

**Summer School in Cardiovascular Medicine:
Clinical & Experimental
X Edition**

**Polo Didattico Monastero “Le Benedettine”
Piazza S. Paolo a Ripa d’Arno, Pisa**

July 21-25, 2025



Organizing Committee: Raffaele De Caterina, Rosalinda Madonna, Doralisa Morrone,
Marco De Carlo, Luna Gargani, Riccardo Liga, Alessandro Sticchi, Matteo Mazzola,
Gabriele Masini, Simona Chiusolo, Carlo Palombo, Giulio Zucchelli

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Summer School in Cardiovascular Medicine: Clinical & Experimental X Edition

Rationale and Presentation

The **Summer and Winter Schools** Initiative of the **University of Pisa** was launched in the year 2013 with the aim of opening new horizons to the exchange of students and postgraduate doctors and cooperation with foreign Universities, under the assumption that sharing knowledge, academic perspectives and research projects are a cornerstone for an accomplished thinking and a better world.

The solicitation coming from the Academic Authorities with the valuable support of the International Division of the University of Pisa was enthusiastically endorsed by many Departments and Research Groups in most cultural fields, from Math-Phys to Human Sciences and Health Sciences. Among these, a Cardiovascular Summer School was one of the first to be activated in 2013, and has been re-iterated yearly until today, with the forced two-year interruption during the COVID-19 pandemic. Over the time it changed denomination according to the central issues here addressed, from the initial "Updates in Cardiovascular Pathophysiology", to "Cardiolung: Updates in Cardiovascular and Pulmonary Pathophysiology", to this present 2025 Edition named "Summer School in Cardiovascular Medicine: Clinical and Experimental", with a progressively increased attendance, from an initial number of 20 up to the current capped 100 participants.

The Summer School is conceived as an intensive course (usually one week) with a strong translational and multidisciplinary approach. It is oriented to provide state-of-the-art and cutting-edge knowledge developments in major cardiovascular issues, from basic sciences to pathophysiological perspectives, to clinical approaches, with special attention devoted to promote scientific thinking through interactive discussions between the Faculty and the participants. Target groups have been traditionally mainly undergraduate and early postgraduate students of Medicine and Life Sciences, PhD students and students in the early years of postgraduate medical schools. This year, the course will be open to practicing physicians (mostly cardiologists), for a deep dive in the areas of fastest development in research and innovation. The Course offers a unique opportunity for participants to be exposed, in a friendly atmosphere, to qualified local and external lecturers coming from prestigious Italian and foreign Institutions and addressing relevant clinical issues and emerging scientific topics in most aspects of cardiovascular medicine and pathophysiology.

The Pisa "Cardiovascular Summer School: Clinical and Experimental" is officially acknowledged with European Credits (ECTS, usually from 3 to 4) and Italian credits, with the younger participants becoming temporary students at the University of Pisa, with all related facilities and privileges.

Further information about the Cardiovascular Summer School is available at the website:

<http://summerschool.cardiovascular.med.unipi.it>, as well as in various international portals, such as: <https://www.summerschoolsineurope.eu> www.Educations.com, Keystone Academic Study Portals, etc.

Contact mails:

cardiovascularsummerschool@unipi.it (for scientific purposes)

support.summerschool@unipi.it (for administrative purposes)

Further information available at: <https://www.unipi.it/index.php/health-sciences/item/22266-cardiovascular-summer-school>

Raffaele De Caterina – Course Director

Organization: 8 half-day slots from July 21 morning to July 25 at lunchtime, with a free afternoon on Wednesday July 23; Social Event on Thursday July 24 evening



University of Pisa Summer School

Summer School in Cardiovascular Medicine 2025

July 21 morning

09:00 Introduction to the Summer School – Raffaele De Caterina (Pisa)

09:15 The University of Pisa and its Internationalization Program – Filippo Giorgi (Pisa)

Hot Topics I

Principles of Cardiovascular Physiology and Pathophysiology

Chairs: Raffaele De Caterina (Pisa) and Carlo Palombo (Pisa)

09:30 Myocardial metabolism in health and disease – Giuseppe Rosano (London, UK)

10:00 Left and right heart mechanics – Fabio Recchia (Pisa)

Break

10:30 Large artery structure and function – Carlo Palombo (Pisa)

11:00 The autonomic nervous system control of cardiovascular functions - Gianfranco Parati (Milan, Italy)

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July 21 afternoon

Hot Topics II

Atherothrombosis and risk factors for cardiovascular disease

Chairs: Stefano Taddei (Pisa) and Agostino Virdis (Pisa)

13:00 Atherothrombosis: a 2025 update – **Gemma Vilahur** (Barcelona, Spain)

14:00 Obesity, overweight, diabetes and cardiovascular risk – **Andrea Natali (Pisa)**

14:00 Lifestyle interventions: the new frontier – **Luigi Fontana (Sydney, Australia)**

Break

15:45 Updates in arterial hypertension – **Stefano Taddei (Pisa)**

16:15 Cardiovascular disease in Type 2 diabetes: how and when does it start? – **Stefano Del Prato (Pisa, Italy)**

16:45 Current and Forthcoming Lipid-lowering therapies – **Alberico Catapano (Milan, Italy)**

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July 22 morning

Hot Topics III

Myocardial ischemic syndromes – Pathophysiology and Endotypes

Chairs: Doralisa Morrone (Pisa) and Raffaele De Caterina (Pisa)

09:30 Endothelial dysfunctions as the final common pathway of atherosclerotic vascular disease – **Lorenzo Ghiadoni (Pisa)**

10:00 Principles of diagnosis and risk stratification of chronic ischemic heart disease – **Danilo Neglia (Pisa)**

10:30 Polymorbidity, polypharmacy and frailty in cardiovascular disease – **Andrea Ungar (Florence, Italy)**

Break

11:45 Myocardial infarction with non-obstructive coronary arteries – **Doralisa Morrone (Pisa)**

12:15 Acute and non-acute myocardial ischemic syndromes – The need for a new classification – **William E. Boden (Boston, MA, USA)**

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July 22 afternoon

Hot Topics IV

Congestion and Heart Failure

Chairs: Luna Gargani (Pisa) and Pierpaolo Pellicori (Glasgow, UK)

14:15 What is congestion and what is heart failure – **John Cleland (Glasgow, UK)**

14:45 How to assess congestion at rest – **Luna Gargani (Pisa)**

15:15 How to assess congestion during exercise – **Nicola Riccardo Pugliese (Pisa)**

15:45 Congestion and assessment of fluid balance in the critically ill – **Francesco Corradi (Pisa)**

Break

Chairs: Raffaele De Caterina (Pisa) and Luna Gargani (Pisa)

17:00 Hypertrophic cardiomyopathy: new therapeutic horizons – **Maurizio Pieroni (Florence)**

17:30 Treating congestion: the old – diuretics – and the new -the sodium-glucose transporter 2 (SGLT2) inhibitors – **Carmine Zoccali (New York, USA)**

18:00 Treating congestion: beta-blockers, ACE-inhibitors, angiotensin receptor antagonist/neprilysin inhibitors, glucagon-like peptide-1 agonists, sodium guanylate cyclase stimulators – **Alberto Giannoni (Pisa)**

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July 23 morning

Hot Topics V

Valvular heart disease – From diagnosis to treatment

Chairs: Raffaele De Caterina (Pisa) and Marco De Carlo (Pisa)

09:30 Aortic stenosis and transcatheter aortic valve implantation (TAVI): state of the art – **Carlo Di Mario (Florence, Italy)**

10:00 Transcatheter aortic valve implantation: a glimpse to the future – **Alessandro Sticchi (Pisa)**

10:30 Mitral transcatheter interventions: state of the art – **Tullio Palmerini (Bologna, Italy)**

Break

11:45 Tricuspid transcatheter interventions – **Marco De Carlo (Pisa)**

12:15 Cardiovascular Imaging to Guide Interventions in Valvular Heart Disease – **Cristina Giannini (Pisa) and Matteo Mazzola (Pisa)**

12:45 Medical therapy and surgery for mitral and tricuspid regurgitation – **Riccardo Liga (Pisa)**

July 23 afternoon

Free afternoon (optional: guided visit to the University of Pisa Anatomy Museum)



University of Pisa Summer School

Summer School in Cardiovascular Medicine 2025

July 24 morning

Hot Topics VI

Advanced cardiovascular imaging

Chairs: Raffaele De Caterina (Pisa) and Emanuele Neri (Pisa)

09:30 Advanced imaging of vascular disease – **Gabriele Masini (Pisa)**

10:00 Cardiac and lung ultrasound – **Luna Gargani (Pisa)**

Break

11:15 Cardiac computed tomography – **Gianluca Pontone (Milan, Italy)**

11:45 Nuclear cardiology – **Duccio Volterrani (Pisa) and Alessia Gimelli (Pisa)**

12:15 Cardiac magnetic resonance imaging – **Giovanni Donato Aquaro (Pisa)**

July 24 afternoon

Hot Topics VII

Electrophysiology and Arrhythmias

Chairs: Giulio Zucchelli (Pisa) and Raffaele De Caterina (Pisa)

14:15 The electrophysiology study? How to find heart rhythm abnormalities – **Raffaele De Lucia (Pisa)**

14:45 Sudden death and cardiomyopathies: How to identify patients at risk – **Stefano Viani (Pisa)**

15:15 Treatments for ventricular tachycardias – **Giulio Zucchelli (Pisa)**

15:45 Atrial cardiomyopathy: cause or bystander for future stroke? – **Lin Yee Chen (Minneapolis, USA)**

Break

Chairs: Gino Grifoni (Pisa) and Marisa Carluccio (Pisa)

17:00 Atrial fibrillation: pathogenesis-guided anti-arrhythmic therapy – **Luca Segreti (Pisa)**

17:30 Atrial fibrillation ablation: principles, techniques and results – **Andrea Di Cori (Pisa)**

18:00 Current and forthcoming antithrombotic approaches – **Raffaele De Caterina (Pisa)**

Summer School in Cardiovascular Medicine 2025

July 25 morning

Hot Topics VII

Pulmonary Hypertension

Chairs: Raffaele De Caterina (Pisa) and Rosalinda Madonna (Pisa)

Introduction and Aims - **Raffaele De Caterina (Pisa) and Rosalinda Madonna (Pisa)**

SESSION I: Physiology and Pathophysiology of the Pulmonary Circulation

09:15 Pulmonary arterial hypertension: Definitions, classifications, diagnosis, risk stratification and treatment – **Pietro Ameri (Genoa, Italy)**

09:45 Right heart catheterization and provocative tests for pulmonary hypertension (theoretical-practical lesson) – **Michele D'Alto (Naples, Italy)**

10:15 Pathophysiology of the right ventricle and pulmonary-vascular interactions – **Fabio Guarracino (Pisa)**

Break

SESSION II: Pulmonary arterial hypertension in special conditions

Chairs: Rosalinda Madonna (Pisa) and Laura Carrozzi (Pisa)

11:15 Pulmonary hypertension from left heart failure: pathophysiology and therapy – **Marco Guazzi (Milan, Italy)**

11:45 Pulmonary arterial hypertension with rheumatologic diseases – **Alessandra Della Rossa (Pisa)**

12:15 Pulmonary hypertension secondary to lung disease – **Roberta Pancani (Pisa)**

12:45 Chronic thromboembolic pulmonary disease and hypertension – **Rosalinda Madonna (Pisa)**

END OF THE COURSE