DEAR GUEST,

It is an honour and a great privilege to welcome you to this World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal diseases jointly organised by the International Osteoporosis Foundation (IOF) and the European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO). This WCO-IOF-ESCEO 2014 congress, which is held in Seville, between April 2 and April 5 is the largest event worldwide, fully dedicated to the clinical and economic aspects of osteoporosis, osteoarthritis and musculoskeletal diseases and gathers more than 4,500 delegates.

The Scientific Advisory Committee, co-chaired by Professor René Rizzoli and Professor Cyrus Cooper, had an extremely difficult task, to select oral presentations, among more than 800 submitted abstracts of the highest quality.

During this congress, prestigious scientists, from all parts of the world, will give you the opportunity of being in touch with the latest scientific developments in various fields. We expect that researchers and clinicians from around the world will experience a diversified and enriching scientific meeting. The final programme includes:

- Stimulating plenary lectures on various ‘hot’ topics delivered by the fields’ leading experts;
- Clinically-focused Meet-the-Expert Sessions, restricted in the number of participants to enable more effective interactions;
- A large number of special sessions with a focus on topics such as: development of an algorithm for the management of osteoarthritis, nutrition for musculoskeletal health, benefit-risk ratio of osteoporosis treatments, adverse reactions induced by treatment of rheumatic disorders with glucocorticoids, definition of a reference case for economic evaluation in osteoarthritis, and many more;
- Poster sessions and oral presentations of the top abstracts.

Many satellite symposia will take place. Their programmes have been carefully reviewed by the organisers to make sure that an appropriate amount of unbiased science will be outlined.

We are convinced that you will enjoy this congress, in the beautiful surroundings of Seville and that the key messages that you will take home after the meeting will help you in your daily practice for the benefit of your patients.

We wish you a very successful meeting.

John A. Kanis
Co-chairman

Jean-Yves Reginster
Co-chairman
ESCEO-IOF Pierre Delmas’ Awards

The ESCEO-IOF Pierre Delmas’ Awards, named in honour of the late Professor Pierre D. Delmas, IOF’s first president, honours individuals who have made a significant and unstinting contribution to the advancement of the work of the IOF, through furthering one or more of the mission statements and/or goals of the Foundation. This award, from the current president, is awarded this year on a regional basis to recognize the current strategic aims of IOF. The winners of these prestigious awards, presented yesterday, are P. Ebeling (Asia Pacific Region), O. Lesnyak (Eastern Europe), B. Masri (Middle East and Africa), D. Messina (Latin America), P. Miller (North America) and J. Ringe (Western Europe).

In presenting these awards, Professor Kanis, President of the IOF, noted, “All these individuals have worked tirelessly to broaden the international recognition of the IOF. They are all active members of the IOF and rare individuals able to bring together members of patient societies, scientists, partners of the industry and politicians.”

HIGHLIGHTS OF THE MEETING

This WCO-IOF-ESCEO congress, here in Seville, is the largest meeting in the field of osteoporosis, osteoarthritis and musculoskeletal diseases, with more than 4,500 attendees seeking information on the epidemiology, pathogenesis, prevention, and treatment of these important public health problems. Over 900 abstracts were submitted addressing all these topics. During the first two days of the congress, a lot of important and interesting communications have been presented either orally or in poster communications. We highlight here only a small part of all the science that has been presented up to now during this congress.

The meeting started on Wednesday April 2 with the ESCEO symposium on the efficacy and safety of anti-osteoporosis medications in the elderly just followed by the lecture of Socrates Papapoulos that reviewed the best clinical articles published in 2013. After the official opening ceremony, the Servier Honorary Lecture by Ueli Schibler on the original topic “The mammalian circadian timing system: how clocks talk to each other” was a great success. Professor Schibler reminded us that the circadian timing system consists of a pacemaker in the brain’s suprachiasmatic nucleus and subsidiary oscillators in nearly all body cells. He then discussed how the suprachiasmatic nucleus and feeding rhythms synchronize circadian oscillators in the liver. Lastly, he presented a novel strategy, dubbed Synthetic Tandem Repeat Promoter Screening (STAR-PROM), capable of identifying in an unbiased manner the signalling pathways participating in the systemic regulation of circadian gene expression.

On Thursday, the first session began with the well-attended plenary lecture of Professor Cooper on the life course epidemiology of musculoskeletal ageing (PL1). He showed that the principal chronic musculoskeletal disorders that have strong impact on health-related quality of life are osteoporosis, sarcopenia and osteoarthritis; these conditions increase in frequency with advancing age, and understanding their epidemiology throughout the life course is critical to the development of cost-effective preventive strategies. Many communications from Thursday April 3 were related to this first plenary lecture. Indeed, osteoporosis, osteoarthritis, frailty, sarcopenia, quality of life and economics were discussed widely in both oral and poster communications.

From a public health point of view, prediction of the evolution of a disease is of primary importance. During the morning session of the day, four presentations were related to this hot topic. The first one showed that the association between incidence of fracture and weight, height or body-mass index are site-specific and that the differences may be mediated, at least in part, by effects on bone mineral density, bone structure and geometry, and patterns of falling (OC1). The second presentation confirmed, in a well-designed meta-analysis, that quantitative ultrasound is an independent predictor of fracture for men and women particularly at low quantitative ultrasound values, but the predictive value for osteoporotic fracture risk decreases with time from baseline (OC2). The third talk was unable to elicit strong predictive independent factors for falls among nursing home resident followed over a period of two years but confirmed that a low body mass index was a significant predictor of death in this population (OC3). The fourth contribution suggested that a serological biomarker of high localized bone turnover, α-CTX, was associated with subchondral bone turnover, and osteophyte formation, both central features of the pathogenesis of osteoarthritis (OC4).

Quality of life was also exhaustively discussed yesterday. For example, it was shown that, as expected, patients who were hospitalized in connection to vertebral fracture had lower health-related quality of life prior to fracture and at all follow-up visits than those not admitted to hospital (OC5). However, the authors also showed that, whilst the accumulated health-related quality of life loss was similar in the two
patient groups, the relative decrement was higher in hospitalized pa-
tients than in non-hospitalized patients. Another study assessed, over
a period of 6 months, the changes in health-related quality of life af-
after a knee or hip replacement for osteoarthritis (OC10). After 6 months
follow-up, health-related quality of life (i.e. EQSD, EQVAS, WOMAC)
showed a statistically significant improvement compared to pre-surgi-
cal status and, interestingly, patients experienced an additional signifi-
cant improvement between month 3 and month 6.

In the afternoon, the Educational Lecture, by Professor Seeman, was
well attended and was very successful. It should be acknowledged that
the topic on how to formulate a research hypothesis was very attractive
and useful for many young scientists.

The third plenary lecture of Roger Fielding on the definition, patho-
physiology and management of sarcopenia was a great success (PL3).
Professor Fielding reminded the attendees that underlying the age-re-
lated loss of skeletal muscle mass and function are physiological chang-
es in the force/power generating capacity of skeletal muscle that ap-
pear to be driven by changes in skeletal contractile protein function,
metabolic derangements and alterations in neuromuscular activation.
Interestingly, he shared wonderful data illustrating the age-related
changes in skeletal muscle gene expression, contractile function, neu-
romuscular activation, and the effects of acute and chronic contractile
activity on changes in phosphorylation and expression of members of
the Akt/mTOR signalling pathway in skeletal muscle from young and
old animals and humans. He believes that the underlying changes in
skeletal muscle biology with age provide exciting potential therapeutic
targets for further investigation.

Two others original topics were also discussed during the oral commu-
nications of the afternoon. The first one was bone health during child-
hood. For example, Dr Moon presented data from the Southampton
Women's Survey showing that gain in childhood lean mass was posi-
tively associated with bone size and trabecular volumetric bone miner-
 nal density at 7 years (OC12). In contrast, relationships between change
in fat mass and bone were weaker, suggesting that muscle growth,
rather than accrual of fat mass, may be a more important determinant
of childhood bone development. The other topic was the change in
bone health in HIV-infected patients. One study showed that at the age
when fracture risk markedly increases in the general population, long-
term HIV infected men have alterations of both trabecular and corti-
cal bone microstructure, which are not captured by areal bone mineral
density despite adequate vitamin D supplementation (OC15). The au-
thors concluded that these data provide a rationale for fracture preven-
tion measures in the emerging population of long-term HIV infected
men aged of 60 years or more. Another study evaluated the change in
bone mineral density over 1-year of follow-up in a cohort 400 of HIV-
infected men treated with combination antiretroviral therapy (OC16).
The authors showed that only 10% of the study population experi-
enced a clinically significant loss of bone mineral density at the femoral
neck (but not at the spine or total hip) but they found no significant as-
associations between this loss and recognised risk factors, including type
of combination antiretroviral therapy.

So, the first full day of this WCO-IOF-ESCEO meeting was a great suc-
cess due to the high scientific quality of the research presented either
orally or in poster communications.
IOF PIERRE DELMAS AWARD

On Wednesday, Professor Cyrus Cooper was announced as the winner of the Pierre Delmas Award for research into osteoporosis. This is the premier research award presented by IOF and ESCEO to honour an individual academic who has contributed significantly to the field of osteoporosis and musculoskeletal science through original and outstanding scientific contributions.

IOF President John A Kanis, Co-Chair of the World Congress, said, “I have had the privilege of collaborating with Cyrus Cooper for nearly two decades. Over this period, he has contributed significantly to the epidemiology of osteoporosis, in the broadest sense of the word, and continues to do so.”

Cyrus Cooper MA, DM, FRCP, FFPH, FMedSci, is Professor of Rheumatology and Director of the MRC Lifecourse Epidemiology Unit at the University of Southampton, and Professor of Musculoskeletal Science at the University of Oxford.

Professor Cooper graduated from the University of Cambridge and St Bartholomew’s Hospital, London, and completed his residency at the Southampton University Hospitals. In 1990, he won an MRC Travelling Fellowship to the Mayo Clinic, USA, where he continued his research in osteoporosis. He later held a position as Senior Lecturer in Rheumatology and MRC Senior Clinical Scientist, and became foundation Chair in Rheumatology at the University of Southampton in 1997 while continuing as an MRC Senior Clinical Scientist at the MRC Environmental Epidemiology Unit. In 2003, he was appointed Director of the MRC Epidemiology Resource Centre, University of Southampton, now re-configured as the MRC Lifecourse Epidemiology Unit.

Professor Cooper stated: “It is an honour and privilege to receive this Award. It is also testimony to the hard work of so many excellent team members and collaborators who have contributed to our research programme, as well as the institutions that have provided such welcome support, most notably the Medical Research Council, and the Universities of Southampton and Oxford. We shall continue our efforts to understand the causes and develop preventive strategies against the consequences, of osteoporosis and other disabling musculoskeletal conditions.”

HERBERT FLEISCH MEDAL

The European Society for Clinical and Economic Aspects of Osteoporosis and Osteoarthritis (ESCEO) and the International Osteoporosis Foundation (IOF) are proud to announce that Professor Jean-Marc Kaufman has been awarded the Herbert A. Fleisch ESCEO-IOF Medal. Herbert Fleisch was a renowned researcher whose groundbreaking work contributed to the development of scientific knowledge about metabolic bone diseases and their treatment.

This award recognises a researcher who has made outstanding and groundbreaking achievements in basic bone science.

Jean-Marc Kaufman obtained his MD degree and his PhD degree (under the mentorship of Alex Vermeulen) at Ghent University in Belgium. He was a senior postdoctoral research fellow (1982-1984) in reproductive physiology with Ernst Knobil at the University of Texas Medical School at Houston. He is board certified in Endocrinology and in Nuclear Medicine. Since 1985 he has been a staff member of the clinical department of Internal Medicine at Ghent University Hospital, where he presently heads the clinical department of Endocrinology and the Laboratory for Hormonology, and where he established in 1994 a multidisciplinary Unit for Osteoporosis and Metabolic Bone Diseases in collaboration with the department of Rheumatology. Since 1993, he has been professor of medicine at Ghent University and acting chair of the university department of Internal Medicine.

Professor Reginster went on to state: “This award, named in honour of a pioneer in osteoporosis research, appropriately recognizes an individual whose work has considerably influenced knowledge about bone and mineral metabolism. Professor Kaufman’s background in endocrinology has allowed him to provide the bone field with unique insights into male osteoporosis.”

THE IOF SERVIER YOUNG RESEARCH AWARD

The IOF-Servier Young Investigator Research Grant aims specifically at encouraging young scientists to carry out high quality research. The grant is generously supported by the SERVIER Research group in partnership with IOF, and awards 40,000 EUR towards original research of significant value and international relevance in the field of osteoporosis, osteoarthritis or musculoskeletal diseases.

This year, the research grant has been shared by Charlotte Beaudart and Emmanuel Biver for their project entitled: “Sarcopenia: a major threat for Quality of Life in the elderly”.

Regarding the recipients, Professor Kanis noted “Emmanuel Biver and Charlotte Beaudart are two young but very promising investigators, both of them having already shown their ability to conduct robust scientific research, and to publish papers in first-line Journals in the field. There is no doubt that they will conduct this new research to the highest standards currently demanded by international organisations.”