Molecular mechanisms of muscle wasting during aging and disease

Congressi Stefano Franscini, Monte Verità, Ascona, Switzerland
September 11 - 16, 2022

SUNDAY	**Arrival**
16.00 - 18.00	Registration
18.00 -19.00	**Reception**
	Keynote Lecture Chair: David Glass
19.00	Tony Wyss-Coray *Young Blood for Old Brains – and Other Tissues*
	followed by an "icebreaker"

MONDAY	**12.09.2022**	
08.30 - 08.50	Welcome address from CSF and Monte Verità	
	Session	**Aging of skeletal muscle and stem cells**
	Chair	Pura Munoz-Cánoves
Speakers		
08.50 - 09.15	Jeff Dilworth	*Epigenetic adaptation of satellite cells to their regenerative niche*
09.15 - 09.40	Michael Rudnicki	*Molecular Regulation of Muscle Stem Cell Function*
Short talks		
09.40 - 09.55	Jan Krützfeldt	*A myogenin+/CD74+ adult muscle stem cell population during regeneration of aged skeletal muscle*
09.55 - 10.10	Isabella Scionti	*LSD1 controls a nuclear checkpoint in Wnt/β-Catenin signaling to regulate muscle stem cell self renewal*
10.10 - 10.40	**Coffee Break**	
Speakers		
10.40 - 11.05	Tom Cheung	*Molecular pathways that control muscle stem cell quiescence in aging*
11.05 - 11.30	Pura Munoz-Cánoves	*Cellular senescence controls skeletal muscle regeneration in young and old mice*
Short talks		
11.30 - 11.45	Elia Angelino	*Pro-cachectic tumor conditioned medium induces adrenergic resistance in C2C12 myocytes through a Pde4-dependent mechanism*
11.45 - 12.00	Xiaotong Hong	*Role of Mitochondrial Dynamics in Muscle Stem Cell Regenerative Functions*
12.00 - 13.30	**Lunch Break**	
	Session	**Disease of the nerve-muscle connection**
	Chair	Markus Rüegg
Speakers		
13.30 - 13.55	Lin Mei	*Rapsyn as an organizer and an enzyme in neuromuscular junction formation*
13.55 - 14.20	Gregorio Valdez	*Aging of the neuromuscular junction and the capping Schwann cells*
Short talks		
14.20 - 14.35	Weichun Lin	*A feedback mechanism in atrophic muscle fibers to promote innervation and neuromuscular synaptogenesis*
14.35 - 14.50	Cristofer Calvo	*Myonuclei exhibit a multimodal transcriptional response to muscle denervation*
14.50 - 15.20	**Coffee Break**	
Speakers		
15.20 - 15.45	Lorenzo Puri	*Activation and functional interactions of muscle-resident cells in response to nerve injury*
15.45 - 16.10	Justin Fallon	*The MuSK-BMP pathway regulates satellite cell quiescence, muscle-selective maintenance of myofiber size, and neuromuscular junction stability*
Short talks		
16.10 - 16.25	Lorenzo Giordani	*Spatially resolved transcriptomics reveals innervation-responsive functional clusters in skeletal muscle*
16.25 - 16.40	Andrea Graziani	*Pde4 targeting rescues defective cAMP signaling and skeletal muscle wasting during cancer cachexia*
17.00 - 19.00	**Poster Session** (with drinks and snacks)	
19.15 - 20.45	**Dinner**	

TUESDAY	**13.09.2022**	
	Session	**Muscle function and homeostasis**
	Chair	Lorenzo Puri
Speakers		
08.50 - 09.15	Benedicte Chazaud	*The resolution of inflammation during regeneration in aged skeletal muscle*
09.15 - 09.40	Foteini Mourkioti	*Telomere regulation during skeletal muscle homeostasis, disease, and aging*
Short talks		
09.40 - 09.55	Laura Pena Couso	*Macrophages support proteostasis and tissue function in skeletal muscle*
09.55 - 10.10	Marc Egerman	*Activin A and BMP9 crosstalk in human skeletal muscle cells*
10.10 - 10.40	**Coffee Break**	
Speakers		
10.40 - 11.05	Jerome Feige	*Targeting skeletal muscle bioenergetics and aging through mitochondrial calcium*
11.05 - 11.30	Erik Richter	*Phosphoproteomics of three exercise modalities identifies canonical muscle signaling and C18ORF25 regulating skeletal muscle function*
Short talks		
11.30 - 11.45	Tang Cam Phung Pham	*The mtRNA-stabilizing protein LRPPRC regulates mitochondrial structure and function in skeletal muscle*
11.45 - 12.00	Corentin Guilhot	*Effect of physical in-activity on muscle FAPs dynamic*
12.00 - 13.30	**Lunch Break**	
	Session	**Mechanisms of aging/Epigenetics and DNA damage**
	Chair	Vittorio Sartorelli
Speakers		
13.30 - 13.55	Luigi Ferruci	*Proteomics in sarcopenic human muscle*
13.55 - 14.20	Rafael de Cabo	*Effect of caloric restriction on longevity and sarcopenia*
Short talks		
14.20 – 14.35	Andrea Bonetto	*IGFBP1 mediates musculoskeletal deficits in colorectal cancer*
14.35 - 14.50	Yi-Ping Li	*UBR2 Targets Myosin Heavy Chain IIb and IIx for Degradation: Molecular Mechanism Essential for Cancer-Induced Muscle Wasting*
14.50 - 15.20	**Coffee Break**	
Speakers		
15.20 - 15.45	Vera Gorbunova	*Mechanisms of longevity and cancer resistance in long-lived mammals*
15.45 - 16.10	Collin Ewald	*Longevity interventions require proper mechanotransduction from muscular basement membrane across tissues via integrin, hemidesmosomes, and YAP1*
Short talks		
16.10 - 16.25	Vanina Romanello	*Peroxisomal-mitochondrial interaction impinging on muscle function*
16.25 - 16.40	Davide D'Amico	*Urolithin A improves muscle strength and impacts on biomarkers of cellular health in humans*
17.00 – 19.00	**Poster Session** (with drinks and snacks)	
19.15 - 20.45	**Dinner**	

WEDNESDAY	**14.09.2022**	
	Session	**Muscle size; force transduction and aging**
	Chair	David Glass
Speakers		
08.50 - 09.15	Tea Shavlakadze	*Age-related gene expression changes in skeletal muscle point to potential mechanisms for sarcopenia*
09.15 - 09.40	Doug Millay	*Control of muscle size by myonuclear numbers and transcriptional heterogeneity*
Short talks		
09.40 - 09.55	Bert Blaauw	*Activation of Akt–mTORC1 signalling reverts cancer-dependent muscle wasting*
09.55 - 10.10	Daniel Ham	*Distinct and additive effects of calorie restriction and rapamycin in aging skeletal muscle*
10.10 - 10.40	**Coffee Break**	
Speakers		
10.40 - 11.05	Abigail Mackey	*Myotendinous junction – the weakest link?*
11.05 - 11.30	Christoph Handschin	*Transcriptional control of training adaptation: PGC-1α and beyond*
Short talks		
11.30 - 11.45	Alejo Efeyan	*The impact of nutrient – Rag GTPase signaling axis in mammalian aging*
11.45 - 12.00	Laetitia Mazelin	*Chronic activation of ALK5/TGF□I signaling in adult mouse skeletal muscle induces severe muscle wasting with concomitant impaired mitochondrial function*
12.00 - 13.30	**Lunch Break**	
	AFTERNOON: free	
	EVENING: free	

THURSDAY	**15.09.2022**	
	Session	**Epigenetics of muscle aging and size control**
	Chair	Jeff Dilworth
Speakers		
08.50 - 09.15	Colin Crist	*The Adhesion G Protein-Coupled Receptor Gpr116 is Essential to Maintain the Skeletal Muscle Stem Cell Pool*
09.15 - 09.40	Vittorio Sartorelli	*Polycomb Ezh1 Maintains Muscle Stem Cells Quiescence by Regulating Notch Signaling and Ciliogenesis*
Short talks		
09.40 - 09.55	Davide Steffan	*Identification of a novel TFEB and exercise dependent gene*
09.55 - 10.10	Shihuan Kuang	*Targeting PTEN in Muscular Dystrophy*
10.10 - 10.40	**Coffee Break**	
Speakers		
10.45 - 11.10	Haim Cohen	*Maintaining healthy longevity by SIRT6*
11.10 - 11.35	Laurent Schaeffer	*The histone variant H2A.Z is required for DNA repair in muscle fibers and prevents premature aging*
Short talks		
11.30 - 11.45	Brian Uapinyoying	*Single-cell transcriptomics identify distinct features of Fibro/Adipogenic Progenitors from healthy and dystrophic muscles*
11.45 - 12.00	Nikki Marie McCormack	*Vamorolone shows efficacy and increases dystrophin protein in novel Becker muscular dystrophy mice*
12.00 - 13.30	**Lunch Break**	
	Session	**Muscle diseases and development of therapeutic strategies**
	Chair	Michael Rudnicki
Speakers		
13.30 - 13.55	Karyn Esser	*Muscle circadian clocks as a disease modifer*
13.55 – 14.20	Gisele Bonne	*The role of A-type Lamins in premature aging and striated muscle diseases*
Short talks		
14.20 - 14.35	Alyson Fiorillo	*The role of pathological miRNAs in Duchenne and Becker Muscular Dystrophy*
14.35 - 14.50	Sweta Girgenrath	*Endosomal Escape Vehicles to Enhance the Functional Delivery of Oligonucleotides in Preclinical Models of Neuromuscular Diseases*
14.50 – 15.15	**Coffee Break**	
Speakers		
15.15 - 15.40	Kevin Campbell	*Mechanistic Insights and Therapeutic Approaches for Matriglycan-Deficient Muscular Dystrophy*
15.40 - 16.05	Carsten Bönnemann	*Treatment options of severe neuromuscular diseases*
Short talks		
16.05 - 16.20	Judith Reinhard	*Therapeutic effect of linker protein-mediated gene therapy in a mouse model for LAMA2-related muscular dystrophy*
16.20 - 16.35	Alan Russell	*Modulating Fast Skeletal Muscle Contraction as a Novel Therapeutic Strategy for Muscular Dystrophy*
16.45 -	Poster Award Ceremony	
19.00 -	**Transfer to Restaurant**	
	GALA DINNER	

FRIDAY	**16.09.2022**
	Departure