

STudent REseArch Mobility Programme (STREAM) Project proposal



Host University:
Université Paris-Sud

Field (drop-down list):
Select a field

Specified field, subject:
Nanosciences, nanomedicine

Research project title:
Development of nanoparticles for radiotherapy

Possible starting month(s):

Sep	Oct	Nov	Dec	Jan	Fev	Mar	Apr	May	Jun	Jul	Aug
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Possible duration in months:

1	2	3	4	5	6	7	8	9	10	11	12
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Alternatively, exact starting and end date: from date to date

Suitable for students in: Bachelor level Master level

Prerequisites:
Bachelor in physico-chemistry or nanosciences

Restrictions:

Description (maximum 2,000 characters):

This project deals with the improvement of radiotherapy treatments with nanoparticles. Even if the first in vitro study dates back to 2004, no clinical trial is on-going because the phenomenon is more complex than first thought and because of a lack of standardization of pre-clinical studies. The hosting team is one of the pioneering groups dealing with the mechanisms at stage. The team is highly specialised in synthesis, functionalisation and characterisation of gold nanoparticles, quantification of the reactive species emitted by nanoparticles under irradiation, interaction of nanoparticles with cells. Systematic and quantitative studies are developed regarding the key parameters governing radiosensitisation (nanoparticle size, metal, ...), the coating evolution under irradiation and the cellular efficiency. This would be an interdisciplinary internship in a fast-growing field.



Comprendre le monde,
construire l'avenir



Faculty and/or Department:

Laboratoire de Chimie Physique (LCP), Equipe "Rayonnements ionisants et biosystèmes"

Contact person, including position:

Séverine Fogel, Head of International Relations

Contact email:

severine.fogel@u-psud.fr

Deadline for nomination to reach host university:

2 months before the starting date

Notification of admission given by the end of:

Within 3 weeks

Additional information:

Comprendre le monde,
construire l'avenir

