#### **SCIENTIFIC PURPOSE AND AIMS**

Musculoskeletal diseases are one of the most important clinical areas among the Western population in terms of prevalence, incidence and morbidity. An in-depth knowledge of the physiological mechanisms underlying skeletal and muscle homeostasis and the main alterations leading to the disease together with the analysis of all clinical and laboratory aspects necessary for the management of these disorders as well as the available therapeutic strategies are essential elements to adequately approach and manage such diseases. The course aims at providing the widest possible theoretical and practical notions on the different aspects of the bone and muscle during the life. In addition, the course aims to evaluate the role of sports and physical activity in muscculoskeletal omeostasis To this end, the course ranges from anatomy, biology and genetics lectures to more strictly clinical and therapy/management topics, including translational research subjects with the aim of providing trainees with updated tools for the management and treatment of patients affected by musculoskeletal diseases. In the light of the complementarity and overarching nature of the topics it deals with, the course is intended for both staff in training, who will have a chance to supplement their knowledge, and specialists wishing to implement, sharpen and update their diagnostic and therapeutic knowledge. The Faculty of the course, made up of lecturers of national and international renown.

### **SEDE DEL CORSO:**

Istituti Biologici della Scuola di Medicina e Chirurgia Università degli Studi di Verona Str. le Grazie, 8, 37134 Verona VR

### **RESPONSABILI SCIENTIFICI**

### Prof. Luca Dalle Carbonare

Medicina e Chirurgia – Università degli Studi di Verona, Policlinico Borgo Roma – Verona

### Prof. Angelo Pietrobelli

Medicina e Chirurgia – Università degli Studi di Verona, Policlinico Borgo Roma – Verona

### Dott.ssa. Maria Teresa Valenti

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PhD School: Life and Health Sciences
Postgraduate Specialisation in
Sport and Exercise Medicine

# MUSCLE AND BONE: EXERCISE, DIET AND TREATMENT A journey from DNA to phenotype and physical performance



Aula E c/o Istituti Biologici della Scuola di Medicina e Chirurgia

Verona, 24/26 Settembre 2019

**Accreditato ECM - 34,4 CREDITI** 

### **PROGRAMMA FORMATIVO**

# September 24<sup>th</sup>

## September 25<sup>th</sup>

# September 26<sup>th</sup>

	Biological Science of Bone and Muscle	М	odels for the study of muscle-skeletal system		Therapeutical approaches Medical
8.30	Registration	9.00	Bone diseases in animal models: experimental	8.30	Vitamin D: effects on bone and muscle
9.00	Cellular and Molecular Biology of Bone (Monica Mottes, Maria Teresa Valenti, Verona)		approaches with nanomedicine (Alessandro Matté, Verona)	9.30	(Angelo Pietrobelli, Verona)  Nutraceuticals and physical performance
10.00	Genetics of bone and muscle	10.00	Blood and Bone, <i>mouse</i> (Lucia De Franceschi, Verona)	9.30	(Cristiano Chiamulera, Verona)
	(Giovanni Malerba, Verona)	11.00	Muscle and Bone, zebra fish	10.30	Physical Activity as a strategy to prevent the diseases (Federico Schena, Verona)
11.00	Physical activity and molecular pathways that control muscle mass and function		(Andrea Vettori, Verona)	11.30	Sport and bone health
	(Marco Sandri, Padova)	12.00	Experimental models alternative to lab animals (Francesca Uberti, Novara)		(Marcello Ferrari, Verona)
12:00	New applications of the genome editing techniques to discover bone and muscle (Donato Zipeto, Verona)	13.00/	14.00 Lunch	12.30	High altitude, physiological adaptations and physical performance (Andrea Ermolao, Padova)
13.00/14.00 Lunch		Bone and Muscle diseases in specific settings		13.30/14.30 Lunch	
14.00	Biochemical approach to study bone and muscle	14.00	Bone and muscle diseases and immunology		Surgical
	( <b>Gianluca Salvagno</b> , Verona)		(Claudio Lunardi, Verona)	14.30	Orthopedic surgery (Bruno Magnan, Elena Samaila, Verona)
15.00	The morphology of normal bone and muscle and new insights in bone tissue regeneration (Carlo Zancanaro, Verona)	15.00	Relationship between Bone and Muscle diseases and Obesity (Elena Zoico, Verona)	15.30	Physical Therapy and rehabilitation (Marialuisa Gandolfi, Alessandro Picelli, Verona)
16.00	Instrumental approach to study bone and muscle (Andrea Rossi, Verona)			16:30	Laboratory: Methods of evaluation of bone density and composition
17.00	Spine, surgery and sport (Massimo Balsano, Verona)	16:00	Aula Magna Lectio Magistralis		Methods of evaluation of physical performance (Luca Giuseppe Dalle Carbonare, Verona)
20.00	Meet the expert and share the knowledge		"I hit the jackpot: the sport as	18.30	Conclusions
			a motivation for the life"	19.00	CME Questionnaire

(Oscar De Pellegrin, Belluno)