8:00-8:30 POSTER SESSION

PLENARY SESSION

8:30-9:00 WELCOME
Carole DELGA (Occitania Région), M PENAUD(DG du CHU de Toulouse), Bruno VELLAS (Toulouse, France), Jorge RUIZ (Miami, USA), Matteo CESARI (Milano, Italy), Roger FIELDING (Boston, USA)

9:00-9:10 PRESENTATION OF THE ICFSR LIFETIME ACHIEVEMENT AWARD
Luigi Ferrucci NIA, Baltimore (USA)

9:10-9:55 SYMPOSIUM 1
THE SPRING STUDY: CHARACTERIZING RESILIENCE AND FRAILTY TO PHYSICAL STRESSORS USING A DYNAMICAL PHYSIOLOGICAL SYSTEMS APPROACH
Moderator: Karen Bandeen-Roche, PhD, Johns Hopkins University, Baltimore, (USA)
• The Measurement of Physical Resiliencies: Conceptualization and Study Design
Karen Bandeen-Roche, PhD, Professor, Biostatistics, Johns Hopkins University, Baltimore, (USA)
• Physical Resiliencies in Three Major Clinical Stressors
Jeremy Walston, MD, Professor, Geriatric Medicine and Gerontology, Johns Hopkins University, Baltimore, (USA)
• Do Dynamical System Measures at Baseline Predict Responses to Clinical Stressors?
Findings from Pilot Studies of Physical Resilience and Aging
Ravi Varadhan, PhD, PhD, Associate Professor, Oncology Biostatistics, Johns Hopkins University, Baltimore, (USA)

9:55-10:15 KEYNOTE 1
AGING BIOMARKERS AND GEROSCIENCE DISCOVERY WHERE WE ARE AND WHERE WE MUST GO
Luigi Ferrucci NIA, Baltimore (USA)

10:15-10:30 CONFERENCE 1 GEROSCIENCE
THE SENESCENCE-ASSOCIATED SECRETOMÉ AS A BIOMARKER OF AGE AND MEDICAL RISK
Marissa J. Schafer, Xu Zhang, Amanika Kumar, Thomas, A. White, Sarah K. Jachim, Elizabeth J. Atkinson, and Nathan K. LeBrasseur Mayo Clinic, Rochester, MN, (USA)

10:30-11:00 COFFEE BREAK POSTER SESSION

BALLROOM 1

11:00-11:20 KEYNOTE 2
THE INSPIRE GEROSCIENCE PLATFORM FOR TRANSLATIONAL GERIATRIC MEDICINE RESEARCH FROM INTRINSIC CAPACITIES TO BIOLOGICAL AGE
Bruno Vellas, Toulouse (France)

11:20-11:50 PANEL DISCUSSION 1
THE GLIM CRITERIA FOR MALNUTRITION – ARE THEY RELEVANT FOR THE FRAIL AND SARCOPENIC INDIVIDUAL?
Moderator : Jurgen Bauer, University of Heidelberg, Heidelberg, Germany
THE EVOLVING MALNUTRITION DIAGNOSIS – A PRESENTATION THE GLIM CONCEPT
Tommy Cederholm, University of Uppsala, Uppsala, Sweden
Discussion : Hidenori Arai, University of Kyoto, Kyoto, (Japan) - Alfonso Cruz-Jentoft, University Hospital Ramon y Cajal, Madrid, (Spain) - John Morley, Saint Louis University, Saint Louis, (USA) - Yves Rolland, CHU of Toulouse, Toulouse, (France)

11:50-12:05 CONFERENCE 2
FRAILTY AND CARDIOVASCULAR DISEASE (CVD): A COMPLEX RELATIONSHIP
N Veronese, Consiglio Nazionale delle Ricerche, Padova (Italy)
12:05-12:20  
**CONFERENCE 3**

FRAILTY AND ITS ASSOCIATION WITH POTENTIAL BIOMARKERS AT BASELINE  
FIRST RESULTS FROM DO-HEALTH  

Michael Gagesch, MD1,2, Patricia Chocano-Bedoya, MD PhD1,2, Reto W. Kressig, MD3, Bruno Vellas, MD4, René Rizzoli, MD5, Heike A. Bischoff-Ferrari, MD DrPh1,2 for the DO-HEALTH investigators -  
1) Department of Geriatrics and Aging Research, University Hospital Zurich and University of Zurich, Zurich, Switzerland  
2) Centre on Aging and Mobility, University of Zurich, Zurich, Switzerland  
3) University of Basel, Switzerland  
4) Felix Platter Hospital, Basel, Switzerland  
5) Gerontopôle, University of Toulouse, France  
6) University of Geneva, (Switzerland)

12:20-12:30  
**ORAL COMMUNICATION 1**  

SARA PROGRAM: PRELIMINARY FINDINGS & IMPLICATIONS FROM SARA-OBS STUDY  
AND ITS IMPACT ON SARA-INT STUDY  

Waly Dioh, PhD1, *Cendrine Tourette, PhD1, Carole Margalef, BS1, Amy Chen, Phd2, René Lafont, PhD1,3, Pierre Dilda, PhD1, Stanislas Veillet, PhD1, and Samuel Agus, PhD2 -  
1) Biophytis, Sorbonne Université Paris, France  
2) Biophytis, Cambridge, MA, USA  
3) Institute de Biologie Paris Seine (BIOSIPE), Paris, (France)

12:30-2:00  
**INDUSTRY SYMPOSIUM LUNCH POSTER SESSION**

BALLROOM 2

11:00-11:45  
**SYMPOSIUM 2**

SARCOPENIA AND NEUROSCIENCE: A FAILURE TO COMMUNICATE  
Stephen B. Kritchevsky, Ph.D., Sticht Center for Healthy Aging and Alzheimer’s Prevention, Wake Forest School of Medicine, Winston Salem, NC, USA  
• Welcome and Introductory Comments  
Stephen B. Kritchevsky, Ph.D., Sticht Center for Healthy Aging and Alzheimer’s Prevention, Wake Forest School (USA)  
• Sarcopenia? Dynapenia: Reflecting back on the last decade  
Brian C. Clark, PhD, Ohio Musculoskeletal and Neurological Institute (OMNI), Ohio University, Athens, OH, (USA)  
• Get a grip: individual variations in grip strength are a marker of brain health  
Richard G. Carson, PhD, Trinity College Institute of Neuroscience & School of Psychology, Trinity College Dublin, Dublin, (Ireland)

11:45-12:05  
**ORAL COMMUNICATION 2**

ACCELEROMETER-DETERMINED PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR ARE ASSOCIATED WITH SARCOPENIA BUT NOT 12-MONTH INCIDENT FALLS IN COMMUNITY-DWELLING SWEDISH OLDER ADULTS  
David Scott1, Jonas Johansson 2, Anoohya Gandham 1, Peter Ebeling 1, Peter Nordstrom 2, Anna Nordstrom 2 -  
1) Monash University, Clayton, VICTORIA, (Australia)  
2) Umeå University, Umeå, (Sweden)

11:55-12:05  
**ORAL COMMUNICATION 3**

ACTIVITY PATTERN VARIANCE: STATISTICAL NOISE OR INSIGHT INTO FRAILTY?  
Megan Huisingh-Scheetz MD, MPH1, Kristen Wroblewski MS2, Linda Waite, PhD3, Elbert Huang MD, MPH4, Donald Hedecker, PhD5, L. Philip Schumm, MA6 -  
1) University of Chicago, Department of Medicine, Section of Geriatrics and Palliative Medicine, Chicago, IL, USA  
2) University of Chicago, Department of Public Health Sciences, Chicago, IL, USA  
3) University of Chicago, Department of Sociology and NORC, Chicago, IL, USA  
4) University of Chicago, Department of Medicine, Section of General Medicine, Chicago, IL, USA  
5) University of Chicago, Department of Public Health Sciences, Chicago, IL, USA  
6) University of Chicago, Department of Public Health Sciences, Chicago, IL, USA

12:05-12:15  
**ORAL COMMUNICATION 4**

ASSESSING HEART RATE DYNAMICS DURING PHYSICAL ACTIVITY:  
A NEW MARKER OF FRAILTY AMONG OLDER ADULTS  
Kayleigh Ruberto1, Ben Carpenter1, Hossein Ehsani, PhD1; Saman Parvaneh, PhD2, Jane Mohler, MPH, PhD1,3; Nima Toosizadeh, PhD1,3,4 -  
1) Department of Biomedical Engineering, College of Engineering, University of Arizona;  
2) Philips Research North America, Cambridge;  
3) Arizona Center of Aging, University of Arizona;  
4) Division of Geriatrics, General Internal Medicine and Palliative Medicine, Department of Medicine, University of Arizona (USA)
12:15-12:30  CONFERENCE 4  
EFFECTS OF FORTETROPIN® ON THE RATE OF MUSCLE PROTEIN SYNTHESIS IN OLDER MEN AND WOMEN: A RANDOMIZED, DOUBLE-BLINDED CONTROL STUDY  
William Evans1, Mahalakshmi Shankaran1, Edna Nyangau1, Tyler Field1, Hussein Mohammed1 Robert Wolfe2, Scott Schutzler2, and Marc Hellerstein1 University of California Berkeley1 and University of Arkansas for Medical Sciences2 (USA)  

12:30-2:00 LUNCH BREAK POSTER SESSION

BALLROOM 1

2:00-2:45 SYMPOSIUM 3  
PRIMARY CARE APPROACH TO GERIATRIC ASSESSMENT, FRAILTY AND SARCOPENIA  
Moderator : John Morley Saint Louis University (USA)  
• Primary Care approach to frailty and sarcopenia  
Jean Woo, The Chinese University of Hong Kong (China)  
• The Rapid Geriatric Assessment: a Tool for Primary Care Physicians  
John Morley, Saint Louis University (USA)  
• The Utility of Rapid Geriatric Assessment App to Identify Unmet Needs of Older Adults in Primary Care  
Reshma A Merchant, National University Health System National University of Singapore (Singapore)  

2:45-3:00  CONFERENCE 5  
THE IMPORTANCE OF PHYSICAL FRAILTY IN MENTAL HEALTH CARE  
DIAGNOSTIC COMPLEXITIES OF THE DIFFERENTIAL DIAGNOSIS OF FRAILTY AND DEPRESSION  
R.C. Oude Voshaar, University of Groningen & University Medical Center Groningen, (The Netherlands)  

3:00-3:15  CONFERENCE 6  
ADAPTATION AND VALIDATION OF A SCALE TO ASSESS INTRINSIC CAPACITY IN MEXICAN COMMUNITY-DWELLING ELDERLY ADULTS  
Luis Miguel Gutiérrez-Robledo MD, PhD1 Rosa Estela García-Chanes PhD (1), Oscar Rosas-Carrasco MD (1) (1) Instituto Nacional de Geriatría, (México)  

3:15-3:30  CONFERENCE 7  
EFFECTS OF A BLENDED HOME-BASED EXERCISE PROGRAM AND DIETARY PROTEIN INTERVENTION ON PHYSICAL PERFORMANCE IN COMMUNITY-DWELLING OLDER ADULTS: RESULTS FROM THE VITAMIN CRCT  
Jantine van den Helder MS 1,2, Sumit Mehra MS 3,4, Carliene van Dronkelaar MS 1, Gerben ter Riet MD PhD 1, Michael Tieland PhD 1, Bart Visser PhD 1, Ben J.A. Kröse PhD 3,5, Raoul H.H. Engelbert PhD 1,6, Peter J.M. Weijs PhD 1,7,8. 1 Center of Expertise Urban Vitality, Amsterdam University of Applied Sciences, 2 Amsterdam University Medical Centers, VU University, Amsterdam Movement Sciences, 3 CREATE-IT Applied Research, Amsterdam University of Applied Sciences, 4 Faculty of Applied Social Sciences and Law, Amsterdam University of Applied Sciences, 5 Informatics Institute, University of Amsterdam, 6 Department of Rehabilitation, Amsterdam University Medical Centers, University of Amsterdam, 7 Department of Nutrition and Dietetics, Amsterdam University Medical Centers, VU University, 8 Amsterdam Public Health research institute, Amsterdam University Medical Centers, VU University; Amsterdam, (The Netherlands)  

3:30-4:00 COFFEE BREAK POSTER SESSION
**SYMPOSIUM 4**

**REvised Asian CONSENSUS ON SARCOPENIA DIAGNOSIS ~ AWGS 2019**

Moderators: Hidenori Arai, President of the National Center for Geriatrics and Gerontology, (Japan)
Liang-Kung Chen, Professor of National Yang Ming University, (Taiwan)

- Revision of the Diagnostic Criteria for Sarcopenia in Asia ~ AWGS2019~
  Masahiro Akishita, The University of Tokyo, (Japan)
- Case finding process and its evidence
  Li-Ning Peng, Taipei Veterans General Hospital, (Taiwan)
- Revised cutoffs of muscle mass, grip strength, and gait speed for Asian older adults
  Tung-Wei Au yeung, Chinese University of Hong Kong, (China)

**ORAL COMMUNICATION 5**

**INCIDENT COGNITIVE DECLINE IN SARCOPENIC OBESITY: DATA FROM THE NATIONAL HEALTH AND AGING TRENDS SURVEY**

John A. Batsis, MD,1,2,3, Christian Haudenschild1,3, Robert M. Roth, PhD1, Meredith Roderka, BS2, Travis Masterson, PhD1, John Brand, PhD1, Tyler Gooding, BA2, Matthew C. Lohman, PhD5, Todd A. Mackenzie, PhD,1,2,3 - 1Geisel School of Medicine at Dartmouth, Hanover, New Hampshire, USA - 2Department of Medicine, Dartmouth Hitchcock Medical Center, Lebanon, New Hampshire, USA 3The Dartmouth Institute for Health Policy, Lebanon, New Hampshire, USA - 4Neuropsychology Program, Department of Psychiatry, Dartmouth-Hitchcock - 5University of South Carolina, Department of Epidemiology and Biostatistics, Columbia, SC (USA)

**ORAL COMMUNICATION 6**

**RELATIONSHIP OF INTRACELLULAR WATER WITH MUSCLE STRENGTH, FUNCTIONAL PERFORMANCE AND FRAILTY IN AGED POPULATION. ANALYSES IN TWO INDEPENDENT POPULATION-BASED SAMPLES**


**POSTER SESSION**

**LATE BREAKING NEWS BALLROOM 3**

**SYMPOSIUM 5**

**NOVEL BIOMARKERS AT THE INTERSECTION OF FRAILTY AND ALZHEIMER’S DISEASE**

Jeremy D. Walston, M.D. Johns Hopkins University (USA)

- Nuclear factor–kappa B-mediated (NFB) related inflammatory markers and cognitive impairment
  Esther Oh MD, PhD, Johns Hopkins University (USA)
- Circulating cell-free DNA is associated with faster rates of cognitive decline and worsening physical measures over time
  L Nidadavolu, Johns Hopkins University (USA)
- Angiotensin system and the intersection of frailty and Alzheimer's disease
  P Abadir, Johns Hopkins University (USA)

**CONFERENCE 8**

**ASSESSMENT OF MUSCLE QUALITY AND QUANTITY USING MID-THIGH COMPUTED TOMOGRAPHY OR ULTRASONOGRAPHY IMAGES**

**DEVELOPMENT OF A NEW DEVICE FOR ASSESSMENT OF WIDE CROSS-SECTIONAL AREAS OF THE THIGH MUSCLE**

Y Matsui, Center for Frailty and Locomotive Syndrome, National Center for Geriatrics and Gerontology, (Japan)
3:00-3:15  CONFERENCE 9  
FROM SARCOPENIA TO OSTEOSARCOPENIC OBESITY - DO OVERLAP SYNDROMES REALLY VALUE-ADD?  
W Lim, Department of Geriatric Medicine, Institute of Geriatrics and Active Aging, Tan Tock Seng Hospital (Singapore)

3:15-3:30  CONFERENCE 10  
IMPLEMENTING EXERCISE THROUGHOUT HOSPITALIZATION TO COUNTERACT MUSCLE & FUNCTION DECLINE  
Aubertin-Leheudre Mylene, PhD, UQAM, Montreal (Canada)

3:00-4:00  COFFEE BREAK POSTER SESSION

4:00-4:45  SYMPOSIUM 6  
SCREENING AND ASSESSMENT FOR FRAILTY IN PRIMARY CARE  
Moderator: Prof Solomon Yu, National Health and Medical Research Council Centre of Research Excellence in Frailty and Healthy Ageing, (Australia)

• Utilisation of General Practice Health Assessments Around An Aged Care Assessment Is Associated With Lower Mortality Risk In Older Australians
  Visvanathan R, National Health and Medical Research Council Centre of Research Excellence in Frailty and Healthy Ageing, (Australia)

• FRAIL Scale and SARC-F: Predictive Validity and Diagnostic Test Accuracy
  Thompson MQ, National Health and Medical Research Council Centre of Research Excellence in Frailty and Healthy Ageing, (Australia)

• The Pictorial Fit-Frail Scale (PFFS) Malay Version: Validity and Reliability Testing in Malaysia
  Ahip SS, National Health and Medical Research Council Centre of Research Excellence in Frailty and Healthy Ageing, (Australia)

4:45-4:55  ORAL COMMUNICATION 7  
ASSOCIATION OF MUSCLE AND METABOLIC BIOMARKERS WITH TRANSITIONS IN GAIT SPEED AND COGNITIVE STATUS IN OLDER ADULTS.
  Debra L. Waters, Department of Medicine and School of Physiotherapy, University of Otago, Dunedin, New Zealand and Department of Internal Medicine, University of New Mexico School of Medicine, Albuquerque, NM, Lara Vlitestra Department of Medicine, University of Otago, Dunedin, New Zealand Clifford Qualls, Department of Mathematics & Statistics and School of Medicine, University of New Mexico, Albuquerque, NM John E. Morley Division of Geriatric Medicine, Saint Louis University, St. Louis, MO, Bruno Vellas, Department of Internal and Geriatrics Medicine, Gerontopole, CHU de Toulouse, UMR 1027 INSERM, University Toulouse III, Toulouse, (France)

4:55-5:05  ORAL COMMUNICATION 8  
The Application of Different Sarcopenia Cutoff Points in Chinese Older People: A Cross-Sectional Observational Study
  Qin Du, PhD1, Wei Chen, MD2, Sheng Ge, MD3, Xianfeng Zhao, PhD1 MD1 - 1 Abbott Nutrition Research and Development, Shanghai, China, 2Peking Union Medical College Hospital, Beijing, China, 3The Sixth People’s Hospital Affiliated Shanghai Jiaotong University, Shanghai, (China)

5:05-6:00  LATE BREAKING NEWS
8:00-9:00  **POSTER SESSION**

**BALLROOM 1**

9:00-9:45  **SYMPOSIUM 7**

**TRYPTOPHAN METABOLISM LINKS CHRONIC INFLAMMATION TO FUNCTIONAL DECLINE & PHYSICAL FRAILTY**

*Moderator: Jeremy Walston, MD Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD (USA)*

- **Altered Tryptophan Metabolism Links Chronic Inflammation to Functional Decline & Physical Frailty in Mice and Humans**
  Reyhan Westbrook, PhD Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD (USA)

- **Neurotoxic Kynurenines are Linked to Reduced Neuromuscular Connectivity in a Mouse Model of Chronic Inflammation and Frailty**
  Tae Chung, MD Department of Physical Medicine and Rehabilitation, Johns Hopkins University School of Medicine, Baltimore, MD (USA)

- **Effects of tryptophan degradation pathway blockade on age-related decline in physical performance and life span of Drosophila melanogaster**
  Mariann M. Gabrawy PhD Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD (USA)

9:45-10:05  **KEYNOTE 3**

**MAINTAINING MOBILITY IN OLD AGE**

Peggy Cawthon, San Francisco (USA)

10:05-10:20  **CONFERENCE 11**

**PROGRESSION OF PHYSICAL FRAILTY AND THE RISK OF ALL-CAUSE MORTALITY IN THE US NATIONAL HEALTH AND AGING TRENDS STUDY: IS THERE A POINT OF NO RETURN?**

*Qian-Li Xue, PhD, Johns Hopkins University School of Medicine Division of Geriatric Medicine and Gerontology & Johns Hopkins Center on Aging and Health, Baltimore, Maryland, USA - Karen Bandeen-Roche, PhD1,2, Jing Tian, MS1,2, Judith D. Kasper PhD3, Linda P. Fried, MD, MPH4 (1) Center on Aging and Health, Johns Hopkins Medical Institutions, Baltimore, MD, USA (2) Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA (3) Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA (4) Mailman School of Public Health, Columbia University, New York, NY, (USA)*

10:20-10:30  **ORAL COMMUNICATION 9** **GEROSCIENCE**

**CIRCULATING CELL-FREE DNA IS ASSOCIATED WITH FASTER RATES OF COGNITIVE DECLINE AND WORSENNING PHYSICAL MEASURES OVER TIME**

*L Nidadavolu1, D Feger2, A Gross2, E Oh1, J Walston1, D Bennett3, P Abadir1 (1) Johns Hopkins University, Division of Geriatric Medicine and Gerontology, Biology of Healthy Aging Program; (2) Johns Hopkins University, Center on Aging and Health; (3) Rush Alzheimer’s Disease Center, Rush University Medical Center (USA)*

10:30 – 11:00  **COFFEE BREAK**  **POSTER SESSION**
BALLROOM 1

11:00-11:20  **KEYNOTE 4**
**NUTRITION, GEROSCIENCES AND AGE RELATED DISEASES**
Roger Fielding Tufts, Boston (USA)

11:20– 11:50  **PANEL DISCUSSION 2**
**FOCUS: THE FRAILTY OUTCOMES CONSENSUS PROJECT - REACHING GLOBAL CONSENSUS ON COMMON DATA ELEMENTS AND CORE OUTCOME MEASURES FOR FRAILTY**
Moderator: John Muscedere MD FRCPC Scientific Director and CEO
Canadian Frailty Network Professor - Queen’s University, Kingston (Canada)
- The need for common data elements and core outcome measures for frailty
  Dr. Leocadio Rodriguez Manas; Hospital Universitario de Getafe (Spain)
- Preliminary results from FOCUS: The Frailty Outcomes Consensus Project
  John Muscedere Queen’s University, Kingston (Canada)

11:50-12:05  **CONFERENCE 12**
**INTERACTIONS BETWEEN DIETARY PROTEIN AND AUTOPHAGY IN AGED SKELETAL MUSCLE**
Gabriele Civiletto1, Claire Regard1, Philipp Gut1 & Jerome N. Feige1,2 - 1- Nestle Research, EPFL Innovation Park, Lausanne, Switzerland - 2- School of Life Sciences, Ecole Polytechnique Lausanne (EPFL), Lausanne, (Switzerland)

12:05-12:20  **CONFERENCE 13**
**GERAS DANCE (DANCING FOR COGNITION & EXERCISE) IMPROVES PHYSICAL PERFORMANCE IN OLDER ADULTS WITH FRAILTY**
Courtney C. Kennedy PhD1, Patricia Hewston PhD1, George Ioannidis PhD1, Bonaventure Egbejuje MD1, Genevieve Hladysz MAL2, Dafna Merom PhD3, Sharon Marr MD1, Christopher Patterson MD1, Ahmed Negm PhD1, Alexandra Papaioannou MD1,4 (1) Dept. Medicine, Division of Geriatrics, McMaster University, Hamilton, ON, Canada (2) YMCA of Hamilton/Burlington/Brantford, ON, Canada (3) University of Western Sydney, School Of Science And Health, New South Wales, Australia (4) Dept. of Health Research Methods, Evidence, and Impact (HEI), McMaster University, Hamilton, ON, (Canada)

12:20- 12:30  **ORAL COMMUNICATION 10**
**THE EFFECT OF EXERCISE ON ACTIVITIES OF DAILY LIFE AND QUALITY OF LIFE IN FRAIL OLDER ADULTS: A SYSTEMATIC REVIEW**
Evan Campbell, PhD1, Fanny Petermann-Rocha MSc2,3, Paul Welsh, PhD3, Carlos Celis-Morales, PhD2,3 and Stuart R Gray, PhD3. - 1Healthcare Improvement Scotland, NHS Scotland - 2Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK. - 3British Heart Foundation Glasgow Cardiovascular Research Centre, Institute of Cardiovascular and Medical Science, University of Glasgow, Glasgow, (UK)

12:30-2:00  **INDUSTRY LUNCH SYMPOSIUM  POSTER SESSION**

BALLROOM 2

9:00-9:10  **ORAL COMMUNICATION 11  GEROSCIENCE**
**RESPONSE TO ACUTE COLD STRESS IN HYPOTHALAMIC-PITUITARY-ADRENAL AXIS OF INTERLEUKIN 10 KNOCKOUT MICE: IMPLICATIONS FOR GENDER DIFFERENCES IN VULNERABILITY TO AGE-RELATED FRAILTY**
N Ge, The Center of Gerontology and Geriatrics, West China Hospital, Sichuan University - Guoxuexiang, Wuhou District (China)
ORAL COMMUNICATION 12 GEROSCIENCE
HOW CAN THE MICROBIOME PLAY A ROLE IN MUSCLE FUNCTIONALITY?
Anton De Spiegeleer, MD1,2,3 - Dirk Elewaut, MD, PhD3 - Nele Van Den Noortgate, MD, PhD1, Yorick Janssens,2 - Nathan Debuinne,2 - Selien Van Langenhove,2 - Sinhath Govindarajan, PhD3 - Bart De Spiegeleer, PhD2 - Evelien Wynendaele, PhD2, - (1) Department of Geriatrics, Faculty of Medicine and Health Sciences, Ghent University Hospital, C. Heymanslaan 10, 9000 Ghent, Belgium. - (2) Drug Quality and Registration (DruQuaR) group, Faculty of Pharmaceutical Sciences, Ghent University, Ottergemsesteenweg 460, 9000 Ghent, Belgium. - (3) Unit for Molecular Immunology and Inflammation, VIB-Center for Inflammation Research, Technologiepark 71, 9000 Ghent, (Belgium)

ORAL COMMUNICATION 13 GEROSCIENCE
IL-15R IS RESPONSIBLE FOR TRANSLLOCATION OF IL-15, ANABOLIC MYOKINE, ONTO THE SKELETAL MUSCLE CELL MEMBRANE WHICH IS REQUIRED FOR IL-15 SECRETION
Taku Fujimoto(a), Ken Sugimoto(a), Toshimasa Takahashi(a,b), Yukiko Yasunobe(a), Keyu Xie(a), Minoru Tanaka(a,c,d), Yuri Onishi(a), Shino Yoshida(a), Hitomi Kurinami(a), Hiroshi Akasaka(a), Hiromi Rakugi(a)  a Department of Geriatric and General Medicine, Graduate School of Medicine, Osaka University, Japan b Departments of Medicine and Physiology, University of Toronto, Canada c Department of Rehabilitation Science, Graduate School of Health Sciences, Kobe University, Japan d Department of Rehabilitation Science, Osaka Health Science University, (Japan)

ORAL COMMUNICATION 14 GEROSCIENCE
SARCOPENIA PREVENTION BY CALORIC RESTRICTION IN RHESUS MONKEYS: MOLECULAR AND FUNCTIONAL NETWORKS
Timothy W. Rhoads, Josef P. Clark, Ricki J. Colman, Rozalyn M. Anderson. University of Wisconsin Madison (USA)

ORAL COMMUNICATION 15 GEROSCIENCE
FIBER TYPE 2 ATROPHY IS ASSOCIATED WITH SARCOPENIA IN HIP FRACTURE PATIENTS
Fabiana Tanganelli 1, Lisa Baber 1, Stefanie Jarmusch 1, Fabian Hofmeister 1, Carl Neuerburg 3, Stefan Mehaffey 3, Stefan Hintze 2, Peter Meinke 2, Uta Ferrari 1, Benedikt Schoser 2, Michael Drey 1 - 1 Geriatrics, Department of General, Trauma and Reconstructive Surgery, University Hospital, LMU Munich - 2 Department of Neurology, University Hospital, LMU Munich - 3 Department of Geriatric, Trauma and Reconstructive Surgery, University Hospital, LMU Munich (Germany)

ORAL COMMUNICATION 16 GEROSCIENCE
PRECLINICAL EVALUATION OF AN ARTIFICIAL INTELLIGENCE DISCOVERED PEPTIDE NETWORK FOR MUSCLE HEALTH
Roi Cal, Heidi Davis, Alish Kerr, Ian Holey and Nora Khaldi. Nuritas, Dublin, (Ireland)

ORAL COMMUNICATION 17 GEROSCIENCE
AGE-ASSOCIATED SEM CELL EXHAUSTION PROMOTES FRAILTY
Ander Matheu1, Leire Moreno-Cugnon 1, Miren Revuelta1, Manuel Moreno-Valladares1, Alex Arrieta1 1Cellular Oncology Laboratory, Biodonostia Institute, San Sebastian, (Spain)

ORAL COMMUNICATION 18 GEROSCIENCE
CELLULAR SENESCENCE AND CHRONOLOGICAL AGE IN VARIOUS HUMAN TISSUES: A SYSTEMATIC REVIEW AND META-ANALYSIS
C.S. Tuttle1, M.E.C. Waaijer2, M.S. Slee-Valentijn3, T. Stijnen4, R.G.J. Westendorp5, A.B. Maier1,6 1. Department of Medicine and Aged Care, Royal Melbourne Hospital, University of Melbourne, Victoria, Australia. 2. Department of Gerontology and Geriatrics, Leiden University Medical Center, Leiden, the Netherlands. 3. Geriatric Rehabilitation, Cordaan, Amsterdam, the Netherlands. 4. Department of Biomedical Data Sciences, Leiden University Medical Center, Leiden, the Netherlands. 5. Department of Public Health and Centre for Healthy Ageing, University of Copenhagen, Copenhagen, Denmark. 6. Faculty of Behavioural and Movement Sciences, Department of Human Movement Sciences, Vrije Universiteit, Amsterdam Movement Sciences, Amsterdam, (the Netherlands)

ORAL COMMUNICATION 19 GEROSCIENCE
UTILIZING THE PARABIOSIS-DETACHMENT MODEL TO INVESTIGATE LASTING EFFECTS OF HETEROCHRONIC PARABIOSIS
David E. Lee, Akshay Bareja, Lauren H. Katz and James P. White Duke University Medical Center, Durham, NC, (USA)
COFFEE BREAK  POSTER SESSION

SYMPOSIUM 8
PROTEIN + EXERCISE INTERVENTIONS IN DIFFERENT POPULATIONS OF OLDER ADULTS
Moderator: Lisette de Groot - Professor Nutrition and Ageing, Wageningen University (the Netherlands)
- Effectiveness of a combined diet and resistance exercise intervention on muscle health for community-dwelling older adults: ProMuscle in Practice study
  Berber Dorhout, Wageningen University (the Netherlands)
- A combined nutrition and exercise intervention improves nutritional status and bone health of healthy Chinese middle-aged and older adults
  Inge Groenendijk, Wageningen University (the Netherlands)
- A 4-week exercise and protein prehabilitation program improves muscle mass and physical functioning in Dutch older adults
  Pol Grootswagers, Wageningen University (the Netherlands)

ORAL COMMUNICATION 20
PREVALENCE OF SARCOPENIA IN A NORTHERN SCANDINAVIAN POPULATION ACCORDING TO UPDATED EWGSOP2 THRESHOLDS FOR UPPER-BODY OR LOWER-BODY STRENGTH: THE TROMSØ STUDY
Jonas Johansson, PhD(1), Bjørn Heine Strand, PhD(3), Bente Morseth, PhD(2), Laila Hopstock, PhD(1), Sameline Grømgaard, PhD(1) - (1) Department of Community Medicine, UiT The Arctic University of Norway, Tromsø, Norway (2) School of Sport Sciences, UiT The Arctic University of Norway, Tromsø, Norway - (3) Norwegian Institute of Public Health, Oslo, (Norway)

ORAL COMMUNICATION 21
WALK SPEED AND MUSCLE MASS ESTIMATED BY THE D3-CREATINE DILUTION METHOD ARE IMPORTANT COMPONENTS OF SARCOPENIA ASSOCIATED WITH INCIDENT MOBILITY DISABILITY IN OLDER MEN: A CLASSIFICATION AND REGRESSION TREE ANALYSIS.
Jesse Zanker, MBBS, MPH(1), Terri Blackwell, MA2, Sheena Patel, MS2, Kate Duchowny, MPH, PhD(2), Sharon Brennan-Olsen, PhD1, Steven R. Cummings, MD(2,3), William J. Evans, PhD4,5, Eric S. Onwell, MD6, David Scott, PhD1,7, Sara Vogrin, MBBS, MBiostat1, Gustavo Duque, MD, PhD1, Peggy M. Cawthon, MPH, PhD(2,3) - (1)Department of Medicine-Western Health, University of Melbourne, Melbourne, Victoria, Australia; Australian Institute for Musculoskeletal Science (AIMSS), University of Melbourne and Western Health, Melbourne, Victoria, Australia. - (2)Research Institute, California Pacific Medical Center, San Francisco. - (3)Department of Epidemiology and Biostatistics, University of California, San Francisco. - (4)Department of Nutritional Sciences and Toxicology, University of California, Berkeley. - (5)Department of Medicine, Duke University, Durham, North Carolina. - (6)Department of Medicine, Oregon Health and Science University, Portland. (7)Department of Medicine, School of Clinical Sciences at Monash Health, Monash University, Clayton, Victoria, (Australia)

PREVALENCE OF LOW MUSCLE MASS, MUSCLE STRENGTH AND UPPER-BODY MUSCLE QUALITY IN COMMUNITY-LIVING OLDER ADULTS LIVING IN AUCKLAND, NEW ZEALAND
Anne N Hiol MSc1, Pamela R von Hurst, PhD1, Cathryn A Conlon, PhD1, Jamie V de Seymour PhD1, Kathryn L Beck, PhD1 (1) School of Sport, Exercise, and Nutrition, Massey University, (New Zealand)

C-REACTIVE PROTEIN AND ALBUMIN DETERMINE ACTIVITIES OF DAILY LIVING, GAIT SPEED, HANDGRIP STRENGTH AND MUSCLE MASS IN GERIATRIC REHABILITATION PATIENTS: THE RESORT STUDY
Jeanine M. Van Ancum1, Dr. Camilla S. L. Tuttle2, Dr. René Koopman3, Prof. Mirjam Pijnappels1, Dr. Carol G. M. Meskers1, A, Prof. Sanjoy K. Paul5, Prof. Wen Kwang Lim2, Dr. Esmee M. Reijnierse2, Prof. Gordon S. Lynch3, Prof. Andrea B. Maier1,2, on behalf of the RESORT Study group - 1 Department of Human Movement Sciences, Vrije Universiteit Amsterdam, Amsterdam Movement Sciences, The Netherlands. - 2 Department of Medicine and Aged Care, The Royal Melbourne Hospital, The University of Melbourne, Melbourne, Victoria, Australia. - 3 Centre for Muscle Research,
### Ballroom 1

**12:30-2:00 LUNCH BREAK POSTER SESSION**

**2:00-2:45 SYMPOSIUM 9**
**ADDRESSING THE DRIVERS OF FRAILTY: ACTIVE NUTRIENTS FOR MITOCHONDRIAL HEALTH, BIOENERGETICS AND FUNCTIONALITY**

**2:45-3:00 CONFERENCE 15**
**DEVELOPMENT OF AN IN VITRO PLATFORM TO PREDICT AND SCREEN COMBINATIONS OF ENDOGENOUS METABOLIC MODULATORS CAPABLE OF INFLUENCING MUSCLE PHYSIOLOGY**
*William Comb1, Murat Cokol1, Melanie Flaender2, Andrew Downey1, Pauline Poydenot2, Erwann Ventre2, Tony Tramontin1, Michael Hamill1*  
1 Axcella Health, Inc. Cambridge MA  2 CYTOO SA. Grenoble (France)

**3:00-3:10 ORAL COMMUNICATION 23**
**INCREASING FRAILTY SEVERITY IS ASSOCIATED WITH A STEP-WISE INCREASE IN RISK OF DELIRIUM IN OLDER UNSCHEDULED HOSPITAL ADMISSIONS**
*C Welch, University of Birmingham (UK)*

**3:10-3:20 ORAL COMMUNICATION 24**
**AN "EVOLUTIONARY ALGORITHM" TO OPTIMIZE THE CONSTRUCTION OF A FRAILTY INDEX IN A POPULATION-BASED STUDY**
*Zucchelli A1,2, Marengoni A1,2, Rizzuto D1, Calderon-Larranaga A1, Onder G3, Fratiglioni L1, Vetrano DL1,3*  
1) Aging Research Center Karolinska Institutet; Stockholm Sweden 2) Università degli Studi di Brescia; Brescia (Italy) 3) Università Cattolica del Sacro Cuore; Roma (Italy)

**3:20-3:30 ORAL COMMUNICATION 25**
**THE EFFECT OF AN E-HEALTH WEB-BASED SUPPORT PROGRAMME ON TOTAL EXERCISE AND BIOLOGICAL PARAMETER AMONG CARDIAC PATIENTS**
*Eliza ML Wong, PhD1, Doris YP Leung, PhD1 - 1 School of Nursing, the Hong Kong Polytechnic University, Hong Kong SAR, (China)*

**3:30-4:00 COFFEE BREAK POSTER SESSION**

**4:00-4:45 SYMPOSIUM 10**
**COMMUNITY-BASED PRIMARY FRAILTY PREVENTION AND ITS IMPLEMENTATION AND DISSEMINATION**
Moderators: Hidenori Arai National Center for Geriatrics and Gerontology, Minoru Yamada, Tsukuba University

- **Community-based Prevention of Frailty: Japanese experiences**
  *Hidenori Arai, National Center for Geriatrics and Gerontology, Minoru Yamada, Tsukuba University*

- **SAYGo: Community-based Peer-led Classes to Improve Falls Risk, Frailty, and Social Connection**
  *Debra L Waters, Director of Gerontology Research, University of Otago, (New Zealand)*

- **Peer-Led Multi-Domain Community Program to Reverse Frailty and Improve Cognition: HAPPY Outcomes**
  *Reshma A Merchant, National University Health System, (Singapore)*
4:45-5:30 SYMPOSIUM 11
“WHY” RATHER THAN “HOW”: A TRANS-PARADIGMATIC DISCUSSION ON THE URGENCY OF THE FRAILTY CONCEPT FOR OPTIMIZING OUTCOMES FOR OLDER ADULTS
• Susan E Howlett, PhD (1,2) Department of Pharmacology, Dalhousie University, Halifax, Nova Scotia, Canada (2) Department of Medicine / Geriatrics, Dalhousie University, Halifax, Nova Scotia, Canada
• Karen Bandeen-Roche, PhD (1), Brian Buta, MHS, Ravi Varadhan, PhD, Qian-Li Xue, PhD (1) Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA (2) Department of Medicine, Johns Hopkins School of Medicine, Baltimore, MD, USA (3) Department of Oncology, Johns Hopkins School of Medicine, Baltimore, MD, USA
• Matteo Cesari, MD, PhD (1,2), Emanuele Marzetti, MD, PhD (1) 1) Department of Clinical Science and Community Health, University of Milan, Milan, Italy (2) Geriatric Unit, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, Milan, Italy (3) IRCCS Fondazione Policlinico Universitario Agostino Gemelli, Rome, Italy

5:30-5:40 ORAL COMMUNICATION 26
AN INTRINSIC CAPACITY SCORE TO PREDICT THE MORTALITY RISK IN AN ELDERLY POPULATION OF COSTA RICA
Luis Miguel Gutiérrez-Robledo, MD, PhD, Rosa Estela García Chanes, PhD, Mario Ulises Pérez Zepeda, MD, PhD (1) Instituto Nacional de Geriatría, México

5:40-5:50 ORAL COMMUNICATION 27
THE ASSOCIATION OF FRAILTY WITH MEDICATIONS WITH HIGH ANTICHOLINERGIC BURDEN IN COMMUNITY DWELLING US OLDER VETERANS.
Sergio J. Ruiz, Victor Cevallos, Michael J. Mintzer, and Jorge G. Ruiz. 1 Miami VAH S GRECC 2 Dept. of Medicine, U of Miami Miller School of Medicine (USA)

BALLROOM 2

2:00-2:45 SYMPOSIUM 12
MEDIATORS OF MUSCLE LOSS
Moderator: J Gunton University of Sydney (Australia)
• Receptor activator of NF-B ligand (RANKL) inhibitors for sarcopaenia
Nicolas Bonnet 1-3 - 1 Division of Bone Diseases, Department of Internal Medicine Specialties, Geneva University Hospital & Faculty of Medicine, Geneva, Switzerland - 2 Biomedical Sciences Research Center “Alexander Fleming,” Athens, Greece - 3 Department of Biotechnology, Agricultural University of Athens, Athens, Greece
• The role of vitamin D in skeletal myocytes
Jenny Gunton 1-3 - 1 Department of Diabetes and Endocrinology, Westmead Hospital, Westmead, Sydney, Australia. 2. Faculty of Health and Medicine, The University of Sydney, Sydney, Australia. 3. The Westmead Institute for Medical Research, The University of Sydney, Australia
• Activin inhibitors for the treatment of sarcopenia
Paul Gregorevic 1-4 - 1. Baker Heart and Diabetes Institute, Melbourne, VIC, Australia - 2. Department of Physiology, Centre for Muscle Research, The University of Melbourne, Melbourne, VIC, Australia 3. Department of Neurology, University of Washington School of Medicine, Seattle, WA - 4. Department of Biochemistry and Molecular Biology, Monash University, Clayton, VIC, Australia

2:45-3:00 CONFERENCE 16
SARCOPENIA OVER THE COURSE OF HOSPITALISATION – THE PREDICTIVE VALUE OF MUSCLE MEASURES IN THREE COHORTS INCLUDING MORE THAN 1,500 OLDER ADULTS
E Reijnierse. The University of Melbourne, Parkville Victoria (Australia)
3:00-3:10
**ORAL COMMUNICATION 28**

**DIETARY INFLAMMATORY INDEX AND DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS**

Kathleen Wooff1, PhD, RD, FACS; Mary Kiely 2, DNP, ANP-BC; Yusuf Yazici2, MD (1) New York University (NYU) teinhardt, Department of Nutrition and Food Studies (2) NYU Langone Health, Division of Rheumatology (USA)

3:10 -3:20
**ORAL COMMUNICATION 29**

**CLINICAL DETERMINANTS OF RESTING METABOLIC RATE IN GERIATRIC OUTPATIENTS**

Suey S.Y. Yeung1,2, Esmee M. Reijnierse2, Marijke C. Trappeenburg3,4, Carel G.M. Meskers 5, Andrea B. Maier1,2 (1) Department of Human Movement Sciences, Faculty of Behavioural and Movement Sciences, Amsterdam Movement Sciences, Vrije Universiteit, Amsterdam, The Netherlands. (2) Department of Medicine and Aged Care, The Royal Melbourne Hospital, The University of Melbourne, Victoria, Australia.(3) Department of Internal Medicine, Section of Gerontology and Geriatrics, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands. (4) Department of Internal Medicine, Amstellaand Hospital, Amstelveen, The Netherlands; (5) Department of Rehabilitation Medicine, Amsterdam UMC, Vrije Universiteit, Amsterdam, (The Netherlands)

3:20-3:30
**ORAL COMMUNICATION 30**

**THE EFFECT OF OLIGONOL ON MUSCLE HEALTH: A DOUBLE-BLIND RANDOMIZED CONTROL TRIAL**

Li-Ning Peng1,2,3, Ming-Hsien Lin MD1,2,3, Liang-Kung Chen MD, PhD1,2,3 1Center for Geriatrics and Gerontology, Taipei Veterans General Hospital, Shih-Pai Rd, Taipei, Taiwan. 2Aging and Health Research Center, National Yang Ming University, Linong St, Taipei, Taiwan. 3Department of Geriatric Medicine, National Yang Ming University School of Medicine, , Linong St, Taipei, , (Taiwan)

3:30-4:00
**COFFEE BREAK**

4:00-4:15
**CONFERENCE 17**

**FRAILTY AND ALL-CAUSE MORTALITY IN 0.5 MILLION CHINESE ADULTS**

Junning Fan, PhD candidate1, Canqing Yu, PhD1, Dianjianyi Sun, PhD1, Yu Guo, MSc2, Zheng Bian, MSc2, Ling Yang, PhD3,4, Yiping Chen, PhD3, 4, Huaidong Du, PhD 3,4, Junshi Chen, MD5, Zhengming Chen, DPhil4, Liming Li, MPH1, Jun Lv*, PhD1,6,7 - (1) Department of Epidemiology and Biostatistics, School of Public Health, Peking University Health Science Center, Beijing, China - (2) Chinese Academy of Medical Sciences, Beijing, China (3) Medical Research Council Population Health Research Unit at the University of Oxford, Oxford, United Kingdom - (4) Clinical Trial Service Unit & Epidemiological Studies Unit (CTSU), Nuffield Department of Population Health, University of Oxford, United Kingdom (5) China National Center for Food Safety Risk Assessment, Beijing, China - (6) Key Laboratory of Molecular Cardiovascular Sciences (Peking University), Ministry of Education, Beijing, China (7) Peking University Institute of Environmental Medicine, Beijing, (China)

4:15-4:25
**ORAL COMMUNICATION 31**

**SARCOPENIA AND HEALTH-RELATED OUTCOMES: AN UMBRELLA REVIEW OF OBSERVATIONAL STUDIES**

Nicola Veronese (1), Jacopo Demurtas (2), Pinar Soysal (3), Lee Smith (4), Gabriel Torbahn (5), Daniel Schoene (6), Lukas Schwingshackl (7), Matteo Cesari (8), Stefania Maggi (1) - 1 National Research Council, Neuroscience Institute, Aging Branch, Padova, Italy. - 2 Primary Care Department Azienda USL Toscana Sud Est, 58100 Grosseto, Italy. - 3 Department of Geriatric Medicine, Bezmialem Vakif University, Istanbul, Turkey. - 4 The Cambridge Centre for Sport and Exercise Sciences, Anglia Ruskin University, Cambridge CB1 1PT, UK. 5 Institute for Biomedicine of Aging, Friedrich Alexander University Erlangen-Nürnberg, Nuremberg, Germany. 6 Institute of Medical Physics, Friedrich-Alexander University Erlangen-Nürnberg, Erlangen, Germany. - 7 Institute for Evidence in Medicine (for Cochrane Germany Foundation), Medical Center-University of Freiburg, Freiburg, Germany - 8 Geriatric Unit, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Milan, (Italy)
4:25-4:35  **ORAL COMMUNICATION 32**
IS SENSORY LOSS A RISK FACTOR FOR FRAILTY? A SYSTEMATIC REVIEW AND META-ANALYSIS
Benjamin Kye Jyn Tan,1* Ryan Eyn Kidd Man,2,3* Alfred Tau Liang Gan,2 Eva K. Fenwick,2,3 Preeti Gupta,2 Varshini Varadaraj,4,5 Bonnielin K. Swenor,4,5 Tien Yin Wong,1,2,3 Ecosse Luc Lamoureux1,2,3 - 1. Yong Loo Lin School of Medicine, National University of Singapore, Singapore - 2. Singapore Eye Research Institute, Singapore National Eye Centre, Singapore - 3. Duke-NUS Medical School, Singapore - 4. The Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA - 5. Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

4:35-4:45  **ORAL COMMUNICATION 33**
SOCIOECONOMIC DISPARITIES IN FRAILTY: A 14 YEAR LONGITUDINAL COHORT STUDY
Ruby Yu, Cecilia Tong, Jason Leung, Jean Woo - Jockey Club Institute of Ageing, The Chinese University of (Hong Kong)

4:45-4:55  **ORAL COMMUNICATION 34**
ARE OLDER ADULTS AT GREATER RISK OF THE ADVERSE MUSCULOSKELETAL CONSEQUENCES OF PHYSICAL INACTIVITY?
Juliette A. Norman, University of Liverpool (UK)

4:55-5:05  **ORAL COMMUNICATION 35**
BLOOD METABOLOMIC PROFILE ADAPTATION FOLLOWING 12-WEEK OF HIIT TRAINING COMBINED WITH CITRULLINE SUPPLEMENTATION IN OLDER ADULTS
Layale Youcef 1, Sylvère Durand (PhD) 2,3, Fanny Aprahamian 2,3, Deborah Lefevre 2,3, Eva Peyrusqué 1,4, Guido Kroemer (MD PhD) 2,3, Mylène Aubertin-Leheudre (PhD) 4, Philippe Noirez (PhD)1,4 - 1 INSERM U1124, Université de Paris, Paris, France - 2 INSERM U1138, Centre de Recherche des Cordeliers, Sorbonne Université, Université de Paris, Paris, France - 3 Metabolomics and Cell Biology Platforms, Gustave Roussy Cancer Campus, AMMICa US23/CNRS UMS3655, Villejuif, France 4 Department of Exercise Science, Université du Québec à Montréal, Montréal, (Canada)

5:05-6:00  **POSTER SESSION**
8:00-9:00  
**POSTER SESSION**

**BALLROOM 1**

9:00-9:45  
**SYMPOSIUM 13**  
MUSCLE mass WITH THE D3-CREATINE DILUTION METHOD: PRACTICAL ASPECTS OF IMPLEMENTATION AND DATA ON THE RELATIONSHIP OF MUSCLE mass WITH HEALTH-RELATED OUTCOMES IN OLD MEN  
Moderator: Luigi Ferrucci, MD, National Institute on Aging (USA)  
- **Methodology** - Description of pre-clinical and clinical validation studies. How to employ the method into clinical trials including large cohort studies and randomized, controlled trials  
  William J. Evans, University of California, Berkeley (USA)  
- **D3Cr muscle mass and assessment skeletal muscle quality. Is Sarcopenic Obesity an anachronistic term?**  
  Ric Orwoll Oregon Health Science University (USA)  
- **Muscle mass as a powerful risk factor for health-related outcomes in older people.**  
  Peggy Cawthon California Pacific Medical Center (USA)

9:45-10:05  
**KEYNOTE 5**  
DEVELOPING A NORMATIVE APPROACH FOR THE ASSESSMENT OF MOBILITY USING DIGITAL BIO MARKERS IN SARCOPENIA AND FRAILTY RESEARCH: THE MOBILISE-D IMI PROJECT  
Clemens Becker, Hospital Bosch Sttutgart (Germany)

10:05-10:20  
**CONFERENCE 18**  
VALIDATION OF THE WHO ICOPE SCREENING TOOL IN CHINA: A PILOT STUDY  
Lina Ma, Jagadish K. Chhetri, Tong Ji, Yaxin Zhang, Yun Li, Piu Chan - Department of Geriatrics, Xuanwu Hospital, Capital Medical University, China National Clinical Research Center for Geriatric Medicine, Beijing, (China)

10:20-10:30  
**ORAL COMMUNICATION 36**  
ANGIOTENSIN SYSTEM AND THE INTERSECTION OF FRAILTY AND ALZHEIMER'S DISEASE  
P Abadir, D Bennett2, J Walston1 - (1) Johns Hopkins University, Division of Geriatric Medicine and Gerontology, Biology of Healthy Aging Program; (2) Rush Alzheimer’s Disease Center, Rush University Medical Center (USA)

10:30-11:00  
**COFFEE BREAK**  
**POSTER SESSION**

**BALLROOM 1**

11:00-11:45  
**SYMPOSIUM 14**  
ASSESSMENT OF QUALITY OF LIFE IN SARCOPENIA: FROM CLINICAL TRIALS TO DAILY PRACTICE  
Moderators: Islene Araujo de Carvalho (Switzerland), Jean-Yves Reginster (Belgium)  
- **Importance of Patients Related Outcomes Measures (PROMs) as primary endpoints for the development of medications aimed at the treatment of diseases related to musculoskeletal aging**  
  Francesca Cerreta (TBC)  
- **Assessment of quality of life with the SarQol questionnaire: Where do we stand?**  
  Charlotte Beaudart (Belgium)  
- **Discussion - conclusion**  
  Olivier Bruyère (Belgium)

11:45-12:15  
**PANEL DISCUSSION 3**  
MUSCLE mass IS NOW PART OF THE DEFINITIONS OF SARCOPENIA  
Alfonso Cruz Jentoft (EWGSOP) Hidenori Arai, Liang-Kun Chen, Jean Woo (Asian AWGS)  
Roger Fielding, Peggy Cawthon (USA)  
Muscle mass and malnutrition - Muscle mass and sarcopenia - Muscle mass and cachexia
**Conference 19**

EWGSOP1 versus EWGSOP2: WHAT IS THE IMPACT ON PREVALENCE AND HEALTH OUTCOMES?

Fanny Petermann-Rocha, MSc1,2, Frederick K Ho, PhD1, Stuart R Gray, PhD2, Jill P Pell MD, PhD1 and Carlos Celis-Morales PhD2 - Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK. - 2British Heart Foundation Glasgow Cardiovascular Research Centre, Institute of Cardiovascular and Medical Science, University of Glasgow, Glasgow, (UK)

**Ballroom 2**

**Conference 20**

DYNAPEenia and frailty in disabled older women living in the community: Important differences in risk of incident adverse health outcomes

Paulo H. M. Chaves, MD, PhD (1), Qian-Li Xue, PhD (2), Leocadio Rodríguez Mañas, MD, PhD (3), Karen Bandeen-Roche, PhD (4). - (1) Benjamin Leon Center for Geriatric Research and Education, Herbert Wertheim College of Medicine, Florida International University, Miami, FL, USA. (2) Center on Aging and Health, Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine, Baltimore, MD, USA. (3) Department of Geriatrics, Hospital Universitario de Getafe, Getafe, Spain. (4) Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, (USA)

**Conference 21**

Development and validation of a hospital electronic record frailty index (HERFI) using machine learning techniques

J Mytton BSc 1 GV Gkoutos PhD 1, C Ferro MD, TA Jackson PhD 1, T Alexander 1, (1) University Hospitals Birmingham NHS Trust, UK (2) Centre for Computational Biology, University of Birmingham, UK - (3) Institute of Inflammation and Ageing, University of Birmingham, (UK)

**Conference 22**

Air pollution and frailty among patients with end-stage kidney disease (ESKD)

Miranda R. Jones (1), Yijing Feng (2), Nadia Chu (1,2), Jeremy Walston (3) Dorry Segev (1,2), Mara McAdams-DeMarco (1, 2), (1) Department of Epidemiology, Johns Hopkins School of Public Health, Baltimore, MD. - (2) Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, MD. - (3) Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD. (USA)

**Oral Communication 37**

Preliminary estimation of residual working capacities criteria for preventing frailty and sarcopenia in the elderly persons

Tomarevska Olena, Poliakov Oleksandr, Bezrukov Vladyslav Institute of Gerontology by D.F. Chebotarev of National Academy of Medical Sciences of (Ukraine)

**Conference 23**

Muscle Mitochondria functional adaptation during habituation to eccentric versus concentric exercise training

Craig RG Willis (1), Colleen S Deane (1), Daniel J Wilkinson (2), Kenneth Smith (2), Bethan E Phillips (2), Philip J Atherton (2), Timothy Etheridge (1). - (1) Department of Sport and Health Sciences, University of Exeter, UK. - (2) MRC-ARUK Centre for Musculoskeletal Ageing Research and National Institute of Health Research, University of Nottingham, (UK)

**Oral Communication 38**

Frailty index, hospital admission and length of hospital stay in nursing home residents: results from the INCUR study

Simó Nadine1, MD, Cesari Matteo2,3, MD, PhD, Tchiero Huidi4, MD, Yves Rolland5, MD, PhD, Artigues Jean-François7, MD, PhD, Vellas Bruno5, MD, PhD and Tabue-Teguo Maturin1,6, MD, PhD. - 1CHU de Guadeloupe, Université des Antilles, Guadeloupe, France - 2Geriatric Unit, Fondazione IRCCS Cà’ Granda Ospedale Maggiore Policlinico, Milano, Italy
10:20-10:30  ORAL COMMUNICATION 39
SOCIAL VULNERABILITY AND LIFESTYLE BEHAVIORS, THEIR IMPACT ON FRAILTY: RESULTS OF THE CANADIAN LONGITUDINAL STUDY ON AGING
Ulises Perez-Zepeda, Olga Theou, Kenneth Rockwood, Melissa Andrew, Andrea Mayo, Judith Godin, Scott Kehler
Dalhousie University, Halifax Nova Scotia (Canada)

10:30-11:00  COFFEE BREAK  POSTER SESSION

11:00-11:15  CONFERENCE 24
POTENTIAL OF CREATINE SUPPLEMENTATION AS A NUTRITIONAL INTERVENTION FOR AGING MUSCULOSKELETAL HEALTH
Darren Candow, PhD, CSEP-CEP, Director of Aging Muscle and Bone Health Laboratory Regina Saskatchewan (Canada)

11:15-11:30  CONFERENCE 25
CAN WHEY-PROTEIN PLUS VITAMIN D SUPPLEMENTATION ENHANCE THE EFFECTS OF PROGRESSIVE RESISTANCE TRAINING ON MUSCLE HEALTH, GLYCAEMIC CONTROL, COGNITIVE FUNCTION AND RELATED RISK FACTORS IN OLDER ADULTS WITH TYPE 2 DIABETES? A 6-MONTH RANDOMIZED CONTROLLED TRIAL
Eliza Miller, PhD1 David W. Dunstan, PhD2 Deborah A. Kerr, PhD3 David Menzies, B.Ed4 Caryl A. Nowson, PhD1 Helen Macpherson, PhD1 Robin M. Daly, PhD1 (1) Institute for Physical Activity and Nutrition, Deakin University, Melbourne, VIC, Australia (2) Baker IDI Heart and Diabetes Institute, Melbourne, VIC, Australia (3) School of Public Health, Curtin University, Perth, WA, Australia (4) South Eastern Melbourne PHN, Melbourne, VIC (Australia)

11:30-11:45  CONFERENCE 26
THE EFFECT OF VITAMIN D SUPPLEMENTATION ON LOWER EXTREMITY POWER, STRENGTH AND PHYSICAL PERFORMANCE IN OLDER ADULTS: A RANDOMIZED CONTROLLED TRIAL
Denise K. Houston, PhD1, Anthony P. Marsh, PhD2, Rebecca H. Neiberg, MS1, Jamehl L. Demons, MD1, Claudia L. Campos, MD1, Osvaldo Delbono, PhD1, Stephen B. Kritchevsky, PhD1, Janet A. Tooze, PhD1 (1) Wake Forest School of Medicine, Winston Salem, NC, USA (2) Wake Forest University, Winston Salem, NC, (USA)

11:45-12:05  ORAL COMMUNICATION 40
HIGH VERSUS LOW DIETARY PROTEIN INTAKE AND BONE HEALTH IN OLDER ADULTS: A SYSTEMATIC REVIEW AND META-ANALYSIS
Inge Groenendijk (1), Laura den Boeft (1), Luc J.C. van Loon (2), Lisette C.P.G.M.de Groot (1) - (1) Division of Human Nutrition and Health, Wageningen University & Research, Wageningen, the Netherlands - (2) Department of Human Biology, NUTRIM School of Nutrition and Translational Research in Metabolism, Maastricht University Medical Centre+, Universiteitssingel Maastricht, (the Netherlands)

12:05-12:15  ORAL COMMUNICATION 41
THE LOW- GRADE INTESTINAL INFLAMMATION POTENTIATES SARCOPENIA IN OLD ADULTS THAT CAN BE RESTRAINED BY A PROBIOTIC: STREPTOCOCCUS THERMOPHILUS CNRZ160.
Isabelle Savary-Auzeloux, PhD1, Marianne Jarzaguert RT1, Jéremie David RT1, Carole Migné RT1, Marcela De Azevedo PhD2, Jean-Marc Chatel PhD 2, Dominique Dardevet PhD1. - 1-Université Clermont Auvergne, INRA, UNH, Unité de Nutrition Humaine, CRNH Auvergne, F-63000 - 2- Micalis, INRA, AgroParisTech, Université Paris Saclay, Jouy en Josas, (France)

12:05-12:15  ORAL COMMUNICATION 42
LEVELS OF FRAILTY AMONG PEOPLE WITH OSTEOARTHRITIS
Olga Theou PhD1,2, Mario Ulises Pérez Zepeda MD, PhD2, D Scott Kehler PhD1, Rebecca Moyer PhD1, Cheryl Kozey
**ORAL COMMUNICATION 43**
MALNUTRITION AS A STRONG PREDICTOR OF THE ONSET OF SARCOPENIA
Charlotte Beaudart¹, Dolores Sanchez-Rodriguez¹,²*, Méda Locquet¹*, Jean-Yves Regnier¹,³, Laetitia Lengelé¹, Olivier Bruyère¹ - 1 WHO Collaborating Centre for Public Health Aspects of Musculoskeletal Health and Aging, Division of Public Health, Epidemiology and Health Economics, University of Liège, Liège, (Belgium) - 2 Geriatrics Department, Parc Salut Mar. Rehabilitation Research Group, Hospital Del Mar Medical Research Institute (IMIM), Barcelona, Spain 3 Prince Mutaib Chair for Biomarkers of Osteoporosis, Biochemistry Department, College of Science, King Saud University, Riyadh, (Kingdom of Saudi Arabia)

**BALLROOM 1**

**2:00-2:45**
**SYMPOSIUM 15**
EVIDENCE AND POSITION STATEMENTS FROM THE SARCOPENIA DEFINITIONS AND OUTCOME CONSORTIUM (SDOC)
Moderator: Roger Fielding (USA)
- Evidence for deriving cutpoints for defining sarcopenia
  Todd Manini (USA)
- Evidence for performance of potential sarcopenia variables predicting outcomes
  Peggy Cawthon (USA)
- SDOC Position Statements: process and conclusions
  Shalender Bhasin (USA)

**2:45-3:00**
**CONFERENCE 27**
BIOCHEMICAL AND NEUROIMAGING MARKERS AS PREDICTORS OF INCIDENT FRAILTY IN THE ELDERLY: A SECONDARY ANALYSIS OF THE MAPT STUDY
Wan-Hsuuan Lu, MS¹, Philippe de Souto Barreto, PhD¹,², Yves Rolland, MD, PhD¹,², Kelly Virecoulon Giudici, PhD¹, Bruno Vellas, MD, PhD¹,² and the MAPT/DSA Group - (1) Gerontopole of Toulouse, Institute of Ageing, Toulouse University Hospital (CHU Toulouse), 31000 Toulouse, France (2) UPS/Inserm UMR1027, University of Toulouse III, 31000 Toulouse, (France)

**3:00-3:10**
**ORAL COMMUNICATION 44**
PROSPECTIVE VALIDATION OF OUR NEW SELECTION CRITERIA CONSIDERING BODY COMPOSITIONS WITH PERIOPERATIVE NUTRITION AND REHABILITATION IN LIVING DONOR LIVER TRANSPLANTATION
Toshimi Kaido MD, PhD¹,², Yuhei Hamaguchi, MD, PhD², Shinji Uemoto, MD, PhD² - (1) Department of Gastroenterological Surgery, Saint Luke’s International University and Hospital, Tokyo, Japan (2) Department of Hepato-Biliary-Pancreatic Surgery and Transplantation, Kyoto University, Kyoto, Japan

**3:10-3:20**
**ORAL COMMUNICATION 45**
A NOVEL ORAL NUTRITIONAL SUPPLEMENT IMPROVES GAIT SPEED AND OXIDATIVE PHOSPHORYLATION IN DUTCH OLDER ADULTS WITH (RISK OF) UNDERNUTRITION
P Grootswagers¹, ETHC Smeets¹, AB Oteng¹, CPMG de Groot¹ - 1Department of Human Nutrition and Health, Wageningen University, Wageningen, (The Netherlands)

**3:20-3:30**
**ORAL COMMUNICATION 46**
The Effect of Ageing on Skeletal Muscle as Assessed by Quantitative MR Imaging: An Association with Frailty and Muscle Strength
Matt Farrow (1,2). John Biglands (2,3). Steven Tanner (2,3). Andy Clegg (4). Lesley Brown (4). Paul Emery (1,2). Ai Lyn Tan (1,2). - 1 Leeds Institute of Rheumatic and Musculoskeletal Medicine, Chapel Allerton Hospital, University of Leeds, United Kingdom, 2 NIHR Leeds Biomedical Research Centre, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom, 3Medical Physics and Engineering, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom. 4Academic Unit of Elderly Care and Rehabilitation, University of Leeds, Bradford (UK)
3:30-3:40  ORAL COMMUNICATION 47
ADVERSE MUSCLE COMPOSITION WITHIN OBESITY IS ASSOCIATED WITH LOW FUNCTIONAL PERFORMANCE AND INCREASED COMORBIDITY – RESULTS FROM THE LARGE UK BIOBANK IMAGING STUDY
Jennifer Linge, MSc1,2, Olof Dahlqvist Leinhard, PhD1,2,3 - (1) AMRA Medical, Linköping, Sweden; (2) Department of Medical and Health Sciences, Linköping University, Sweden; (3) Center for Medical Image Science and Visualization (CMIV), Linköping University, Sweden

3:40-3:50  ORAL COMMUNICATION 48
BUILDING A MEASURE OF PHENOTYPIC AGE USING MULTI-DOMAIN PREDICTORS: A 18-YEAR LONGITUDINAL POPULATION BASED STUDY
Davide L. Vetrano (1,2), Jérôme Salignon (3,4), Debora Rizzuto (1), Amaia Calderon-Larrañaga (1), Alberto Zucchelli (5), Christian G. Riedel (3,4), Laura Fratiglioni (1,6) - (1) Aging Research Center, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden (2) Centro di Medicina dell’Invecchiamento, IRCCS Fondazione Policlinico ”A. Gemelli” and Catholic University of Rome, Italy (3) Department of Biosciences and Nutrition, Karolinska Institutet, Huddinge, Sweden (4) Integrated Cardio Metabolic Centre (ICMC), Department of Medicine, Karolinska Institute, Huddinge, Sweden (5) Department of Clinical and Experimental Sciences, University of Brescia (6) Stockholm Gerontology Research Center, 11330, Stockholm, (Sweden)

3:50-5:00  POSTER SESSION

BALLROOM 2

2:00-4:00  LATE BREAKING NEWS