

## BMM7 Module

### Frontiers in Cardiovascular Research Course 2024-2025

**January 8, 2025**

#### CNIC Auditorium

09:00-09:30 Welcome by BMM7 coordinators:  
Valentín Fuster, Héctor Bueno, M<sup>a</sup> Ángeles Moro & Fátima Sánchez-Cabo

#### Form and function of the cardiovascular system

09:30-10:30 Cardiovascular disease: Needs and opportunities for translational research  
**Héctor Bueno**, CNIC

**January 9, 2025** Chair: Fátima Sánchez Cabo

#### Seminar Room 3<sup>rd</sup> Floor

09:00-9:45 Anatomy and physiology of the heart (I): Basic concepts of heart anatomy  
(i.e. pig heart dissection)  
**José María Pérez-Pomares**, Universidad de Málaga

#### South wing laboratories 2<sup>nd</sup> Floor

10:30-11:30 Pig heart dissection

**January 10, 2025** Chair: Héctor Bueno

#### CNIC Auditorium / Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Anatomy and physiology of the heart (II): Basic concepts in cardiac echocardiography: in situ echocardiogram; interpretation of normal heart and basic anomalies  
**Inés García Lunar**, CNIC

**January 13, 2025** Chair: M Ángeles Moro

#### CNIC Auditorium

09:00-10:30 Developmental biology of the heart I  
**Bjarke Jensen**, University of Amsterdam

**January 14, 2025** Chair: Fátima Sánchez Cabo

**CNIC Auditorium**

09:00-9:45 Developmental biology of the Heart: Congenital heart disease and cardiomyopathy  
**José Luis de la Pompa, CNIC**

9:45-10:30 Angiogenesis: basics, pathology, and therapeutic aspects  
**Henar Cuervo, CNIC**

**January 15, 2025** Chair: Héctor Bueno

**CNIC Auditorium**

09:00-09:45 The normal heart rhythm and its functional and structural alterations that may lead to sudden cardiac death  
**David Filgueiras, CNIC**

9:45-10:30 Adaptive immunity and antibodies in atherosclerosis  
**Almudena R. Ramiro, CNIC**

**January 16, 2025** Chair: M Ángeles Moro

**CNIC Auditorium**

09:00-10:30 Translational research in myocardial disease: cancer therapy cardiotoxicity as a role model  
**Borja Ibáñez, CNIC**

## Pathology of the cardiovascular system

**January 17, 2025** Chair: Fátima Sánchez Cabo

**CNIC Auditorium**

09:00-09:45 Inflammation and immunity in cardiovascular disease  
**David Sancho, CNIC**

09:45-10:30 Novel diagnosis and therapies for myocarditis  
**Pilar Martín, CNIC**

**January 20, 2025** Chair: Fátima Sánchez-Cabo

**CNIC Auditorium**

- 09:00-09:45 Genetic heart diseases  
**Pablo García Pavía**, CNIC
- 09:45-10:30 Heart Regeneration; animal models and translational strategies  
**Miguel Torres**, CNIC

**January 28, 2025** Chair: M Ángeles Moro

**CNIC Auditorium**

- 09:00-09:45 Vascular component in Alzheimer's disease: From mice to humans  
**Marta Cortés-Canteli**, CINIC-CSIC & CNIC
- 09:45-10:30 Translational research in cerebrovascular pathophysiology  
**M<sup>a</sup> Ángeles Moro**, CNIC

**January 29, 2025** Chair: Héctor Bueno

**CNIC Auditorium**

- 09:00-10:30 Cardiovascular health and disease: Present and Future  
**Valentin Fuster**, CNIC

**January 30, 2025** Chair: Fátima Sánchez Cabo

**CNIC Auditorium**

- 09:00-09:45 Artificial intelligence for cardiovascular disease  
**Fátima Sánchez-Cabo**, CNIC
- 09:45-10:30 Nanomedicine for cardiovascular disease  
**Carlos Pérez Medina**, CNIC

## Cardiovascular genetics

**January 31, 2025** Chair: Fátima Sánchez Cabo

**CNIC Auditorium**

- 09:00-09:45 Experimental models in cardiovascular research: Myocardial ischemia  
**Enrique Lara-Pezzi**, CNIC
- 09:45-10:30 Functional assessment of genetic variants linked to heart disease  
**Jorge Alegre-Cebollada**, CNIC

## Population studies: Genomics, epidemiology and clinical trials

**February 3, 2025** Chair: **María Ángeles Moro**

### CNIC Auditorium

- 09:00-09:45 Beyond traditional risk factors: acquired mutations as a shared driver of cardiovascular disease and cancer  
**José Javier Fuster**, CNIC
- 09:45-10:30 Interpreting statistics in clinical trials  
**Stuart Pocock**, CNIC/London School of Hygiene and Tropical Medicine

**February 4, 2025** Chair: **Héctor Bueno**

### CNIC Auditorium

- 09:00-09:45 Aging and cardiovascular disease: From the rarest to the most common  
**Vicente Andrés**, CNIC
- 09:45-10:30 Providing energy to the heart  
**José Antonio Enríquez**, CNIC

**February 5, 2025** Chair: **Fátima Sánchez Cabo**

### CNIC Auditorium

- 09:00-09:30 Research and development in medicine: The industry vision  
**Enrique Samper**, Life Length
- 09:30-10:00 Translational investigation in a biotech company  
**Macarena Hernández**, UCM
- 10:00-10:30 Life Science Tool Development  
**Antonio Quílez**, A4Cell

## Frontiers in cardiovascular research

**February 6, 2025** Chair: **Héctor Bueno**

### CNIC Auditorium

- 09:00-09:45 Effect of Time-Varying Exposure to School-Based Health Promotion on Adiposity in Childhood.  
*Journal of the American College of Cardiology*. 2024 Aug 6;84(6):499-508. doi: 10.1016/j.jacc.2024.04.065.  
**Rodrigo Fernández Jiménez**, CNIC
- 09:45-10:30 Colchicine in acutely decompensated heart failure: the COLICA trial. *European Heart Journal*. 2024 Aug 30: ehae538. doi: 10.1093/eurheartj/ehae538.  
**Domingo Pascual Figal**, CNIC

## Practical Workshops

### February 7, 2025

09:00-10:30 Visit - Animal Facility  
**Antonio de Molina, CNIC**

### February 10, 2025

#### Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Model systems (I): mouse-transgenesis  
**Juan de Dios Hourcade, CNIC**

### February 11, 2025

#### Sótano -3 – Animal grande

##### GROUP 1:

09:00-09:45 Cardiovascular image  
**Gonzalo Pizarro, Carlos Galán, CNIC**

##### GROUP 2:

09:45-10:30 Cardiovascular image: RM & PET  
**Gonzalo Pizarro, Carlos Galán, CNIC**

### February 12, 2025

#### Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Model systems (II): Zebrafish  
**Eduardo Díaz, María Galardi, CNIC**

### February 13, 2025

#### Seminar Room 3<sup>rd</sup> Floor

09:00-09:30 Introduction Seminar Microscopy Unit  
**Valeria Caiolfa, CNIC**

09:30-10:00 Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
**Giovanna Giovinazzo, CNIC**

## February 14, 2025

### GROUP 1: Cell Culture Room

09:00-10:00 Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
**Elisa Santos, Belén Prados, CNIC**

### GROUP 2: Microscopy Unit 2<sup>nd</sup> Floor West

09:00-10:00 Advance confocal and live cell microscopy  
**Elvira Arza, Olga Giménez, M<sup>a</sup> Dolores López Maderuelo, CNIC**

### GROUP 1: Microscopy Unit 2<sup>nd</sup> Floor West

10:00-11:00 Advanced confocal and live cell microscopy  
**Alfonsa Diaz, Verónica Labrador, Moreno Zamai, CNIC**

### GROUP 2: Cell Culture Room

10:00-11:00 Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
**Elisa Santos, Belén Prados, CNIC**

## February 17, 2025

### Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Proteomics & Metabolomics  
**Juan Antonio López & Alessia Ferrarini, CNIC**

## February 18, 2025

### Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Flow cytometry  
**Beatriz Álvarez, Norman Muñoz, CNIC**

## February 19, 2025

### Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Genomics  
**Rebeca Álvarez, Ana Dopazo, Ana Quintas, M<sup>a</sup> Ascensión Rey, CNIC**

## February 20, 2025

## Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Bioinformatics and Biostatistics  
Carlos Torroja & Fernando Martínez, CNIC

## BMM7 student presentations

**February 21, 2025**

## Seminar Room 3<sup>rd</sup> Floor

09:00-10:30 Student presentations  
Moderators: Héctor Bueno, M<sup>a</sup> Ángeles Moro & Fátima Sánchez-Cabo (CNIC)