Funded PhD on Cell Migration

In the team of **Alexis Gautreau (Ecole Polytechnique/CNRS, Palaiseau)**
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Funded for 3 years
Supervision by Anna Polesskaya (CNRS Staff Researcher)
and Alexis Gautreau (CNRS Research Director)
Tight collaboration with the group of Gregory Giannone (University of Bordeaux)

Main Goal

Cell migration is powered at the leading edge by branched actin generated by the WAVE and Arp2/3 complexes. Recent biochemical analyses have revealed a diverse arrays of related complexes, whose role in cell migration is not yet fully deciphered. Recent proteomics screens have revealed novel partners of both types of complexes that appear to play a role in the persistence of cell migration. The PhD student will generate knock-out and knock-in cell lines to analyze in detail phenotypes associated with gene inactivation and dynamics of the encoded proteins. Protein behavior will be analyzed at the nanoscale in collaboration with Giannone's group.

Technologies

Generation of knock-out and knock-in cell lines by CRISPR-Cas9
Videomicroscopy & super-resolution microscopy
Quantitative analyses of cell behavior and protein dynamics

References

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