Position in Cell Biology

sbcf
Society for Biology of the Cell - France
www.sbcf.fr

Open position: 3 years Post Doc

Project title: Modulating gene expression by nucleus positioning in mouse oocytes

We are seeking for a motivated scientist to work on the role of the cytoskeleton in modulation of gene expression in mouse oocytes. In Mammals, the nucleus is centrally located in oocytes and does not predefine future embryo axes, unlike in most model systems. Yet, nucleus centring correlates with the success of meiotic divisions in mouse and human oocytes. Meiotic divisions and the first steps of embryonic development take place in the absence of transcription and rely entirely on maternal transcripts accumulated in the oocyte during its growth. In this context, post-transcriptional regulation through mRNA translation or degradation is essential. Recently, we identified the mechanism of actin-based nucleus centring in mouse oocytes: the nucleus is positioned thanks to a Formin 2-nucleated actin cytoplasmic mesh. Interestingly, we also discovered the involvement of nucleus centring in the control of transcriptome composition (Almonacid, *submitted*). In this project, using cell biology coupled to computational biology, bio-informatics and bio-physics, we want to understand the impact of nucleus centring in modulation of gene expression.

Key words: Actin-Nucleus-Mechanotransduction

Profile and skills of the candidate:

Cell and Developmental Biologist

Lab: Oocyte Mechanics and Morphogenesis, CIRB, Collège de France (https://www.college-de-france.fr/site/en-cirb/Terret-Verlhac.htm)

Location: Paris, France

Contact: Marie-Hélène Verlhac (marie-helene.verlhac@college-de-france.fr)

Dead line / Starting dates: January 2019/March 2019

Publications:

- Manil-Ségalen M et al. 2018. *J Cell Biol* 217: 3416-3430

- Chaigne A et al. 2016. *Nat Commun* 7:10253-10267

- Almonacid M et al. 2015. *Nat Cell Biol* 17: 470-479

Position in Cell Biology

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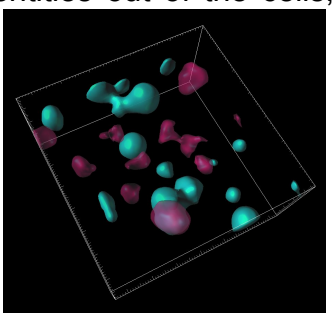
Post-doc position in EV biology

Study of the secretion of a novel subpopulation of extracellular vesicles

We are looking for a motivated post-doctoral scientist to join the research team "Membrane dynamics & viruses" (MDV) headed by Raphael Gaudin, part of the IRIM UMR9004 - CNRS research institute, Montpellier, France. Our lab is interested in various aspects of intracellular trafficking pathways in health and disease. In particular, we are currently studying secretion of biological entities out of the cells, including extracellular vesicles and viruses. We recently discovered a novel extracellular vesicle subtype containing Sonic Hedgehog (Shh) we called ART-EVs (Coulter, Dorobantu *et al. Cell Rep*, 2018) and we aim to better characterize these vesicles and their secretory route. The proposed project will take advantage of state-of-the-art imaging techniques, Crispr-Cas9 strategies and other innovative approaches mastered in the lab.



Key words: Exosomes; Extracellular vesicles; Intracellular trafficking; Membrane dynamics; Secretion

Profile and skills of the candidate: You are going to defend or already hold a PhD in Cell biology with experience in membrane trafficking. Previous experience with exosomes or extracellular vesicles is a plus. You are curious, motivated and have a problem-solving mindset. The successful candidate is expected to perform bench work and communicate his/her results through internal and external seminars. The project will be conducted in collaboration with two other labs with *in vivo* and proteomics expertise. The applicant is expected to speak English, while French is not a prerequisite.

Lab: The institute is located on the CNRS campus of Montpellier in the sunny south of France. We offer an internationally renowned research environment with direct access to modern infrastructures and advanced facilities for imaging and flow cytometry. More information is available at:

http://www.irim.cnrs.fr/index.php/en/researchh/teams/membrane-dynamics-viruses

Location: Montpellier, France

Contact: Raphael Gaudin (raphael.gaudin@irim.cnrs.fr)

Dead line / Starting dates: Mid 2019

Position in Cell Biology

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Society for Biology of the Cell - France
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Open position: **Post-Doc Position**

Project title: Deciphering Extracellular Vesicle Biogenesis in Cancer Cells

Extracellular Vesicles have aroused growing interest in cancer research and could represent attractive new targets for anti-tumour therapies and non-invasive diagnosis biomarkers. Although some specific cytokines are known to be enriched and be transported in EVs, the specific cargo and the impact of disease progression and therapy insults remain underestimated. In addition, the mechanisms involved in constitutive release of EVs from cancer cells are still unclear. We aim now at pursuing in-depth exploration of EV biogenesis and cancer cells and how they adapt to the tumor microenvironment.
Please visit us: http://nbidere.wixsite.com/soap @LabSoap

Key words: exosome, cancer, cell biology

Profile and skills of the candidate:

2 years post-PhD experience candidates with significant experience in the EV field and/or in mouse models. Selected candidates will apply for (inter)national funding. Candidates should have at least one first author paper in a peer-reviewed journal.

Lab: Signaling in Oncogenesis, Angiogenesis, and Permeability, CRCINA.org

Location: Nantes, France

Contact: Julie Gavard, Julie.gavard@inserm.fr

Dead line / Starting dates: June 2019 / Oct 2019

Publications:

- Andre-Gregoire et al, Biochimie 2018
- Harford-Wright et al, Brain 2017
- Treps et al, J Extracell Ves 2017
- Treps et al, Oncogene 2016
- Dubois et al, Blood 2014

Position in Cell Biology

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Society for Biology of the Cell - France
www.sbcf.fr

Open position: **Postdoc**

Project title: Mechanics of human preimplantation embryo

Jean-Léon Maître, head of the "**Mechanics of mammalian development**" team (science.institut-curie.org/team-maitre/), is seeking a postdoc with a strong interest in **interdisciplinary research** to carry out a project on **human preimplantation development**.

The candidate will study the morphogenetic events shaping the human embryo before its implantation. This requires an approach at **the interface between physics, biology and medicine**. The candidate's work will include developmental **biology techniques** with culture and manipulation of human and mouse embryos; biophysical techniques, such as micropipette aspiration; **data and image analysis**.

Key words: human embryo, cell and tissue mechanics

Profile and skills of the candidate:

Prior experience with **mammalian embryos, molecular biology, bioinformatics analysis, biophysics and/or image analysis** will be extremely valuable. Otherwise, on-the-job training will be provided. The ideal candidate should feel comfortable working in an **interdisciplinary and international environment**.

Lab: Institut Curie, Genetics and developmental biology unit

Location: Paris, France

Contact: Jean-Léon Maître, jean-leon.maitre@curie.fr

Dead line / Starting dates: 21/12/18, early 2019

Publications:

Maître, J.-L., Turlier, H., Illukkumbura, R., Eismann, B., Niwayama, R., Nédélec, F., and Hiiragi, T. (2016) Asymmetric division of contractile domains couples cell positioning and fate specification. Nature. 536, 344–348

Maître, J.-L., Niwayama, R., Turlier, H., Nédélec, F., and Hiiragi, T. (2015) Pulsatile cell-autonomous contractility drives compaction in the mouse embryo. Nat Cell Biol. 17, 849–855

Maître, J.-L. (2017) Mechanics of blastocyst morphogenesis. Biol Cell. 107, 1369

Position in Cell Biology

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Society for Biology of the Cell - France
www.sbcf.fr

Open position: POSTDOC (2 years)

Project title: Synthetic lethal partners to alleviate resistance to integrin inhibitors in glioblastoma.

The project focuses on synthetic lethal partners able to alleviate resistance to integrin inhibitors in glioblastoma. In this project, we use genome-scale loss-of-function screens based on pooled CRISPR-Cas9 and RNA interference technologies together with large-scale coregulatory network reconstruction and strong preclinical validation protocols to determine the basis of tumor resistance to anti-integrin drugs. The postdoctorant will be particularly in charge to evaluate the hits obtained after whole genome screenings in pertinent glioma models. The project offers a variety of complementary approaches with the opportunity of initiating longer-term projects.

Key words: glioblastoma, integrin, apoptosis, signaling networks, whole genome screening, innovative therapies, targeted therapy resistance

Profile and skills of the candidate:

We are looking for a highly motivated and autonomous post-doctoral fellow with a good track record and a strong background in cell biology, molecular biology, tumoral signaling and preclinical *in vitro* and *in vivo* assays. She/he should have good communication skills and appreciate multi-team work.

Lab: Laboratory of Bioimaging and Pathologies, UMR7021 CNRS, University of Strasbourg

Location: ILLKIRCH, France

Contact: Monique Dontenwill, **m**onique.dontenwill@unistra.fr

Dead line / Starting dates: 28th february/ september 2019

Publications:

- RENNER G et al., **2015**. Cell Death and Differentiation, 23: 640-653.

- JANOUSKOVA H et al, **2012,** Cancer Research, 72: 3463-3470.

Do not exceed one page

PhD position

3D genome organization during neuronal differentiaton - https://www.chromdesign.eu/call-for-applicants/

The European Innovation Training Network "**ChromDesign**– Chromatin structure and Design" aims to identify novel features in the three-dimensional structure of genes, the so-called chromatin, which are responsible for the development of cells in health and disease. The Project is funded by the European Commission under the MSCA-H2020 Program and brings together researchers in Spain, Denmark, Switzerland, Germany, France, Italy, Belgium and United Kingdom, in the academic and private sector. In the Cavalli lab, we study genome architecture, proteins associated with genome architecture and its relationship with transcription. Specifically, this project is going to focus on gene silencing components of the Polycomb group proteins (PcG) associated with extremely long-range interactions (ELRI) using in-vitro neuronal differentiation as a model system. In mouse embryonic stem cells (mESC), PcG proteins and H3K27me3 repressive mark often characterize prominent ELRIs, however, upon differentiation into neuronal cells, ELRIs largely dissociate. So far, it is unclear whether ELRI dissociation is necessary for cell differentiation or if ELRIs dissolve as a result of changing cell identity. Here, we propose a targeted manipulation of PcG proteins in order to understand their role in differentiation in healthy cells and in diseases in which nuclear architecture is often perturbed but its role in gene expression is unknown.

Key words: 3D Genome, epigenetics, chromatin, B-to plasma cell differentiation

Profile and skills of the candidate:

We are looking for outstanding, highly motivated, dedicated and rigourous candidates with a team spirit and good expertise in stem cell culture, molecular and cell biology, genomics and epigenomics and high-end microscopy.

Eligibility criteria:

Applicants may be a national of a Member State, of an Associated Country or of any other third country. By the time of start of the PhD, the candidate should hold an academic degree that enables her/him to undertake doctoral studies. Preference is given to applicants with MSc or equivalent degree. At the time of recruitment by the host organisation, candidates must be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. At the time of recruitment by the host organisation, candidates must not have resided or carried out their main activity (work, studies, etc.) in the country of their host organisation for more than 12 months in the 3 years immediately prior to the reference date.

Cavalli lab. IGH It is mandatory to apply via the website: https://www.chromdesign.eu/call-for-applicants/

Location: Montpellier, France

Contacts: Giacomo Cavalli (giacomo.cavalli@igh.cnrs.fr)

Dead line: Jan 7, 2019 / Starting date is flexible but no later than September 1st, 2019.

Publications:

- Bonev, B., Mendelson Cohen, N., Szabo, Q., Fritsch, L., Papadopoulos, G., Lubling, Y., Xu, X., Lv, X., Hugnot, J.-P., Tanay, A., and Cavalli, G. (2017). Multi-scale 3D genome rewiring during mouse neural development. Cell 171, 557-572.e24
- Schuettengruber, B., Bourbon, H., Di Croce, L., and Cavalli, G. (2017). Genome Regulation by Polycomb and Trithorax: 70 years and counting. Cell 171, 34-57
- Ciabrelli, F., Comoglio, F. Fellous, S., Bonev, B., Ninova, M., Szabo, Q., Xuéreb, A., Klopp, C., Aravin, A. Paro, R., Bantignies, F., and Cavalli, G. Stable Polycomb-dependent transgenerational inheritance of chromatin states in Drosophila (2017). Nature Genet, 49, 876-886, doi:10.1038/ng.3848

Position in Cell Biology

sbcf
Society for Biology of the Cell - France
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Open position: Post-doc

Project title: Investigating the role of myosin in situ by chemical engineering approaches based on structural insights

2 years-FUNDED POSTDOC POSITION:

The *Structural Motility* lab directed by Dr. Anne Houdusse, located in the cell biology department at the Institut Curie, center of Paris, France, has gathered important structural insights on how force generated by molecular motors can power cellular processes in human health and disease. With recent developments in optogenetic tools and specific drug force generation modulators, we will investigate the mechanistic role of non conventional myosins in situ and how partners can define and control the recruitment in space and time. Applicants should have a strong interest in the fundamental mechanisms of mechano-transduction and cellular traffic and the desire to do multidisciplinary research. Candidates with expertise in microscopy, cell biology or biophysical approaches would be advantaged. Fluency in English (written and oral) is required. Applicants should send their CV along with a cover letter and contact details of three references to anne.houdusse@curie.fr

Key words: Molecular motors - Cancer

Profile and skills of the candidate:

Cell biology – Biochemistry or Structural biology with interest in in situ experiments

Lab: Structural Motility, UMR144, Institut Curie

Location: Paris, France

Contact: Anne Houdusse, anne.houdusse@curie.fr

Dead line / Starting dates: Mar-sep 2019

Publications:

Planelles-Herrero VJ, et al, ***Nat. Commun***. 8, 190, **2017**.
Yu I-M et al, ***Nat Commun***. 8, 15864, **2017**.
Robert-Paganin et al, ***Nat Commun***. 9, 4019, **2018**.

Position in Cell Biology

sbcf
Society for Biology of the Cell - France
www.sbcf.fr

Open position: Researcher/Post Doc

Project : Targeting vulnerabilities in B-cell tumors

Our project aims at identifying tumor-specific molecular vulnerabilities related to genomic abnormalities (CNV, mutation) and microenvironment deregulation, with a special targeting of Bcl2 network and p53 pathway that are responsible for resistance. We offer characterized cohorts of myeloma and lymphoma cell lines (GEP, ExonSeq, RNASeq, functional responses) as well as 2 cohorts of patients in collaboration with the Hematology department. Our team is labeled by Inserm and CNRS, is founder of the Nantes University cluster L'Héma-Next (www.lhema.fr), of the Nantes-Angers SIRIC (Comprehensive Cancer Research) ILIAD (INCA, Institut-national-du-cancer) and belongs to 2 national networks, Carnot Institute Calym (www.calym.org), and CNRS GDR3697 (www.micronit.fr).

The candidate will study interactions between Bcl2 and p53 networks in myeloma and lymphoma. Personal and research funds are available

Key words: Bcl2 & p53 networks

Profile and skills of the candidate:

Cellular/molecular biologist with skills in cell death and transduction pathways, and some knowledge in hematology and bio-informatics.

Lab: Team 10, CRCINA, www.crcina.org

Location: Nantes, France

Contact: C Pellat catherine.pellat-deceunynck@univ-nantes.fr

Starting dates: 2019/2020

Publications:

- Chiron D, …, Le Gouill S, Amiot M, Pellat-Deceunynck C. Rational targeted therapies to overcome microenvironment-dependent expansion of mantle cell lymphoma. Blood. 2016; 128:2808-2818
- Gomez-Bougie P, …, Moreau P, Pellat-Deceunynck C, Amiot M. BH3-mimetic toolkit guides the respective use of BCL2 and MCL1 BH3-mimetics in myeloma treatment. Blood. 2018 Oct 11
- Lok A, …, Amiot M, Pellat-Deceunynck C. p53 regulates CD46 expression and Measles virus infection in myeloma cells. Blood Advances. 2018, In press

Two post-doctoral positions

Three-dimensional chromatin organization in B to plasma cell differentiation

Antibody-secreting plasma cells are critical effector cells and long-lived sentinels for immune memory. Therefore, B cell maturation is tightly regulated to ensure efficient immune response without autoimmunity or immune deficiency. On the transcriptional level, the differentiation of B cells into plasma cells (PCD) is associated with substantial and coordinated changes in the gene expression profile, which fall into two main categories: the loss of B cell-associated transcripts and the acquisition of plasma cell gene expression program. Although the role of the complex network of transcription factors involved in PCD has been investigated, little is known about the role of chromosome architecture regulation in PCD.

Key words: 3D Genome, epigenetics, chromatin, B-to plasma cell differentiation

Profile and skills of the candidates:

Candidates must hold a high-quality Ph.D. or M.D., and be highly motivated and hardworking, with experience in molecular, cell biology and bioinformatics related to analysis of epigenetic modifications. The CV should include evidence of previous research accomplishments. Our laboratories offer the opportunity to conduct top-level research in a supportive environment. The research will be conducted at IGH, a flagship French life science Institute that carries out cutting-edge research in an exciting and friendly scientific atmosphere and is located in Montpellier, a vibrant city in the wonderful southern French riviera

Lab: Cavalli and Moreaux labs. IGH https://www.igh.cnrs.fr/en/research/departments/genome-dynamics/21-chromatin-and-cell-biology and https://www.igh.cnrs.fr/en/research/departments/molecular-bases-of-human-diseases/8-maintenance-of-genome-integrity-during-dna-replication

Location: Montpellier, France

Contacts: Giacomo Cavalli (giacomo.cavalli@igh.cnrs.fr) and Jérome Moreaux (Jerome.moreaux@igh.cnrs.fr)

Dead line: Jan 7, 2019 / Starting dates: April, 2019, each position is for 30 months.

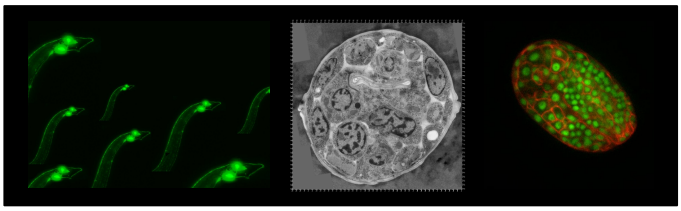
Publications:

Cavalli

- Bonev, B., Mendelson Cohen, N., Szabo, Q., Fritsch, L., Papadopoulos, G., Lubling, Y., Xu, X., Lv, X., Hugnot, J.-P., Tanay, A., and Cavalli, G. (2017). Multi-scale 3D genome rewiring during mouse neural development. Cell 171, 557-572.e24
- Schuettengruber, B., Bourbon, H., Di Croce, L., and Cavalli, G. (2017). Genome Regulation by Polycomb and Trithorax: 70 years and counting. Cell 171, 34-57
- Ciabrelli, F., Comoglio, F. Fellous, S., Bonev, B., Ninova, M., Szabo, Q., Xuéreb, A., Klopp, C., Aravin, A. Paro, R., Bantignies, F., and Cavalli, G. Stable Polycomb-dependent transgenerational inheritance of chromatin states in Drosophila (2017). Nature Genet, 49, 876-886, doi:10.1038/ng.3848

Moreaux

- DNMTi/HDACi combined epigenetic targeted treatment induces reprogramming of myeloma cells in the direction of normal plasma cells. Bruyer A, Maes K, Herviou L, Kassambara A, Seckinger A, Cartron G, Rème T, Robert N, Requirand G, Boireau S, Müller-Tidow C, Veyrune JL, Vincent L, Bouhyan S, Goldschmidt H, Vanderkerken K, Hose D, Klein B, De Bruyne E, Moreaux J. Br J Cancer. 2018. Mar 2
- Global miRNA expression analysis identifies novel key regulators of plasma cell differentiation and malignant plasma cell. Kassambara A, Jourdan M, Bruyer A, Robert N, Pantesco V, Elemento O, Klein B, Moreaux J. Nucleic Acids Res. 2017. Jun 2;45(10):5639-5652.
- RECQ1 helicase is involved in replication stress survival and drug resistance in multiple myeloma. Viziteu E, Klein B, Basbous J, Lin YL, Hirtz C, Gourzones C, Tiers L, Bruyer A, Vincent L, Gandmougin C, Seckinger A, Goldschmidt H, Constantinou A, Pasero P, Hose D, Moreaux J. Leukemia. 2017. Oct;31(10):2104-2113



The Jarriault Lab is looking for a postdoc!

We are looking for an outstanding scientist to help us solve open questions in the cellular reprogramming field. We have pioneered the study of natural instances of cellular reprogramming establishing the worm as a unique model (see for ex. Jarriault, PNAS 2008; Richard, Dev. 2011; Kagias, PNAS 2012; Hadjuskova Genesis 2012; Zuryn Science 2014), while fostering a creative and enthousiastic working atmosphere in the lab. The project will aim at deciphering the Gene Regulatory Network that leads to the initiation of reprogramming and how its structure impacts on its timing. *C. elegans* has proved a powerful model to unravel conserved principles underlying how a cell can naturally change its identity.
For more information about the group, please visit: http://igbmc.fr/jarriault

Our team, supported by an ERC grant, is part of the Cell and Developmental Department, at the IGBMC, in Strasbourg, France. This Research Institute (http://www.igbmc.fr) provides access to state-of-the-art facilities and a vibrant international research environment.

The successful candidate should have a PhD (or be in the final stages of completion) and be highly motivated with a strong interest in Developmental and Stem Cells Biology. The ability to work both independently and as a team member and experience in the use of molecular biology and genetic techniques are essential. Experience in working with *C. elegans* is a plus, but is not required.
Note that a very good track record and at least one publication as a first author is required.

Applicants should email a cover letter, a CV, a description of research experience as well as the contact info for 2-3 references to:

Sophie JARRIAULT - e-mail : sophie@igbmc.fr

EPIGENETICS
CHRONIC DISEASES
CANCER

Institute for Advanced Biosciences

CENTRE DE RECHERCHE UGA - INSERM U 1209 - CNRS UMR 5309

2-year POST-DOC POSITION
IN DYNAMICS OF CELLULAR ADHESIVE STRUCTURES
funded by French Agency for Research (ANR)

Regenerative medicine is predicated on understanding the molecular basis of tissue-specific differentiation and then applying the appropriate soluble and physical cues to drive stem cell fate. Integrins are adhesive receptors which are key players in the sensing of chemical, physical and mechanical cues of the microenvironment. The differentiation of cells, leading to cell identity and tissue formation, is controlled both by growth factor receptors and by the adhesive receptors integrins. Our previous studies (Fourel et al, J Cell Biol 2016) have reported synergistic effects between the BMP receptors and integrin receptors to couple cell migration and cell differentiation. To understand how integrin and BMP receptors work together to orchestrate cell identity and tissue specificity, we need to decipher their organization, their interactions at the molecular scale and their spatio-temporal coordination.

Our team has set up innovative molecular tools to control at high spatio-temporal resolution various aspects of adhesive receptors. We will benefit from the IAB imaging platform to unravel the interplay between receptors at the molecular scale by adapting super-resolution microscopy. The dynamic of adhesion sites on cell differentiation will be investigated by integrating biomaterial development, transcriptomic and proteomic profiling. This work will be performed in collaboration with the group of Catherine Picart (Grenoble) and Benoit Ladoux (Paris).

Your background: We are looking for a highly motivated, talented and self-driven candidate with a good knowledge of cellular signaling and mechanobiology. The candidate should have a background in cell biology and/or in biophysics with excellent practice of optical microscopies.

The project will be conducted in a stimulating, highly interdisciplinary and international environment at the Institute for Advanced Biosciences, Grenoble, France. Grenoble is a fun and sporty city known for its high quality of life.

Please send CV and the names of 2 references (with email address and phone numbers) to:
Corinne.albiges-rizo@univ-grenoble-alpes.fr
Review of applications will start immediately and continue until the position is filled.

Site Santé
Allée des Alpes
38700 La Tronche

Tél. : 33 (0)4 76 54 94 49
Fax : 33 (0)4 76 54 94 54
iab.univ-grenoble-alpes.fr