



**Japanese post-doctoral fellowship at the Institut Pasteur:
first call (2019)
Research project 1**

Host laboratory	Molecular Genetics of RNA Viruses
Contact	boursepdjapon@pasteur.fr
Title	Assessment of potential for emergence of novel influenza A viruses based on compatibilities between viral proteins
Abstract	<p>The generation of novel influenza A virus (IAV) strains from the animal reservoir having the potential to infect humans is associated with increased risks of pandemics. Viral reassortment, i.e. genetic exchange of the viral segments upon coinfection, is a major source of emerging novel IAV strains. In this project, the risk of emergence of new IAV strains infecting humans will be evaluated using a panel of strains currently circulating in avian, pig and human populations. We will determine the compatibilities between proteins, one of the key features for the generation of functional viruses through reassortment. Using a split nano-luciferase based high-throughput interactomic approach, we will explore protein compatibilities at the levels of interactions between the viral proteins, and between viral and human cellular proteins. Then the replicative capacity of compatible reassortant viruses in human cells compared to avian or pig cells.</p>