and Director, professor Thomas Söderqvist further developed this idea by putting the age structure diagrams on a three-dimensional world map, such that geographic and demographic data were captured simultaneously. This made it possible to show, in a glance, the large demographical changes over time and especially the large differences between rich and poor countries. The physical diagrams were constructed from acrylic plastic and illuminated by fibre optics, and the map of the world was presented quite unconventionally as a disc, with China, Japan and Papua New Guinea in the center of the earth. This fascinating installation has become a magnet for researchers, staff, students and visitors passing through the Faculty lobby, many of whom gather spontaneously in small groups in to discuss global aging.

More information on “An Ageing World” can be found at www.corporeality.net/museion/2010/10/05/an-ageing-world-a-science-design-installation-about-global-demography.

The concept of “An Ageing World” is available for export to other IARU partners.
Taking advantage of the fact that many experts in aging research were gathered in Copenhagen for the IARU Congress, the University of Copenhagen, the Faculty of Health Sciences and CEHA held a press conference on 4 October 2010, followed by a round table discussion entitled “Living Longer and Stronger – A New Approach to Age.” University of Copenhagen Rector Ralf Hemmingsen and Dean Ulla Wewer welcomed and introduced the press conference, which was designed to increase public awareness of the concept of “Healthy Aging”, IARU and the importance of aging research. More than 100 individuals attended this event, which was a great success obtaining high visibility and media coverage in the printed media as well as in the Danish National Radio.

The panelists at the press conference attempted to provide a varied picture of the aging world, as well as the problems, challenges – but also opportunities – it presents to individuals and societies. Panelists also emphasized the need for new solutions, insights, and perspectives on how to adapt to the current and future demographic change in Danish society and other cultures around the world.

Panelists at the press conference included the following leading international scientists:

- Professor Carlos Mendes de Leon, Rush University Medical Center, Chicago, USA
- Professor Julia Twigg, University of Kent, Canterbury, UK
- Professor Vilhelm Bohr, National Institute On Aging, NIH, Baltimore, USA
- Professor Albert Gjedde, University of Copenhagen, Denmark

Speeches presented at the Press Conference included “Age as a Core Competence” by the Minister for the Internal Affairs and Minister for Health Bertel Haarder and “Five Ways to Understand Aging” by Managing Director Lene Juel Rasmussen, Center for Healthy Aging.

The press conference also served as a kick off event for a collaboration between the well renowned Danish magazine Monday Morning, the University of Copenhagen and CEHA. The aim with this collaboration entitled “Alderbedst” (Best Age) is to give a more varied picture of the elderly and the aging world.

“Best Age” also features a series of articles on aging in the magazine Monday Morning (for example, “The Aging Society can be a Resource” and “Unlocking the Age Code”, which are available in English at healthyaging.ku.dk/press/alderbedsteng, as well as an online open source forum that fosters innovation and discussion between a panel of researchers, politicians, representatives of professional organizations and prominent public figures. The conclusions and outcomes of “Best Age” will also be described in a forthcoming article published in Monday Morning.

The Copenhagen Center for Healthy Aging (CEHA) was established in 2009. CEHA focuses on research into aging for better health and reduced frailty throughout life. The mission of CEHA research is to determine how more people can live healthier lives and enjoy a robust old-age. The multidisciplinary research programs at the Center investigate biomedical, social and psychological influences on healthy aging, and develop initiatives for preventing and treating aging-associated dysfunction and disease.

CEHA research themes include:

- Molecular Aging and Neurobiology
- Muscle Metabolism
- Life Course Perspective on Aging
- Health Care Policy and Preventive Medicine
- Health Promotion, Communication and User-driven Innovation

CEHA was recently funded for its first five years by the Danish Nordea Foundation with a possible extension for another five years (www.nordea-fonden.dk/38005/).

The Center, which is led by Managing Director Lene Juel Rasmussen, is based at the University of Copenhagen, primarily at the Faculty of Health Sciences.

More information on CEHA is available on healthyaging.ku.dk
IARU Summer School on Healthy Aging

In 2011, the Center for Healthy Aging will institute a two-week summer school course, to be part of the IARU Global Summer Program (www.iaruni.org/gsp/about). This course, entitled “Healthy Aging: From Molecules to Policies,” will be held at the Faculty of Health Sciences, University of Copenhagen, during July or August 2011.

The course, which will be open to 20 IARU graduate students in biology or social science, will combine lectures and project work and reflects the commitment of the Center to interdisciplinary research and teaching.

More detailed information on the course will be announced later through the IARU network channels and on the CEHA webpage at healthyaging.ku.dk/education.

The iHan Network

The international Healthy Aging Network (iHAN) continues its effort to promote collaborations involving researchers who are working outside of the established IARU network. One such collaboration involves the University of Queensland (Brisbane, Australia), where a new brain imaging center is examining the pathogenesis of neurodegeneration after stroke, the University of Oslo, (Oslo, Norway), where research is focused on the compartmentalization of energy metabolism among glial cells and neurons in the brain, and Aarhus University (Aarhus, Denmark), where the importance of mitochondrial function for brain energy metabolism is being explored using positron emission tomography. The Universities of Brisbane and Aarhus are also mapping glucose uptake and glucose consumption in brain tissue after ischemic or anoxic insults. Based on successful interactions at the IARU congress in Copenhagen in October 2010, a study on uncoupling of mitochondria in the human brain at the University of Berkeley was proposed. The next meeting of iHAN members is scheduled to take place at the University of Berkeley (Berkeley, California, USA) in the spring of 2011.
Health Policy Challenges of Aging Populations
Professor Sharon Kaufmann from the University of Berkeley/University of San Francisco Joint Graduate Program in Medical Anthropology was a guest of the Center for Healthy Aging in October 2010. She lectured on new analytical perspectives on shifting demographics, technology development, and policy change. A whole day was devoted to discussing ongoing and future research projects and collaborations involving the Universities of Copenhagen, San Francisco/Berkeley.

The IARU Congress on Aging, Longevity and Health, following shortly thereafter, provided the opportunity to meet with other IARU partners working on health policy challenges. Several of the participants in this theme presented research results at the Congress. These included Senior Research Fellow Kenneth Howse from Oxford University; Professor Xiaoying Zheng from Peking University; Professor Hiroko Akiyama from University of Tokyo; and Professor Allan Krasnik from University of Copenhagen.

Neurodegeneration and Life Course Issues
Starting in June 2010, Professor Thomas Gill, Yale University has been a visiting researcher at the Center for Healthy Aging. The collaboration between Yale University and University of Copenhagen includes the doctoral research project by Mikkel Vass on “Prevention of Functional Decline in Older People”. An afternoon was also devoted to a IARU workshop on “Prevention in Old Age”, during which Professor Gill gave a keynote lecture on “The Role of Preventive Home Care.” The workshop also included lectures by Associate Professor Carsten Hendriksen, University of Copenhagen, Professor Steve Iliffe, University College London and Professor Emeritus, Chairman of The Age Forum, Povl Riis. This was an excellent workshop, which provided opportunities to discuss collaboration between the two IARU universities.

Evolutionary Medicine
The Evolutionary Medicine Program is now firmly established as one of the seven research programs of the Centre for Social Evolution (CSE) at the Department of Biology, University of Copenhagen, coordinated by Professor Jacobus J. Boomsma and Dr. Sean G. Byars. This program uses databases from the Danish National Hospital Register and the Danish Civil Registration System for analyzing whether perinatal markers of genomic imprinting are correlated with maternal conditions during pregnancy and mental disease later in life.

The fourth year course in Evolutionary Medicine was taught for the first time in 2008 as part of Yale Professor Steve Stearns’ sabbatical at CSE. This course is now part of the regular curriculum in block 3 (February-March) with 30 students from biology, biochemistry and molecular biomedicine passing the exam in 2010.

A proposal for a Symposium on Evolutionary Medicine by Sean Byars and Jacobus Boomsma was approved for the 13th Congress of the European Society for Evolutionary Biology, which will be held on 20-25 August 2011 in Tübingen, Germany.

More information on the Aging, Longevity and Health research project is available at ageing.iaru.ku.dk.