Master « Sciences, Technologie, Santé »
Mention « In Silico Drug Design »

Second Year

OFFER AN INTERNSHIP
Academic Year 2013 – 2014

Send to Mrs Pr Camproux :
anne-claude.camproux@univ-paris-diderot.fr

Name of the head of laboratory or company : Cheryl Arrowsmith

Adress : Structural Genomics Consortium
MaRS Center, South Tower
101 College Street, Suite 700
M5G 1L7, Toronto, ON
Canada
E-mail : toronto@thesgc.org

Name of training supervisor : Matthieu Schapira
Phone number : +1 416 978 3092
E-mail : matthieu.schapira@utoronto.ca
Specialty training : Research ☒ Professional ☐

A few key words to describe the subject of training :

Defining chemical tractability profile of proteins involved in histone methylation pathways, and proposing novel avenues to develop focused chemical libraries.

Title of internship:

Histone methylation pathways and focused chemical libraries.

this subject is a first step towards a thesis: Yes

Short texte describing your project :

Proteins involved in epigenetic mechanisms represent an emerging class of drug targets (pubmedid 22498752, 24153301). Methylation of lysine and arginine side-chains on histone tails is an essential component of chromatin-mediated signaling and epigenetic control of cell fate in health and disease. The chemical coverage of histone methyltransferases, and methyl-lysine binders, which respectively deposit and interpret methyl marks on histone tails is limited. Moreover, all inhibitors were identified by screening large and diverse compound collections, and so far, no strategy has been found to successfully design chemical collections enriched in hits against these target classes. We will systematically analyze (1) the structural mechanism of known inhibitors, as well as (2) the structural diversity and (3) druggability of binding sites. Our goals are (1) to define the chemical tractability profile of proteins involved in histone methylation pathways, and (2) propose novel avenues to develop focused chemical libraries.

Send by e-mail : anne-claude.camproux@univ-paris-diderot.fr