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## EMBO Workshop

### Molecular mechanisms of muscle growth and wasting in health and disease

Centro Stefano Franscini, Ascona, Switzerland

15.9.2013-20.9.2013

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#### SUNDAY

#### Arrival

16.00 - 18.00

Registration

18.00 - 19.30

**Reception with food and drinks**

#### Keynote Lecture

19.30

Hall, Michael

*TOR signaling in growth and metabolism*

followed by an "icebreaker"

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**MONDAY**

08.45 - 09.00	Cometta, Chiara and Sonognini, Lorenzo	<i>Welcome speech and introduction to Centro Stefano Franscini and Monte Verità</i>
	<b>Session</b> <u>Chairman</u>	<b>Repair mechanisms of skeletal muscle</b> Krauss, Robert
<b>Speakers</b>		
09.00 - 09.30	Rudnicki, Michael	<i>Molecular regulation of muscle stem cell function.</i>
09.30 - 10.00	Brack, Andrew	<i>Satellite cell quiescence and self renewal</i>
<b>Short talks</b>		
10.00 - 10.15	Fukada, So-ichiro	<i>Maturation of myofiber is mediated by transit double cortin-expressing myogenic cells during regeneration</i>
10.15 - 10.30	Juhas, Mark	<i>3D tissue-engineered muscle with satellite cell niche exhibits unparallel contractile function and robust vascularization</i>
10.30 - 11.00	<b>Coffee Break</b>	
11.00 - 11.30	Rando, Thomas	<i>The molecular regulation of muscle stem cell quiescence</i>
11.30 - 12.00	Olwin, Bradley	<i>Rescue of a cell-autonomous loss of asymmetric division and self-renewal in aged skeletal muscle stem cells</i>
<b>Short talks</b>		
12.00 - 12.15	Bonaldo, Paolo	<i>Collagen VI is a key component of muscle stem cell niche required for muscle regeneration</i>
12.15 - 12.30	Adams, Christopher	<i>Identification of a stress-activated pathway that reprograms skeletal muscle gene expression and promotes muscle atrophy</i>
12.30 - 14.30	<b>Lunch Break</b>	
	<b>Session</b> <u>Chairman</u>	<b>Disease of the nerve-muscle connection</b> Ruegg, Markus
<b>Speakers</b>		
14.30 - 15.00	Muñoz-Cánoves, Pura	<i>Satellite cell functions and the control of muscle repair and growth during aging</i>
15.00 - 15.30	Mei, Lin	<i>Mechanisms of LRP4 in neuromuscular junction formation and muscular dystrophy</i>
<b>Short talks</b>		
15.30 - 15.45	Martin, Paul	<i>Postnatal deletion of Pofut1 in mouse skeletal myofibers inhibits NotchR signaling and reduces skeletal muscle growth and regeneration</i>
15.45 - 16.00	Huijbers, Maartje	<i>Pathogenic mechanisms in MUSK Myasthenia Gravis</i>
16.00 - 16.30	<b>Coffee Break</b>	
16.30 - 17.00	Burden, Steven	<i>The Muscle Connectome</i>
17.00 - 17.30	Burghes, Arthur	<i>Mouse models of SMA: Therapeutics and basic biology of SMA</i>
<b>Short talks</b>		
17.30 - 17.45	Rimer, Mendell	<i>Characterization of skeletal muscle conditional ERK2- and ERK1/2- deficient mice</i>
17.45 - 18.00	Kumar, Ashok	<i>Epigenetic regulation of neurogenic muscle atrophy</i>
18.00 - 19.00	<b>Poster Session (with drinks and snacks)</b>	
19.00 - 20.30	<b>Dinner</b>	
20.30 - 21.30	<b>Poster Session (continued)</b>	

TUESDAY		
	<b>Session</b> <u>Chairman</u>	<b>Excitation-contraction coupling; calcium handling; mitochondria</b> McNally, Elizabeth
<b>Speakers</b>		
09.00 - 09.30	Hamilton, Susan	<i>Skeletal Muscle Regulation of Body Composition: The Role of Ca<sup>2+</sup> Influx via CaV1.1</i>
09.30 - 10.00	Millay, Douglas	<i>Myomaker is a membrane activator of myoblast fusion and muscle formation</i>
<b>Short talks</b>		
10.00 - 10.15	Zorzato, Francesco	<i>Enhanced dihydropyridine receptor calcium channel activity in skeletal muscle from JP-45 and calsequestrin 1 double knock-out mice restores muscle strength</i>
10.15 - 10.30	Hwee, Darren	<i>Small molecule fast skeletal troponin activator CK-2066260 improves Ca<sup>2+</sup> sensitivity, sub- maximal muscle force and exercise capacity</i>
10.30 - 11.00 <b>Coffee Break</b>		
11.00 - 11.30	Bennett, Anton	<i>Making Muscle by Protein Tyrosine Dephosphorylation</i>
11.30 - 12.00	Lynch, Gordon	<i>Therapeutic potential of heat shock protein induction for muscle wasting conditions</i>
<b>Short talks</b>		
12.00 - 12.15	Wasser, Martin	<i>Studying developmental muscle atrophy and cell death using live imaging of Drosophila metamorphosis and image analysis</i>
12.30 - 14.30 <b>Lunch Break</b>		
	<b>Session</b> <u>Chairman</u>	<b>Mechanisms controlling muscle size</b> Muñoz-Cánoves, Pura
<b>Speakers</b>		
14.30 - 15.00	Krauss, Robert	<i>Pak1 and Pak2 kinases promote skeletal myogenesis</i>
15.00 - 15.30	Ruegg, Markus	<i>mTOR and the control of autophagy in skeletal muscle</i>
<b>Short talks</b>		
15.30 - 15.45	Hughes, Simon	<i>EIF4EBP3L Acts as a gatekeeper of TORC1 in activity-dependent muscle growth by regulating Mef2ca translational initiation</i>
15.45 - 16.00	Graziani, Andrea	<i>Role of acylated and unacylated ghrelin in skeletal muscle regeneration</i>
16.00 - 16.30 <b>Coffee Break</b>		
16.30 - 17.00	Sandri, Marco	<i>Novel signaling pathways that control muscle atrophy and hypertrophy</i>
17.00 - 17.30	Guttridge, Denis	<i>Stem cells in cancer-induced muscle wasting</i>
<b>Short talks</b>		
17.30 - 17.45	Gregorevic, Paul	<i>The Bone Morphogenetic Protein (BMP) signaling axis is a positive regulator of skeletal muscle mass</i>
19.00 - 20.30 <b>Dinner</b>		
<b>Free Evening</b>		

<b>WEDNESDAY</b>		
	<b>Session Chairman</b>	<b>Epigenetics and microRNAs in muscle function</b>
<b>Speakers</b>		Glass, David
09.00 - 09.30	Xiao, Rui-Ping	<i>MG53-mediated skeletal muscle insulin resistance and resultant metabolic syndrome</i>
09.30 - 10.00	Charlet-Berguerand, N.	<i>microRNA and messenger RNA processing alterations in Myotonic Dystrophy</i>
<b>Short talks</b>		
10.00 - 10.15	Gallouzi, Imed-Eddine	<i>HuR and miR-1192 respectively promote and reduce myogenesis by modulating the translation of HMGB1 mRNA</i>
10.15 - 10.30	Ito, Naoki	<i>Activation of calcium signalling through TRPV1 by nNOS and peroxynitrite as a key trigger of skeletal muscle hypertrophy</i>
10.30 - 11.00	<b>Coffee Break</b>	
11.00 - 11.30	Gabellini, Davide	<i>FSHD muscular dystrophy: a walk on the dark side of the (epi)genome</i>
11.30 - 12.00	van der Marel, Silvere	<i>The chromatin modifier SMCHD1 is mutated in FSHD2 and acts as a modifier in FSHD1</i>
<b>Short talks</b>		
12.00 - 12.15	Mourkioti, Foteini	<i>Humanizing mouse models of disease: Role of telomere dysfunction in Duchenne Muscular Dystrophy</i>
12.15 - 12.30	Montanaro, Federica	<i>Identification of a new pathway involved in muscle regeneration and fibrosis in muscular dystrophy</i>
12.30 - 14.30	<b>Lunch Break</b>	
	<b>Session Chairman</b>	<b>Metabolic dynamics; interaction of skeletal muscle with other organs</b>
<b>Speakers</b>		Guttridge, Denis
14.30 - 15.00	Puigserver, Pere	<i>Transcriptional programming of the mitochondrial bioenergetics in skeletal muscle</i>
15.00 - 15.30	Kambadur, Ravi	<i>Regulation of skeletal muscle metabolism by Myostatin</i>
<b>Short talks</b>		
15.30 - 15.45	Raimundo, Nuno	<i>AMPK-autophagy pathway determines myopathy formation in response to mitochondrial malfunction</i>
15.45 - 16.00	Chazaud, Benedicte	<i>AMPK<math>\alpha</math>1 regulates macrophage skewing at the time of resolution of inflammation during skeletal muscle regeneration</i>
16.00 - 16.30	<b>Coffee Break</b>	
16.30 - 17.00	Sartorelli, Vittorio	<i>The methyltransferase SMYD3 regulates skeletal muscle mass</i>
17.00 - 17.30	Rossi, Fabio	<i>Mechanisms controlling the switch between trophic and degenerative roles of mesenchymal stem cell in muscle regeneration</i>
<b>Short talks</b>		
17.30 - 17.45	Patnam, Sreekanth	<i>Myostatin signals through the novel zinc finger containing protein menos musculo 1 (MM1) to promote skeletal muscle wasting</i>
17.45 - 18.00	Buschbeck, Marcus	<i>A structural chromatin component linking muscle metabolism and epigenetic regulation</i>
18.00 - 19.00	<b>Poster Session (with drinks and snacks)</b>	
19.00 - 20.30	<b>Dinner</b>	
20.30 - 21.30	<b>Poster Session (continued)</b>	

<b>THURSDAY</b>		
	<b>Session</b>	<b>Mechanisms of sarcopenia and cachexia</b>
	<u>Chairman</u>	Rudnicki, Michael
<b>Speakers</b>		
09.00 - 09.30	Moraes, Carlos	<i>Muscle wasting and mitochondrial function</i>
09.30 - 10.00	Glass, David	<i>Signaling pathways that mediate skeletal muscle atrophy, hypertrophy and aging</i>
<b>Short talks</b>		
10.00 - 10.15	White, James	<i>G protein coupled receptor 56 is a target gene of the PGC-1<math>\alpha</math>4 isoform and regulates skeletal muscle hypertrophy</i>
10.15 - 10.30	Favier, François	<i>REDD1 null mice resist to dexamethasone-induced skeletal muscle atrophy</i>
10.30 - 11.00	<b>Coffee Break</b>	
11.00 - 11.30	Esser, Karyn	<i>Circadian Rhythms, the molecular clock and muscle: why muscle needs to keep time</i>
11.30 - 12.00	Judge, Andrew	<i>New insights into the regulation of FoxO signaling in skeletal muscle</i>
<b>Short talks</b>		
12.00 - 12.15	Lach-Trifilieffe, Estelle	<i>Blockade of activin receptor type II induces strong hypertrophy and protects from atrophy</i>
12.15 - 12.30	Smuder, Ashley	<i>HSP72 overexpression protects against ventilator-induced diaphragm dysfunction</i>
12.30 - 14.30	<b>Lunch Break</b>	
	<b>Session</b>	<b>Muscular dystrophies and development of therapeutic strategies</b>
	<u>Chairman</u>	Campbell, Kevin
<b>Speakers</b>		
14.30 - 15.00	Campbell, Kevin	<i>Mechanistic insights into dystroglycan glycosylation and muscular dystrophy</i>
15.00 - 15.30	McNally, Elizabeth	<i>Matrix regulation of muscle degeneration in muscular dystrophy</i>
<b>Short talks</b>		
15.30 - 15.45	Winder, Steve	<i>Dystroglycan phosphorylation as a therapeutic target for Duchenne muscular dystrophy</i>
15.45 - 16.00	Kobayashi, Yvonne	<i>Acute phosphodiesterase5A inhibitor treatment restores blood flow and activity to active mdx muscle and restores active hyperemia to BMD muscle</i>
16.00 - 16.30	<b>Coffee Break</b>	
16.30 - 17.00	Keller, Charles	<i>Dynamic Pax3:Foxo1 oncogene expression drives checkpoint adaptation in rhabdomyosarcoma</i>
17.00 - 17.30	Duez, Hélène	<i>Rev-erba modulates skeletal muscle oxidative capacity</i>
<b>Short talks</b>		
17.30 - 17.45	Kanagawa, Motoi	<i>Impaired viability of muscle precursor cells in muscular dystrophy with glycosylation defects and amelioration of its severe phenotype by limited gene expression</i>
17.45 - 18.00	Fiorillo, Allyson	<i>microRNAs as Modifiers of Dystrophin Protein Levels in Becker Muscular Dystrophy – Implications for Variability in Exon Skipping</i>
<b>Aperitif and Gala Dinner</b>		

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**FRIDAY**

**Breakfast and Departure**

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