



European Training Network 'Targeted Anti-Cancer Therapies' PhD offer

Context. Despite improvements in prevention and treatments over the past decades, cancer is still the second leading cause of death globally.¹ Whilst survival rates have improved markedly for certain cancers, others are still linked to high mortality rates, thus highlighting the urgent need for the development of new therapeutic tools. **Antibody-Drug Conjugates (ADCs)** are fast growing classes of oncology therapeutics. They consist in a highly potent cytotoxic drug connected via a linker to an antibody that is specifically targeting certain tumor markers. By combining the cytotoxicity of the drug and the targeting properties of the antibody, ADCs kill cancer cells whilst leaving the healthy cells unaffected, thus broadening the effective therapeutic window of such therapies. Consequently, four ADCs have reached the market – Adcetris™ (2011), Kadcyła® (2013), Besponsa™ (2017) and Mylotarg® (2017) – and the approval of many more is hotly anticipated; as of October 2018, at least 83 candidates were in clinical trials.² Despite a rapid evolution of the field, limitations in ADCs design still exist which could fuel the development of *new generations*.

Project. 'Targeted Anti-Cancer Therapies' (TACT) is a 'European Training Network' (ETN) research project that received funding by the European Commission under the 'Horizon 2020 research and innovation programme' and the 'Marie Skłodowska-Curie actions'. Being an *international* and *multidisciplinary* training and research doctoral programme, TACT aims to train **11 Early-Stage Researchers** (ESRs) on the development of state-of-the-art targeted anti-cancer therapeutics and equip them with transferable, future career-enhancing skills. More specifically, TACT's research programme will focus on key interconnected priority themes for the conception of new and more effective generations of Protein-Drug Conjugates (PDCs): *site-specific bioconjugation* methods, more *potent payloads*, more efficient *protein-based targeting systems* and new *analytical tools* for acute characterization.

This will be made possible thanks to a unique cooperation between academic and industrial worlds, resulting in a consortium comprising **nine beneficiary institutions**: University of Strasbourg and CNRS (France); University College of London, Queen's University of Belfast and Almac Discovery (U. K.); Technical University of Munich and Heidelberg Pharma (Germany); University of Wageningen (Netherlands); Spirochem AG (Switzerland). Each of these institutions will host and train at least one ESR, who will benefit from an unequalled scientific training in all domains related to the field of PDCs via their main research projects, secondments at other institutions and network-wide meetings.

Applications. The TACT consortium is looking for highly **talented, motivated** and **qualified** graduate students in various fields at the interface of **chemistry, biology** and **analytical chemistry** to start October, 1st 2020. The candidates will have to possess a strong interest in interdisciplinary research and be willing to take part in various communication activities towards non-scientific public. They will have to be fluent in English, possess a high degree of self-organisation and be able to work collaboratively. Applicants can visit www.tact-etn.eu to visualize the different research projects proposed in this programme. Applications must be sent by e-mail directly to the personal investigators concerned **before June 1st 2020**, and include:

- a one-page CV
- a motivation letter
- transcripts of undergraduate studies
- contacts of two references

Any application that does not follow these rules will **not be processed**.

ATTENTION! Candidates must not have resided or carried out their main activity (e.g. studies) in the country of their potential future host organisation for **more than 12 months in the 3 years immediately prior to their recruitment**.

¹ World Cancer Report 2014, edited by Stewart BW, Wild CW, ISBN (PDF) 978-92-832-0443-5

² R. Lyon, *Drug Discov. Today Tech.*, **2018**, 30, 105