



ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE

*TO PAY A PERMANENT TRIBUTE TO ARCHIMEDES AND GALILEO GALILEI, FOUNDERS OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES*



International School of Precision Medicine and Laboratory Medicine

Directors: Prof. Marcello Ciaccio, Prof. Francesco Salvatore

1th Course

Clinical Laboratory Medicine in the Era of Precision Medicine

Directors:

Prof. Marcello Ciaccio, Prof. Mario Plebani, Prof. Francesco Salvatore

Purpose of the Course

Laboratory Medicine has a pivotal role in *Clinical Medicine*, from screening to diagnosis, prognosis, monitoring, and guiding and monitoring therapies. It is a constantly evolving branch of *Medicine* and technology represents the common thread. Significant progress has been achieved in the last decades, which has revolutionized the aims of the *Laboratory Medicine*, switching from a specimen-centered to patient-centered vision, paving the way toward *Precision and Personalized Medicine*.

The purpose of the *Course* is to present the last discoveries in *Laboratory Medicine* and their applications in *Clinical Practice*.

The main topics of the *Course* are the *Big Data* applied to health and disease, the *Ageing*, presented from an innovative and unconventional point of view, and new advancement in cancer immunotherapy. A session will be focused on *COVID-19* and the last scientific evidence on the *SARS-CoV-2* infection.

Scientific Committee

Marcello Ciaccio, Mario Plebani, Francesco Salvatore

Scientific Secretary

Luisa Agnello (Palermo)

Marcella Nunziato (Naples)

Andrea Padoan (Padua)

Organizing Committee

Caterina Maria Gambino

Rosaria Vincenza Giglio

Bruna Lo Sasso

Concetta Scazzone

Monday, 12 June

14:00 Opening remarks - Welcome address by Authorities and Academicians

Keynote Lecture

14:30 Lights and shadows in clinical trials

Silvio Garattini (Milan)

Chair: Marcello Ciaccio (Palermo)

Laboratory Medicine: Challenges and Opportunities on the Road to Precision Medicine

Chair: Mario Plebani (Padua), Martina Zaninotto (Padua)

15:30 Biomarkers and Personalized Medicine: current status and further perspectives

Giuseppe Castaldo (Naples)

15:50 Laboratory Medicine in the era of "Patient-Centered-Medicine"

Giuseppe Lippi (Verona)

16:10 New paradigms and the concept of the "Biomedical person" during the multimorbidity that drives our aging

Francesco Salvatore (Naples)

16:30 Discussion

16:45 Coffee Break

17:00 Round Table - The role of Scientific Societies in improving the appropriateness and the sustainability of the National Health System

Discussant: Marina Turco

Participants: Giuseppe Castaldo, Marcello Ciaccio, Carlo Della Rocca, Andrea Lenzi, Giuseppe Lippi, Roberta Pacifici, Mario Plebani, Francesco Salvatore, Laura Sciacovelli, Tommaso Trenti

Tuesday, 13 June

Machine Learning and Artificial Intelligence in Diagnostics

Chair: Tommaso Trenti (Modena), Laura Sciacovelli (Padua)

09:00 Big Data: Past, Present, and Future
Andrea Padoan (Padua)

09:20 Machine Learning in Laboratory Medicine: waiting for the flood?
Rossella Tomaiuolo (Milan)

09:40 Medical Artificial Intelligence: Applications, Implications, and Opportunities
Matteo Vidali (Milan)

10:00 Discussion

10:15 Round Table - The Clinical Biochemistry Research in Italy

Discussant: Adriana Bazzi (Milano), Andrea Lenzi (Roma)

Partecipant: Luisa Agnello (Palermo), Daniela Basso (Padua), Giuseppe Castaldo (Naples), Elisa Danese (Verona), Mariagrazia Perilli (L'Aquila), Giovanni Palladini (Pavia), Pietro Pietrini (Pisa), Alessandro Usiello (Naples)

Cancer Immunotherapy: Current Status and Challenges for Clinical Application

Chair: Antonio Fortunato (Ancona), Lucio Pastore (Naples)

11:30 The Potential of Biomarker Testing, Real World Evidence, Tumour Agnostic Therapies to Empower Personalized Medicine
Ettore Domenico Capoluongo (Naples)

11:50 The role of immune profile in predicting outcomes in cancer patients treated with immunotherapy
Marianna Nuti (Roma)

12:10 Biomarkers in Immunotherapy: Applications and Shortcomings
Antonio Russo (Palermo)

12:30 Discussion

13:00 Lunch

Keynote Lecture

14:00 COVID-19: why did it happen and how can we protect ourselves against it happening again?"

Giuseppe Remuzzi (Milan)

Chair: Francesco Curcio (Udine)

COVID-19: Evolution from Pandemic to Endemic

Chair: Francesco Curcio (Udine), Roberto Burioni (Milan)

15:00 COVID-19: lesson from the pandemic

Giorgio Palù (Padua)

15:20 COVID-19 vaccine: perspectives for living with the Virus

Silvio Brusaferrò (Udine)

15:40 Precision Medicine for COVID-19: from Biochemical to Clinical phenotypes

Mario Plebani (Padua)

16:00 The critical Role of Laboratory Medicine in COVID-19 management

Rossella Tomaiuolo (Milano)

16:20 Impact of COVID-19 pandemic on the performance of the Italian NHS

Nino Cartabellotta (Bologna)

16:40 Discussion

17:00 Closing Remarks and End of the Course