

Train2Target

An integrated multidisciplinary approach towards a new generation of antibiotics: Targeting function and cross-talk of bacterial envelope protein machineries

Train2Target is a multidisciplinary European Training Network funded by the European Commission under the Horizon 2020 Marie Skłodowska-Curie Action. Eleven research groups from academia and private sector have come together to address the challenge of the discovery of innovative antimicrobials.

Description

Infectious diseases are still among the top 10 causes of death worldwide. The most relevant factor accounting for the high incidence of infectious diseases is the increase and spread of multi drug resistant (MDR) strains, which is leaving clinicians with very limited options to treat infections especially those from Gram-negative pathogens.

The bacterial cell envelope is still one of the best targets for antimicrobial discovery. Train2Target is an interdisciplinary project aiming at dissecting the biogenesis of the cell envelope of Gram-negative bacteria, in particular peptidoglycan biosynthesis and outer membrane assembly. The assembly of these structures is carried out by sophisticated molecular machines that function outside the cell and that need to be temporally and spatially orchestrated to ensure proper cell growth and division. The Train2Target project aims at dissecting at the molecular level the function and coordination of core envelope machineries: to this end interdisciplinary approaches based on an array of genetic, biochemical, biophysical and structural biology techniques will be used. Innovative in vivo and in vitro assays will be also developed to find molecules that alter the function and/or misbalance the coordination of envelope machineries thus providing new drugs to be developed as innovative antibiotics.

The consortium consists of partners with excellent scientific qualifications in multiple disciplines. In total there are 15 open ESR positions within Train2Target. During the appointment secondments will be performed at the premises of other partners to ensure multidisciplinary training and close collaborations.



funded by the European Commission under the H2020 Marie Curie actions (no. 721484), offering attractive packages to the best candidates

Applicants for the PhD positions must not yet been awarded a PhD degree and must be in the first 4 years (full-time equivalent) of their research careers prior to the recruitment.

All applicants must not have resided or carried out their main activity (work, studies, etc.) in the country of the organization they are applying to for more than 12 months in the 3 years immediately prior to the recruitment.

Positions include interdisciplinary training, summer schools and yearly international meetings.

Please send a CV and cover letter by email to the appropriate organization (see individual project application deadlines).