Call for 10 PhD positions in a H2020-MSCA-ITN-funded training program aimed at improving tumor-specific immune receptor function

The European Network on Anti-Cancer Immuno-Therapy Improvement by modification of CAR and TCR Interactions and Nanoscale Geometry (EN-ACTI^{2}NG), formed by 12 academic, clinical and industrial institutions from Spain, Austria, Germany, The Netherlands and the United Kingdom offers a multidisciplinary training for 10 early stage researchers in the development and analysis of engineered tumor-specific immune receptors. This network, funded by the H2020 Marie Sklodowska Curie Action program, emanates from recent clinical evidence that T cells expressing engineered tumor-specific immune receptors can eradicate tumors that do not respond to conventional treatment. This important therapeutic approach is in a very early phase of development and requires a well-trained workforce to address challenges such as development of tumor-specific receptors for a wider array of tumors, improvement in efficiency of these receptors, better on/off-target toxicity safety profiles and more efficient transfer of basic research findings to the clinic.

The network brings together experts in (1) biochemical and functional analysis of immune receptors, (2) development and (pre-)clinical testing of new tumor-specific immune receptors, (3) clinical grade preparations of cancer-specific immune cells, (4) superresolution imaging and biophysical analysis of these receptors and (5) development of microfluidic devices for microscopy-based high-throughput screening of recombinant immune receptor-expressing T lymphocytes. Individual projects benefit from the complementary expertise provided by the other consortium members, facilitated by project-specific secondments at the participating institutions. Research-based training will be complemented with extensive training in career development and communication and dissemination methods. The competitively funded appointments are for 3 years and all institutions have arranged access to doctoral programs of the hosting or affiliated institutions. A brief hyperlinked description of the research projects is shown below; visit the EN-ACTI^{2}NG website for more details. Candidates are strongly encouraged to contact the individual group leaders before submitting their applications.

Candidate requirements

Please see the EN-ACTI^{2}NG website for full details.

- possession of/finishing the program leading to a degree (usually the Master Degree) in Biological Sciences, Chemistry, (Bio-)Physics, Engineering, Medical Sciences which would formally entitle them to embark on a doctorate. Applicants that are still in the course of obtaining the qualifying degree should include in their application an official declaration by their program director specifying the date at which the degree will be awarded.
- less than 4 years full-time equivalent research experience and have not been awarded a doctoral degree.
- compliance of the mobility rule: at the time of recruitment by the host organization, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organization for more than 12 months in the 3 years immediately before the hiring date.

Application procedure

We will apply a rolling application procedure and advice candidates to apply early and not later than **May 1st, 2017.** The application has to include (1) a CV (no gap time will be allowed in order to verify fulfillment of the mobility and 3 year rules), (2) a copy of valid passport or identity card, (3) a copy of university and, if obtained, master or equivalent degree, (4) a transcript of academic grades (including an explanation of the grading system), (5) a letter of motivation, (6) one or more recommendation letters and (7) a list of the 3 projects you are most interested in, listing the project numbers and titles in order of preference. These documents should be sent in a single pdf file to the consortium's e-mail address (enacti2ng@cbm.csic.es) mentioning in the subject line: EN-ACTI2NG application and the numbers of the 3 projects in preferred order (e.g, "EN-ACTI2NG application PhD5, PhD8, PhD2"). After a first check of fulfillment of the EU-mandated eligibility criteria and requested documentation, CVs will be forwarded to the group leaders. Group leaders will contact the best 3 applicants for each position for an interview via Skype and/or will invite them for an interview. You may be contacted by various group leaders. See the EN-ACTI^{2}NG website for full details. Unfortunately, due to the expected volume of applications we will only be able to contact shortlisted candidates.

Start date: summer/fall 2017 but never later than January 1st, 2018.

EN-ACTI²NG

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PhD Project	Host Institution	Supervisor
CSIC Determination of CD3 domains involved in TCR nanocluster formation to improve T cell sensitivity	Centro de Biología Molecular Severo Ochoa, Consejo Superior de Investigaciones Científicas (Madrid, ES)	Hisse Martien van Santen
UFR The role of novel TCR-CD3 interaction partners for TCR and CAR function	Faculty of Biology and Center of Chronic Immunodeficiency, University of Freiburg (Freiburg, DE)	Susana Minguet, Wolfgang Schamel
UKK Combinatorial antigen recognition by two tumor-specific CARs with split signaling moieties	University Clinic Cologne (Cologne, DE)	Hinrich Abken
LUMC Identification of high affinity TCRs directed against B cell malignancy-associated target antigens	Leiden University Medical Center (Leiden, NL)	Mirjam Heemskerk
MUW Visualizing and quantitating CAR T-cell antigen recognition at single molecule resolution	Center for Pathophysiology, Infectiology and Immunology, Institute for Hygiene and Applied Immunology, Immune Recognition Unit, Medical University of Vienna (Vienna, AT)	Johannes Huppa
TUW Single molecule mobility and protein-protein interactions in CAR T-cells	Institute of Applied Physics, TU Wien (Wien, AT)	Gerhard Schütz
STRATEC CONS Microfluidic chip development for microscopy-assisted observation and selection of single cells	Stratec Consumables GMBH (Anif, AT)	Marco Lindner
FIMA Identification of TCR and costimulatory receptor-specific aptamers to generate artificial TCR-signalosome/aptamer scaffolds	Centro de Investigación Médica Aplicada (Pamplona, ES)	Fernando Pastor Rodriguez
UBR Selection of CD8 co-receptor variants for optimization of TCR gene therapy	Faculty of Health Sciences, University of Bristol (Bristol, UK)	Linda Wooldridge
UWÜ Novel CAR formats with enhanced signaling and tumor recognition properties	University of Würzburg (Würzburg, DE)	Michael Hudecek