

# MitoFit Science Camp

**MitoFit Science Camp 2016, Kuehtai, Tyrol, Austria  
 2016 July 07 – 13**



## Programme

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July-07	Arrival and Welcome		<b>1</b>
July-08	Diagnostic SUIT protocols of mitochondrial fitness.	A1	<b>2</b>
	Quality management system for mitochondrial respirometry: the MitoFit proficiency test with a real-time Demo-Experiment (SUIT reference protocol).	A2	<b>2</b>
	DatLab 7 Proficiency Test	A3	<b>3</b>
July-09	Mitochondrial assays in blood cells: Blood cell preparation, cryopreservation, respiration.	B1	<b>3</b>
	Cell culture models versus tissue samples: - Brain and neuronal cells - Adipose tissue - Other.	B2	<b>3</b>
	Mitochondrial studies in neurodegeneration.	B3	<b>4</b>
July-10	Skeletal and cardiac muscle fibres - towards a data repository.	C1	<b>5</b>
July-11	Towards a database on mt-respiratory physiology: from laboratory standards to inter-laboratory harmonization.	D1	<b>6</b>
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July-12	MITOEAGLE and parallel IOC112 O2k-Workshop.	E1/E2	<b>8</b>
	Posters		<b>9</b>
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**Abstracts:** [http://www.mitofit.org/index.php/MitoFit\\_Science\\_Camp\\_2016\\_Kuehtai\\_AT](http://www.mitofit.org/index.php/MitoFit_Science_Camp_2016_Kuehtai_AT)



The MitoFit Science Camp may be considered as a sequence of workshops rather than a conference or school, addressing key topics of the COST Action MITOEAGLE project.



<b>Thursday, July 7</b>	
07:00 - 18:30	<b>Arrival</b>
19:00 - 20:30	<i>Dinner</i>
20:30 - 21:15	<b>Welcome by the organizers</b>



## Friday, July 8 Morning

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07:00 - 08:00	<i>Yoga (Meagan McManus) / Competitive sports (Martin Fritz)</i>
08:00 - 09:00	<i>Break(fast)</i>
<b>Topic A1</b>	<b>Diagnostic SUIT protocols of mitochondrial fitness.</b>
09:00 - 10:15	<b>SUIT protocols: the next steps</b> <i>Chairs: Verena Laner, Charles L Hoppel</i>
	<b>Gnaiger Erich</b> (ORO) SUIT protocols -MitoPathways 2007-2016. <span style="float: right;"><u>A1-01</u></span>
	<b>Gnaiger Erich</b> (ORO) <b>Release of DatLab 7</b> - new dimensions with MitoFit quality control and MitoPedia: DatLab. <span style="float: right;"><u>A1-02</u></span>
	<b>Doerrier Carolina</b> (ORO) SUIT reference assay for OXPHOS analysis by high-resolution respirometry. <span style="float: right;"><u>A1-03</u></span>
10:15 - 10:45	<i>Coffee break</i>
10:45 - 12:00	<b>SUIT protocols: limitations and solutions</b> <i>Chairs: Carolina Doerrier, Daniel A Kane</i>
	<b>Sumbalová Zuzana</b> (ORO) Optimizing strategies on the malate concentration in SUIT protocols. <span style="float: right;"><u>A1-04</u></span>
	<b>Krumschnabel Gerhard</b> (ORO) O2k-Network discussion forum: Fatty acid oxidation. <span style="float: right;"><u>A1-05</u></span>
	<b>Osiki Prisca O</b> (ZA) Suitability of octanoylcarnitine & malate for assessment of beta oxidation capacity by respirometry in aconitase-inhibited samples. <span style="float: right;"><u>A1-06</u></span>
	<b>Makrečka-Kuka Marina</b> (LV) Long-chain acylCoAs vs acylcarnitines in mitochondrial bioenergetics: from <i>in vitro</i> to <i>in vivo</i> . <span style="float: right;"><u>A1-07</u></span>
12:00 - 15:00	<i>Lunch &amp; Action / e-bikes</i>



## Friday, July 8 Afternoon

<b>Topic A2</b>	<b>Quality management system for mt respirometry: the MitoFit proficiency test with a real-time Demo-Experiment (SUIT reference protocol).</b>
15:30 - 16:45	<b>O2k-demo experiment: reference SUIT protocol with cryopreserved mammalian cells.</b> <i>Chairs: Dominique-Marie Votion, Edward O Ojuka</i>
	<b>Lamberti Giorgia</b> (ORO) Development of a reference sample for HRR. <span style="float: right;"><u>A2-01</u></span>
	<b>Doerrier Carolina, Lamberti Giorgia</b> (ORO) O2k-Demo experiment: the SUIT reference protocol RP1/RP2. <span style="float: right;"><u>A2-02</u></span>
16:45 - 17:15	<i>Coffee break</i>
17:15 - 18:30	<b>Continued</b>
19:00 - 20:30	<i>Dinner</i>
<b>Topic A3</b>	<b>DatLab 7 proficiency test.</b> <span style="float: right;"><u>A3-01</u></span>

20:30 - 21:15	<b>Plattner Christina, Erich Gnaiger (ORO)</b>
	<b>Pick up your OROBOROS USB-flash drive with DatLab 7</b>
	DatLab proficiency test – bring your laptop.



## Saturday, July 9 Morning



07:00 - 08:00	<i>Yoga (Meagan McManus) / Competitive sports (Martin Fritz)</i>
08:00 - 09:00	<i>Break(fast)</i>

<b>Topic B1</b>	<b>Mitochondrial assays in blood cells: Blood cell preparation, cryopreservation, respiration.</b>
09:00 - 10:15	<b>Blood cells for mitochondrial screening</b> <i>Chairs: Meagan McManus, P Darrell Neuffer</i>
	<b>Sumbalová Zuzana (ORO)</b> Human blood cells as study model of mitochondrial respiration. <span style="float: right;"><u>B1-01</u></span>
	<b>Molina Anthony JA (US)</b> Blood-cell bioenergetics and physical function. <span style="float: right;"><u>B1-02</u></span>
	<b>Karabatsiakis Alexander (DE)</b> Cryopreserved PBMCs as a study model of mitochondrial respiration. <span style="float: right;"><u>B1-03</u></span>
	<b>Irving Brian A (US)</b> PBMC and t-cell mitochondrial function in humans. <span style="float: right;"><u>B1-04</u></span>
	<b>Pelnena Dita (LV) Poster</b> OXPHOS enzyme activity measurements in mitochondria isolated from peripheral blood leukocytes in control group and patients with suspected mitochondrial disease. <span style="float: right;"><u>B1-05</u></span>
10:15 - 10:45	<i>Coffee Break</i>
10:45 - 12:00	<b>Workshop: Blood cell preparation, cryopreservation, respiration</b> <i>Chairs: Elisa Calabria, Sameh S Ali</i>
12:00 - 15:00	<i>Lunch &amp; Soccer / Volleyball / e-bikes</i>



## Saturday, July 9 Afternoon

<b>Topic B2</b>	<b>Cell culture models versus tissue samples: - Brain and neuronal cells - Adipose tissue - Other.</b>
15:30 - 16:45	<b>Cells and tissues</b> <i>Chairs: Chao-Pin Hsiao, Anthony J Hickey</i>
	<b>Hoppel Charles L (US)</b> Mitochondrial respiration in permeabilized skin fibroblasts. <span style="float: right;"><u>B2-01</u></span>
	<b>Burtscher Johannes (AT)</b> Oxidative phosphorylation in the healthy and epileptic mouse brain. <span style="float: right;"><u>B2-02</u></span>
	<b>Irving Brian A (US)</b> The rotenone paradox in liver mitochondria. <span style="float: right;"><u>B2-03</u></span>
	<b>Volani Chiara (AT)</b>

	Effects of iron imbalances on mitochondrial activity in mouse liver homogenate and permabilized rat PBMCs.	<u>B2-04</u>
16:45 - 17:15	<i>Coffee break</i>	
17:15 - 18:30	<b>Cells and tissues</b> <i>Chairs: Verena Laner, Brian A Irving</i>	
	<b>Calzia Enrico</b> (DE) Mitochondrial respiration shows tissue- and strain-specific aging in short- and long-lived <i>N. furzeri</i> strains.	<u>B2-05</u>
	<b>Herminghaus Anna</b> (DE) Poster Sterile laparotomy time-dependently modulates hepatic but not colonic mitochondrial function similar to moderate abdominal sepsis.	<u>B2-06</u>
	<b>Madlala Hlengiwe</b> (ZA) Fructose-induced defects in selected mitochondrial enzymes are detected by respirometry using glutamate&malate but not pyruvate&malate substrates.	<u>B2-07</u>
	<b>Morales-Garcia Norma Lilia</b> (MX) Respiratory deficiencies in isolated mitochondria from a $\Delta$ -shy1 <i>S. cerevisiae</i> strain.	<u>B2-08</u>
	<b>Uribe Alvarez Christina</b> (MX) In <i>Staphylococcus epidermidis</i> , oxygen variations promote differential expression of respiratory enzymes that constitute possible therapeutic targets.	<u>B2-09</u>
19:00 - 20:30	<i>Dinner</i>	

<b>Topic B3</b>	<b>Mitochondrial studies in neurodegeneration.</b>	
20:30 - 21:15	<i>Chairs: Nicole Bezuidenhout, David Marcinek</i>	
	<b>McManus Meagan</b> (US) A multi-tiered mitochondrial approach to predictive biomarkers of neurodegenerative disease.	<u>B3-01</u>
	<b>Schaefer Patrick M</b> (DE) Prominent role of amyloid beta and its intracellular localization in Alzheimer's disease associated mitochondrial dysfunction.	<u>B3-02</u>
	<b>Verebne Tar Krisztina</b> (HU) Investigating the role of the proteasome activator PA200 in mitochondrial homeostasis in a cellular model for Huntington's disease.	<u>B3-03</u>
	<b>Krako Nina</b> (RS) Conformational targeting of amyloid $\beta$ oligomers inside endoplasmic reticulum rescues mitochondrial deficits in 7PA2 cells. ( <i>not present</i> )	<u>B3-04</u>
	<b>Hsiao Chao-Pin</b> (US) Poster Association between mitochondrial bioenergetics and radiation-related fatigue: a possible mechanism and novel target.	<u>B3-05</u>



## Sunday, July 10 Morning



08:00 - 09:00	<i>Break(fast)</i>	
<b>Topic C1</b>	<b>Skeletal and cardiac muscle fibres - towards a data repository.</b>	
09:00 - 10:15	<b>Quantitative studies</b>	
	<i>Chairs: Marina Makrecka-Kuka, Anthony JA Molina</i>	
	<b>Hoppel Charles L (US)</b>	
	Skeletal muscle mitochondria: diagnostic studies.	<u>C1-01</u>
	<b>Garcia-Roves Pablo M (ES)</b>	
	Technical perspective of high-resolution respirometry in permeabilized skinned muscle fibers from different mouse models.	<u>C1-02</u>
	<b>Coen Paul (US)</b>	
	Improved mitochondrial function in human skeletal muscle – quantification.	<u>C1-03</u>
	<b>Neufer P Darrell (US)</b>	
	Direct real-time quantification of mitochondrial oxidative phosphorylation efficiency in permeabilized skeletal muscle myofibers.	<u>C1-04</u>
	<b>Marcinek David J (US)</b>	
	Targeting mitochondrial redox stress reveals two phases for reversal of mitochondrial dysfunction in aged mouse skeletal muscle.	<u>C1-05</u>
10:15 - 10:45	<i>Coffee break</i>	
10:45 - 12:00	<b>Oxygen dependence of respiration in permeabilized fibres: respiration media, inhibitors, sample preparation</b>	
	<i>Chairs: Zuzana Sumbalová, Paul Coen</i>	
	<b>Merth Alexander, Droscher Stephanie, Bezuidenhout Nicole, Doerrier Carolina, Gradl Phillip, Gnaiger Erich (WGT, ORO)</b>	
	The DatLab-controlled cooling plate for permeabilized muscle fibre preparation.	<u>C1-06</u>
	<b>Bezuidenhout Nicole (ZA)</b>	
	Comparison of oxygen dependence of respiration in permeabilized mouse skeletal muscle fibers in two respiration media, MiR06Cr and Buffer Z containing Ctl, Cr and Blebbistatin.	<u>C1-07</u>
	<b>Kane Daniel N (CA)</b>	
	Effects of inhibiting myosin-ATPase on mitochondrial respiratory capacity in permeabilized muscle.	<u>C1-08</u>
	<b>Chicco Adam J (US)</b>	
	Oxygen dependence of H <sub>2</sub> O <sub>2</sub> release from skeletal muscle and cardiac mitochondria: influence of sample preparation.	<u>C1-09</u>

## Sunday, July 10 Afternoon

12:00 - 18:00	<b>Excursion Dreiseenhütte</b>
19:00	<i>Dinner</i>
20:30	<i>Soccer European-Championship public viewing</i>



## Monday, July 11 Morning



07:00 - 08:00	<i>MitoFit Training (Stefan Moser)</i>
08:00 - 09:00	<i>Break(fast)</i>
<b>Topic D1</b>	<b>Towards a database on mt-respiratory physiology: from laboratory standards to inter-laboratory harmonization. Data base and harmonization studies</b>
09:00 - 10:15	<p><i>Chairs:</i> Plattner Christina, Adam J Chicco</p> <p><b>Garcia-Roves Pablo M</b> (ES)                      Design and implementation of systems biology approaches to integrate heterogenic data in biomedical research. <span style="float:right"><u>D1-01</u></span></p> <p><b>Drinnan Michael</b> (UK)                      The O2k in 2020: letting Datlab outside its box. <span style="float:right"><u>D1-02</u></span></p> <p><b>Molina Anthony JA</b> (US)                      UPBEAT, database and self-learning software. <span style="float:right"><u>D1-03</u></span></p> <p><b>Krumschnabel Gerhard</b> (ORO)                      O2k-MultiSensor: Mitochondrial respiration media for HRR and simultaneous O2k-Fluorometry. <span style="float:right"><u>D1-04</u></span></p> <p><b>Hoppel Charles L</b> (US)                      Comparison of permeabilized skeletal muscle fibers or isolated mitochondria for the detection of oxidative phosphorylation defects. <span style="float:right"><u>D1-05</u></span></p> <p><b>Markova Michaela</b> (CZ) Poster                      Porcine hearts samples preparation: PBI-Shredder or saponin? <span style="float:right"><u>D1-06</u></span></p> <p><b>Krumschnabel Gerhard</b> (ORO)                      O2k-Protocols: mt-preparations for HRR. <span style="float:right"><u>D1-07</u></span></p> <p><b>Irving Brian A</b> (US)                      Shredder: lessons learned. <span style="float:right"><u>D1-08</u></span></p>
10:15 - 10:45	<i>Coffee break</i>
10:45 - 12:00	<p><b>MITOEAGLE nomenclature - roundtable</b></p> <p><i>Chairs:</i> Giorgia Lamberti, Pablo Miguel Garcia-Roves</p> <p><b>Gnaiger Erich</b> (AT)                      Introduction: Do bioenergetics and mitochondrial physiology need a consistent nomenclature to become MitoFit? - Expand 'MitoPedia' as a basis for a joint publication on 'concepts and nomenclature'? <span style="float:right"><u>D1-08</u></span></p>
12:00 - 15:00	<i>Lunch &amp; Volleyball / Athletics</i>



## Monday, July 11 Afternoon

<b>Topic D2</b>	<b>Mitochondrial health: molecules, cells and tissues. Exercise at high altitude and high performance</b>
15:30 - 16:45	<p><i>Chairs:</i> Kathrin Renner-Sattler, Bret H Goodpaster</p> <p><b>Burtscher Martin</b> (AT)                      Living and exercising at moderate altitudes: health risk or benefit? <span style="float:right"><u>D2-01</u></span></p>

	<p><b>Chicco Adam J (US)</b> OXPHOS coupling efficiency of permeabilized muscle fibers predicts metabolic efficiency of subjects exercising at 5,260 m. <span style="float: right;"><u>D2-02</u></span></p> <p><b>Votion Dominique-Marie (BE)</b> OXPHOS capacities correlate with racing performance and indicate risk of developing exercise-induced myopathy. <span style="float: right;"><u>D2-03</u></span></p> <p><b>Laner V, Gnaiger E (ORO)</b> OXPHOS and ETS capacity in permeabilized fibres of canine superathletes. Analysis of HRR data presenting unexpected challenges. <span style="float: right;"><u>D2-04</u></span></p>
16:45 - 17:15	<i>Coffee break</i>
17:15 - 18:30	<p><b>Mitochondrial function and dysfunction</b> <i>Chairs: Anna Herminghaus, Enrico Calzia</i></p> <p><b>Hickey Anthony J (NZ)</b> How do bumblebees warm flight muscles? <span style="float: right;"><u>D2-05</u></span></p> <p><b>Krajcova Adela (CZ)</b> Mitochondrial pathogenesis of propofol infusion syndrome in an <i>in vitro</i> model of human skeletal muscle. <span style="float: right;"><u>D2-06</u></span></p> <p><b>Chicco Adam J (US)</b> Investigating the mechanism of cardiac mitochondrial respiratory impairment in Barth Syndrome. <span style="float: right;"><u>D2-07</u></span></p> <p><b>Pileggi Chantal (NZ) Poster</b> Voluntary exercise prevents high fat diet-induced cardiac mitochondrial dysfunction in male rats. <span style="float: right;"><u>D2-08</u></span></p> <p><b>Maarman Gerald (ZA)</b> Melatonin rescues uric acid-induced impairment of respiration in myotubes. <span style="float: right;"><u>D2-09</u></span></p>
19:00 - 20:30	<i>Dinner</i>

	<p><b>Topic D3 MoTrPAC and MITOEGLE.</b></p>
20:30 - 21:15	<p><i>Chairs: Kathrin Renner-Sattler, Arnould Thierry</i></p> <p><b>Goodpaster Bret H (US) The molecular transducers of physical activity consortium (MoTrPAC) and MITOEGLE: exercise effects on mitochondria.</b> The MoTrPAC is a new initiative funded by the U.S. National Institutes of Health to investigate the biological molecules in response to acute and chronic exercise, and to relate these changes to the benefits of physical activity. This molecular map will contain the many molecular signals that transmit the health effects of physical activity, and indicate how they are altered by age, sex, and fitness level. Clinical centers across the U.S. will obtain skeletal muscle, adipose tissue and blood specimens in ~2,500 healthy human subjects before and after bouts of acute exercise and following an exercise training program, and in a smaller number of non-exercise control subjects and in highly-trained athletes. Although not likely to be included in the primary analyses of blood and tissue specimens, <span style="float: right;"><u>D3-01</u></span></p>



mitochondria was a featured topic of importance during the NIH-convened working group webinars and discussions that helped guide the MoTrPAC. We will propose an ancillary study to investigate the effects of exercise on mitochondrial genetics, energetics, dynamics, e.g., fusion, fission, mitophagy, epigenomics, oxidative stress and redox biology in skeletal muscle, adipose tissue and peripheral blood cells. This project within the MoTrPAC could synergize with MITOEAGLE to provide novel insights about the role of mitochondria and exercise in human health.

**Discussion: MITOEAGLE - think MitoGlobally**



## Tuesday, July 12 Morning



07:00 - 08:00	<i>HIT-Training (Verena Menz)</i>	
08:00 - 09:00	<i>Break(fast)</i>	
<b>Topic E1 MITOEAGLE and parallel IOC112 O2k-Workshop. <math>V_{O2max}</math> tests.</b>		
09:00 - 10:15	<i>Chairs: Adelheid Weidinger, Dominik Pesta</i>	
	<b>Göbel Georg (AT)</b>	
	A supervised statistical approach: the meaning of the mean and beyond in small sample sizes.	<u>E1-01</u>
	The MITOEAGLE network.	<u>E1-02</u>
	IOC112 O2k-Workshop - experimental groups.	<u>E1-03</u>
10:15 - 10:45	<i>Coffee break</i>	
10:45 - 12:00	<b>Continued</b>	
12:00 - 15:00	<i>Lunch, 2 km walking-tests, <math>V_{O2max}</math> tests, e-bikes</i>	



## Tuesday, July 12 Afternoon

<b>Topic E2 MITOEAGLE and parallel IOC112 O2k-Workshop.</b>		
15:30 - 16:45	MITOEAGLE: towards the 1 <sup>st</sup> MC Meeting.	<u>E2-01</u>
	IOC112 O2k-Workshop - experimental groups.	<u>E2-02</u>
16:45 - 17:15	<i>Coffee break</i>	
17:15 - 18:30	<b>Continued</b>	
19:00 - 20:30	<i>Dinner</i>	
20:30	<i>Conclusions and Poster Awards</i>	
21:30	<b>MitoFit party at Dorfstadl</b>	



## Wednesday, July 13 Morning



08:00 - 09:00	<i>Break(fast)</i>
<b>09:00</b>	<b>Departure by bus to Innsbruck</b>



## Posters

<b>Herminghaus Anna:</b> Sterile laparotomy time-dependently modulates hepatic but not colonic mitochondrial function similar to moderate abdominal sepsis.	B2-06
<b>Hsiao Chao-Pin:</b> Association between mitochondrial bioenergetics and radiation-related fatigue: a possible mechanism and novel target.	B3-05
<b>Pelena Dita: OXPHOS</b> enzyme activity measurements in mitochondria isolated from peripheral blood leukocytes in control group and patients with suspected mitochondrial disease.	B1-05
<b>Pileggi Chantal:</b> Voluntary exercise prevents high fat diet-induced cardiac mitochondrial dysfunction in male rats.	D2-08
<b>Markova Michaela:</b> Porcine hearts samples preparation: PBI-Shredder or saponin?	D1-06

## List of Participants

Name	Laboratory, affiliation
Sameh S Ali**	<a href="#">EG Giza Ali SS</a> : Zewail City of Science and Technology
Thierry Arnould	Laboratory of Biochemistry and Cellular Biology, University of Namur (FUNDP) (BE)
Nicole Bezuidenhout**	<a href="#">ZA Cape Town Ojuka EO</a> : Institute of South Africa Newlands ESSM UCT Dept of Human Biology Sports Science University of Cape Town
Johannes Burtscher	Institute of Pharmacology, Medical University of Innsbruck (AT)
Martin Burtscher*	<a href="#">AT Innsbruck Burtscher M</a> : Institut für Sportwissenschaften, Leopold Franzens Universität Innsbruck
Elisa Calabria*	<a href="#">IT Verona Calabria E</a> : Department of Neurological and Movement Sciences, University of Verona
Enrico Calzia**	<a href="#">DE Ulm Radermacher P</a> : Division APV Department Anesthesiology, University Hospital Ulm
Marta Casado Pinna	Instituto de Biomedicina de Valencia, Department of Molecular and Cellular Pathology and Therapy, Metabolic Exp Pathology (ES)
Adam Chicco**	<a href="#">US CO Fort Collins Chicco AJ</a> : Department of Biomedical Sciences, Colorado State University
Paul Coen****	<a href="#">US FL Orlando Goodpaster BH</a> : Translational Research Institute for Metabolism and Diabetes
Markus De Marees	Ruhr-University Bochum (DE)
Valentina Dikova	<a href="#">AT Innsbruck OROBOROS</a> : OROBOROS INSTRUMENTS
Carolina Doerrier	<a href="#">AT Innsbruck OROBOROS</a> : OROBOROS INSTRUMENTS
Stephen Dozier*****	<a href="#">US NC Winston-Salem Molina AJA</a> : Wake Forest School of Medicine
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Hannes Gatterer*	<a href="#">AT Innsbruck Burtcher M</a> : Institut für Sportwissenschaften, Leopold Franzens Universität Innsbruck
Erich Gnaiger	<a href="#">AT Innsbruck OROBOROS</a> : OROBOROS INSTRUMENTS
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Bret Goodpaster****	<a href="#">US FL Orlando Goodpaster BH</a> : Translational Research Institute for Metabolism and Diabetes
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Chao-Pin Hsiao**	<a href="#">US OH Cleveland Hoppel CL</a> : Frances Payne Bolton School of Nursing, Case Western Reserve University
Reinhard Huber	<a href="#">AT Neu-Rum STH</a> : Sporttherapie Huber
Brian A Irving**	<a href="#">US LA Baton Rouge Irving BA</a> : School of Kinesiology, Louisiana State University
Tomas Jelenik*****	<a href="#">DE Duesseldorf Roden M</a> : German Diabetes Center, Heinrich Heine University Düsseldorf
Daniel Kane**	<a href="#">CA Antigonish Kane DA</a> : Department of Human Kinetics, St. Francis Xavier University
Alexander Karabatsiakis****	<a href="#">DE Ulm Karabatsiakis A</a> : Clinical Biological Psychology, Univ Ulm
Gloria-Maria Keppner**	<a href="#">DE Freising Klingenspor M</a> : Molecular Nutritional Medicine, Technische Universität München, Else Kröner Fresenius Center
Adéla Krajčová	Third Faculty of Medicine, Charles University in Prague (CZ)
Nina Krako	Faculty of Medicine, Univ Belgrade Clinic for Endocrinology, Diabetes and Metabolic Diseases Clinical Center of Serbia (RS)
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Verena Menz*	<b><u>AT Innsbruck Burtscher M</u></b> : Institut für Sportwissenschaften, Leopold Franzens Universität Innsbruck
Allen Mitchell***	<b><u>US NC Greenville Brown DA</u></b> : East Carolina University
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