**Post summary**

The topical treatment of eye diseases shows great advantages such as ease of administration, good patient compliance and cost effectiveness, but it still has drawbacks in great loss of drug and low bioavailability in deeper ocular tissues. Nanomedicine has great potential for the improvement of ocular administration: size of carriers and their surface characteristics are crucial parameters that impact on drug release and diffusion across and into ocular barriers. In this context, rapid and affordable methodologies to characterize how formulations perform in contact with ocular tissues are strongly needed. Regardless the ocular target site, availability of validated ex-vivo models is essential: in fact, models help formulations screening by identifying those characteristics that are responsible for an effective drug delivery.

Project aims at design and development of novel lipid based nanocarriers, particularly micro and nanoemulsions and nanoparticles, that can enhance drug penetration across ocular barriers: candidate will carry on both colloidal formulation research and full set up and assessment of newly developed ex-vivo animal models, to screen and characterize obtained formulations.

Research activities will be held in both Torino (Italy) and Parma (Italy) location, most of the time is planned in Torino.

**Standard duties and responsibilities of the ESR**

For the 36 months of employment contract the ESR will be required to work exclusively on the MSCA programme.
In all cases, all duties and responsibilities will be clearly outlined in the researchers Personal Career Development Plan, as determined in the early stages of the project between the ESR and their supervisory committee.

Person specification

Qualifications
Essential

Applicants should hold or expect to attain, as a minimum a 2:1 Honours degree, or equivalent, in Pharmacy, Industrial Pharmacy, Materials Science, Biomedical Science, Organic Chemistry or related area.

Knowledge & Experience
Essential

• Research project carried out in one of the above disciplines
• A demonstrated knowledge of at least three of the following: pharmaceutical formulation development, drug delivery, nanotechnology, analytical chemistry, lipid chemistry, cell culture/molecular biology, nanoscale surface interaction

Skills & Competencies
Essential

• Applicants whose first language is not English must submit evidence of competency in English
• Evidence of interest, attitude and research experience in the above disciplines

Further information

For any informal queries, please contact Paolo Gasco preferably by email at paolo.gasco@nanovector.it, or alternatively by phone at +390112258921

For queries relating to the application and admission process please contact Dr Laurence Fitzhenry at orbital@wit.ie or by telephone at +353 (0)51 302624.

Website: www.orbital-itn.eu

The Institute may decide to interview only those applicants who appear from the information available, to be the most suitable, in terms of experience, qualifications and other requirements of the position.