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Structure and Membrane Compartments Team

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Keywords: Organelle, Membrane Remodelling, Myosin, Skin Pigmentation, Intracellular Trafficking, Imaging



1.5 years-FUNDED POSTDOC POSITION:

Investigating how the partners of Myosin VI contribute to its cellular functions

The group of Dr. Cédric Delevoye within the team headed by Dr. Graça Raposo is located at the Institut Curie, center of Paris, France. We are studying the cellular and molecular mechanisms that control human skin pigmentation in health and disease. We focus on the trafficking events leading to the biogenesis, maturation and homeostasis of the pigment granule of epidermal melanocytes, called the melanosome.

Within the ANR MyoActions, we propose a multi-scale analysis (from structure to chemistry and cell biology) to provide insights into how molecular motors, associated partners and the forces they produce can remodel membrane of organelles. Our work integrates cell biology, biochemistry and advanced cellular imaging (EM, CLEM) to define the generation of transport intermediates required for pigmentation.

Applicants should have a strong interest in the mechanisms of intracellular trafficking and wish to work in a multidisciplinary environment. We are seeking for a creative and self-motivated Post doctoral fellow with research experience in the field of Cell Biology. Expertise in microscopy and/ or genome editing will be a plus. English (written/oral) is required. Applicants should send their CV along with a cover letter and contact details of three references to cedric.delevoye@curie.fr (deadline end of 2017).

Key publications:

1. Patwardhan A, et al. Routing of the RAB6 secretory pathway towards the lysosome related organelle of melanocytes. (2017). *Nat Commun.* 8:15835.
2. Dennis MK, Delevoye C et al. BLOC-1 and BLOC-3 regulate VAMP7 cycling to and from melanosomes via distinct tubular transport carriers. (2016). *The Journal of Cell Biology.* 214(3):293.
3. Delevoye C, et al. BLOC-1 Brings Together the Actin and Microtubule Cytoskeletons to Generate Recycling Endosomes. (2016). *Curr Biol.* 26(1):1.
4. Delevoye C, et al. Recycling endosome tubule morphogenesis from sorting endosomes requires the kinesin motor KIF13A. (2014). *Cell Rep.* 6(3):445.
5. Loubery S, Delevoye C et al. Myosin VI regulates actin dynamics and melanosome biogenesis. (2012). *Traffic.* 13(5):665.

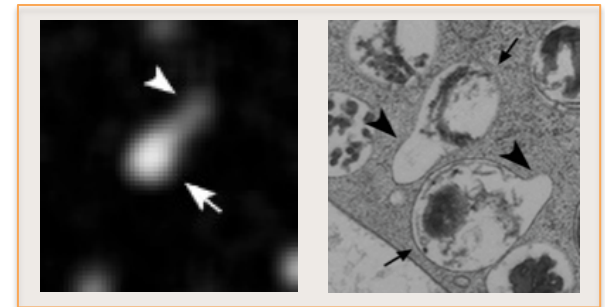


Figure 1. Membrane remodeling events at melanosomes by live cell imaging (left) and electron microscopy (right).

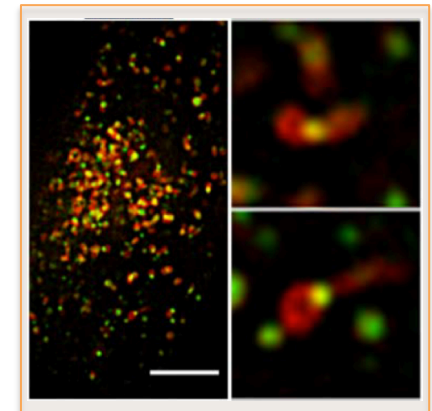


Figure 2. Myosin VI (green) localization at discrete melanosomal (red) subdomains during tubule formation.

