RiSE – Roche internship for Scientific Exchange – in Ocular Drug Delivery (9 months)

Switzerland, Basel-Town, Basel

Job Facts
The Ophthalmology Discovery and Biomarkers Group located in Basel, Switzerland oversees the discovery, research, and development of novel treatments for Age-related Macular Degeneration (AMD), Diabetic Retinopathy (DR), Diabetic Macular Edema (DME) and Glaucoma, which are all among the leading causes of irreversible vision loss.
Key responsibilities of this group of 40 associates, students, postdoctoral fellows, and scientists include initiation of drug discovery campaigns and investigation of therapeutics for clinical translation, biomarker discovery, and development of novel in vitro and in vivo preclinical translational models to evaluate our pipeline. The development of ocular drug delivery technologies for sustained release and therapeutic bioactivity are also a key focus. Furthermore, key alliances with academia and clinics throughout Europe, North America, and Asia facilitate interactions with patient data and biospecimens via ongoing clinical studies.
The RiSE program (Roche Internships for Scientific Exchange) offers the most talented students the opportunity to enhance their competencies and to gain valuable work experience with us by participating in the process of drug discovery, biomarker, and technology development, facilitating development of strategies that will improve clinical outcomes.
During the internship your tasks will include:

- Working with a team of chemists, engineers, and biologists to develop novel retinal drug delivery devices based on antibodies, proteins, peptides, polymer and/or lipid-derived nanoparticles and formulations
- Evaluating drug carrier sensitivity, specificity, and toxicity using established in vitro and in vivo models of retinal diseases, in conjunction with our Team
- Recombinant protein production to yield novel targeted therapies with clinically-relevant improvements, such as prolonged antibody half-life in vivo
- Conjugation of nanoparticles, antibodies, antibody fragments, proteins, peptides, and oligonucleotides to targeting moieties
- Analyzing and reporting experimental results through high-impact publications and presentations, as well as exchanging information with external collaborators and mentors which will be assigned to you

Who you are
You're someone who wants to influence your own development. You're looking for a company where you have the opportunity to pursue your interests across functions and geographies. Where a job title is not considered the final definition of who you are, but the starting point.

Moreover, you are/have:

- Enrolled in PhD or MD/PhD program in chemistry, biomaterials, polymer chemistry, pharmaceutical science, or relevant drug delivery technology fields
- Strong experience in bioconjugate chemistry and synthesis and characterization of drug delivery devices based on proteins, polymers, lipids, hydrogels, and/or other biomaterials. Experience with nanoparticulate drug delivery systems is desirable
- Experience in recombinant protein production and/or engineering using E. coli or mammalian cell expression systems is desirable
- Exposure to FPLC, light scattering (e.g. SEC-MALS), and other protein characterization and purification methods
- Exposure to mechanisms and models of ophthalmic disease
- Experience with tissue culture and standard molecular biology techniques (e.g. RT-PCR, ELISA)
- Highly motivated to work in a team and contribute to a collaboration with academic partners and have a great interest in acquiring novel techniques and gaining scientific knowledge
- Fluent in written and oral English

The preferred start date of the internship is January 2018 or upon availability.
Applications need to include a CV and a cover letter, as well as a letter from your academic supervisor supporting your RiSE application.
3 reference letters from mentors or University-level faculty members familiar with the applicant.
Please note that non-EU/EFTA nationals have to successfully apply for a Swiss work permit.

Who we are
Basel is the headquarters of the Roche Group and one of its most important centres of pharmaceutical research. Over 8,500 people from approximately 90 countries work in Basel, which is one of Roche`s largest sites.

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