

**Post Doctoral Position at Institut Pasteur de Lille**

3-years

Starting January 2020

The escalating global rise in antibiotic drug resistant bacterial infections is a serious threat to global health. The discovery of novel antibiotic against Gram-negative nosocomial bacteria is particularly challenging as these bacteria use very efficient and promiscuous xenobiotic efflux pumps to prevent the entry of new chemical entities. It is therefore clear that developing inhibitors to these efflux systems, as well as enriching our knowledge of the basic biology of these pumps will be a major step forward in breaking the xenobiotic defence system of these bacteria.

An international (French/German) collaborative research program (named EFFORT) has recently been funded (ANR/BMBF) to investigate and develop a novel class of **efflux pump inhibitors in Gram-negative bacteria**. The project aims to fully elucidate the mechanism of action of the efflux pump inhibitors, understand the structural biology and perform medicinal chemistry to develop the inhibitors into drug like molecules for *in vivo* proof of concept. The bacteria of interest as *E. coli*, *K. pneumoniae*, *A. baumannii* and *P. aeruginosa*. This application concerns a **postdoctoral researcher position** at the **Institut Pasteur of Lille, France**, in the research team of Ruben Hartkoorn. In this team, the research focus will be to define the mechanism of action of the new efflux pump inhibitors using microbiology, molecular biology and genetic tools in all the bacteria species mentioned above.

Applicant must possess a Ph.D in biochemistry, cell biology, molecular biology, biomedical engineering or a related area. Candidates must have demonstrated profound research experience in bacterial genetic engineering, microbiology, bacteriology and/or molecular biology. It is essential that the candidate is able to work efficiently in the context of an international collaboration and interact with structural biology and chemistry collaborators. Candidates must have a publication record in good and relevant scientific journal.

Interested candidates must send a CV (listing education, research skills and publications) and a focussed letter of motivation to [ruben.hartkoorn@inserm.fr](mailto:ruben.hartkoorn@inserm.fr). The position is available from the beginning of January 2020 for 3 years.

**Ruben C. Hartkoorn**

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