



Research Engineer position

The team “Radioresistance of Bacteria and Archae” from the Institute for Integrative Biology of the Cell (I2BC, Gif sur Yvette, <https://www.i2bc.paris-saclay.fr/>) offers a 18-20 months position for a highly motivated research engineer candidate

Scientific background

Deinococcus radiodurans, one of the most radioresistant bacteria known to date, has an exceptional ability to reconstruct a functional genome from several hundred fragments produced by ionizing radiation. In this bacterium, the IrrE and DdrO proteins constitute the main regulatory couple for the expression of genes involved in the repair and maintenance of the genome during DNA damage. Under DNA damage conditions, IrrE cleaves and inactivates DdrO, abolishing its role as a repressor. The DdrO repressor is essential for cell viability and its depletion leads to morphological changes in cells, reminiscent of a bacterial apoptotic response (formation of membrane vesicles and nanotubes, cell division defect, DNA fragmentation). Recently, within the framework of the ANR NOVOREP, we published the list of genes belonging to the DdrO/IrrE regulon thanks to the use of different omics approaches, coupled with targeted approaches. Several genes whose expression is continuously deregulated because of a total DdrO depletion into the cell could lead to several phenotypes. As an exemple, the formation of membrane vesicles starts a few hours after DdrO depletion. The recruited engineer will be associated with two research programs 1) The characterization of a candidate gene that may be involved in the formation of membrane blebbing when the transcriptional repressor DdrO is deleted. 2) He/She will also help to characterize the mechanism of action of homologs of DdrO/IrrE found in other bacteria.

Qualifications

The applicant must have a PhD in biological or biochemical sciences and demonstrable experience in Microbiology, biochemistry and molecular biology. Knowledge in global approach (RNA-seq, ChIP-seq) and microscopy would be appreciated. Rigor and strong organizational and team working to carry out several activities in parallel, as well as verbal and written communication skills in English will be required.

Application details

The position (IR, Ingénieur de Recherche) is fixed term for 18-20 months, and can start on October 1st 2022. The engineer will be supervised by the head of the team and also by an Assistant professor.

Applications including a CV and a cover letter highlighting the suitability of the candidate for the proposed project, as well as the contact details of 2 referees, should be submitted through the Emploi CNRS web portal (<https://emploi.cnrs.fr/Offres/CDD/UMR9198-FABCON-001/Default.aspx>), but preliminary inquiries and additional information can be discussed by e-mail to fabrice.confalonieri@i2bc.paris-saclay.fr and pascale.servant@i2bc.paris-saclay.fr