



fsrmm

fondation suisse de recherche sur les maladies musculaires
fondazione svizzera per la ricerca sulle malattie muscolari
schweiz. stiftung für die erforschung der muskelkrankheiten

Program

11th Swiss Meeting on Muscle Research

Macolin / Magglingen

20th – 22nd November 2016



Vesalius (1514-64)

Sunday, November 20th

16:00-17:30 Arrival, Check-in

17:30-18:30 Welcome Aperó

18:30-19:30 Dinner

19:30-19:35 Meeting opening (Markus A. Rüegg)

19:35-20:20 Making sense of heterogeneities in adult skeletal muscle stem cells

Special guest: Shahragim Tajbakhsh, Institut Pasteur, Paris

Session 1: Muscle Development

Chair: Markus A. Rüegg

20:20-20:50 Human myogenic reserve cells contribute to muscle regeneration and satellite cell formation after intramuscular transplantation in immunodeficient mice
Thomas Laumonier, University of Geneva

20:50-21:20 Receptor FgfrL1 and slow muscle fibers
Beat Trueb, University of Bern

21:20-21:50 Ablation of raptor impairs but does not abolish myogenesis during mouse development
Nathalie Rion, Biozentrum, Basel

Sponsors 2016

KontaktGruppe für **F**orschungsfragen
Contact Group for Research Matters



Monday, November 21st

Session 1: Cell therapy approaches

Chair: Denis Monard

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- 8:00-8:30 Targeting the stem cell niche to restore muscle regeneration in aging
Jérôme Feige, EPF Lausanne
- 8:30-9:00 Role of NFAT proteins in human primary myoblast differentiation
Julie Perroud, University of Geneva
- 9:00-9:30 NAD⁺ repletion improves mitochondrial and stem cell function and enhances life span in mice
Hongbo Zhang, EPF Lausanne
- 9:30-10:00 Mesoangioblasts from different tissues: potential for muscle regeneration and translational perspective
Marisa Jaconi, University of Geneva

10:00-10:45 Coffee break

Session 2: Disease-specific therapy approaches

Chair: Laurent Bernheim

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- 10:45-11:15 Deciphering the pathogenic mechanisms of C9ORF72 ALS and FTD
Magdalini Polymenidou, University of Zürich
- 11:15-11:45 RNA binding proteins involved in neurodegeneration and neuro-muscular diseases
Frédéric Allain, ETH Zürich
- 11:45-12:15 The use of a mutated version of the splicing regulator SRSF1 (ASF/SF2) as a new strategy to cure Spinal Muscular Atrophy (SMA)
Antoine Clery, ETH Zürich

12:15-13:45 Lunch

- 13:45-14:15 Restoration of basement membrane assembly by small linker proteins prevents laminin- α 2-deficient muscular dystrophy
Judith Reinhard, Biozentrum, Basel
- 14:15-14:45 Targeting deregulated AMPK and mTORC1 pathways in DM1 improves muscle function via splicing-dependent and -independent mechanisms
Marielle Brockhoff, University of Basel

Poster session 1

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- 14:45-16:30 POSTERS Nr. 1-16 and *coffee break*

16:30-17:00 Cardiac involvement in patients with Duchenne / Becker muscular dystrophy (Duchenne heart study) – a longitudinal observational study
Beate Rücker, Kinderspital Zürich

17:00-17:30 Synchronous MRI of muscle motion induced by electrical stimulation
Francesco Santini, University Hospital Basel

17:30-18:00 Neurophysiological assessment of muscle membrane properties
Werner Z'Graggen, Inselspital Bern

18:00-18:30 Urolithin A induces mitophagy and prolongs lifespan in *C. elegans* and increases muscle function in rodents
Laurent Mouchiroud, EPF Lausanne

19:00-20.30 Dinner

Evening program

20:30-22:30 free beer at poster site

Tuesday, November 22nd

Session 1: Translational medicine

Chair: Urs Rugg

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- 8:00-8:30 U7 snRNA-based splicing modulation as a potential therapy for inherited diseases - retrospective and outlook
Daniel Schümperli, University of Bern
- 8:30-9:00 The Omigapil CALLISTO Studie in CMD patients
Rudolf Hausmann, Santhera Pharmaceuticals
- 9:00-9:30 Enhancing estrogenic signalling to fight muscular dystrophies: Mechanisms of action and repurposing clinically approved drugs
Elinam Gayi, University of Geneva
- 9:30-10:00 Therapeutic effectiveness of Rimeporide, an NHE-1 inhibitor, from muscle cells in culture to models of Duchenne muscular dystrophy
Hesham I.Hamed, University of Geneva
- 10:00-10:30 Treatment with L-citrulline and metformin in Duchenne muscular dystrophy
Dirk Fischer, University Hospital Basel

10:30-11:15 *Coffee Break*

Session 2: Muscle plasticity and physiology (1)

Chair: Nicolas Mermod

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- 11:15-11:45 mTORC1 deregulation impairs muscle homeostasis upon denervation
Perrine Castets, Biozentrum Basel
- 11:45-12:15 Molecular mechanisms of HIIT-induced RyR1 modifications and skeletal muscle adaptations to exercise
Nadège Zanou, University of Lausanne
- 12:15-12:45 Extraocular muscles - RYR3: Is there something behind the eyes?
Jan Eckhardt, University Hospital Basel

12:45-14:00 *Lunch*

Poster session 2

- 14:00-15:30 POSTERS Nr. 17-26

15:30-16:00 Differential cytoplasmic adapter recruitment controls dynamic and function of beta-1 integrin splice variants
Bernhard Wehrle-Haller, University of Geneva

16:00-16:30 The coactivator PGC-1alpha regulates skeletal muscle cell plasticity in health and disease
Christoph Handschin, Biozentrum Basel

16:30-17:00 Characterization of a transgenic mouse over-expressing SRP35 in its skeletal muscle: metabolic effect
Alexis Ruiz, University Hospital Basel

Concluding remarks (Markus Rüegg)

-please remove posters now-

Departure

Poster presentations

Author	Title	Topic	Nr
Lei Zhuang	Role of the receptor FGFR1 in muscle development	Muscle development	1
Stéphane König	Role of secreted <i>plg5</i> during differentiation of DMD myoblast	Muscle development	2
Shilpy Joshi	Differential contributions of TEAD transcription factors to myogenic differentiation of C2C12 cells and primary myoblasts	Muscle development	3
Peter Meister	Antagonistic roles of Polycomb repression and Notch signaling impair muscle transdifferentiation in <i>C. elegans</i>	Muscle development	4
Pavithra Iyer	Assessment of a cell therapy approach for Duchenne muscular dystrophy using mesoangioblasts and non-viral vectors	Cell therapy	5
Omid Mashinchian	Derivation of uncommitted human muscle stem cells from iPSCs	Cell therapy	6
Sonia Karaz	Cross-talk between regeneration and ectopic adipogenesis in muscle aging	Cell therapy	7
Christoph Bachmann	Characterization of Excitation-Contraction Coupling in Muscles from Patients with X-Linked Myotubular Myopathy	Disease-specific approaches	8
Sophie Saüc	Differential roles of STIM1 and STIM1L in skeletal muscle	Disease-specific approaches	9
Olivier Dorchies	The <i>mdx5Cv</i> dystrophic mouse: first in depth longitudinal phenotyping	Disease-specific approaches	10
Hesham Hamed	Lack of TRPC1 cation channels enhances muscle fatigue in <i>mdx5Cv</i> dystrophic mice	Disease-specific approaches	11
Jochen Kinter	Identification of plant-derived alkaloids with therapeutic potential for Myotonic Dystrophy Type I	Disease-specific approaches	12
Nicolas Place	Neuromuscular adjustments in plantar flexors in young adults with cerebral palsy	Disease-specific approaches	13
Dongryeol Ryu	NAD ⁺ repletion improves muscle function in muscular dystrophy and counters global PARylation.	Disease-specific approaches	14
Maurizio Sury	Attempt at further ameliorating the muscular dystrophy in mouse models for MDC1A using a construct combining “mini-agrin” and “ α LNNd”	Disease-specific approaches	15
Ruben Herrendorff	A novel antigen-specific treatment for multifocal motor neuropathy	Disease-specific approaches	16
Xeni Deligianni	Reproducibility of EMS-induced synchronous MRI of muscle motion	Diagnostic tools	17

Olivier Dorchies	Estrogen deprivation caused by the lack of aromatase aggravates the pathology in dystrophic mice	Translational medicine	18
Kathrin Chojnowska	Regulation of the mitochondrial dynamics via mTORC1 in skeletal muscle	Muscle plasticity and physiology	19
Maud Frieden	Ion channel(s) gated by STIM1L, an isoform of STIM1 highly expressed in skeletal muscle	Muscle plasticity and physiology	20
Laurence Neff	PCR-restriction-based strategies allow genotyping without sequencing of several allelic variants of the mdx mouse that carry point mutations	Muscle plasticity and physiology	21
Laurence Neff	Towards generating new dystrophic mouse mutants by homologous recombination using dimeric RNA-guided FokI-dCas9 nucleases	Muscle plasticity and physiology	22
Jonathan Gill	PGC-1 α amelioration of mitochondrial function and calcium metabolism prevents age-related formation of tubular aggregates in muscle	Muscle plasticity and physiology	23
Shuo Lin	Sustained activation of mTORC1 affects the integrity and function of the neuromuscular junction reminiscent of age-related changes	Muscle plasticity and physiology	24
Regula Furrer	PGC-1 α -induced cross-talk between muscles and macrophages may prime muscles for faster regeneration	Muscle plasticity and physiology	25
Lionel Tintignac	Deregulation of the proteostasis network in diseased muscle	Muscle plasticity and physiology	26
Francesco Zorzato	An RYR1 mutation associated with malignant hyperthermia is also associated with bleeding abnormalities	Muscle plasticity and physiology	27