

## Postdoctoral position at the Institut de Recherche en Cancérologie de Montpellier IRCM

**Description:** Radiotherapy is one of the main treatments for solid tumors. Severe late radiation-induced toxicity of the surrounding normal tissues occurs in 5% to 10% of patients following radiotherapy. The radiation-induced lymphocyte apoptosis assay developed to predict late radiation-induced toxicity in patients has demonstrated to be significantly associated with toxicities. However, the molecular mechanism explaining the link between the lymphocyte apoptosis rate and the development of late toxicity is still unknown. It is well established that the acid sphingomyelinase/ceramide pathway is involved in radiation-induced apoptosis, more particularly in endothelial cells. We have started to look at this pathway in peripheral blood mononuclear cells (PBMC) in cancer patients. We observed ceramide expression in response to radiation in patients' samples and we were able to identify an increase in acid sphingomyelinase activity at 8 Gy. This project proposes to study the ceramide pathways in PBMC responsiveness to ionizing radiation in cancer patients and the consequences on apoptosis, ROS and inflammation.

The goal of this project is to have a better understanding on the correlation between radiation-induced late toxicity and apoptosis and to help improve the life quality of the patients.

This project is part of an integrated research program carried out by SIRIC Montpellier Cancer, one of the 8 integrated cancer research sites certified by the French National Cancer Institute. As a national site of reference for oncology, the SIRIC Montpellier Cancer represents an outstanding consortium covering a large field of expertise at the interface of basic, translational and clinical research.

**Candidate Requirements:** The candidate should have a PhD in Molecular Biology, Biochemistry or Cell Biology. An expertise in lipid signaling would be a plus. We are looking for a postdoc fellow who can work independently in a collaborative environment. Candidate should be highly motivated, creative, have strong communication skills and the ability to communicate well in English.

**Starting position:** February 2021

**Contract duration:** 12 months renewable contract

**Funding:** SIRIC Montpellier Cancer Grant INCa\_Inserm\_DGOS\_12553

### How to apply:

Please send application package to [muriel.bregues@icm.unicancer.fr](mailto:muriel.bregues@icm.unicancer.fr), including:

- a cover letter briefly stating your previous research experience, why your skills would suit the job and the reason for applying
- a CV including your publication list, two or more reference letters or contact details.