



INSTITUT DE BIOLOGIE ET CHIMIE DES PROTÉINES

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POST-DOCTORAL POSITION - Role of the hepatic microenvironment in the infection of hepatocytes by the hepatitis C virus : an integrated microscopy approach.

Keywords : hepatitis C virus, microenvironment, hepatocyte, microscopy, cryo-methods.

The hepatitis C virus (HCV) is a strict human pathogen, and hepatocytes are its main targets for productive infection. At the approach to the liver, HCV diffuses through the hepatic microenvironment (ME) where it comes in contact or interacts with several molecules of the extracellular matrix (ECM). The involvement in HCV entry of glycosaminoglycans and proteoglycans of the hepatic ME was suggested but remains unclear. Hepatocyte invasion involves a set of factors or receptors most likely acting in combination to accomplish virus cell entry. However these receptors are ubiquitously expressed at the surface of several cell types.

In this context, we aim at studying the role of components of the hepatic ME and ECM in the early steps of HCV entry into hepatocytes, in order to understand HCV hepatotropism.

The project is centered around two axes :

- 1- To follow the dynamics of HCV entry into primary human hepatocytes and hepatoma cells by fluorescence (time-lapse) confocal microscopy and by (cryo)-transmission electron microscopy (TEM);
- 2- To study the involvement of components of the hepatic ME and ECM in HCV entry, by combining cell biology and biochemical approaches, in collaboration with a group at the IBCP with a strong expertise in TEM and ECM biology (F. Ruggiero).

Our laboratory is part of the IFR128 where all core facilities are available (<http://www.ifr128.prd.fr> and <http://microscopies.univ-lyon1.fr>), and is a core unit of the international pole of excellence and competitiveness in Infectiology "LyonBioPôle" (www.lyonbiopole.org).

Qualifications

The successful candidate must have a PhD in the areas of biochemistry, cell biology, virology or related fields, with a strong background in biology. Hands-on experience in microscopy is required. Interest in image analysis (and related scientific computing techniques) will be appreciated. Proven ability to identify research objectives and meet agreed deadlines, self-motivation, flexibility, and assistance to ongoing research work are essential. Excellent written and communication skills in English and the ability to work effectively as part of a team are required.

Salary and terms of employment

The salary will be 26400 euros net per year (50000 gross per year), for 2 years, on a grant from the FINOVI foundation (www.finovi.org).

The deadline for application is 20 February 2010, with interviews currently planned in March 2010. The post doc position is intended to start in April 2010.

Further information and contact

Interested applicants must contact Eve-Isabelle Pécheur (e.pecheur@ibcp.fr). Please include CV, letter of motivation, name and e-mail of 2 references, and documentation for education, jobs and publications.