

<b>Project title</b>	<b>Study crosstalk between Cancer-Associated Adipocytes and Tumor Cells in Breast Cancer in obese patients</b>
<b>Type of position</b>	Laboratory technician position (Ingénieur d'Etudes IE)
<b>Starting date</b>	March 1 <sup>st</sup> 2021
<b>Duration</b>	18 months
<b>Level</b>	minimum 3-5 years of experience
<b>Salary</b>	between 2282 and 2403 euros/month (depending of the experience level)
<b>Short description</b>	<p>The aim of the project is to decipher the role of obesity in breast cancer, specifically, the effect of adipose cells on tumor invasiveness and the molecular mechanisms responsible for this. We will analyse patient's tumor and surrounding adipose tissue. In addition, we'll perform co-culturing of breast cancer cell lines and fresh adipocytes from breast cancer patients and study how the two types of cell interact and affect each other over time and what molecular mechanisms are implicated in the cross-talk. All samples will be profiled for gene expression. In addition, lipidomics, metabolomics and biochemical studies of invasive state of breast cancer cell and differentiation states of adipocytes cell will be generated. The final goal of the project is to retrieve multi-omics signatures of adipose cell in invasive breast cancers that might serve as biomarkers of invasiveness and resistance to treatment.</p>
<b>Environment</b>	<p>The suggested position is under the interdisciplinary project LipoCanPredict, involving four partners with complementary expertise in a collaborative environment in the Centre de Recherche St. Antoine (located in the St. Antoine hospital) and in the Institut Curie. The project is equipped by of four complementary know-how of the partners: 1) biolab for the co-culture model; 2) pathology department for primary adipose tissue from patient biopsies; 3) high-end equipment for lipidomics and metabolomics; and 4) bioinformatics and biostatistical expertise for data analysis.</p> <p>The project is supported by ITMO-MIC grant.</p> <p>The successful applicant will perform the majority of work in the St. Antoine hospital and partially in the Institut Curie, depending on the nature of the experiment and essential equipment and instruments.</p>
<b>Requirements</b>	<p>Expertise in cell biology and molecular biology, preferably in the domain of cancer. Hand-on experience with patient samples, primary culture, co-culture handling; current techniques as Western blot, PCR, immuno-cyto/histochemistry, imaging techniques, invasion assays, etc.</p>

<b>Objective</b>	The goal of the applicant is to perform tumor cell and cancer-associated adipocytes co-culture experiments and study mutual influence between these two cell types using typical biochemical and cell biology techniques.
<b>Host Institutes</b>	Centre de Recherche St. Antoine, St. Antoine Hospital TGF $\beta$ signaling in cellular plasticity and cancer team 34 rue Crozatier, Bâtiment Kourilsky, 75012, Paris, FR  In collaboration with Institut Curie UNIT 900 INSERM - Mines ParisTech - PSL Bioinformatics and Computational Systems Biology of Cancer team 26 rue d'Ulm 75248 Paris CEDEX 05 FR
<b>Supervisors</b>	Mathieu Boissan (mathieu.boissan@inserm.fr, +33(0)149284632, <a href="https://www.crsa.fr/boissan-mathieu.html">https://www.crsa.fr/boissan-mathieu.html</a> )  Inna Kuperstein (inna.kuperstein@curie.fr, +33(0)156246987, <a href="http://sysbio.curie.fr">http://sysbio.curie.fr</a> , <a href="https://www.linkedin.com/in/inna-kuperstein-62265078">https://www.linkedin.com/in/inna-kuperstein-62265078</a> )
<b>How to apply</b>	Send the following documents via e-mail to Drs. Boissan and Kuperstein ( <a href="mailto:mathieu.boissan@inserm.fr">mathieu.boissan@inserm.fr</a> , <a href="mailto:inna.kuperstein@curie.fr">inna.kuperstein@curie.fr</a> )  CV, letter of motivation , two letters of recommendation, or complete contact information for 2 references
<b>Deadline for application</b>	Applications can be submitted at any time until February 15 <sup>th</sup> 2021
<b>For further information</b>	Please contact the supervisors of this project

## References

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