Universidad Internacional de Andalucía

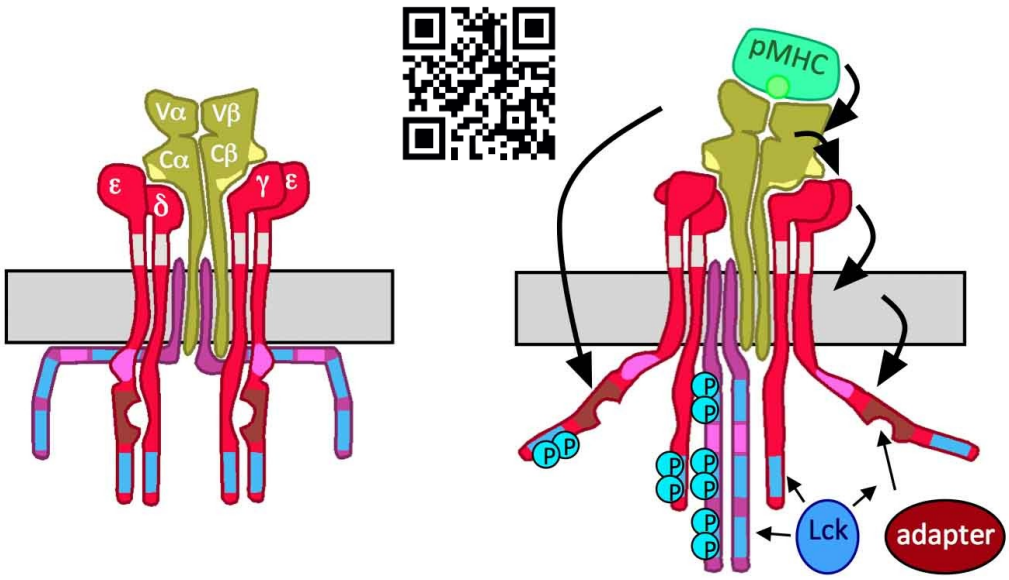
WORKSHOPS "CURRENT TRENDS IN BIOMEDICINE"

2022

SEDE ANTONIO MACHADO
BAEZA, SPAIN

UNDERSTANDING TCR STRUCTURE AND SIGNALLING FOR EFFECTIVE IMMUNOTHERAPY

Baeza, Spain • 17th-19th October 2022



Organized by:

Oreste Acuto Oxford, UK.

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Sponsors:

SCOPE

CARs are chimeric receptors that fuse the ligand-recognition property of a monoclonal antibody with the signal-transducing cytoplasmic tail of the CD3ζ subunit of the T-cell receptor (TCR) in combination with the cytoplasmic tails of co-stimulatory membrane receptors (e.g. CD28, 4-1BB). CARs are expressed using retroviral or lentiviral vectors in blood T cells from the patient and are able to convert them into T cells capable of recognizing and killing cancer cells. The current CARs are being effective in the treatment of childhood leukemias by, for instance, using an immunoglobulin construct recognizing the CD19 marker expressed by both leukemic and normal B cells. Although present-day CARs are effective for childhood leukemias, they are still far from being effective to treat patients with solid tumors. A possible reason is that CARs are not reproducing the

sophisticated sensitivity and signal transduction capabilities of the TCR. We believe that by increasing our knowledge on how the TCR works, we will be able to implement changes in CAR design in order to make them more competent to confront the challenges of cancer therapy. Given that present-day CARs have not been designed taking into consideration the allosteric nature of the TCR, it is unlikely that they can respond to tiny concentrations of ligand molecules in the tumor target cells.

For the above reasons, we believe the Symposium will be of high interest not only to basic immunologists interested on how T cells can specifically distinguish foreign from self-antigens but also to researchers working on CAR design and to clinicians who are applying CAR technology and all sort of clinicians interested in the new and booming field of cancer immunotherapy.

FORMAT OF THE WORKSHOP

The workshop will bring together a maximum of 15 speakers and 35 participants, to form a group of around 50 people. The scientific programme will start in the morning of Monday, October 17th, and will end around noon on Wednesday, October 19th. Ample time for informal discussion will be reserved. Participants will be invited to present a poster.

VENUE OF THE WORKSHOP

The workshop will be held in Baeza, at the “Sede Antonio Machado”, a XVII century building turned into a Conference Centre of the Universidad Internacional de Andalucía (UNIA). This Seat includes a residence, where participants will be accommodated. Baeza is a World Historic Heritage town, renowned for its Renaissance and Gothic buildings.

SPEAKERS

Oreste Acuto — Sir William Dunn School of Pathology, University of Oxford. Oxford, UK.

Balbino Alarcón — Centro de Biología Molecular Severo Ochoa, Consejo Superior de Investigaciones Científicas. Madrid, Spain.

Brian M. Baker — Department of Chemistry and Biochemistry / Harper Cancer Research Institute; University of Notre Dame. Notre Dame, IN, USA.

Chiara Bonini — Experimental Hematology Unit, Division of Immunology, Transplantation and Infectious Diseases, IRCCS San Raffaele Scientific Institute, University Vita-Salute San Raffaele. Milan, Italy.

Mark M. Davis — Stanford University School of Medicine, Institute for Immunity, Transplantation and Infection. Stanford, CA, USA.

Omer Dushek — Sir William Dunn School of Pathology, University of Oxford. Oxford, UK.

Johannes B. Huppa — Institute for Hygiene and Applied Immunology, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna. Vienna, Austria.

Michelle Krogsgaard — Department of Pathology and Perlmutter Cancer Center, New York University Grossman School of Medicine. New York, NY, USA.

Björn F. Lillemeier Faculty of Biology, Signalling Research Centres BIOSS and CIBSS, University of Freiburg. Freiburg, Germany.

Susana Minguet Faculty of Biology, Signalling Research Centres BIOSS and CIBSS / Center of Chronic Immunodeficiency CCI, University Clinics and Medical Faculty; University of Freiburg. Freiburg, Germany.

Jamie Rossjohn Infection and Immunity Program and Department of Biochemistry and Molecular Biology, Biomedicine Discovery Institute, Monash University. Clayton, Australia / Institute of Infection and Immunity, Cardiff University, School of Medicine. Cardiff, UK.

Wolfgang W. Schamel Faculty of Biology, Signalling Research Centres BIOSS and CIBSS / Center of Chronic Immunodeficiency CCI, University Clinics and Medical Faculty; University of Freiburg. Freiburg, Germany.

Andrew K. Sewell Division of Infection and Immunity, Cardiff University School of Medicine / Systems Immunity Research Institute, Cardiff University. Cardiff, UK.

Chenqi Xu State Key Laboratory of Molecular Biology, CAS Center for Excellence in Molecular Cell Science, Shanghai Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences / School of Life Science and Technology, ShanghaiTech University. Shanghai, China.

TALK BY VIDEOCONFERENCE

Cheng Zhu

Wallace H. Coulter Department of Biomedical Engineering / Parker H. Petit Institute for Bioengineering and Bioscience / George W. Woodruff School of Mechanical Engineering; Georgia Institute of Technology. Atlanta, GA, USA.

DEADLINE: 22nd JULY 2022

MORE APPLICATIONS WILL BE ACCEPTED IN CHRONOLOGICAL ORDER UNTIL COMPLETING THE WORKSHOP

MORE INFORMATION AND APPLICATION:

http://www.unia.es/biomedicine

workshops.biomed@unia.es

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