

**Verona University Medical School: Summer School (1<sup>ST</sup> Edition - 2-6 October, 2017)**

**BONE ACROSS THE LIFE SPAN: FUNCTION, DYSFUNCTION AND THERAPY**

*Education, tools, and strategies to optimize your patient outcomes*

**Monday morning: *Biological Science of Bone***

- I. Bone cell biology (Monica Mottes, Verona)
- II. Bone molecular pathways (Maria Teresa Valenti, Verona)
- III. Genetics of bone (Giovanni Malerba, Verona)
  - a. Physiological condition
  - b. Pathological condition
- IV. New applications of the genome editing techniques to discover bone pathways (Donato Zipeto, Verona)
- V. Bone metabolism throughout life (Luigi Gennari, Siena)

**Monday afternoon: *Practical Session***

- Laboratory (Maria Teresa Valenti, Verona)
  - a. Cellular Biology (Dott. Samuele Cheri)
  - b. Molecular biology (Dott.ssa Michela Deana)
    - Mesenchymal Stem cells
    - Cancer bone cells

Ore 20: meet the expert and share the knowledge

**Tuesday morning: *Anatomy and Physiology***

**Anatomia apparato scheletrico**

- The morphology of normal bone (Carlo Zancanaro, Verona)
- New insights in bone tissue regeneration (Andrea Sbarbati, Verona)
- Practical applications

**2. Tuesday afternoon; *Pathophysiology and Diagnostics***

- Biochemical evaluation (Gianluca Salvagno, Verona)
- Instrumental diagnostic approach + practical application and new frontiers (Luca Dalle Carbonare, Angelo Pietrobelli, Verona)

**3. Wednesday morning: *Bone Diseases in the Childhood***

- Pathophysiology of bone diseases in childhood (Franco Antoniazzi, Verona)

**Metabolism and nutrition in childhood**

- a. Oncologic bone diseases in childhood (Simone Cesaro, Verona)
- b. Nutrition and Bone (Angelo Pietrobelli, Verona)
- c. Rehabilitation and growth (Ermes Vedovi, Verona)

**4. Wednesday afternoon: *Bone diseases in the Elderly***

- Epidemiology of bone diseases in the elderly (Stefania Maggi, CNR, Padova)

- Osteopenia and Sarcopenia in the elderly: two sides of the same coin (Mauro Zamboni, Verona)

Osteoporosis and sarcopenia in the elderly as a cause of disability  
(Francesco Fantin, Verona)  
Laboratory: Methods of evaluation of bone composition  
Methods of evaluation of physical performance (Andrea Rossi, Verona)

Thursday morning *Metabolic Bone Diseases and Therapy*

Metabolic bone diseases (Roland Chapurlat, Lyon - France)  
Immunological bone diseases (Claudio Lunardi, Verona)

*Therapy*

Medical Therapy  
Vitamin D in children and adults (Attilio Boner, Verona)  
Bisphosphonates (Andrea Giusti, Genova)  
Anabolic drugs (Bruno Frediani, Siena)

Thursday afternoon

Surgical Therapy  
Orthopedic surgery in children and adults (Bruno Magnan, Verona)

Ore 20 - Dinner lecture (at *Bibliotheca Capitularis*) :  
New Therapeutic Frontiers in Bone Diseases (Socrates Papapoulos, Leiden - NL)

Friday morning: *Physical medicine and rehabilitation in bone dysfunction*  
Effects of movement on bone remodeling (Maurizio Rossini, Verona)  
Rehabilitation of vertebral fractures (Alessio Baricich, Novara)  
Rehabilitation of non-vertebral fractures (Alessandro Picelli, Verona)

Friday afternoon

Bone dysfunction in neurological diseases and rehabilitation  
In children (Antimo Moretti, Napoli)  
In adults (Marco Invernizzi, Novara)  
Specific rehabilitation approaches  
Pain treatment (Vittorio Schweiger/Orazio Codella, Verona)  
Physical Therapy (Marialuisa Gandolfi, Verona)  
Postural correction (Nicola Smania, Verona)