

Job opening for two structural biologist positions to join the Structural Motility team at the Curie Institute Paris, France.

We are looking for **two post-doctoral fellows to join the Structural Motility team** at the Curie Institute (Paris Center) directed by Anne Houdusse.

The *Structural Motility* team at the Institut Curie has gathered important structural insights on how force generated by molecular motors can power cellular processes in human health and disease. We investigate the spatial regulation and timing of force production in cells. We develop chemical biology and cell biology approaches to test insights from structures. Our goal is also to decipher how molecular motors produce force by visualizing yet unknown structures, or by understanding of how their activity is regulated. One of our goals is to develop specific modulators of the force they can produce. Many of these motors are also involved in human pathologies and their modulation could lead to new therapies.

We are looking for an **expert in biochemical, crystallogeneses and structural determination** studies. The post-doctoral fellow will also gain expertise in functional and cellular studies.

In addition, we are looking for a **cell biologist interested in developing tools in chemical biology**, and understanding molecular mechanism in cells.

Energy and a strong will to quickly gain autonomy in the lead of exciting scientific projects are essential. Experience in cryo-electron microscopy or cell biology, is a plus. We are ready to train a dynamic and motivated candidate.

If you are interested, please send a CV and a letter of motivation as well as letters of recommendation of your previous employers.

Contact : Anne Houdusse (anne.houdusse@curie.fr)

<https://science.institut-curie.org/research/multiscale-physics-biology-chemistry/umr144-subcellular-structure-and-cellular-dynamics/team-houdusse/>

Key publications

Gyimesi M, Horváth ÁI, Túrós D, Suthar SK, Péntes M, Kurdi C, Canon L, Kikuti C, Ruppel KM, Trivedi DV, Spudich JA, Lőrincz I, Rauscher AA, Kovács M, Pál E, Komoly S, Houdusse A, Málnási-Csizmadia A. (2020 Oct 8)

Single Residue Variation in Skeletal Muscle Myosin Enables Direct and Selective Drug Targeting for Spasticity and Muscle Stiffness.

Cell : 335-346 : DOI: [10.1016/j.cell.2020.08.050](https://doi.org/10.1016/j.cell.2020.08.050)

Julien Robert-Paganin, Olena Pylypenko, Carlos Kikuti, H Lee Sweeney, Anne Houdusse (2019 Nov 6)

Force Generation by Myosin Motors: A Structural Perspective.

Chemical reviews : 5-35 : DOI: [10.1021/acs.chemrev.9b00264](https://doi.org/10.1021/acs.chemrev.9b00264)

Julien Robert-Paganin, Daniel Auguin, Anne Houdusse (2018 Oct 3)

Hypertrophic cardiomyopathy disease results from disparate impairments of cardiac myosin function and auto-inhibition.

Nature communications : 4019 : DOI: [10.1038/s41467-018-06191-4](https://doi.org/10.1038/s41467-018-06191-4)

Florian Blanc, Tatiana Isabet, Hannah Benisty, H Lee Sweeney, Marco Cecchini, Anne Houdusse (2018 May 31)

An intermediate along the recovery stroke of myosin VI revealed by X-ray crystallography and molecular dynamics.

Proceedings of the National Academy of Sciences of the United States of America : 6213-6218 : DOI: [10.1073/pnas.1711512115](https://doi.org/10.1073/pnas.1711512115)

Vicente J Planelles-Herrero, James J Hartman, Julien Robert-Paganin, Fady I Malik, Anne Houdusse (2017 Aug 5)

Mechanistic and structural basis for activation of cardiac myosin force production by omecamtiv mecarbil.

Nature communications : 190 : DOI: [10.1038/s41467-017-00176-5](https://doi.org/10.1038/s41467-017-00176-5)

I-Mei Yu, Vicente J Planelles-Herrero, Yannick Sourigues, Dihia Moussaoui, Helena Sirkia, Carlos Kikuti, David Stroebel, Margaret A Titus, Anne Houdusse (2017 Jun 30)

Myosin 7 and its adaptors link cadherins to actin.

Nature communications : 15864 : DOI: [10.1038/ncomms15864](https://doi.org/10.1038/ncomms15864)