

Post-doctoral position
CIRI, Lyon, France



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Post-Translational Modifications in Inflammation Signaling

A post-doctoral position is available in the team "NLRP3 inflammasome", International Research Center in Infectiology (CIRI, Inserm U1111), Lyon, France, to participate in its research program "Regulation of inflammasome activity through NLRP3 ubiquitination level". The position is funded for up to 3 years by the European Research Council (ERC).

Inflammation plays a critical role in maintaining health by protecting the host against infections and mediating tissue repair. Adversely chronic inflammation fuels pathogenesis of a large set of conditions including gout, Alzheimer's diseases, type 2 diabetes, atherosclerosis and cancer. Inflammation should therefore remain tightly controlled. NLRP3 is a cytosolic receptor that senses pathogens and damages, and triggers the inflammatory response by assembling the inflammasome signaling complex. NLRP3 does not directly bind its diverse activators and we still know very little about the molecular mechanism of NLRP3 activation. Recent studies have pointed at the role of post-translational modifications of NLRP3. In particular, the team and others have recently discovered that inflammasome assembly is regulated through NLRP3 ubiquitination level. The team has evidenced the key role of the deubiquitinase BRCC3 in this process*. The objective of the post-doctoral project is to identify new enzymes involved in NLRP3 modifications and to investigate their regulation.

*Deubiquitination of NLRP3 by BRCC3 critically regulates inflammasome activity. *Molecular Cell*. 2013 49(2): 331-8.

Candidate profile:

- extensive experience in **Cell Biology** or **Biochemistry**, preferably with a background on ubiquitination or other post-translational modifications.
- experience in Immunology or Infectiology will be appreciated but not absolutely required.
- experience in establishing conditional transgenic mice will be appreciated.
- full involvement in the project, dedication, flexibility, autonomy and rigor.
- excellent communication skills, team spirit and assistance to others ongoing research are essential.
- no nationality restriction. The working language is English.

Scientific environment:

The postdoctoral fellow will work closely with the PI (Bénédicte PY) and other members of the team. He will benefit from a highly collaborative, diverse environment and state-of-the art core facilities to carry out biochemistry, molecular and cellular biology of the Lyon-Gerland campus hosting several academic biology research centers (CIRI, IGFL, IBCP, LBMC,...), higher educational institute (ENS), pharmaceutical and biotech companies.

To apply, please submit a cover letter, a CV with a list of publications, scientific achievements and technical skills, and contact details of 2 referees to benedicte.py@inserm.fr.

Bénédicte PY

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