



## Job Opening Doctoral Candidate 8 (DC8) InnoCAR-T

**Title:** Development of multiplex-modified knock-out and knock-in CAR-T cells to resist immunosuppression

**Keywords:** CAR-T, gene-editing, knock-out, GMP-ready

**Duration:** 36 months

**Host institute:** Integra Therapeutics, Barcelona, Spain

Duration: 27 months

**Secondment institutes:** UMCG, Groningen, Netherlands

Duration: 9 months

**APPLICATION DEADLINE:** 31/08/2023

**Intended start date:** November 2023

### PhD-student position (3 years):

The PhD student position offers an exciting and innovative research project aimed at developing the next generation of engineered T-cells for cancer immunotherapy. We are seeking a motivated scientist to contribute in therapeutically relevant engineering of CAR-T cells *ex vivo* using novel genome writing to generate more efficient and safer gene therapeutic solutions. Hereto, we will employ a multiplex pipeline for targeted genetic modification of CAR-T cells, comprising targeted knock-out as well as knock-in of relevant genes, to resist immunosuppression. Herewith, we aim to deliver the next-generation of CAR-T products for Point-of-Care therapy.

The candidate will participate in a highly translational project with Interactions with industry and clinicians, as part of an international consortium. The candidate will be offered a competitive salary and a full-time contract. The PhD project is scheduled to last 3 years, and will start at Integra Therapeutics, with a short stay of 9 months at the UMCG / The Netherlands. Integra Therapeutics is a biotechnology company that is creating next-generation gene writing tools to make advanced therapies safer and more effective. The technology is based on the CRISPR system, which has been merged with transposase and integrase proteins that have a great capacity for gene transfer. Thus, the system does not depend on viral vectors for transporting the gene-editing components into the cell both *ex vivo* and *in-vivo* (for more information: [www.integra-tx.com](http://www.integra-tx.com)). This research project will end with a PhD thesis defense at IDIBABS.

This project is part of a collaborative training network of 10 closely related projects (<https://www.innocar-t.eu/>) in which PhD students will benefit from networking opportunities. This includes a multidisciplinary training program with network-wide training events that will be provided to the candidates. Herewith, the PhD project will provide the candidate a unique opportunity to obtain knowledge/expertise on important facets of both academia and industry.

### Key Responsibilities:

- Implementation of Multiplex Gene editing tools for T-cell engineering
- Development of improved CAR-T cassettes expression and performance
- Preclinical validation of developed next-gen CAR-T products
- Management, presentation and publication of research data



**Requirements:**

- Candidate is in the first four years of his/her research career and does not have a doctoral degree
- Residence duration in Spain does not exceed 12 months in total within the last 3 years
- MSc in biology, biochemistry, biotechnology, bioinformatics or related
- Relevant hands-on experience in computational science and/or bioinformatics
- Molecular Biology experience.
- Interest in applied genetic engineering and synthetic biology.
- Curiosity and motivation to applied novel gene writing tools to cell therapy.
- Good time management and communication skills.
- Excellent team player who enjoys working in a fast-evolving research environment

**Contact:**

Please send the following documents:

- CV (Name\_Surname\_CV.pdf)
- Cover letter (Name\_Surname\_CL.pdf)
- 2 letters of recommendation (Name\_Surname\_LR.pdf)

To the email address [info@integra-tx.com](mailto:info@integra-tx.com) with "PhD\_InnoCAR-T" in the email title.