

## Prof. Jamila Faivre: microbiology is a new field to me but it's interesting

Submitted Nov 24, 2017. Accepted for publication Jan 10, 2018.

doi: 10.21037/hbsn.2018.01.03

View this article at: <http://dx.doi.org/10.21037/hbsn.2018.01.03>

### Expert introduction

Jamila Faivre, MD, PhD (*Figure 1*), is Associate Professor of Cell Biology and Oncology and head of the “Microbiota, Inflammation and Cancer” research group of the INSERM Unit 1193 at University Paris-Saclay and Assistance Publique-Hôpitaux de Paris (APHP), France. Her current research aims to elucidate the functions of gut-liver axis interactions and gut microbiota in liver physiopathology, and the role of inflammatory and oxidative stress in liver carcinogenesis.

Dr. Faivre obtained her MD degree in 1990, her post-graduate diploma in medical microbiology in 1993, her Master degree in cell biology and biochemistry in 1993 and her PhD in cell biology and biochemistry in 2004 at the University Pierre et Marie Curie, Paris. She received her accreditation to supervise research at the University of Paris-Sud in 2009. Since that period, she has trained and mentored 15 Master students and 13 PhD students in the field of oncology, molecular and cellular biology.

Dr. Faivre has published in the best international journals related to liver diseases (*Gastroenterology*, *Gut*, *Hepatology*) and cellular biology (*Cell*, *Nature Communications*, *Genome Research*). Dr. Faivre's group is partnered with several national and international research programs in the field of acute and chronic liver diseases. She is co-holder of five patents relating to biomarkers and pharmaceutical products for the prevention or treatment of common chronic diseases (diabetes, cancer). Dr. Faivre also contributed to the industrial development and the clinical evaluation of products of her research in the field of liver pathology.

We met Prof. Jamila Faivre during the Liver, Microbiome and Academic Skills Workshop held from September 8–9 in Beijing and were honored to have conducted an interview with her. We greatly appreciate that she found time to share her experiences and perspectives with us.



Figure 1 Prof. Jamila Faivre, MD, PhD.

### Interview

**HBSN:** Can you introduce the recent researches you are doing?

**Prof. Faivre:** I lead a research group named “Inflammation, Microbiota and Cancer” in Paris. In the past, all my researches were about liver carcinogenesis, in particular hepatocellular carcinoma. Three years ago, our group decided to focus on the role of gut microbiota in liver carcinogenesis in humans. Firstly, we decided to study the composition of gut microbiota in patients with hepatocellular carcinoma. We studied a lot of different mice models with primary liver cancer and metabolic disorders and found that there's a possibility to modulate the composition of gut microbiota by utilizing different drugs. It means that after modulation, gut microbiota may be composed of a relatively high number of beneficial bacteria. In fact, we found some modulators, which have the capacity to enhance the number of beneficial bacteria

in the gut microbiota. The modulators are not probiotic, but pharmaceutical drugs. When we overexpressed these kinds of drugs in mice, we obtained some positive results in terms of resistance to some inflammatory disorders. Our future plan is to create a new clinical product and to test its effect in humans with dysbiotic microbiota. Our goal is to improve patients' resistance to hepatocellular carcinoma.

It's a very challenging and competitive project, as the field of microbiota is a new area for all researchers in the world, which means it's very hard to make a breakthrough. Also, microbiology is a new field to me, because I'm an oncologist and hepatologist, not a microbiologist, which initially made it difficult for me to adapt to this area. But I find it very exciting.

I'm a medical doctor, a PhD, and a professor of medicine. But 5 years ago, I stopped my clinical work and began to do full-time research and teaching activities. I hoped to transfer my experimental studies into something good to humans. Actually, I have developed a new drug candidate against acute liver failure, which came from our laboratory experiments. Now I have decided to open a new chapter, aiming at finding new drugs to cure primary liver cancers in humans.

**HBSN:** *What made you focus on liver disease instead of other diseases?*

**Prof. Faivre:** As we all know, today there is no cure for chronic liver diseases. Many patients die when they have primary liver cancer, acute liver disease, severe fatty liver disease and so on. There's still much we do not understand in the pathogenesis of liver diseases. Let's take hepatocellular carcinoma (HCC) as an example. Most of the patients with HCC die after resection or transplantation. So there is a real need for research and new treatments against chronic liver diseases. That's why I decided to focus on this area.

**HBSN:** *How do you deal with challenges in your research?*

**Prof. Faivre:** First, we try to make some relevant hypotheses that are close to human situations. Then we create a network of collaborators and experts, including some excellent local

students and senior researchers, so as to produce more ideas. It's a long-term thinking process to identify relevant medical questions.

Besides, we need to avoid being lost in big-data. Lots of information comes from big-data, including genomics and metagenomics. So we need to use medical thinking to pick up the most important genomic information to make sure that our direction is correct.

**HBSN:** *How do you create balance between your study and personal life?*

**Prof. Faivre:** It's very difficult for women to create balance between private and professional life, because we not only have family issues to deal with, but also hospital work to manage, teaching and research activities. We need to manage these conflicts to make life simple. Nowadays, women have ambition and want to be the best, so we need to work harder to be as excellent as our male counterparts, or to perform even better than them.

**HBSN:** *As a non-English speaking specialist, could you provide some advice on how to write scientific papers?*

**Prof. Faivre:** The best way is to practice English, especially scientific English. You can join a fellowship project in English-speaking countries to improve your English and develop your scientific thinking. In my opinion, it's really important to immerse yourself in an English-speaking environment.

## Acknowledgements

None.

## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

(Editors: Nicole Li, Bella Poon, Ginny Chen, HBSN, editor@thehbsn.org)

**Cite this article as:** Li N, Poon B, Chen G. Prof. Jamila Faivre: microbiology is a new field to me but it's interesting. *HepatoBiliary Surg Nutr* 2018;7(1):75-76. doi: 10.21037/hbsn.2018.01.03