



## CONVOCATORIA DE PRÁCTICAS INTERNACIONALES

### CONVENIO UCLM/CERFA 2022

#### **PROYECTO 1**

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#### **Afiliación del supervisor y Enlace a afiliación / Supervisor affiliation and Affiliation link**

Institut für Chemie und Biochemie/ Fachbereich Biologie, Pharmazie, Chemie/ Freie Universität Berlin  
<https://www.bcp.fu-berlin.de/en/chemie/biochemie/index.html>

#### **Título del Proyecto/ Project Title**

**APC mimics for cellular (immune)therapies**

#### **Perfil preferencial del estudiante**

Ideally enrolled in a relevant MSc programme or close to complete the corresponding BSc

Research areas:

Biochemistry

Biotechnology

Nanoscience and Molecular Nanotechnology

#### **Fechas orientativas/Available Dates**

Institut für Chemie und Biochemie/ Fachbereich Biologie, Pharmazie, Chemie/

#### **Programa/ Detailed program of the traineeship period (aprox. 100-200 palabras)**

The working programme consists on a thorough theoretical and practical immersion of the trainee into molecular immunology, and immunological research. The trainee will gain independence and confidence on experimental design, as well as performing experimentation. The overall goal of the research project is to expand, and study T cell clones of interest for cellular immune-therapies using novel APC-mimics. The specific tasks of the trainee are: 1) the preparation of APC mimics (based on recombinant proteins), and 2) their application for testing T cell expansions on cell lines and primary human cells. If applicable, the trainee will participate on the characterization of expanded cells. In brief:

- The student will attend to a well-established seminar series, with great reputation amongst students, what will facilitate its immersion in the topic. The student is expected to participate from the Protein biochemistry seminars as well as other group activities.
- Experimentally, the student will address protein expression and purification using a well-established Expi293 platform and automated chromatography systems. The trainee will also perform task on the functionalization of the APC mimics and apply them for T cell ex vivo expansions.

#### **Competencias a adquirir por parte del estudiante/ Knowledge, skills and competences to be acquired by the trainee at the end of the traineeship (expected Learning Outcomes) (aprox. 100 palabras)**

The trainee will receive theoretical training in state of the art molecular and cellular immunological research as well as on methods and routines to read, interpret, and present up-to-date scientific literature. As primary outcome of this training one could expect him/her to be confident to present scientific literature related to the topic and discuss it. From a practical

work point of view the student will contribute to experimental design, and he/she will perform complex experiments on his/her own. This should result in a certain degree of independence required to work in any lab in the future

**Seguimiento/ Monitoring Plan (aprox. 50 palabras)**

Knowledge acquisition performance: the student will attend the on-going seminar series (2h/week over 6 weeks) dedicated to the topic of interest. Therefore, a continuous "evaluation" will be carried out.

Practical work performance. To be assessed in three phases:

- A) Direct monitoring over the first 4 weeks to establish routines (daily routine).
- B) Semi-supervised experimentation during the subsequent 8 weeks. Daily meeting pre- and post-work will guide the trainee towards independence.
- C) Semi-unsupervised work phase for the last 4 weeks. In this phase the trainee should be able to plan and perform experiments on his/her own and report results and problems on scheduled meetings.

**Evaluación/ Evaluation plan (aprox. 50 palabras)**

Attendance and active participation will be considered for the evaluation of the knowledge acquisition during the regular seminars. At the end of the training period a presentation of the results in the format of one of the graded-internships of the MSc program of the FU will take place to formally grade the student's performance. Typically this includes a 15-20 minutes presentation of the topic and the results, plus a 20-30 minutes discussion of the theoretical background and experimentation performed.

**Conocimientos técnicos o experiencia requerida (si procede) / Technical knowledge or experience required (if applicable)**

Language competence required: English (C1)

Basic knowledge on immunology and immunology related methods is a must.

Knowledge, and ideally work experience, on protein manipulation methods is desired.

Prior experience on flow cytometry and work with primary cells is a plus.

**Especificaciones extra de la institución de acogida (si procede) / Additional specifications of the host institution (if applicable)**

N/A

**Disponibilidad para evaluar informes de convalidación de créditos (Si/No) /**

Availability to evaluate credit convalidation reports (Yes / No)

YES

**Otra información relevante / Any additional important information**

Además del soporte económico del Programa Erasmus+ Placement de la UCLM, los estudiantes recibirán el paquete de **Ayudas CERFA-Fundación Ramón Areces**. En la convocatoria 2022, éste se divide en dos conceptos:

- Ayuda económica en concepto de viaje: 400 euros
- Curso práctico destinado a ofrecer formación sobre gestión de carrera profesional

Toda la información aquí: <https://cerfa.de/ayudas-cerfa-fra/>