

CNIO - CaixaResearch Foundation Frontiers Meeting  
**FRONTIERS IN IMMUNOMODULATION AND CANCER THERAPY: SECOND EDITION**  
October 16<sup>th</sup>- 18<sup>th</sup>, 2024

**Venue:**

Spanish National Cancer Research Centre – CNIO Auditorium, Madrid, Spain

**Chairpersons and organizing committee:**

**Luis Alvarez-Vallina**, CNIO, Madrid, Spain

**Maria Casanova-Acebes**, CNIO, Madrid, Spain

**Nabil Djouder**, CNIO, Madrid, Spain

**David Sancho**, CNIC, Madrid, Spain

**Xin (Cindy) Sun**, JEM, New York, US

**Rationale:**

The immune system has the ability to recognize and kill tumor cells. However, tumors may invade the immune system generating an immunosuppressive tumor microenvironment making tumors resistant to immunotherapies. This conference will focus and discuss recent findings on mechanistic insights of immune escape machinery, immunotolerance and immunomodulation. We will address how tumors can escape the immune system creating an immunosuppressive tumor microenvironment and how tumours become resistant to immunotherapy. This conference will also present an overview of pre-clinical and emerging clinical advances targeting the immune system for treatment of cancer or cancer-associated disorders.

**SPEAKER LIST**

Speakers:

Dr. Yasmine Belkaid - Pasteur Institute, Paris, France

Dr. Mark Cragg - Southampton General Hospital; University of Southampton, Southampton, UK

Dr. Karin de Visser - The Netherlands Cancer Institute, Amsterdam, Netherlands

Dr. Sandra Demaria - Weill Cornell Medical College, New York, US

Dr. Florent Ginhoux - Gustave Roussy, Villejuif Cedex, France

Dr. Ilaria Malanchi - The Francis Crick Institute, London, UK

Dr. Kenneth Murphy - Washington University in St. Louis, Washington, US

Dr. Hai Qi - Institute for Immunology, Tsinghua University, Beijing, China

Dr. Caetano Reis e Sousa - The Francis Crick Institute, London, UK

Dr. Boris Reizis - NYU Grossman School of Medicine, New York, US

Dr. Bruno Silva-Santos - Institute of Molecular Medicine (IMM) João Lobo Antunes, Lisboa, Portugal

Dr. Ramnik Xavier - Broad Institute, Cambridge, US

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Wednesday October 16<sup>th</sup>, 2024

13:00 Registration - welcome coffee  
14:45-15:00 *Welcome address: Maria Casanova-Acebes*

15:00-16:00 **Keynote Lecture**  
Development and function of the cDC1  
**Kenneth Murphy**, Washington University in St. Louis, Washington, US  
*Chair: Maria Casanova-Acebes*

16:00-16:30 *Coffee break*

16:30-18:30 **Targeting the tumor microenvironment**  
*Chair: Maria Casanova-Acebes*

This session will present recent work and discuss new ideas targeting the tumor microenvironment, how to disrupt the supportive environment that promotes tumor growth and progression and how to inhibiting factors like angiogenesis, immune suppression, and stromal support to seek to enhance the efficacy of cancer treatments and impede tumor development.

16:30 – 17:00 Dissecting how breast tumors hijack myelopoiesis to promote metastasis  
**Karin de Visser**, The Netherlands Cancer Institute, Amsterdam, Netherlands

17:00 – 17:30 Tumor Macrophage Heterogeneity  
**Florent Ginhoux**, Gustave Roussy, Villejuif Cedex, France

17:30 – 17:45 *short talk*

17:45 – 18:00 *short talk*

18:00 – 18:30 Title tbc  
**Ilaria Malanchi**, The Francis Crick Institute, London, UK

18:45-20:15 *Welcome cocktail for all participants*

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Thursday October 17<sup>th</sup>, 2024

09:00 - 12:30 Immune system engineering and vaccination strategies in solid tumors

*Chair: Xin Sun*

*The following session will the cutting-edge approaches and promising developments in the field. It will discuss Immune system engineering and vaccination strategies in solid tumors to offer innovative approaches to cancer therapy by enhancing immune recognition and response to tumor cells. Techniques such as CAR T-cell therapy and vaccination to prime the immune system against tumor-specific antigens will be explored.*

09:00 – 09:30 Engineering Antibodies for Agonism

**Mark Cragg**, Southampton General Hospital; University of Southampton, UK

09:30 – 09:45 short talk

09:45 – 10:00 short talk

10:00 – 10:30 Immunotherapy with natural conventional type-1 dendritic cells excels at immune memory induction to eradicate cancer relapse

**David Sancho**, Spanish National Center for Cardiovascular Research - CNIC, Madrid, Spain

10:30-11:30 *Coffee break and group picture*

11:30 – 12:00 Physiological and regulatable T cell redirection against intracellular and extracellular tumour antigens

**Luis Álvarez Vallina**, Spanish National Cancer Research Centre - CNIO, Madrid, Spain

12:00-14:00 *Lunch*

14:00-17:30 Immunomodulation and immunotolerance

*Chair: David Sancho*

*The following session will cover the most recent advances in immunomodulation and immunotolerance, vital in medical advancement, including cancer therapy and organ transplantation. Understanding how the immune system can be regulated will offer promising avenues for therapeutic intervention, while achieving immunotolerance holds potential for revolutionizing treatment in various diseases, emphasizing collaboration and knowledge exchange to improve patient outcomes.*

14:00 – 14:30 DaNGeRous necrophagy, coprophagy and immunity to cancer

**Caetano Reis e Sousa**, The Francis Crick Institute, London, UK

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14:30 – 15:00 speaker tbc

15:00 – 15:15 *short talk*

15:15 – 15:30 *short talk*

15:30-16:00 *Coffee break*

16:00 – 16:30 Extracellular DNA and its regulation in immunity and autoimmunity  
**Boris Reizis**, NYU Grossman School of Medicine, NY, US

16:30 – 17:00 In situ vaccination by radiation and immunotherapy: novel insights  
and combinations  
**Sandra Demaria**, Weill Cornell Medical College, NY, US

17:00-18:30 *Poster session - Refreshments*

## Friday, October 18<sup>th</sup>, 2024

09:00-13:00 Microbiome and metabolism in immunology  
*Chair: Luis Álvarez-Vallina*

*This session will discuss how the microbiome and various metabolic pathways could influence and rewire the inflammatory environment. This session will highlight the importance of interdisciplinary research to elucidate these complex interactions and their impact on human health.*

09:00 – 09:30 Speaker tbc

09:30 – 10:00 Spatial transcriptomics identify controllers of tissue homeostasis  
**Xavier Ramnik**, Broad Institute, Cambridge, US

10:00 – 10:15 *short talk*

10:15-11:00 *Coffee break (certificates and invoices will be available at the reception desk)*

11:00 – 11:30 Title tbc  
**Nabil Djouder**, Spanish National Cancer Research Centre -CNIO,  
Madrid, Spain

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11:30 – 12:00 TREMing1 neutrophil immunity in breast metastasis

**María Casanova-Acebes**, Spanish National Cancer Research Centre -CNIO,  
Madrid, Spain

12:00-13:30 *Lunch*

13:30-17:00 Neuroimmunomodulation

*Chair: Nabil Djouder*

*This session will explore the bidirectional communication between the nervous and immune systems, unveiling how psychological and physiological factors influence immune responses.*

13:30 – 14:00 In search of good memory: the B-cell story

**Hai Qi**, Institute for Immunology, Tsinghua University, Beijing, China

14:00 – 14:30 New mechanistic insights on gamma-delta T cell targeting of liquid  
and solid tumors

**Bruno Silva-Santos**, Institute of Molecular Medicine (IMM) João Lobo Antunes,  
Lisboa, Portugal

14:30 – 14:45 *short talk*

14:45 – 15:15 Speaker tbc

15:15-16:00 *Coffee break*

16:00-16:45 *Closing Lecture*

Title tbc

**Yasmine Belkaid**, Pasteur Institute, Paris, France

*Chair: Nabil Djouder*

16:45-17:00 *Wrap up and closing: Nabil Djouder*

17:00 *Poster/talk prizes - Refreshments*