



# 12th International Symposium on In Vivo Body Composition Studies

## DAY 1: Thursday 20th February

### Satellite Mini-Symposium (open to all attendees of the main conference):

10:00 – 12:00

#### Body Composition Dynamics & Energy Expenditure Patterns

*Chair: Jennifer Miles-Chan (New Zealand)*

- Energy expenditure patterns and body composition dynamics across human lifespan  
*John Speakman (UK/China)*
- Changes in body composition and control of resting metabolic rate during weight loss: Energy allocation to the brain 'drives' adaptive thermogenesis  
*Manfred Müller (Germany)*
- Adaptive thermogenesis driving catch-up fat during weight regain: a role for skeletal muscle hypothyroidism  
*Abdul Dulloo (Switzerland)*
- Impact of energy turnover on the regulation of energy balance and energy partitioning  
*Anja Bosy-Westphal (Germany)*

### Main Conference:

09:30 –

Registration desk open

13:30 – 14:00

Opening Ceremony

14:00 – 15:00

#### **Keynote Session 1:**

*Chair: Dympna Gallagher (USA)*

**Can Insights Into the Current Body Composition Paradigm Guide Future Research Efforts?**

*Steven Heymsfield (USA)*

15:00 – 16:30

#### **Plenary Session 1:**

*Chair: Manfred Müller (Germany)*

##### **Evolving Techniques & Technologies**

- Artificial Intelligence in Body Composition Research: Overview and Laboratory Insights  
*John Shepherd (USA)*
- Current and future applications of point of care spectral photon counting CT  
*Jenn Clark (New Zealand)*
- Have we reached peak impedance?  
*Leigh Ward (Australia)*

16:30 – 18:00

Welcome Reception



# 12th International Symposium on In Vivo Body Composition Studies

## DAY 2: Friday 21st February

08:00 – 08:30	Registration desk open
08:30 – 09:30	<b>Keynote Session 2:</b> <i>Chair: Carrie Earthman (USA)</i> <b>Body Composition at the University of Auckland: end of an era</b> <i>Lindsay Plank (New Zealand)</i>
09:30 – 10:30	<b>Short Oral Communications Session 1:</b> <i>Chair: Anja Bosy-Westphal (Germany)</i> <b>Ultrasound, CT and Bioimpedance Spectroscopy in Clinical Applications</b> <ul style="list-style-type: none"><li>• Bridging Oncology Research and Practice: An innovative online CT body composition analysis program <i>Judy Bauer (Australia)</i></li><li>• Bioimpedance phase angle as indicator for geriatric phenotypes <i>Kristina Norman (Germany)</i></li><li>• Validation of ultrasound versus magnetic resonance imaging for muscle thickness measurement <i>Shayal Chand (New Zealand)</i></li><li>• Supporting lipoedema diagnosis through bioimpedance spectroscopy body composition assessment <i>Belinda Thompson (Australia)</i></li></ul>
10:30 – 11:00	Refreshment break, with sponsor exhibition
11:00 – 12:30	<b>Plenary Session 2:</b> <i>Chair: Lindsay Plank (New Zealand)</i> <b>Assessment of Muscle in Clinical Settings: Challenges &amp; Considerations</b> <ul style="list-style-type: none"><li>• Optimizing Muscle Assessment in Clinical Practice: Challenges and Considerations <i>Carla Prado (Canada)</i></li><li>• Bedside muscle assessment during and after critical illness - experiences from a clinician-researcher <i>Kate Lambell (Australia)</i></li><li>• Research Needs and Future Directions in the Application of Available Body Composition Technologies for Diagnosing Malnutrition in Acute Care <i>Carrie Earthman (USA)</i></li></ul>
12:30 – 13:30	Lunch & Poster Session, with sponsor exhibition

13:30 – 15:00

### Plenary Session 3:

Chair: John Speakman (UK/China)

#### Body composition in Sports and Physical Activity

- Muscle quality assessments in relation to physical performance or physical activity  
*Yosuke Yamada (Japan)*
- The evolution of body composition methods and standards to address military needs  
*Karl Friedl (USA)*
- Physical inactivity, sedentary behaviour, and body composition: Inference from space science and clinical research  
*Audrey Bergouignan (France / USA)*

15:00 – 15:30

Refreshment break, with sponsor exhibition

15:30 – 16:30

### Short Oral Communications Session 2:

Chair: Kay Nguo (Australia)

#### Advancing body composition assessment in the context of physical activity

- The Usefulness of Non-Fasted State Bioelectrical Impedance Measurements in Athletes  
*Analiza M Silva (Portugal)*
- Cross-sectional and prospective agreement between DXA- and prediction equation-estimated appendicular lean mass  
*Robin Daly (Australia)*
- Evaluating D3-Creatine Utility for Body Composition and Muscle Strength in Special Populations  
*Devon Cataldi (USA)*
- Lifespan assessment of body composition, physical function, and cardiorespiratory fitness for maximal healthspan  
*Christopher Oliver (Australia)*

16:30 – 17:30

### Hot Topic Points-of-View:

Moderator: Jean-Pierre Montani (Switzerland)

#### Quality of weight loss with novel anti-obesity pharmacotherapy

- Is loss of bone mass clinically significant?  
*Berit Heitmann (Denmark)*
- Is there evidence for a disproportional loss of muscle mass?  
*Anja Bosy-Westphal (Germany)*

18:30 – 21:30

### Conference Dinner & "Triennial" Meeting

*The Maritime Room, Princes Wharf, Auckland CBD*



# 12th International Symposium on In Vivo Body Composition Studies

## DAY 3: Saturday 22nd February

08:00 – 08:30

Registration desk open

08:30 – 09:30

### Keynote Session 3:

Chair: Abdul Dulloo

Building capacity for Body Composition Assessment in Low and Middle Income Countries: Insights from the IAEA and the IAEA Body Composition Database

*Alexia Alford (Austria)*

[Title TBC]

*Jonathan Wells (UK)*

09:30 – 10:30

### Short Oral Communications Session 3:

Chair: Berit Heitmann (Denmark)

#### Populations, Perceptions & Phenotypes

- Mana Mōmona: Fat Indigenous Bodies and Body Sovereignty  
*Ashlea Gillon (New Zealand)*
- Determinants of weight gain over five years in young South African adults  
*Salome Kruger (South Africa)*
- Sustained effects of LookAHEAD intervention on body composition among adults with diabetes  
*Maxine Ashby-Thompson (USA)*
- Image-derived phenotypes: Comparison of DXA and MRI in the UK Biobank  
*Brandon Whitchee (UK)*

10:30 – 11:00

Refreshment break, with sponsor exhibition

11:00 – 12:30

### Plenary Session 4:

Chair: Jennifer Miles-Chan (New Zealand)

#### Diversity, Equity & Inclusion in Body Composition Research

- Indigenous data sovereignty in the context of global databases  
*Jeremy Hema (New Zealand)*
- Body Composition Beyond the Binary: Challenges and Opportunities  
*Maggie Delano (USA)*
- South Asians and Diaspora: which body composition phenotypes make them so prone to type 2 diabetes and cardiovascular diseases?

*Abdul Dulloo (Switzerland)*

12:30 – 13:30 Lunch & Poster Session, with sponsor exhibition

13:30 – 14:30 **Short Oral Communications Session 4:**

*Chair: John Shepherd (USA)*

**Body Composition in Early Life**

- Prenatal weight gain and adipose tissue depot changes  
*Elizabeth Widen (USA)*
- Understanding the contribution of body composition to energy expenditure in infants  
*Leanne Redman (USA)*
- Birthweight and body composition classifications in South African children: the BC-IT study  
*Makama Andries Monyeki (South Africa)*
- Body composition assessment during the first five years: Shape Up! Keiki  
*Jonathan Bennett (USA)*

14:30 – 15:00 Refreshment break, with sponsor exhibition

15:00 – 16:00 **Forbes Lecture:**

*Chair: Steven Heymsfield (USA)*

**Applications of Body Composition Assessment in Clinical Practice**

*Dympna Gallagher (USA)*

16:00 – 16:30 Closing Ceremony