

# Frontiers in Myogenesis Meeting

## “Skeletal muscle: development, regeneration and disease”

Conference Organizers: Alessandra Sacco, Fabio Rossi, Peter Zammit

September 23-28 2019

Marriott San Jose, San Jose, Costa Rica

### PRELIMINARY PROGRAM

All listed speakers have confirmed their participation.

#### **Monday, September 23 – DAY 1**

2-6pm Meeting registration

3pm- Housing check-in

**6:00pm-7:00pm Dinner**

**7:30-8:40pm Opening Keynote Address**

7:30-7:40pm **Welcome Introduction** – Conference Organizers Alessandra Sacco, Fabio Rossi, and Pete Zammit

7:40pm-8:40pm \*\*\* **THE EMBO LECTURE\*\*\***

**Pura Munoz-Canoves**, Pompeu Fabra University (UPF), Barcelona, Spain

*“Muscle stem cell aging and rejuvenating strategies”*

8:40pm-10:00pm Opening Reception

#### **Tuesday, September 24 – DAY 2**

7:00am-8:30am Breakfast

**8:30am-10:00am SESSION 1 – Mechanisms of skeletal muscle development**

8:30am-9:00am **Peter Currie**, Monash University, Melbourne, Australia

*“Defining the in vivo dynamics of muscle stem and progenitor cell action during growth and injury”*

9:00am-9:30am **Gabrielle Kardon**, University of Utah

*“Inspired by the diaphragm: development of the diaphragm and congenital diaphragmatic hernias”*

9:30am-9:45am Speaker selected from abstract 1

9:45am-10:00am Speaker selected from abstract 2

**10:00am-10:30am Coffee Break**

**10:30am-12:00pm SESSION 2 – Mechanisms of myoblast fusion and nuclear positioning**

10:30am-11:00am **Elizabeth Chen**, UT Southwestern Medical Center

*“Mechanisms of myoblast fusion”*

11:00am-11:30am **Edgar Gomes**, University of Lisbon, Portugal

*“Positioning the nucleus for muscle function”*

11:30am-11:45am Speaker selected from abstract 3

11:45am-12:00pm Speaker selected from abstract 4

**12:00pm-1:30pm Lunch and Meet the Speakers**

**1:30pm- 5:30pm SESSION 3 – Muscle stem cell regulation**

1:30pm-2:00pm **Helen Blau**, Stanford University

*“Challenges facing muscle stem cell therapy” or “Regulating muscle regeneration : no pain, no gain!”*

2:00pm-2:30pm **Tom Cheung**, The Hong Kong University of Science and Technology, Hong Kong, China

*“Differential mRNA processing during muscle stem cell activation”*

2:30pm-3:00pm **Colin Crist**, McGill University, Montreal, Canada

*“Regulation of Satellite Cell Quiescence and Self-Renewal by Selective mRNA Translation”*

3:00pm-3:15pm Speaker selected from abstract 5

3:15pm-3:30pm Speaker selected from abstracts 6

**3:30pm-4:00pm Coffee Break**

4:00pm-4:30pm **Andrew Brack**, University of California, San Francisco (UCSF)

*“Muscle stem cell heterogeneity”*

4:30pm-5:00pm **Thomas Braun**, Max-Planck-Institute for Heart and Lung Research, Bad Nauheim, Germany

*“Epigenetic regulation of programmed cell death in muscle stem cells during tissue regeneration”*

5:00pm-5:15pm Speaker selected from abstracts 7

5:15pm-5:30pm Speaker selected from abstracts 8

**5:30pm-6:00pm POSTER BLITZ**

6:00pm-7:30pm Dinner

**7:30pm-10:00pm POSTER SESSION 1**

7:30pm-8:45pm Odd numbers

8:45pm-10:00pm Even numbers

**Wednesday, September 25 – DAY 3**

7:00am-8:30am Breakfast

**8:30am-10:00am SESSION 4 – Signaling pathways in muscle stem cell fate decisions**

8:30am-9:00am **Carmen Birchmeier**, Max Delbrueck Center for Molecular Medicine in the Helmholtz Association, Berlin, Germany

*“Oscillatory expression of Hes1 and MyoD allow activated satellite cells to maintain an undifferentiated state”*

9:00am-9:30am **Yusuke Ono**, University of Nagasaki, Japan

*“Roles of Notch signaling in regulating muscle mass and regeneration”*

9:30am-9:45am Speaker selected from abstract 9

9:45am-10:00am Speaker selected from abstract 10

**10:00am-10:30am Coffee Break**

**10:30am-12:00pm SESSION 5 – Epigenetic control of muscle stem cells**

10:30am-11:00am **Stephen Tapscott**, Fred Hutchinson Cancer Research Center

*“Gene transcription in skeletal muscle development and disease”*

11:00am-11:30am **Jeff Dilworth**, University of Ottawa, Ottawa, Canada  
*“Transcriptional control of satellite cell niche repopulation”*

11:30am-11:45am Speaker selected from abstract 11

11:45am-12:00pm Speaker selected from abstract 12

**12:00pm-1:30pm Lunch and Meet the Experts**

**1:30pm- 3:30pm SESSION 6 – Induced pluripotent stem cells to generate myogenic progenitors**

1:30pm-2:00pm **Rita Perlingeiro**, University of Minnesota  
*“Unraveling the molecular signature of pluripotent stem cell-derived myogenic progenitors upon transplantation”*

2:00pm-2:30pm **Olivier Pourquie**, Harvard Medical School  
*“In vitro modeling of human muscle development and disease”*

2:30pm-3:00pm **Radbod Darabi**, University of Texas Health Science Center at Houston  
*“Reporter hESCs for PAX7 and MYF5 provide valuable insights into myogenic differentiation of hPSCs as well as transcriptional regulation of skeletal myogenesis”*

3:00pm-3:15pm Speaker selected from abstract 13

3:15pm-3:30pm Speaker selected from abstracts 14

**3:30pm-4:00pm Coffee Break**

**4:00pm-5:30pm SESSION 7– Bioengineering approaches for skeletal muscle modeling**

4:00pm-4:30pm **Francesco Saverio Tedesco**, University College London, UK  
*“Human iPS Cell-Derived Artificial Skeletal Muscles for Complex Disease Modeling of Muscular Dystrophies”*

4:30pm-5:00pm **Penney Gilbert**, University of Toronto, Canada  
*“3D models to study human skeletal muscle endogenous repair in a dish”*

5:00pm-5:15pm Speaker selected from abstracts 15

5:15pm-5:30pm Speaker selected from abstracts 16

5:30pm-6:00pm **POSTER BLITZ**

6:00pm-7:30pm Dinner

**7:30pm-10:00pm POSTER SESSION 2**

7:30pm-8:45pm Odd numbers

8:45pm-10:00pm Even numbers

**Thursday, September 26 – DAY 4**

7:00am-8:30am Breakfast

**8:30am-12:00pm SESSION 8 – Role of the microenvironment in skeletal muscle repair and disease**

8:30am-9:00am **David Goldhamer**, University of Connecticut Stem Cell Institute  
*“FAPs and heterotopic ossification of muscle”*

9:00am-9:30am **Pier Lorenzo Puri**, Sanford Burnham Prebys Medical Discovery Institute

*“Control of gene expression in skeletal muscle by high-order chromatin interactions”*

9:30am-9:45am Speaker selected from abstract 17

9:45am-10:00am Speaker selected from abstract 18

10:00am-10:30am **Coffee Break**

10:30am-11:00am **Benedicte Chazaud**, Institut NeuroMyoGène, Université Claude Bernard Lyon 1, INSERM, Lyon, France

*“Molecular control of late of myogenesis by macrophages”*

11:00am-11:30am **Clarissa Henry**, University of Maine

*“Roles for glycosylation in modulating ECM during neuromuscular development and homeostasis”*

11:30am-11:45am Speaker selected from abstract 19

11:45am-12:00pm Speaker selected from abstract 20

**12:00pm-1:30pm Lunch and Meet the Experts**

**1:30pm-6:00pm FREE TIME- ACTIVITIES**

6:00pm-7:30pm Dinner

**7:30pm-10:00pm POSTER SESSION 3**

7:30pm-8:45pm Odd numbers

8:45pm-10:00pm Even numbers

**Friday, September 27 – DAY 5**

7:00am-8:30am Breakfast

**8:30am-3:30pm SESSION 9 – Muscle diseases and therapy**

8:30am-9:00am **Eric Olson**, University of Texas Southwestern Medical Center

*“TBD”*

9:00am-9:30am **Elizabeth McNally**, Northwestern University Feinberg School of Medicine

*“Modifiers of muscular dystrophy”*

9:30am-9:45am Speaker selected from abstract 21

9:45am-10:00am Speaker selected from abstract 22

10:00am-10:30am **Coffee Break**

10:30am-11:00am **Dongsheng Duan**, University of Missouri

*“AAV gene therapy for Duchenne muscular dystrophy”*

11:00am-11:30am **Pascal Bernatchez**, University of British Columbia, Vancouver, Canada

*“The humanization of rodent muscular dystrophy: are plasma lipids part of the problem?”*

11:30am-11:45am Speaker selected from abstract 23

11:45am-12:00pm Speaker selected from abstract 24

**12:00pm-1:30pm Lunch and Meet the Experts**

1:30pm-2:00pm **Foteini Mourkioti**, Perelman School of Medicine, University of Pennsylvania

*“Telomere length regulation of muscle stem cells in chronic injuries”*

2:00pm-2:30pm **Michael Kyba**, University of Minnesota  
*"Pathological mechanisms in FSHD"*

2:30pm-2:45pm Speaker selected from abstract 25

2:45pm-3:00pm Speaker selected from abstract 26

**3:00pm-3:30pm Coffee Break**

**3:30pm-5:00pm SESSION 10 – Muscle-related cancers**

3:30pm-4:00pm **Janet Shipley**, The Institute of Cancer Research, Surrey, UK  
*"EZH2 and potential for differentiation therapy of rhabdomyosarcomas"*

4:00pm-4:30pm **Joe Chakkalal**, University of Rochester Medical Center  
*"Satellite cell contributions to pediatric skeletal muscle growth and cancer survivorship"*

Talks selected from Abstracts

4:30pm-4:45pm Speaker selected from abstracts 27

4:45pm-5:00pm Speaker selected from abstracts 28

5:00pm-5:30pm **Closing remarks**

5:30pm-5:45pm **PRIZES FOR BEST POSTERS**

7:00pm-9:00pm **Closing Banquet**

**Saturday, September 28**

**Departure**