Post-doctoral position Cytoskeleton and condensate biology

The Martin lab has an open postdoctoral position in cell biology, at the intersection of cytoskeleton and biomolecular condensate research.



The process of biomolecular condensation, or liquid-liquid phase separation, governs the organization of many proteins in a variety of cellular functions. While condensate biophysical properties have been studied in vitro, understanding how these properties control physiological function in vivo remains an open challenge. Our lab described a formin-dependent actin-rich condensate that underlies yeast cell-cell fusion for sexual reproduction. Condensation relies on an intrinsically disordered region of the formin, can be replaced by heterologous phase-separating protein domains, and is critical for cell-cell fusion, providing a simple readout of functionality. Our published and unpublished data show that this represents an excellent system to match biophysical properties measured in vitro to functional readouts in vivo.

We are looking for an enthusiastic postdoctoral researcher to probe the biophysical properties of the condensate, in vitro and in vivo. The ideal candidate will have strong competences in protein purification and in vitro reconstitution approaches, and a background in cytoskeletal and/or biocondensate research.

The lab has extensive competence in live-cell imaging and in vivo manipulations. We are located at the University of Geneva, in a vibrant research community with common interests in cellular, molecular and biophysical mechanisms. For more information, please consult <u>https://mocel.unige.ch/research-groups/sophie-martin</u> and/or contact Sophie Martin.

Key references

Billault-Chaumartin I et al, **Curr Biol** 2022, DOI: <u>10.1016/j.cub.2022.09.026</u> Billault-Chaumartin I et al, **J Cell Sci** 2022, DOI: <u>10.1242/jcs.260289</u> Dudin O et al, **J Cell Biol** 2015, DOI: 10.1083/jcb.201411124

Requirements

- PhD thesis (or planned defense at time of application)
- At least one first-author publication/preprint (can be in preparation)
- Curious and open mind with high motivation to excel in science
- Background in cytoskeleton or bio-condensate research

How to Apply

Start date from January 2025 or later. Please send motivation letter, CV, list of publications and the names and email addresses of 2-3 referees to <u>Sophie.Martin@unige.ch</u>.