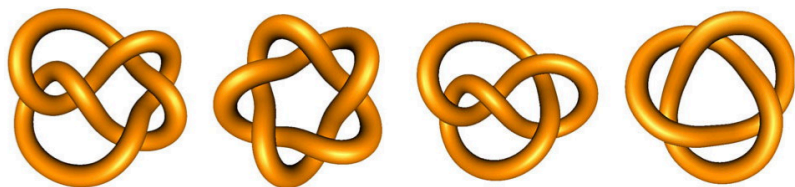# Application for a post-doctoral contract MC
UMR5240: Microbiologie, Adaptation, Pathogénie
Team: CRP, Chromatin and Regulation of Bacterial Pathogenesis

http://map.univ-lyon1.fr

Description

The CRP team seeks highly motivated candidates in the field of global regulation of bacterial gene expression to apply for a CNRS permanent researcher position. The aim of the CRP team is to develop an integrative model of bacterial genetic regulation. Rapid and precise expression of genes in response to intracellular or environmental signals is based on complex and robust genetic programs. Their execution requires a fine modulation of RNA and protein synthesis and degradation. The team focuses on the relationship between the chromosome dynamics (spatial organisation, DNA topology, distribution of nucleoid-associated proteins, spatial localisation of genes in the cell) and genetic regulation (transcriptional regulatory networks, assembly of nucleoprotein complexes, Non coding RNAs). The team uses a variety of multi-scale approaches ranging from molecular genetics, transcriptomics, in vivo and in vitro imaging, to biophysical and computational modelling. It benefits from state-of-the-art facilities and from tight links with world- renowned computational systems biology teams.

Environment

The MAP unit provides a stimulating environment for conducting research on the adaptation processes of microorganisms, by integrating different organisational levels: molecules, cells, populations, during interactions with a host or with defined environments, such as those encountered in agricultural ecosystems. The candidate will have access to the tools and expertise available in the MAP unit as well as Campus facilities or local technical platforms (microscopies, structural analysis, greenhouses, DNA/RNA sequencing, computing infrastructures, plant/bacterial-oriented analytics). The LyonTech Campus of northern Lyon is one of the largest in France in term of technological research infrastructures.

Applicant

Two types of candidates are sought: a biologist with very good knowledge in genetics, biochemistry and analysis of global gene expression data or chromatin structure (ChIP-Seq, Hi-C)

(application in CNRS section 21); a computational biologist with strong skills in bioinformatics and systems biology, who will develop original analyses and modelling of gene regulatory networks (application in CNRS CID section 51).

Potential keywords of application:

‣ DNA topology, genome spatial organisation, spatial localisation of genes in the cell.
‣ Distribution of nucleoid-associated proteins, nucleoprotein complexes.
‣ Regulatory RNAs.
‣ Transcriptional regulatory networks

When:	deadline: Jan 7 2020 (12 am)
Where:	apply @ www.cnrs.fr
CNRS section:	CID 51 (Modélisation, et analyse des données et des systèmes biologiques: informatique, mathématique et physique)
optionally	21 (Genome Organisation, Expression, Evolution. Bionformatics & Systems Biol)
Work address:	UCB Lyon1 University, Lwoff Bldg, Raphaël-Dubois Street 10, LyonTech La Doua Campus, 69622 Villeurbanne, Auvergne-Rhone-Alpes France

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