BMM9 / Res@cnic-sec / Getting to know CNIC Course

Frontiers in Cardiovascular Research
Course 2020-2021

Coordinators: Valentín Fuster, José Javier Fuster & Guadalupe Sabio (CNIC)
Teresa González (UAM)

Teams Link: Click here to join the meeting

January 11, 2021

Teams

14:30-15:00 Welcome by BMM9 coordinators

Form and function of the cardiovascular system

Teams (Moderator: J.J. Fuster)

15:00-15:50 Cardiovascular disease: Needs and opportunities for translational research
Héctor Bueno, CNIC

16:00-17:20 Cardiovascular disease: Present and future
Valentín Fuster, CNIC

17:30-18:20 Cardiac computational modelling on supercomputers
Mariano Vázquez, BSC

January 13, 2021

Teams (Moderator: T. González)

14:30-15:20 Molecular Basis of Cardiac Electrophysiology and Arrhythmias
Teresa González, UAM

15:30-16:20 Potassium channels in the regulation of vascular myocytes function
Angel Cogolludo, UCM

16:30-17:20 Biomechanics of the cardiovascular system
Francisco Rojo, UPM
January 14, 2021

Teams (Moderator: J.J. Fuster)

16:30-17:20 Development of the vasculature: Vasculogenesis, angiogenesis and lymphangiogenesis
Rui Benedito, CNIC

January 15, 2021

Teams (Moderator: T. González)

14:30-15:20 Anatomy and physiology of the vasculature: Types of vessels, constitution of vessels. Physiology of vasculature: resistance, blood pressure, etc.
Gonzalo Pizarro, CNIC

15:30-16:20 How do cells and tissues sense, adapt and respond to mechanical forces? An emerging perspective in biomedicine
Miguel Angel del Pozo, CNIC

16:30-17:20 Developmental biology of the heart
José Luis de la Pompa, CNIC

Pathology of the cardiovascular system

January 19, 2021

Teams (Moderator: G. Sabio)

14:30-15:20 From drug re-purposing to gene therapy: A personalized approach to treat cardiac arrhythmias
Silvia Priori, CNIC

15:30-16:20 Clinical utility of advanced imaging and mathematical analysis of complex cardiac arrhythmias
David Filgueiras, CNIC

16:30-17:20 The artificial heart: past, present and future
Aida Suárez, Clínica Universitaria de Navarra, Madrid

January 20, 2021

Teams (Moderator: J.J. Fuster)

14:30-15:20 Pathophysiology of atherosclerosis: Insight gained from experimental models
Jacob Fog Bentzon, CNIC
15:30-16:20 Aging and cardiovascular disease: From the rarest to the most common
Vicente Andrés, CNIC

16:30-17:20 Beyond traditional risk factors: acquired mutations as a shared driver of cardiovascular disease and cancer
José J. Fuster, CNIC

January 21, 2021

Teams (Moderator: G. Sabio)

14:30-15:20 Inflammation and cardiovascular disease
David Sancho, CNIC

15:30-16:20 Metabolic disorders: Basic and molecular concepts in obesity and diabetes
Guadalupe Sabio, CNIC

16:30-17:20 Providing energy to the heart
José Antonio Enríquez, CNIC

January 22, 2021

Teams (Moderator: G. Sabio)

14:30-16:10 Myocardial diseases: From large animals to Clinical trials
Borja Ibáñez, CNIC

16:20-17:10 Muscle regeneration and aging: rejuvenating strategies
Pura Muñoz, CNIC

January 25, 2021

Teams (Moderator: J.J. Fuster)

14:30-15:20 Experimental models in cardiovascular research: Cardiac ischemia
Enrique Lara-Pezzi, CNIC

15:30-16:20 Novel diagnosis and therapy for myocarditis
Pilar Martín, CNIC

16:30-17:20 Experimental models in cardiovascular research: Lentiviral-mediated gene therapy and mouse models of aortic diseases
Juan Miguel Redondo, CNIC
Cardiovascular genetics

January 26, 2021

Teams (Moderator: J.J. Fuster)

14:30-15:20  Introduction to cardiovascular genetics
             Julián Palomino, Hospital 12 de Octubre

15:30-16:20  From single molecules to heart disease
             Jorge Alegre-Cebollada, CNIC

Population studies: Genomics, epidemiology and clinical trials

January 27, 2021

Teams (Moderator: T. González)

14:30-15:20  Research and development in medicine: The industry’s vision
             Savion Gropper, Boehringer Ingelheim Pharma GmbH & Co. KG

15:30-16:20  Cardiovascular epidemiology: Descriptive, intervention and health promotion studies
             Juan Miguel Fernández Alvira, CNIC

January 28, 2021

Teams (Moderator: T. González)

14:30-15:20  Interpreting statistics in clinical trials
             Stuart Pocock, CNIC/London School of Hygiene and Tropical Medicine

15:30-16:20  The Fuster-CNIC-Ferrer cardiovascular polypill project: A new paradigm in cardiovascular therapeutics innovation
             José Mª Castellano, CNIC

16:30-17:20  Oral antiplatelet treatment in ACS: From bench to bedside
             Antonio Fernández-Ortiz, CNIC
Frontiers in cardiovascular research

January 29, 2021

Teams (Moderator: G. Sabio)

14:30-15:00  A Network of Macrophages Supports Mitochondrial Homeostasis in the Heart
Andrés Hidalgo, CNIC

15:00-15:30  ALDH4A1 is an atherosclerosis auto-antigen targeted by protective antibodies
Almudena R. Ramiro, CNIC

T. González

CNIC

15:45-17:00  Anatomy and physiology of the heart: Basic concepts in cardiac
echocardiography: in situ echocardiogram; interpretation of normal heart and
basic anomalies
Gabriela Guzmán, Hospital Universitario La Paz

BMM9 students presentations

February 1, 2021

Teams

14:30-16:00  Students presentations

February 2, 2021

Teams

14:30-16:00  Students presentations

Moderators: José Javier Fuster, Guadalupe Sabio and Teresa González (CNIC-UAM)

Practical Workshops

February 3, 2021

First Floor Seminar and Meeting Rooms (Teams)

14:30-15:00  Introduction Seminar Microscopy Unit
Valeria Caiolfa, CNIC
15:00-15:30  Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
   Giovanna Giovinazzo, CNIC

GROUP 1: Cell Culture Room  
15:30-17:30  Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
   Elisa Santos, Belén Prados, CNIC

GROUP 2: Microscopy Unit 2nd Floor West  
15:30-17:30  Advance confocal and live cell microscopy  
   Verónica Labrador, Alfonso Diaz CNIC

February 4, 2021

First Floor Seminar and Meeting Rooms

GROUP 1: Microscopy Unit 2nd Floor West  
14:30-16:30  Advanced confocal and live cell microscopy  
   Moreno Zamai, Elvira Arza, Olga Gimenez CNIC

GROUP 2: Cell Culture Room  
14:30-16:30  Cardiovascular disease modelling: culture, differentiation and gene editing in mESC and hiPSC  
   Elisa Santos, Belén Prados, CNIC

February 5, 2021

First Floor Seminar and Meeting Rooms (Teams)

14:30-15:30  Preclinical molecular imaging  
   Beatriz Salinas, Instituto de Investigación Sanitaria Gregorio Marañón / CNIC / Universidad Carlos III de Madrid

First Floor Seminar and Meeting Rooms / Teams and Presential

15:45-16:30  Case studies: RM and PET  
   Daniel Calle, CNIC

Sótano -3 – Animal pequeño

GROUP 1:  
16:30-17:00  Equipment Cardiovascular image: RM and PET  
   Daniel Calle, CNIC

GROUP 2:  
17:00-17:30  Equipment Cardiovascular image: RM and PET  
   Daniel Calle, CNIC
February 8, 2021

First Floor Seminar and Meeting Rooms (Teams)

14:30-16:30  Bioinformatics and Biostatistics
Fátima Sánchez Cabo, CNIC

Basement -3

GROUP 1:
16:30-17:15  Visit Animal Facility
Santiago Rodríguez, CNIC

GROUP 2:
17:15-18:00  Visit Animal Facility
Santiago Rodríguez, CNIC

February 10, 2021

Teams

14:30-16:30  Model systems (I): mouse-transgenesis
Juan de Dios Hourcade, CNIC

February 11, 2021

Teams

14:30-16:00  Flow cytometry
Beatriz Álvarez, CNIC

February 12, 2021

Teams

14:30-16:00  Proteomics
Juan Antonio López, CNIC

16:00-17:30  Genomics
Ana Quintas, CNIC

February 15, 2021

First Floor Seminar Room

14:30-17:00  Model systems (II): Zebrafish
Laura Andrés, Eduardo Díaz, María Galardi, Irene García, CNIC