



COLUMBIA UNIVERSITY

*College of Physicians
and Surgeons*

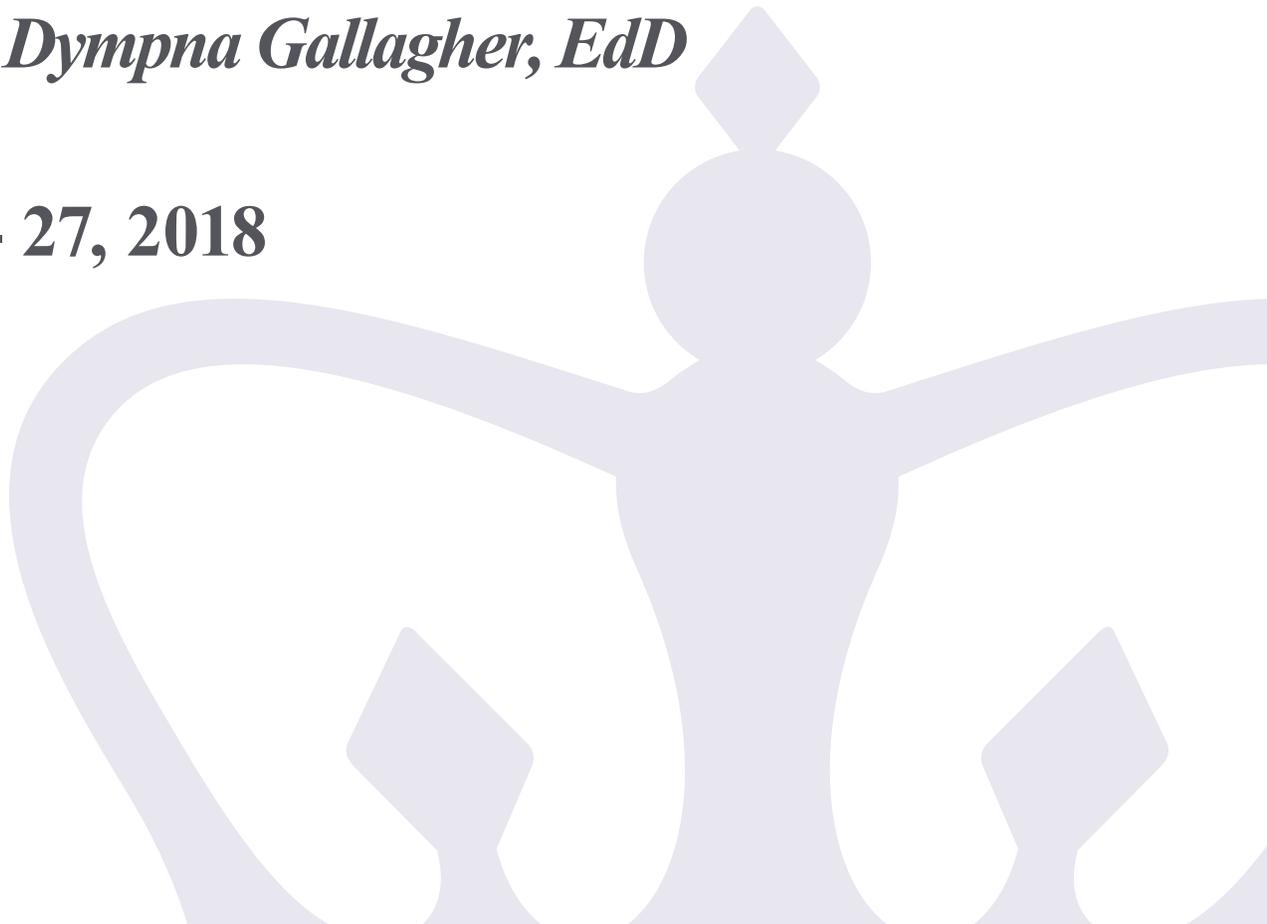
 **NewYork-Presbyterian**

 COLUMBIA | NYONRC
New York Obesity Nutrition Research Center

***11th International Symposium on
In Vivo Body Composition Studies
Body Composition Analysis (Structural, Functional,
Kinetic): Technologies and Models for Biomedical
Research and Clinical Application***

Hosted by Dympna Gallagher, EdD

June 25 - 27, 2018



11th International Symposium on In Vivo Body Composition Studies

**Body Composition Analysis (Structural, Functional, Kinetic): Technologies and
Models for Biomedical Research and Clinical Application**

Hosted by Dympna Gallagher, Ed.D.

June 25 - 27, 2018

Program Description & Objectives

The event would allow the learner to acquire an understanding of how current capabilities in human phenotyping can be used for the following: population studies relating to adiposity/fatness; interpreting body mass index based reference data bases; defining adiposity and fat distribution cut-off values; body composition in clinical applications (sarcopenia, cachexia, obesity, diabetes, electrolyte and fluid disturbances, weight loss); body composition in nutrition research; body composition in the evaluation of physical performance and exercise; body composition in human biology across lifecourse. The program is designed for physicians, clinicians, public health professionals (eg, registered dietitians), postdoctoral fellows, students and researchers with an interest in acquiring a more thorough understanding of measurement of body composition, limitations of currently available measurement methods, clinical implications of specific body composition phenotypes, and gaps in knowledge.

At the conclusion of this activity, participants will be better able to:

- Demonstrate a working knowledge of methods used to assess body composition and the strengths and limitations of each.
- Demonstrate an understanding of the use of body composition when monitoring change in patient outcomes in order to help patients improve their health. This will be achieved through active learning that requires the practitioner to integrate the experience with knowledge mastered during the course.

Accreditation Statement

The College of Physicians and Surgeons of Columbia University is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA Credit Designation Statement

The College of Physicians and Surgeons designates this live activity for a maximum of 15.0 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Acknowledgments

This activity is supported by independent educational grants from:

Mead Johnson & Company, LLC
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Exhibits

We would like to thank our exhibitors:

AMRA Medical
Bodystat

COSMED
EchoMRI

InBody USA
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Course Director

Dympna Gallagher Ed.D., *Professor of Nutritional Medicine (in Medicine in the Institute of Human Nutrition), Columbia University Irving Medical Center, New York, New York, USA*

Columbia University Faculty

Rudolph L. Leibel, M.D., *Christopher J. Murphy Memorial Professor of Diabetes Research and Professor of Pediatrics and Medicine; Co-Director, Naomi Berrie Diabetes Center; Head, Division of Molecular Genetics at CUMC, New York, NY, USA*

Xavier Pi-Sunyer, M.D., M.P.H., *Professor of Medicine at CUMC, New York, NY, USA*

Wei Shen M.D., M.P.H., *Assistant Professor of Nutritional Pediatrics (in Pediatrics and the Institute of Human Nutrition) at CUMC, New York, NY, USA*

Guest Faculty

Anja Bosy-Westphal, M.D., Ph.D., *Professor in Human Nutrition, Christian-Albrechts-Universität zu Kiel, Institut für Humanernährung, Kiel, Germany*

Sochung Chung, M.D., Ph.D., *Professor, Department of Pediatrics, Konkuk University School of Medicine, Seoul, South Korea*

Lance E. Davidson, Ph.D., *Assistant Professor, Department of Exercise Sciences, Brigham Young University, Provo, Utah, USA*

Abdul Dulloo, Ph.D., *Professor, Department of Medicine, Division of Physiology, University of Fribourg, Fribourg, Switzerland*

Carrie P. Earthman, Ph.D., R.D., *Professor, Nutrition, University of Minnesota, St. Paul, Minnesota, USA*

Elisabet K. Forsum, Ph.D., *Professor Emeritus, Department of Clinical and Experimental Medicine (IKE)/Division of Surgery, Orthopedics and Oncology (KOO), Linköping University, Linköping, Sweden*

Steven Heymsfield, M.D., *Professor, Metabolism & Body Composition Department, Pennington Biomedical Research Center, Baton Rouge, LA, USA*

Sai Krupa Das, Ph.D., *Assistant Professor, Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy, Tufts University, Boston, Massachusetts, USA*

Manfred Müller, M.D., *Professor, Christian-Albrechts-Universität zu Kiel, Institut für Humanernährung, Kiel, Germany*

Tim Nagy, Ph.D., *Professor and Interim Director, Department of Nutrition Sciences and the Nutrition Obesity Research Center, University of Alabama Birmingham, Birmingham, Alabama, USA*

Leanne M. Redman, Ph.D., *LPFA Endowed Fellowship; Associate Professor, Reproductive Endocrinology & Women's Health, Pennington Biomedical Research Center, Baton Rouge, LA, USA*

John Shepherd, Ph.D., *Professor, University of Hawaii (Manoa), Honolulu, Hawaii, USA*

Analiza Silva, Ph.D. *Professor, University of Lisbon, Lisbon, Portugal*

Diana M. Thomas, Ph.D., *Professor, Department of Mathematical Sciences, United States Military Academy, West Point, New York, USA*

Leigh C. Ward, Ph.D. RNUTR FNSA, *Honorary Reader in Metabolic Biochemistry, School of Chemistry and Molecular Biosciences, The University of Queensland, Brisbane, Australia*

Disclosure

Before the program, all faculty will disclose the existence of any financial interest and/or other relationship(s) (e.g. employee, consultant, speaker's bureau, grant recipient, research support, stock ownership or any other special relationship) they might have with a) the manufacturer(s) of any commercial product(s) to be discussed during their presentation and/or b) any commercial contributor to this activity. When unlabeled uses are discussed, these will also be indicated.

Alexia Alford, Ph.D.

None

Angela Andreoli, Ph.D.

None

Luiz Antonio dos Anjos, M.D., Ph.D.

None

Maxine Ashby-Thompson, MPH

None

Magnus Borga, Ph.D.*

*Salary & Ownership Interest
AMRA Medical AB*

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*Consulting Fees
SECA GmbH*

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*Loaner bioimpedance device
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South Africa Yogurt Initiative
Grants Evaluation Panel
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*Receipt of Intellectual Property
Rights/Patent Holder
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Diana M. Thomas Ph.D.*

None

Dale R. Wagner, Ph.D.

None

Leigh C. Ward Ph.D. RNUTR FNSA

*Royalty & Consulting Fees
ImpediMed Ltd*

Elizabeth M. Widen, Ph.D.

None

**Aidan J. Woodward, BPharm,
MBBS, FRACP**

None

* indicates that the speaker intends to discuss unlabeled uses of a commercial product, or an investigational use of a product not yet approved for this purpose. The speaker will disclose this information during his/her presentation.

Monday, June 25, 2018

3:30 p.m. *Registration in the Vagelos Education Center Lobby*

4:30 p.m. Welcome and Introduction

Auditorium

Dympna Gallagher, Ed.D. & Xavier Pi-Sunyer, M.D., M.P.H. (USA)

Body Composition Analysis in Energy Homeostasis

Moderator: Rudolph L. Leibel, M.D. (USA)

Auditorium

5:00 p.m. Advances in Structure-Function Organ System Energy Expenditure Models
Steven Heymsfield, M.D. (USA)

5:30 p.m. Can 3D Body Shape Image Measurements Predict Body Composition?
A Machine Learning Approach
Diana M. Thomas, Ph.D. (USA)

6:00 p.m. Body Composition and its Role in the Control of Energy Intake
Abdul Dulloo, Ph.D. (Switzerland)

6:30 p.m. Body Composition Changes in the Human Calorie Restriction Trial
Sai Krupa Das, Ph.D. (USA)

7:00 p.m. Q&A

7:30 p.m. *Reception*

Tuesday, June 26, 2018

8:00 a.m. *Registration & Continental Breakfast in the Vagelos Education Center Lobby*

Body Composition Analysis: Functional, Genomic and Translational

Moderator: Dympna Gallagher, Ed.D. (USA)

Auditorium

8:15 a.m. Body Composition-Related Functions: A Problem-Oriented Approach to Phenotyping
Manfred Müller, M.D. (Germany)

8:45 a.m. Translating Body Composition Related Findings in Rodents to Humans
Tim Nagy, Ph.D. (USA)

9:15 a.m. Genetic/Genomics Defining Molecular Mechanisms-Relation to Body Composition
Rudolph L. Leibel, M.D. (USA)

9:45 a.m. Structural and Functional Body Components in Athletic Health and Performance Phenotypes
Analiza Silva, Ph.D. (Portugal)

10:15 a.m. Q&A

10:30 a.m. *Refreshment Break*

Concurrent Oral Sessions

Session I Moderator: Elizabeth M. Widen, Ph.D. (USA)

Auditorium

11:00 a.m. Comparison of an iPad Application and 3D Body Scanner to the Bod Pod for
Measurement of Body Fat Percentage
Dale R. Wagner, Ph.D. (USA)

11:15 a.m. Predicting Internal Body Composition Distribution from External 3D Body Shape
Bennett K. Ng (USA)

11:30 a.m. Improved Body Surface Area Prediction Equations Using a 3-Dimensional Photonic Scan
Maxine Ashby-Thompson, MPH (USA)

11:45 a.m. Q&A

Session II Moderator: Lance E. Davidson, Ph.D. (USA)

Classrooms 404 and 405

11:00 a.m. Understanding Body Composition Using Stable Isotopes in Low-Middle Income Countries:
The Work of the IAEA
Alexia Alford, Ph.D. (Austria)

Tuesday, June 26, 2018 *(Continued)*

- 11:15 a.m. The Relationship between Organ-Tissue of Body Composition and Resting Energy Expenditure in Prepubertal Children
Taishi Midorikawa, Ph.D. (Japan)
- 11:30 a.m. Energy Cost of Fat Mass is Elevated in Severe Obesity
Stan Heshka, Ph.D. (USA)
- 11:45 a.m. Q&A
- 12:00 p.m. *Lunch & Expert Led Poster Sessions I, II & III in Room 401*

Body Composition: Metabolic Disease

Moderator: Joseph Kehayias, Ph.D. (USA)

Auditorium

- 2:00 p.m. Determinants of Ectopic Fat Deposition in Metabolic Disease
Anja Bosy-Westphal, M.D., Ph.D. (Germany)
- 2:30 p.m. Fitness/Adiposity and CVD
Lance E. Davidson, Ph.D. (USA)
- 3:00 p.m. Changes in Body Composition and Metabolic Disease Risk
Xavier Pi-Sunyer, M.D., M.P.H. (USA)
- 3:30 p.m. Deciphering Weight Stability: Challenges of Measuring Changing Body Composition
Dympna Gallagher, Ed.D. (USA)
- 4:00 p.m. Q&A

Concurrent Oral Sessions

Session III: Metabolic

Moderator: Phil Jakeman, Ph.D. (Ireland)

Auditorium

- 4:15 p.m. Is Body Composition and Hydration Status a Valid Tools in Young Adults Affected by Diabetes Types I?
Angela Andreoli, Ph.D. (Italy)
- 4:30 p.m. Relationship Between Total Body Protein and Cross-Sectional Skeletal Muscle Area in Cirrhosis is Influenced by Overhydration
Lindsay Plank, MSc, DPhil (New Zealand)
- 4:45 p.m. Body Fat: Different Descriptions
Yungao Sun, Ph.D. (China)

Session IV: Aging

Moderator: Barbara Gower, Ph.D. (USA)

Classrooms 404 and 405

- 4:15 p.m. Effect of Aging and Adiposity on the Density of Fat-Free Mass and the Hydration Factor in Non-Caucasian Older Adults
Rogelio González-Arellanes (Mexico)
- 4:30 p.m. Sarcopenia, Obesity, the Combination of Both and Implications for Muscle Strength and Bone Mineral Density in Brazilian Adults: The Pró-Saúde Study
Amina Chain, Dsc (Brazil)
- 4:45 p.m. Cut-off Points of Phase Angle and Its Association with Sarcopenic Obesity in Community-dwelling Mexican Older Adults
Óscar Rosas Carrasco, M.D. (Mexico)
- 5:00 p.m. *Adjourn*
- 6:00 p.m. Dinner at Coogan's (Broadway at 169th Street)

Wednesday, June 27, 2018

8:00 a.m. *Registration & Continental Breakfast in the Vagelos Education Center Lobby*

Body Composition Analysis in Early Life and Beyond

Moderator: Richard J. Deckelbaum, M.D. (USA)

Auditorium

- 8:30 a.m. Body Composition in Early Life: Validity of Current Methodologies
Elisabet K. Forsum, Ph.D. (Sweden)
- 9:00 a.m. Phenotyping: Pregnancy and Newborn
Leanne M. Redman, Ph.D. (USA)
- 9:30 a.m. Pediatric Body Composition References in Children: Clinical Usefulness and Limitations
Sochung Chung, M.D., Ph.D. (South Korea)
- 10:00 a.m. Q&A
- 10:15 a.m. *Refreshment Break*

Concurrent Oral Sessions

Session V: Pediatric

Moderator: Leanne M. Redman, Ph.D. (USA)

Auditorium

- 10:30 a.m. Total and Regional Body Fatness from Late Adolescence to Early Adulthood in a Brazilian Birth Cohort Study
Silvana Paiva Orlandi, Ph.D. (Brazil)
- 10:45 a.m. Body Fat Assessment using Bioelectrical Impedance Analysis and Deuterium Dilution among South African Children: BC- IT Study
Makama Andrie Monyeki, Ph.D. (South Africa)
- 11:00 a.m. Inter-instrument Comparison of Bioimpedance Body Composition in Russian Children's Study
Sergey Rudnev, Ph.D. (Russia)
- 11:15 a.m. Pregnancy Weight Gain Trajectories and Child Adiposity in African American and Dominican Dyads from Northern Manhattan and the South Bronx
Elizabeth M. Widen, Ph.D. (USA)
- 11:30 a.m. Increased Visceral Adipose Tissue at One-Year Postpartum
Isaiah (Francis) Janumala, M.D. (USA)
- 11:45 a.m. Q&A

Session VI: Methods

Moderator: Lindsay Plank, MSc, DPhil (New Zealand)

Classrooms 404 and 405

- 10:30 a.m. A Cold Shower Accelerates the Stabilization of Impedance Parameters after Exercise Allowing the Assessment of Body Hydration Status with Bioimpedance Vector Analysis
Francesco Campa, Ph.D. (Italy)
- 10:45 a.m. Evaluation of Anthropometric Equations to Assess Body Fat in Adult Black South African Women
Herculina Salome Kruger, Ph.D. (South Africa)
- 11:00 a.m. Agreement Between DXA and MRI for Body Composition Analysis
Magnus Borga, Ph.D. (Sweden)
- 11:15 a.m. Comparison of A-Mode and B-Mode Ultrasound for Measurement of Subcutaneous Fat
Dale R. Wagner, Ph.D. (USA)
- 11:30 a.m. Total Body Water Measurements from Standing, Seated, and Supine Positions using Bioimpedance Spectroscopy: A Deuterium Oxide Comparison
Jordan R. Moon, Ph.D. (USA)
- 11:45 a.m. Association between Bone Mineral Content and Density with Stature, Fat and Fat-free Mass in a Large Sample of Brazilian Adults
Luiz Antonio dos Anjos, M.D., Ph.D. (Brazil)
- 12:00 p.m. *Lunch & Expert Led Poster Sessions IV, V & VI in Room 401*

Wednesday, June 27, 2018 *(Continued)*

1:30 p.m. Triennial Meeting in Auditorium

Body Composition: Technologies for Biomedical Research & Clinical Applications

Moderator: Xavier Pi-Sunyer, M.D., M.P.H. (USA)

Auditorium

2:30 p.m. Body Composition Tools in Clinical Settings: Applications for Assessment and Monitoring
Carrie P. Earthman, Ph.D., R.D. (USA)

3:00 p.m. Phenotypes of Body Composition Using Shape and Appearance Modeling of Deconvoluted DXA Images
John Shepherd, Ph.D. (USA)

3:30 p.m. Bioimpedance for TBW Prediction in Health and in Fluid Abnormal States
Leigh C. Ward, Ph.D. RNUtr FNSA (Australia)

4:00 p.m. Uniqueness of Imaging in Body Composition
Wei Shen, M.D., M.P.H. (USA)

4:30 p.m. Q&A

4:45 p.m. *Refreshment Break*

Concurrent Oral Sessions

Session VII: Clinical

Moderator: Carrie P. Earthman, Ph.D., R.D. (USA)

Auditorium

5:00 p.m. Evaluation of Bedside Techniques Used to Assess Skeletal Muscle Mass in Patients with Cirrhosis
Aidan J. Woodward, BPharm, MBBS, FRACP (Australia)

5:15 p.m. Can Measures of Intracellular Water Track Changes in Muscle Protein Catabolism in Critically Ill Patients?
Lindsay Plank, MSc, DPhil (New Zealand)

5:30 p.m. Calf Circumference As A Muscle Mass Marker: Results From NHANES Database
Maria Cristina Gonzalez, M.D., Ph.D. (Brazil)

Session VIII: Clinical

Moderator: Angela Andreoli, Ph.D. (Italy)

Classrooms 404 and 405

5:00 p.m. Body Composition in Male and Female Mexican Adults with Down Syndrome Using a Four-Compartment Model: Prediction Equation Development
Mauro E. Valencia, Ph.D. (Mexico)

5:15 p.m. A 2-D Analysis of Body Composition in Patients with Crohn's Disease
Phil Jakeman, Ph.D. (Ireland)

5:30 p.m. Relationship between Physical Activity and Bone Mineral Density in Black Postmenopausal HIV-Positive Women on HAART: A Cross Sectional Study
Ukegbu Patricia Ogechi (South Africa)

5:45 p.m. *Closing in Auditorium*

Posters

Tuesday, June 26th

Expert Led Poster Session I – Room 401

Chair: Steven Heymsfield, M.D. (USA)

P-P-1000-1 Development of equation for prediction of total body water by bioelectrical impedance analysis among Myanmar children aged 4 to 7 years
Aye Aye Maw, Australia

P-P-1000-2 Bioelectrical impedance analysis (BIA): a possible solution for assessing volume status in children with nephrotic syndrome
Steven Brantlov, Denmark

P-M-3000-3 Quantifying Total Body Water in Athletic Males and Females Ages 14-49 Years: A Comparison of Bioimpedance Spectroscopy and Deuterium Dilution
Jordan Moon, USA

P-P-1000-3 Development and validation of BIA prediction equation based on D2O dilution to estimate fat free mass in 2 to 5 years-old children from Saint-Marc Haiti.
Mauro Valencia, Mexico

P-M-3000-5 Phase Angle Predicts Strength Independent of DXA Lean Mass
Brianna Bourgeois, USA

Expert Led Poster Session II – Room 401

Chair: Anja Bosy-Westphal, M.D., Ph.D. (Germany)

P-A-2000-1 Body tissue distribution across life: relationships with WC and WHR
Aldo Scafoglieri, Belgium

P-M-3000-2 Ultrasound Measurement of Subcutaneous Fat for the Assessment of Fat Patterning in Overweight and Obese Females
Sonja Lackner, Austria

P-M-3000-6 The validity of multi-frequency bioelectric impedance methods to measure body composition in obese patients: a systematic review
Louise Becroft, Australia

P-M-3000-9 Membrane Capacitance is Associated with Insulin Resistance in Non-Diabetic Adults
Valene Garr Barry, USA

P-O-4000-4 Higher weight cycling episodes are associated with abnormal adult waist circumference and BMI in women
Stephanie Byun, USA

Expert Led Poster Session III– Room 401

Chair: Manfred Müller, M.D. (Germany)

P-M-3000-7 Universal Software for Automated Anthropometry Measurements: Evaluation with Two Different Systems
Sima Sobhiyeh, USA

P-M-3000-8 Inter-Tester Reliability of Novice Examiners Using A-Mode Ultrasound and Skinfolds to Measure Subcutaneous Body Fat
Dale R. Wagner, USA

P-O-4000-5 Identification of a T-score at the Hip to More Reliably Diagnose Osteoporosis at the Distal Femur and Proximal Tibia in Persons with Spinal Cord Injury
Christopher M. Ciriigliaro, USA

P-A-2000-5 Correlation analysis of blood lipid, muscle strength of lower limbs and body components in 30-60 years women
Juping Li, China

P-M-3000-12 Deuterium dilution measurement at low concentrations by Fourier Transform Infrared Spectrometer (FT-IR)
Wen Yu, USA

Wednesday, June 27th

Expert Led Poster Session IV – Room 401

Chair: Anja Bosy-Westphal, M.D., Ph.D. (Germany)

P-O-4000-2 Impact of energy flux on changes in glucose metabolism with caloric restriction and overfeeding
Franziska Büsing, Germany

P-O-4000-3 Impact of daylong changes in energy flux on sleeping energy expenditure and fat oxidation
Alessa Nas, Germany

P-O-4000-8 Analysis of muscle strength of lower limbs and body components of women with fatty liver
Wei Li, China

P-O-4000-9 Recovery Method for Type 2 Diabetes and a single Example Report
Bo Wang, China

P-O-4000-10 Visceral adipose tissue and cardiometabolic risk factors in early pregnancy among overweight and obese women
Susan Lin, USA

Expert Led Poster Session V – Room 401

Chair: Manfred Müller, M.D. (Germany)

P-M-3000-1 Modifications to Hanai mixture theory for prediction of body composition (BC) by bioimpedance spectroscopy (BIS)

Timothy Essex, Australia

P-A-2000-4 Prevalence of sarcopenia in Mexican older people using the European Working Group on Sarcopenia in Older People (EWGSOP) definition

Maria del Consuelo Velazquez-Alva, Mexico

P-M-3000-10 Fat-free mass predictive equation developed for a bipolar bioelectric impedance device based on a step-voltage response

Vivian Wahrlich, Brazil

P-O-4000-6 Body composition prevalence study of of 8527 women with ectopic pregnancy in Lanzhou City

XU Xiao-Ying, China

P-O-4000-7 The Relationship Between Osteoporosis And Osteoarthritis In Ovariectomized Rats

Chen Huang, China

Expert Led Poster Session VI – Room 401

Chair: Steven Heymsfield, M.D. (USA)

P-A-2000-2 Impact of Hounsfield Unit Threshold on Cross-sectional Area and Attenuation Measures of Skeletal Muscle

Levi Teigen, USA

P-A-2000-3 Body composition using the deuterium oxide technique in elderly people from Uruguay

Gabriela Fajardo, Uruguay

P-M-3000-4 Body composition studies in Russia: historical, methodological, and organizational aspects

Sergey Rudnev, Russia

P-O-4000-1 Usefulness of Tanita TBF-310 for body composition assessment in Judo elite athletes using a four-compartment molecular model as the reference method

Chrisophe dos Santos Domingos, Portugal

P-M-3000-11 Comparison of Human Body Dimensions Measured by Traditional Anthropometry and 3-Dimensional Photonic Scanner

Maxine Ashby-Thompson, USA

Meeting Location

Roy and Diana Vagelos Education Center
104 Haven Avenue
New York, New York 10032

Parking is available at the NewYork-Presbyterian/Columbia University Medical Center parking lot, located on the southwest corner of Fort Washington Avenue and West 165th Street.

Hotel Accommodations

Blocks of rooms have been reserved at several properties in New York. These special room rates are available to the attendees from June 25 - 28, 2018. Please note, all rates quoted are subject to state and local taxes. Other rates and conditions may apply, please check with the individual properties for details.

Reservations must be made directly with the property of your choice. To receive the room rates quoted remember to mention that you are a registrant of 11th International Symposium on In Vivo Body Composition Studies conference. Space at the properties will be held until the cut-off dates listed or until the room blocks have been exhausted, whichever comes first. Reservations received after the cut off dates are subject to availability and prevailing rates.

Lucerne Hotel

201 West 79th Street
New York, New York 10024
Group # 241200

(800) 492-8122

(212) 875-1000

Cut-Off: May 25, 2018

Rate: \$245/per night

Edge Hotel

514 West 168th Street
New York, New York 10024
Rate: \$199/per night

(877) 973-4666

(212) 543-0005

Cut-Off: May 21, 2018

Complimentary Bus Service

Complimentary bus service will be provided from the Lucerne to the Medical Center on Tuesday, June 26th and Wednesday, June 27th at 7:30 AM.

Tuition

Early registration fee (postmarked, faxed or e-mailed on or before March 31, 2018): Standard Tuition: \$400; Post-doc Fellows: \$200. Registration after March 31, 2018: Standard Tuition: \$450; Post-doc Fellows: \$250. Standard Tuition One Day Fee: \$225. Post-doc Fellows One Day Fee: \$125. The fee includes the plenary presentations, continental breakfasts, lunches, refreshment breaks and an electronic course syllabus. Confirmation of registration will be sent upon receipt of the registration form. Refund of registration fee, less a \$25 administrative charge, will be made if written notice of cancellation is received by **May 1, 2018**. No refunds can be made thereafter.

Registration

Space is Limited. Early Registration is Encouraged.

By Mail:

Complete the registration form and mail with full payment to:

**Columbia University
Vagelos College of Physicians & Surgeons
Center for Continuing Medical Education
630 West 168th Street, Unit 39
New York, NY 10032**

On-Line: www.columbiacme.org

Telephone registrations and/or cancellations are not accepted.

Americans with Disabilities Act

The Columbia University College of Physicians and Surgeons fully complies with the legal requirements of the ADA and the rules and regulations thereof. Any participant with special needs must submit a written request to our office at least one month prior to the course date.

Additional Information

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