Postdoc in thoracic oncology, resistance to targeted therapy

Research Description

Our team, located in the Cancer Research Center of Toulouse (CRCT), INSERM U1037 (https://www.crct-inserm.fr/en/), is interested in targeted therapies that are used as standard of care for lung cancer harboring oncogenic addictions such as EGFR mutations. Despite the improved clinical outcomes derived from the introduction of EGFR tyrosine kinase inhibitors (EGFR-TKI), the overall prognosis remains unfavorable because of the systematic emergence of resistances. Recent studies have suggested that these resistances may emerge from a small population of drug-tolerant cells that initially resists the treatment by entering a slow cycling state dependent on epigenetic modifications. Targeting these cells should thus be a new promising approach to hamper the emergence of secondary resistance, however an accurate phenotypic and molecular characterization of this particular state still lack, which is a prerequisite to the development of new therapeutics.

The main objective of the recruited postdoc will be to decipher the mechanisms that lead some lung cancer cells to rapidly adapt and survive to targeted therapies. He/She will develop experimental approaches including cell line set, *in vivo* models including transgenic mice and Patient-Derived Xenograft (PDX) and will have access to biopsies of patients including solid and liquid biopsies (CTC, Circulating Tumor Cells). In particular he/she will address which signaling pathways and which molecular mechanisms are activated in response to therapy.

Requirements

► PhD in Cell/Molecular Biology
► A high level of motivation and interest. The candidate should be able to conduct his/her research independently, but also to tightly collaborate with a PhD student and other lab members.
► Strong background in signaling pathways involved in cancer / resistance to therapies
► Experience with in vivo / PDX models is appreciated but not mandatory.
► Competitive CV with a solid track record of publications is mandatory, international mobility will be considered a major plus.

What we offer

► 1 year renewable contract, 2200€ / month net income, from September 2019
► Incorporation in an internationally competitive Cancer Research Center, in a mixed basic and clinical research environment favored by its privileged location (Toulouse Oncopole)
► Access to one of the best animal housing facilities in Europe (CREFRE)
► An exciting and innovative research project with immediate clinical applications

How to apply

Interested applicants should send their CV (incl. the contact details of three referees) and a motivation letter to: pradines.anne@iuct-oncopole.fr and olivier.calvayrac@inserm.fr

Some publications of the team

1- Calvayrac O. et al, EMBO Mol Med, 2017
2- Guibert N. et al, Oncotarget, 2017
3- Delaunay M. et al, Eur Respir J, 2017
4- Bousquet E. et al, Oncogene, 2016
5- Guibert N. et al, J Thorac Oncol, 2016
6- Barlesi F. et al, Lancet, 2016
7- Calvayrac O. et al, Clin Cancer Res, 2014

For more information, please also visit our group webpage: https://www.crct-inserm.fr/03-g-favre/