

Postdoctoral position in Cell and Developmental Biology

Institute of Biology Valrose (iBV), Nice, France

Position available (starting oct./dec. 2015.) in Pascal Théron laboratory to functionally characterize Hedgehog secretion and spreading in *Drosophila*.

Hedgehog proteins are key signaling mediators that govern a wide range of processes during embryonic development and adult tissue homeostasis from *Drosophila* to human. Hedgehogs are the only metazoan proteins known to possess a covalently-linked cholesterol moiety. Our laboratory is interested in how Hedgehog proteins traffic in the producing tissue (for more information see Ayers et al., *Dev Cell.*, 2010. and D'Angelo et al., *Dev Cell.*, 2015.) and exert their function in the receiving tissue (Ranieri et al, *Nat Commun.*, 2014.).

We showed recently that the Endosomal Sorting Complex Required for Transport (ESCRT) promotes Hedgehog proteins loading on exo-vesicles to exert their effect at long distances (Matusek et al., *Nature*, 2015). The postdoctoral project aims to gain further insight into the trafficking, vesicular secretion and the extracellular spread of Hedgehog proteins through tissues using cell biology and genetic technics. Moreover, *in vivo* imaging and single molecule tracking (in collaboration with computational science lab) will be developed to investigate the dynamics of Hedgehog release and spreading.

Selected references

Ayers et al., *Dev. Cell* 2010 vol18, 605–620

Briscoe and Théron, *Nat Rev Mol Cell Biol.* 2013, Vol. 14(7), 416-29

Matusek et al., *Nature* 2014 Dec 4;516(7529), 99-103

D'Angelo et al., *Dev. Cell* 2015 Feb. 9 ; 32, 290-303

Location

The group is located at the Valrose Campus in the heart of Nice and is part of the iBV, an international research center that brings together high-profile teams with complementary areas of expertise and access to state of the art facilities including imaging/microscopy and cytometry platforms, L2 and L3 laboratories, and histology and biochemistry facilities.

For more information, visit <http://ibv.unice.fr>

Qualification and experience


Interested candidates should have strong knowledge of, and experience in fly genetics, cell biology and optic microscopy (confocal/spinning disc).

The position is funded for 2-3 years in duration. Candidates must have a Ph.D. degree, and can be nationals of any country.

Applications

Candidates should send a Curriculum Vitae and a list of three referees to:

Dr. Pascal Théron, iBV, Parc Valrose, Université Nice Sophia Antipolis, 06108 Nice Cedex 2, France

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