



Engineer/Post-doctoral Position – Genomics in transcription and DNA repair

Molecular mechanisms of Mediatoropathies associated to transcription and transcription-coupled DNA repair

A **2-year engineer or post-doctoral position** funded by an ANR/DFG grant is open from the **beginning of 2026** to work on the international France-Germany project in the group headed by Dr. Julie Soutourina at the Institute for Integrative Biology of the Cell (I2BC), Genome Biology department on the Gif-sur-Yvette campus of the CNRS (**Paris region, France**).

The engineer/post-doctoral fellow will participate in the interdisciplinary collaborative project **to improve our understanding of the molecular mechanisms involved in Mediatoropathies**. These rare neurodevelopmental diseases are associated with mutations in subunits of Mediator, an essential coregulator complex highly conserved from yeast to human cells. We aim in understanding the **molecular consequences of the identified pathological variants in Mediator subunits on transcription and transcription-coupled DNA repair (TCR) and their impact on neurodevelopment**. We propose to take advantage of the yeast *Saccharomyces cerevisiae* model and human cells to study transcriptional and TCR activities of transposed Mediator variants using genomic approaches. A bioinformatic analysis of NGS data will help to understand underlying mechanisms and their conservation from yeast to human cells.

The successful candidate will have a PhD or Master degree in molecular biology with solid knowledge in genetics and functional genomics. We are seeking for highly motivated candidates with a strong interest in the field of transcription and DNA repair in eukaryotes. A previous experience on yeast model and/or human cells, and genome-wide approaches, in particular ChIP-seq, is strongly required. An interest or previous experience in bioinformatic analyses of NGS data will be a plus.

Interested candidates should contact Dr. Julie Soutourina at julie.soutourina@cea.fr and send a Curriculum Vitae, including past research experience and publication records, as well as a letter detailing their motivation and interest in our work. Applicants should also provide the names and contact details for two or three references and recommendation letters.

Website: <https://www.i2bc.paris-saclay.fr/equipe-genome-transcriptional-regulation/>

Selected references:

- Maalouf C, Alberti A, Soutourina J.* (2024) Mediator complex in transcription regulation and DNA repair: relevance for human diseases. *DNA repair*; 141:103714.
- André KM, Giordanengo Aiach N, Martinez-Fernandez V, Zeitler L, Alberti A, Goldar A, Werner M, Denby Wilkes C, Soutourina J.* (2023) Functional interplay between Mediator and RSC chromatin remodeling complex controls nucleosome-depleted region maintenance at promoters. *Cell Rep.* 42(5):112465.
- Zeitler L, Denby Wilkes C, Goldar A, Soutourina J.* (2022) A quantitative modelling approach for DNA repair on a population scale. *PLoS Comp Biology*, 18(9):e1010488.
- Gopaul D.#, Denby Wilkes C.#, Goldar A., Giordanengo Aiach N., Barrault M.B., Novikova E., Soutourina J.* (2022) Genomic analysis of Rad26 and Rad1–Rad10 reveals differences in their dependence on Mediator and RNA polymerase II. *Genome Research*, 32(8), 1516-1528.
- Georges A#, Gopaul D#, Denby Wilkes C, Giordanengo Aiach N, Novikova E, Barrault MB, Alibert O, Soutourina J.* (2019) Functional interplay between Mediator and RNA polymerase II in Rad2/XPG loading to the chromatin. *Nucleic Acids Res*, 47(17), 8988-9004.
- Eyboulet F., Cibot C., Eychenne T., Neil H., Alibert O., Werner M. & Soutourina J.* (2013) Mediator links transcription and DNA repair by facilitating Rad2/XPG recruitment. *Genes & Dev.* 27, 2549-2562.