EPIGENETICS
CHRONIC DISEASES
CANCER

Institute for Advanced Biosciences

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

POST DOCTORAL POSITION OFFER

Post-doctoral position

Cellular mechanism and tumor heterogeneity.
Key words: peritoneal carcinogenesis, cell-cell interaction, cell-extracellular matrix interactions, mechanotransduction, epigenetics, cell signaling

Profile

Candidates must be highly motivated and have a PhD in biological science. Strong knowledge of molecular and cellular biology with hands-on experience, is required.
Prior experience in cell signaling, cell culture.
Practical expertise will be gained as part of the research activities.

Ability to work independently within different teams environment, computer literacy and good communication skills are required. French speaking is NOT a requirement.

Workplace

Institute for Advanced Biosciences (IAB)
Site santé – Allée des Alpes
38700 La Tronche / France
Contact: + 33 4 76 54 94 63

About IAB

With 17 teams, the Institute for Advanced Biosciences (IAB, formerly Institut Albert Bonniot Institute) is an internationally renowned institute in fundamental and translational biomedical research, recognized for its high-level publications (more than 1,000 over the last 5 years) and its impact on the development of start-ups in the field of biotechnology. The scientific strategy is based on three topics: Epigenetics, Chronic Diseases and Cancer. The scope of action of the IAB covers a range of scientific expertise from the biological continuum of molecules to populations. More information: iab.univ-grenoble-alpes.fr

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

About Pitcher program

PITCHER is a network of 10 teams based on data and specimen collection by RENAPE and BIG-RENAPE, two national clinical networks on peritoneal carcinomatosis. Matched specimens of primary tumors, PC lesions and peritoneal fluids will be collected in the same patients. Epigenetic landscapes will be analyzed by a bioinformatics pipeline combining exome sequencing, transcriptome and methylome to identify "epigenetic hotspots", and their variations across lesions will be evaluated. Organoid cultures and animal models will be derived from multicellular structures in peritoneal fluids. Our goal is to determine whether mechanical plasticity is an acquired, environment-determined characteristic of cancer cells, or whether it already pre-exists in cancer cells. The strategy will be to investigate how the mechanical environment directs cell fate and phenotypic reprogramming through interactions at membrane, cytoskeleton and nuclear level. These experimental data will be integrated with those of the "omics" analyses. This study will provide insights on possible targets for therapeutic interventions aimed at preventing the spread of cancer cells.

Expected results

PITCHER is the first project systematically addressing the interplay between epigenetic deregulation and phenotypic heterogeneity in sub-clones of the same tumor. The molecular, physiological and clinical data will be used for identifying predictive markers and potentially actionable targets for controlling the spread of PC. The theoretical insights will be of relevance for metastasis-related ITH in general.
PITCHER a program Plan cancer 2014 - 2019 Tumor heterogeneity and ecosystem program

Inquiries

Please contact Corinne ALBIGES-RIZO, Microenvironment, Cell plasticity and Signaling department head (corinne.albiges-rizo@univ-grenoble-alpes.fr) and to Saadi KHOCHBIN Signaling through Chromatin department head (saadi.khochbin@univ-grenoble-alpes.fr).

Application

Please send your application including a statement of past and future research interests describing research experience and expertise, a complete curriculum vitae, date of availability, and at least two contacts for references (including phone number and email) to amelie.fauconnet@univ-grenoble-alpes.fr) before 15. June 2017.

PITCHER, a program