



Integrated Training in Dry Eye Disease Drug Development (IT-DED³)

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PhD student - Early Stage Researcher (ESR7) Drug penetration to ocular surface tissues

About IT-DED³

The European Network for Integrated Training in Dry Eye Disease Drug Development ([IT-DED³](#)) aims to deliver multidisciplinary and entrepreneurial researchers trained to develop new therapies for patients suffering from Dry Eye Diseases (DED). DED is a chronic, multifactorial disease of the ocular surface and is a major and increasing healthcare problem due to its high prevalence and economic burden because of the ageing population and frequent computer/tablet/smartphone usage.

Both the research and training programme of [IT-DED³](#) will deliver researchers with an enhanced career perspective and employability, who know how to use their entrepreneurial skills to move drug development projects in DED and other fields to the next technology readiness level.

About the host organisation

The [University of Eastern Finland \(UEF\)](#) is one of the largest universities in Finland and was placed 24th in the QS World University 2014 Rankings list of the top young universities (<50 years). UEF has a strong and multidisciplinary ocular research involving several units (ophthalmology, biopharmaceutics, pharmaceutical chemistry and technology, physics and neurosciences). The School of Pharmacy has long traditions from the 1980's in ocular drug research with a current focus in ocular pharmacokinetics, modelling and drug delivery systems, particularly in relation to the retinal drug delivery. The Faculty of Health Sciences has selected "Targeted Drug Delivery with Emphasis on Ocular Drug Treatment" among its key research areas.

[Ocular drug delivery group](#) aims to develop improved drug delivery methods for targeted and prolonged drug delivery to the eye, particularly retina. Furthermore, the group aims to build quantitative understanding of ocular pharmacokinetics and pharmacodynamics, including the computational tools for drug development and preclinical-to-clinical translation. The group hosts versatile expertise that is relevant in ocular drug delivery. This includes doctoral level investigators, group of Ph.D. students and Master's students and technicians.

Tasks description

ESR will investigate the role of pharmacokinetic and formulation factors on the performance of investigational drugs against dry eye disease. These studies will include physical chemical characterization of drugs and drug delivery systems and biological experiments with cultured eye cells and laboratory animals. The analytical methods will include physical methods (e.g. rheology), chemical analytics (e.g. LC/MS), and *in vivo* end-points (e.g. fluorescence *in vivo*). The ESR should also apply pharmacokinetic modelling to build understanding on drug retention in the ocular surface tissues.

Preferably ESR should have background in pharmaceutical or (bio)medical sciences, but other suitable educational backgrounds may be also feasible.

Please note that the normative time-to-degree for full-time doctoral students in Finland is four years.

Profile and requirements

- ✓ Applicants can be of any nationality.
- ✓ Applicants must hold a MSc or equivalent in the field of (bio)medical sciences, pharmaceutical sciences or an equivalent.

- ✓ Applicants must have an ability to understand and express themselves in both written and spoken English to a level that is sufficiently high for them to derive the full benefit from the network training.
- ✓ Applicants must be eligible to enrol on a PhD programme at the host institution (or at a designated university in case the host institution is a non-academic organisation).
- ✓ Applicants must have the necessary academic skills and background to make the success of a doctoral degree.
- ✓ *H2020 MSCA Mobility Rule*: researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of the host organisation for more than 12 months in the 3 years immediately before the recruitment date. Compulsory national service, short stays such as holidays, and time spent as part of a procedure for obtaining refugee status are not taken into account.
- ✓ *H2020 MSCA eligibility criteria*: Early Stage Researchers (ESRs) must, at the date of recruitment by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when the researcher obtained the degree entitling him/her to embark on a doctorate (either in the country in which the degree was obtained or in the country in which the researcher is recruited, even if a doctorate was never started or envisaged).

Benefits

- ✓ You will be employed by the host organisation for 36 months.
- ✓ A competitive salary plus allowances. Moreover, funding is available for technical and personal skills training and participation in international research events.
- ✓ You will benefit from the designed training programme offered by the host organisation and the IT-DED³ consortium.
- ✓ You will participate in international secondments to other organisations within the IT-DED³ network and in outreach activities targeted at a wide audience.

Please, find additional information in the [Information package for Marie Skłodowska-Curie fellows](#)

Application

Interested candidates are invited to apply for this position by filing in the form on our website (www.itded3.eu), via this link: www.uantwerpen.be/en/projects/dry-eye-disease-drug-development/job-openings/submit-your-applicat/

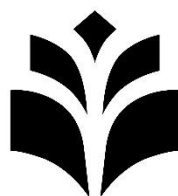
Additional information

For additional information about the research project and this individual position, please contact:

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