

EURO-CHOLANGIO-NET COST Action CA18122

“COST for MSCA” PROGRAM – AVAILABILITY FORM FOR HOSTING LABORATORY

This availability form has to be mailed to: melissa.kerr@uniroma1.it by **April 30, 2023**

NAME OF HOSTING MENTOR (<i>last, first, middle, title</i>) Patricia Aspichueta	
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RESEARCH FIELD (*please insert here a brief summary of the research interests of your lab*).

Obesity and metabolic dysfunction associated fatty liver disease (MAFLD), despite being closely related, are two independent risk factors for the development of liver cancer. Although the natural history of MAFLD may include the development of hepatocellular carcinoma (HCC), along with HCC, other liver cancers such as intrahepatic cholangiocarcinoma (iCCA) and colorectal liver metastases are also related with MAFLD. The development of cancer is associated with profound alterations not only at the genomic and transcriptional regulation level, but also at the level of energy metabolism in general, and that of lipids, in particular. Our group is interested in finding metabolic alterations involved in liver cancer and related liver diseases. We are interested in finding new therapeutic approaches and early biomarkers of liver pathology and its progression.

SKILLS (please list here the skills – technical and soft – that a potential fellow *could* learn in your lab)

Develop mouse models to study liver disease:

Sleeping beauty technique for liver cancer

Bile duct ligation for cholestasis

Administration of diets and/or drugs

***In vivo* metabolic assays in mouse models of obesity and liver disease:**

VLDL secretion

Fat tolerance test

Glucose and insulin tolerance test

Gluconeogenesis from pyruvate

Adipose tissue lipolysis

Isolation of lipoproteins and quantification of lipids and apoprotein content

Metabolic fluxes in cells or freshly isolated tissues using radiolabeled substrates:

- de novo lipogenesis of cholesterol, glycerolipids (3H-acetate),

- Fatty acid oxidation (14C-palmitate),

- Synthesis of glycerolipids-phospholipids, triglycerides (14C-glycerol, 3H-choline, 3H-oleate....)

Biochemistry techniques:

Western Blotting, qPCR, quantification of lipids in tissues (triglycerides, diglycerides, sterols, fatty acids...), quantification of lipids in serum.

Cellular cultures and primary cultures of hepatocytes:

Cultures of different lines of liver cancer

Isolation of hepatocytes from mouse models and primary cultures

MENTOR (please list here your previous experience in mentoring post-doctoral fellows including MSCA fellows)

Number of PhD students supervised: 14.

Number of Postdoctoral Fellow supervised: 4

Number of MSCA Fellows supervised: 0

Other (please specify): Master students supervised: 13; Medical and science students supervised: 15:

Ongoing PhD thesis in our Lab: 6; ongoing clinical PhD Thesis: 2

INSTITUTION/ORGANIZATION (please briefly write here the support your Institution/Organization has established for foreign postdoctoral fellows)

The University of the Basque Country is a center with a long tradition of hosting postdoctoral researchers funded at international (Marie Skłodowska-Curie Actions), national (Ramón y Cajal, Juan de la Cierva, among others) and regional (IkerBasque) levels. The UPV/EHU offers possibilities for stabilization of those researchers who have demonstrated their excellence through a competition/opposition process and under the figure of contracted research personnel.

In addition, the University of the Basque Country facilitates access to accommodation for researchers in its network of university residences.