



Institute of Biosciences and Biotechnology Grenoble (BIG)

Laboratory: Biology of Cancer and Infection - INSERM U1036

Postdoctoral position on vascular remodeling and BMPs

A postdoctoral position is available for 2 years to study vascular remodeling in the context of BMP signaling in the lab of Sabine Bailly (Grenoble, France)

BMPs are a large family of growth factors that play key roles in many processes from embryonic development to vascular diseases. Our lab has uncovered the role of BMP9 and BMP10 in vascular remodeling via its receptor ALK1, which is mutated in two rare vascular diseases (hereditary hemorrhagic telangiectasia (HHT) and pulmonary arterial hypertension (PAH)). The postdoc project is supported by the ANR grant B9inPAH and aims to better characterize the role of BMP9 and BMP10 in vascular remodeling using mouse and rat models. This work will be performed in collaboration with the group of Christophe Guignabert (INSERM U 999) in Paris.

Candidates must be highly motivated and experienced. Candidates who wish to apply to ATIP/AVENIR, ERC Young Researchers or INSERM/CNRS permanent positions are welcome. Experience in rodent phenotyping, *in vitro* and *in vivo* vascular models, and cellular signaling are needed; super resolution microscopy techniques or omics will be a plus. BIG is an institute for life science research and is located in a beautiful region in the French Alps. It offers state of the art equipment and facilities. Inserm and the University of Grenoble-Alpes are consistently ranked among the leading European research organisations.

- Please email your CV, a statement of research interests, and 1 or 2 reference letters to the address:
sabine.bailly@cea.fr
- For more information, see website:
<http://big.cea.fr/drf/big/BCI/BAL>

Selected papers from the lab:

Goumans MJ, Zwijsen A, Ten Dijke P, Bailly S: Bone Morphogenetic Proteins in Vascular Homeostasis and Disease. **Cold Spring Harbor perspectives in biology**, 2018, 10 :2

Levet S, Ouarne M, Ciais D, Coutton C, Subileau M, Mallet C, Ricard N, Bidart M, Debillon T, Faravelli F, Rooryck C, Feige JJ, Tillet E, Bailly S: BMP9 and BMP10 are necessary for proper closure of the ductus arteriosus. **PNAS** 2015, 112:E3207-15.

Levet S, Ciais D, Merdzhanova G, Mallet C, Zimmers TA, Lee SJ, Navarro FP, Texier I, Feige JJ, Bailly S, Vittet D: Bone morphogenetic protein 9 (BMP9) controls lymphatic vessel maturation and valve formation. **Blood** 2013, 122:598-607.

Ricard N, Ciais D, Levet S, Subileau M, Mallet C, Zimmers TA, Lee SJ, Bidart M, Feige JJ, Bailly S: BMP9 and BMP10 are critical for postnatal retinal vascular remodeling. **Blood** 2012, 119:6162-71.

David L, Mallet C, Mazerbourg S, Feige JJ, Bailly S: Identification of BMP9 and BMP10 as functional activators of the orphan activin receptor-like kinase 1 (ALK1) in endothelial cells. **Blood** 2007, 109:1953-61.