Post-doctoral position _ Generation & *in-depth* characterization of organoid models as tools to identify the biological underpinnings of cell-death resistance in neuroblastoma.

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Keywords:
Pediatric Cancer, Organoids, Next generation sequencing, Genetic engineering

About the lab:
The establishment of cancer-derived organoids has recently begun to emerge as a prominent and promising tool to enhance our understanding of human cancers *(Broutier et al., nature protocols 2016 & Broutier et al., nature medicine 2017)*. However, such models have as yet not been developed for pediatric cancers. The research program that we develop in the C³ lab forms part of this perspective with the objective to elaborate innovative organoid models to address pediatric cancers specificities and complexity, with a special focus on the mechanisms of resistance to treatments. We are affiliated to the Cancer Research Centre of Lyon (CRCL –INSERM U1052 / CNRS 5286) and to the Centre Léon Bérard's Pediatric hospital (IHOPE). The CRCL is amongst the most prestigious cancer research center in France and the IHOPE is a major reference pediatric cancer center. Our group is therefore composed of both researchers, clinicians and pathologists.

Position Highlight:
Starting on October 2019. Available for highly motivated post-doctoral fellow interested in conducting inter-disciplinary research using *in-vitro* and *in-silico* approaches to develop innovative neuroblastoma models and use them to better understand the mechanisms of resistance to treatment in these pathologies. Successful candidates will be part of a stimulating and collaborative scientific environment with cutting-edge instrumentation and facilities.

Length/Period:
The successful applicant will initially have a 1-year contract, with the possibility of extension (+2 years).

Salary:
Salary will depend on candidate's experience.

Objectives:
The candidate should achieve the development of robust strategies & protocols to generate and characterize neuroblastoma organoid models from tumoral samples and from healthy tissues upon genetic engineering. Moreover, the candidate will use these organoid tools to address the intratumoral heterogeneity role in cell death resistance notably upon treatments. Finally, the candidate will be involved in writing reports, publications and grant applications.

Candidate profile:

- Strong academic background (evidenced by training and publications) is required, and notably an extensive experience in cancer biology, especially molecular and cellular assays, cytometry, immunohistochemistry, immunofluorescence techniques and subsequent data analysis. Moreover, the candidate should have a robust experience in primary and/or organoid culture and in genetic engineering technologies (lentivirus vectors and CRISPR/Cas9-mediated gene editing).
- The candidate should be highly self-motivated, with strong communication and interpersonal skills and the ability to work independently.
- Working experience with mice is desirable. Experienced with neuroblastoma and next generation sequencing data analysis will be considered a plus.

Elements to be provided for your application:
Interested candidates should send a single PDF file that includes a full curriculum vitae with publications, a short description of previous training & work experiences and the names, contact details and recommendation letters of 2 referees (former professor/advisor/mentor) to laura.broutier@lyon.unicancer.fr. Please indicate "**POSTDOCTORAL POSITION_C3 TEAM**" in the subject line.