



Prof. Carlos J. Pirola: the putative therapeutics of alcoholic fatty liver disease (AFLD) and non-AFLD (NAFLD): a systems biology approach

Submitted Sep 20, 2019. Accepted for publication Sep 27, 2019.

doi: 10.21037/hbsn.2019.11.29

View this article at: <http://dx.doi.org/10.21037/hbsn.2019.11.29>

Expert's introduction

Carlos Jose Pirola has been a PhD in biochemistry since 1984 (University of Buenos Aires, UBA). He received training in molecular biology in the Cedars Sinai Medical Center in Los Angeles, California, USA. His major interest is Systems Biology of metabolic syndrome components, including hypertension, obesity, type 2 diabetes, and fatty liver. He is currently a senior investigator at the National Scientific and Technical Research Council (CONICET) and is serving both as the chair of the Department of Molecular Genetics and Biology of Complex Diseases and as the director of the Institute of Medical Research (IDIM, UBA-CONICET). He is a member of the American Association for the Study of Liver Diseases (AASLD) and the InterAmerican Society of Hypertension (IASH), being an International Fellow of the American Heart Association (AHA) and The American Society of Human Genetics (ASHG). Dr. Pirola has earned several national and international awards and has more than 170 publication in the PubMed in areas including genetics, epigenetics, metabolomics, and the pathophysiology of cardiometabolic diseases. He was responsible for the creation of the first Center of Excellence in Translational Medicine in Argentina and is serving as a reviewer of a number of international journals including *Hepatobiliary Surgery and Nutrition (HBSN)* and *Annals of Translational Medicine (Figure 1)*.

Interview

At the conference Dr. Pirola has talk about of the implications of studying NAFLD from a point of view of the Systems Biology gathering the knowledge of omics techniques such as genomics, transcriptomics, proteomics and metabolomics and its application to therapeutics in particular drug reposition.

HBSN: Can you give us a general description of your presentation yesterday?

Prof. Pirola: Yesterday, I talked about systems biology with a focus on the putative novel therapeutics for alcoholic fatty disease (AFLD) and non-AFLD (NAFLD). Systems biology is an approach that attempts to understand how a complex biological system works from its molecular constitution. But currently we don't have enough information to make a good model, a mathematical model. Because of this, we use a different kind of discipline called system bioinformatics, which combines information gathered from omics techniques, in particular, of the interaction of genes associated with a given disease. You can find which drugs are better for that disease, even some old drugs that were or are being used for other diseases. For instance, NAFLD is associated with the metabolic syndromes, which is the aggregation of very prevalent diseases, such as hypertension, type 2 diabetes, central obesity etc. Therefore, systems biology can tell us which these old drugs may be effective for the treatment of NAFLD and AFLD. That is a basic summary of my presentation.

HBSN: What are some challenges or difficulties you have faced in your recent studies?

Dr. Pirola: We have tried different methods in our investigations, and we are conducting some genetic studies about the basis of these diseases. The main restrictions on studying the genetic basis of these diseases and the main challenge in our country, Argentina, is the economic crisis we are suffering lately. So, we don't have enough resources to use these high through put, (more informative) technologies, because you have to spend hundreds of thousands dollars in each study.



Figure 1 Carlos J. Pirola, PhD.

HBSN: *As we all know, you have won a lot of honors and awards. What do you think is the key to your success?*

Dr. Pirola: In Argentina, people do a lot of jobs with a low salary, which imposes a lot of hardship on scientific activity. I spent 40 years in this career, and, if I had to choose again, I would think about it. But it is a wonderful job with many personal retributions if you get enough salary to live in a modest way. We work for the government and the salaries are pretty modest, so you need to consider it carefully. At any rate, I took what it was my leitmotiv and sometimes you cannot avoid this kind of personal imperatives.

HBSN: *When did you first hear about HBSN?*

Dr. Pirola: Well I don't remember how I first came to know about the journal. I think because they sent me a manuscript for revising. After that, they invited me to read and revised manuscripts for the journal and I did it. I am honored to do it. The journal is going to be pretty good because its impact factor is around four and hopefully increasing.

Cite this article as: Shi R. Prof. Carlos J. Pirola: the putative therapeutics of alcoholic fatty liver disease (AFLD) and non-AFLD (NAFLD): a systems biology approach. *Hepatobiliary Surg Nutr* 2019;8(6):683-684. doi: 10.21037/hbsn.2019.11.29

HBSN: *What do you think about Dr. Mao?*

Dr. Pirola: My impression is that he is a very good person. He has very good interpersonal skills. I really appreciate his ability to manage the scientific network around the meeting and its scientific background in all the related areas the meeting was on.

HBSN: *What is your impression of China?*

Dr. Pirola: We went to Guilin just last week, and I was in China about 10 years ago because I gave a talk in the meeting of the American Society of Nutrigenetics and Nutrigenomics at Beijing and have the opportunity to visit Xi'an, and Shanghai. In that time, I enjoyed a lot my visit. Now, I was really impressed by the society changes. It seems people are better and China shows an impressive improvement.

HBSN: *What are your expectations for HBSN's future?*

Dr. Pirola: The journal should improve its impact factor to become better. This is very important. Six issues a year is good thing to start, but one issue each month would be better. Of course, I aware that this demands a lot of additional work. A key to increase *HBSN's* impact factor is balance the number of original manuscripts with excellent reviews.

Acknowledgments

I would like to express my sincere gratitude to Dr. Pirola, and to *HBSN* for giving me this wonderful opportunity.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

(Science Editor: Ruolei Shi, HBSN, editor@thehbsn.org)

(English Language Editor: John Ayric Gray, AME Publishing Company)