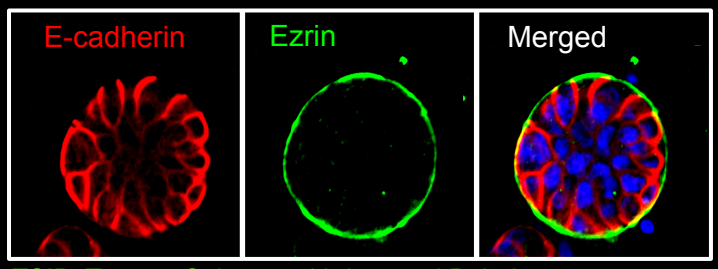
**Postdoctoral position in Collective cell migration**
**Gustave Roussy Institute - Paris / Villejuif**

**Open postdoctoral position in the Jaulin lab to study collective cell migration from patients' tumors**

https://www.gustaveroussy.fr/fr/equipe-dissemination-tumorale

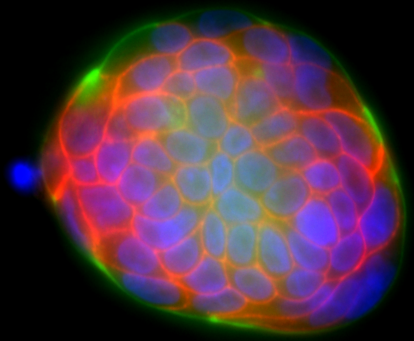



TSIP: Tumour Spheres with Inverted Polarity
Isolated form patients with colorectal carcinoma

The Gustave Roussy institute is located in the Paris area and the largest comprehensive cancer center in Europe and provides a vibrant clinical and scientific environment. Research at GR institute covers a wide range of subjects in the field of cancer biology, from fundamental mechanisms to clinical trials and favors interaction between scientists and medical doctors. The team is part of a newly created INSERM unit in cell biology dedicated to the understanding of tumour cell dynamics.

The team use cell biology approaches applied to live tumour specimens to investigate the mechanisms of colorectal carcinoma (CRC) invasion and dissemination. Two recent prospective and systematic analyses of primary samples collected from metastatic CRC patients demonstrated the large predominance of collective behaviour and the maintenance of epithelial architecture during CRC metastatic spread (*Zajac et al. Nature Cell Biology 2018, Libanje et al. EMBO Journal 2019*). This provides an alternative model to mesenchymal single cell invasion, and opens avenues of fundamental, translational and clinical research.

We have identified an undescribed mode of collective invasion. The postdoctoral research project aims at understanding the cellular, molecular and biophysical bases of this new mode of 3D migration combining cell lines, organoids and tumour explants in 3D matrix and microfluidics (as a collaboration with the Piel lab, Curie institute). The postdoctoral fellow will specifically: i) Define the mechanisms of force generation and the role of the cytoskeleton, ii) investigate the role of cell adhesion and apico-basolateral polarity and iii) address the contribution of cell cooperation and hierarchization.



The candidate must be familiar with advanced imaging technics and softwares and should have proven ability to drive its own research. Background in cell biology is requiered, knonwledge on cell migration or bio-physics is advantageous but not mandatory. The candidate should have recently obtained his/her PhD in cell biology or related fields.

The position is currently open and funded for 3 years by the National CAncer Institute (INCA / CDI-chantier).

Please send a CV and cover letter to Fanny Jaulin: fanny.jaulin@gustaveroussy.fr and Karthiga.KANAGASABAI@gustaveroussy.fr under the reference **AE-2019-08_ Post Doc U981**