

**CIFRE PhD Project: Joint doctorate between UCD and University Paris-Sud with industry partner,
Sanofi Pharma**

Post: 3 year PhD (Joint Doctorate) on Oral Peptide Delivery: “*Understanding physicochemical interactions between selected intestinal permeation enhancers and peptide therapeutics to enable improved oral peptide formulation design.*”

Funding: CIFRE (Industrial Agreement of Training through Research) thesis grant, funded by the French Ministry of Higher Education and Research via an industry partner. Scheme details are at: http://www.anrt.asso.fr/fr/espace_cifre/accueil.jsp#.Vqn6UCqLSUk

Starting date: September 2016

Workplaces: University College Dublin; University of Paris-Sud; Sanofi Pharma, Montpellier. The thesis student will work across these locations for a period of 3 years, beginning in France.

Scientific field: Human health, Medicine, Structural biology, Biophysics, Biology, Pharmaceutical and Analytical Sciences

Project Summary

This thesis will bridge three collaborating partners and institutions:

Professor David Brayden, University College Dublin, UCD

(<http://www.ucd.ie/vetmed/staff/veterinarybiosciences/davidbrayden/>)

Professor Elias Fattal, Galien Institute, Paris-Sud (<http://www.umr-cnrs8612.u-psud.fr/>),

Dr. Rachel Vogel, Sanofi R&D, Montpellier (<http://www.sanofi.com/>).

Ph.D. description

The candidate will undertake a three year Ph.D. Life Sciences thesis within the context of a multidisciplinary pharmaceutical-based project involving academic and industrial partners with oral drug delivery expertise. A joint doctorate will be awarded between UCD and the University of Paris-Sud. The candidate will carry out research with advanced biophysical techniques to improve understanding of how a group of established intestinal permeation enhancers interact with selected peptides. With this knowledge, *in vitro* fluxes will then be carried out using advanced intestinal model systems and this will allow rank ordering of selected enhancers in terms of efficacy, toxicology and mechanism of action.

Knowledge and skills

-A recent BSc (minimum 2.1 Honours) or MSc degree in biological sciences (e.g. biochemistry, cellular biology, or molecular biology), biological chemistry, physical chemistry or biophysics.

-The candidate must be able to work across disciplines and to learn analytical techniques around physico-chemical analysis of the interaction between the enhancer and peptide in bio-relevant buffers.

-Ability to perform in a transversal team across three sites in two different countries- two academic and one pharmaceutical

-Good spoken and written French and English in order to perform well in French and Irish labs

To apply, send a CV and cover letter with the names of three referees to each of the following addresses by March 11: Professor David Brayden, david.brayden@ucd.ie ; Professor Elias Fattal, elias.fattal@u-psud.fr ; Dr. Rachel Vogel, rachel.vogel@sanofi.com. Informal enquiries can also be made to any of these contacts.

