



BMM9/ Getting to know CNIC

Insight into cardiovascular pathology research: a comprehensive molecular, physiological, clinical and practical approach (BMM9) Course 2017-2018

09 January, 2018

Second Floor Seminar Room

BMM9

09.30 – 10.10

Welcome by BMM9 coordinators

A. Form and function of the cardiovascular system

All participants

10.30 – 11.45

Cardiovascular diseases: Needs and opportunities for translational research

Hector Bueno (CNIC)

12.00 - 13.00:

Cardiac computational modelling on supercomputers

Mariano Vazquez (BSC)

Ground Floor “Auditorium”

10 January, 2018

BMM9

José María Pérez-Pomares (Univ. Málaga).

09.30 - 10.45 Anatomy and Physiology of the Heart (I): Basic concepts of heart anatomy (i.e. pig heart dissection).

Third Floor Seminar Room

Second Floor Seminar Room
and Human Imaging Unit

Gabriela Guzmán (Hospital Universitario de La Paz).

11.00 - 12.15: Anatomy and Physiology of the Heart (II): Basic concepts in cardiac echocardiography: in situ echocardiogram; interpretation of normal heart and basic anomalies.



11 January, 2018

All Participants

Ground Floor "Auditorium"

09.30 - 10.30 **Mechanisms controlling cardiac and vascular myocytes function**
Ángel Cogolludo (UCM)

10.35 - 11.35 **Biomechanics of the cardiovascular system**
Francisco Rojo (UPM)

12 January, 2018

All Participants

Ground Floor "Auditorium"

09.30 - 12.15 **Developmental Biology of the heart I**
Antoon Moorman (Univ. Amsterdam)

12.30 - 13.30 **Developmental Biology of the heart II**
José Luís de la Pompa (CNIC)

15 January, 2018

All Participants

Ground Floor "Auditorium"

09.00 - 10.15 **Anatomy and Physiology of the vasculature:** types of vessels, constitution of vessels. Physiology of vasculature: resistance, blood pressure, etc

Gonzalo Pizarro (CNIC)

10.30 - 11.30 **Development of the vasculature:** Vasculogenesis, angiogenesis and lymphangiogenesis.

Rui Benedito (CNIC)

B. Pathology of the cardiovascular system

16 January, 2018

All Participants

Ground Floor "Auditorium"

10.00 - 11:00 **Clinical Utility of Advanced Imaging and Mathematical Analysis of Complex Cardiac Arrhythmias**

David Filgueiras (CNIC)

11.20 – 12.30 **From drug re-purposing to gene therapy:** a personalized approach to treat cardiac arrhythmias

Silvia Priori (CNIC/Università degli Studi di Pavia/IRCCS Fondazione Salvatore Maugeri)

17 January, 2018

All Participants

Ground Floor "Auditorium"

09.30 - 10.30 **Inflammation and cardiovascular disease**

David Sancho (CNIC)

10.40 - 11.40 **Metabolic disorders:** Basic and molecular concepts in obesity and diabetes.



Guadalupe Sabio (CNIC)

11.50 - 12.50

Providing energy to the heart

José Antonio Enríquez (CNIC)

18 January, 2018

Ground Floor "Auditorium"

All Participants

09.30 - 10.45 **Cardiovascular disease: Present and future**
Valentín Fuster (CNIC)

11.00 – 12:00 **Pathophysiology of atherosclerosis: insight gained from experimental models.**

Jacob Fog Bentzon (CNIC)

12.15- 13.15 **Aging and cardiovascular disease: From the rarest to the most common**

Vicente Andrés (CNIC)

19 January, 2018

Ground Floor "Auditorium"

All Participants

09.30 - 10.45 **Ischemic cardiovascular disease (I): pathophysiology of myocardial infarction.**(differential diagnosis versus heart arrest and heart failure).

11.00 - 12.15 **Ischemic cardiovascular disease (II): experimental approaches to myocardial infarction (imaging and pig as experimental animal model).**

Borja Ibáñez (CNIC)

12.30 - 13.15 **Experimental models in cardiovascular research: Cardiac ischemia.**

Enrique Lara-Pezzi (CNIC)

22 January, 2018

Ground Floor "Auditorium"

All Participants

9.30 - 10.30 **Experimental models in cardiovascular research: Vascular injury, hypertrophy and aneurysm.**

Juan Miguel Redondo (CNIC)

10.40 - 11.40 **Novel diagnosis and therapy for Myocarditis**

Pilar Martín (CNIC)

C. Cardiovascular Genetics

23 January, 2018

Ground Floor "Auditorium"

All Participants

09.30 - 10.30 **Introduction to Cardiovascular Genetics**

Pablo García Pavía (H. Puerta de Hierro)



D. Population studies: Genomics, Epidemiology and Clinical Trials

24 January, 2018

All Participants

Third Floor Seminar Room

09.30 - 10.30 Research and Development in Medicine: The industry's vision
Savion Gropper (Boehringer Ingelheim Pharma GmbH & Co. KG)

10.40 - 11.40 The Fuster-CNIC-Ferrer Cardiovascular Polypill Project: a new paradigm in cardiovascular therapeutics innovation
Jose M^a Castellano (CNIC)

25 January, 2018

All Participants

First Floor Seminar Room

09.30 - 10.40 Interpreting statistics in Clinical Trials
Stuart Pocock (CNIC/London School of Hygiene and Tropical Medicine)

10.50 – 11.50 Cardiovascular epidemiology: descriptive, intervention and health promotion studies
Juan M. Fernández Alvira (CNIC)

12.00 – 13.00 Oral antiplatelet treatment in ACS: from bench to bedside
Antonio Fernández-Ortiz (CNIC)

E. Frontiers in Cardiovascular Research

29 January, 2018

All Participants

Ground Floor "Auditorium"

09.00-09.45 Dual ifgMosaic: A Versatile Method for Multispectral and Combinatorial Mosaic Gene-Function Analysis."
Rui Benedito (CNIC)

10.00 - 10.45 Nitric oxide mediates aortic disease in mice deficient in the metalloprotease Adamts1 and in a mouse model of Marfan syndrome."
Juan Miguel Redondo (CNIC)

11.00 - 11.45 The Importance of Breakfast in Atherosclerosis Disease: Insights From the PESA Study."
Héctor Bueno (CNIC)



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F. BMM9 STUDENT PRESENTATIONS

30 January- 01 February (09:30- 11:30 h)

**30 January – First Floor Seminar Room
31 January – Second Floor Seminar Room
1 February – Second Floor Seminar Room**

Moderators: **Jorge Alegre-Cebollada, Andrés Hidalgo and Teresa González (CNIC/UAM)**



G. BMM9 PRACTICAL WORKSHOPS

02 February (09.30 to 12.00 h)

Third Floor Seminar Room

Group 1

Bioinformatics and Biostatistics
Fátima S. Cabo, Carlos Torroja (CNIC)

Group 2

Bioinformatics and Biostatistics
Fátima S. Cabo, Carlos Torroja (CNIC)

05 February (09.30 to 12.30 h)

Third Floor Seminar Room

9.30 - 10.30 h (Groups 1, 2, 3 and 4)

MRI
Manuel Desco (CNIC/Universidad Carlos III)

10.30 – 11:30 h (Groups 1 and 2)

Group 1

Cardiovascular Image: RM
Izaskun Bilbao (CNIC)

Group 2

Cardiovascular Image: PET
Juan Pellico (CNIC)

11:45 – 12.30 h (Groups 1 and 2)

Group 2

Cardiovascular Image: RM
Izaskun Bilbao (CNIC)

Group 1

Cardiovascular Image: PET
Juan Pellico (CNIC)

06 February (09.00 to 12.00 h)

09.00-9.30 h (Groups 1, 2 and 3)

Introduction Seminar Microscopy Unit
Valeria Caiolfa (CNIC)

First Floor Seminar Room

09.30 - 12.00 h (Groups 1, 2 and 3)

Several Seminar Rooms

Group 1 (Third Floor Meeting Room)

ES cell culture and differentiation
Giovanna Giovinazzo, Elisa Santos, Belén Prado (CNIC)

Group 2 (First Floor Seminar Room)

Advanced Confocal and live Cell Microscopy
Verónica Labrador, Elvira Arza (CNIC)

Group 3 (Third Floor Seminar Room)

Model systems (I): mouse-transgenesis
Luis Miguel Criado (CNIC)



07 February (09.30 to 12.00 h)

Several Seminar Rooms

Group 1 (First Floor Seminar Room)
Model systems (I): mouse-transgenesis
Jose M^a Fernández (CNIC)

Group 2 (Third Floor Meeting Room)
ES cell culture and differentiation
Giovanna Giovinazzo, Elisa Santos, Belén Prado (CNIC)

Group 3 (Second Floor Meeting Room)
Advanced Confocal and live Cell Microscopy
Helio Duarte, Moreno Zamai (CNIC)

08 February (09.30 to 12.00 h)

Several Seminar Rooms

Group 1 (Second Floor Seminar Room)
Advanced Confocal and live Cell Microscopy
Verónica Labrador, Elvira Arza (CNIC)

Group 2 (Third Floor Seminar Room)
Model systems (II): mouse-transgenesis
Juan de Dios Hourcade (CNIC)

Group 3 (Third Floor Meeting Room)
ES cell culture and differentiation
Giovanna Giovinazzo, Elisa Santos, Belén Prado (CNIC)

09 February (09.30 to 12.30 h)

9.30 - 10.30h (Groups 1, 2, 3 and 4)
PET
Izaskun Bilbao (CNIC)

10.30 – 11:30 h (Two groups 3 and 4)
Group 3
Cardiovascular Image: RM
Izaskun Bilbao (CNIC)

Group 4
Cardiovascular Image: PET
Juan Pellico (CNIC)

11:45 - 12:30 h (Two groups 3 and 4)
Group 4
Cardiovascular Image: RM
Izaskun Bilbao (CNIC)

Group 3
Cardiovascular Image: PET
Juan Pellico (CNIC)



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12 February (09.30 to 12.00 h)

First Floor Seminar Room

Cell analysis techniques: Cytometry and High Content Screening
María Montoya (CNIC)

13 February (09.30 to 12.00 h)

Third Floor Seminar Room

Proteomics
Juan Antonio López (CNIC)

Genomics
Ana Dopazo (CNIC)

14 February (09.30 to 12.00 h)

Third Floor Seminar Room

Group 1 and Group 2
Model systems (II): Zebrafish
María Galardi, Eduardo Díaz (CNIC)

Extra Workshops: GTKCNIC & voluntary for BMM9

15 February (11.10 to 13.00 h)

Second Floor Seminar Room

11.10 to 11.20 h
Finance Department

Jose Alberto Alonso (Finance Director, CNIC)

11.20 to 11.30 h

Human Resources Strategy. The European Charter for Researchers and the CNIC Code of good scientific practices

Antonio Ureña (HR Director, CNIC)

11.30 to 11.50 h

CNIC Predoctoral Programme

Beatriz Ferreiro (Science Management Director, CNIC)

12.10 to 12.40 h

TT Office, Research Office (RO) & Projects Office (PO)

Noelia Lopez (TT Officer, CNIC)

Cristina Giménez (RO Officer, CNIC)

Inga Dreville (PO Officer CNIC)

12.40 to 13.00 h

“The CNIC Library and Information Service, how can we help you “

Irene Maseda Agüero (Library and Scientific Production Officer, CNIC)