

## Editorial



The strength of the INI-CRCT network lies in both the diversity of the expertise of its participants and the quality of the large-scale studies and biobanks they coordinate. Our goal is to make the best use of these tremendous resources in order to identify new biomarkers for the diagnosis or prognosis of patients with chronic renal or cardiovascular disease. As the coordinator of WP2, it has given me great pleasure to see the completion of the initial studies on the prognostic value of oxidized LDL cholesterol in dialysis patients in the AURORA study, and I am following with interest the progress of trials with potassium in congestive heart failure and chronic kidney disease based on the GREAT and NEPHROTEST studies. In 2016 we will be launching the initial studies on microbiota in chronic kidney disease and our proposal to contribute to the cross-cutting programme run by Inserm on this theme, with the CKD-REIN study. Let us hope that this trial will materialise and will also encourage other members of the network to develop this research theme, which opens up innovative prospects in the treatment of chronic kidney and cardiovascular disease."

Bénédicte STENGEL  
Coordinator of Workpackage 2

## Testimony



INI-CRCT, a partner of the CIC-P, welcomes young researchers!

"I am an Italian physician and I have specialised in cardiology since 2014. In Italy, I work at the hospital of Perugia in the department headed by Prof. Guiseppe Ambrosio. I joined the Nancy CIC-P in November 2014 for a year of research.

I chose Nancy because the CIC-P is a leading centre of investigation, with highly qualified personnel and a global reputation. It is the ideal place for me, as I am very interested in the field of cardiovascular research. The staff are very good at accommodating researchers from other countries. I worked on a clinical trial, HF-COM, the purpose of which was to use pulmonary ultrasound to assess the degree of pulmonary congestion remaining at the end of hospitalisation for congestive heart failure and its impact on the patients' prognosis. I also made use of this stay to develop my skills in the field of medical statistics and to participate in randomised clinical trials.

I am now leaving the CIC-P to continue my project in Italy. I have very much enjoyed this collaboration and I hope that it continues even after my return to Italy."

Stefano COIRO



Martine Laville, Professor of Nutrition at Lyon, hospital practitioner and coordinator of the FORCE network. She also directs the Rhône-Alpes Centre for Research in Human Nutrition.

FORCE is an F-CRIN-labelled network for research in the area of obesity and nutrition. Based in three centres (Lyon, Paris and Toulouse) with expertise in translational mechanistic research on small numbers of patients, it has developed larger-scale approaches including intervention trials. For this purpose, the network has been extended to include 37 centres throughout France specialising in obesity. FORCE has set up a research unit within each centre, giving it a considerable critical mass for projects and for recruitment capabilities.

It collaborates with INI-CRCT on the Stanislas cohort to reanalyse nutritional data that has not yet been exploited. The great advantage of this information is that it is family-based, since the volunteers of the cohort are families. This therefore provides an excellent opportunity to combine the nutritional expertise of FORCE and the knowledge acquired by INI-CRCT on heart failure.

In addition, the two networks have other interests in common, for example, the fibrosis found in adipose tissue in cases of obesity and also in cases of heart and kidney failure. Any potential trials with anti-fibrotic drugs developed for either congestive heart failure or renal failure therefore concern both structures, for the study of the processes at work in adipose tissue.

Collaboration with a network such as INI-CRCT creates new opportunities at the interface between nutrition and chronic diseases. This also facilitates exchanges on modes of operation, which are always beneficial.



PAQNUT: A first successful collaboration between two F-CRIN networks

The PAQNUT project is the second collaboration between the INI-CRCT and FORCE networks. We already jointly published an article on fundamental research at the beginning of the year. On the strength of this collaboration, the two networks have undertaken a joint project based on the Stanislas cohort. The goal in this case is to study the impact of nutrition on cardiovascular complications in an initially healthy population.

"The Stanislas cohort is made up of 4,000 people who have been followed for 20 years. These are initially healthy families that undergo very comprehensive cardiovascular and renal phenotyping on their fourth visit. Thanks to this collaboration, we will now be able to study the associations between the nutritional profiles, showing what the participants of the study have eaten over the last 20 years and what they eat now, and the state of their cardiovascular and renal systems. By taking the family aspect into account, we can be confident that the participants ate the same things as their children, while they were living under the same roof. This will therefore enable us to establish links between genetics, the environment and cardiovascular risk factors, the structure and function of the heart and vessels, and the function of the kidneys." [Prof. Rossignol]

This collaboration enables INI-CRCT and the Nancy CIC-P to benefit from the know-how and nutritional expertise of FORCE, and gives FORCE access to invaluable data about a universally known cohort with highly detailed cardiovascular, renal and nutritional phenotyping.



## "Joining the INI-CRCT network opens up new opportunities"



Nicolas VODOVAR, associate researcher in the INSERM UMR-S 942 laboratory at the Lariboisière Hospital in Paris.

### What are the main strands of your research activity?

When I arrived at the laboratory in 2013, I became interested in BNP which is a small peptide produced during heart failure which over the last ten years has been the biomarker of choice for the diagnosis and prognosis of acute and chronic heart failure. I work in particular on aspects of the metabolism of BNP that are specific to humans, such as the glycosylation of proBNP or the inhibitory effect of BNP on neprilysin. What is interesting is that these aspects are specific to humans and had been little studied until now.

In the laboratory, I also participate in other projects in which I co-supervise doctoral students: a project on QSOX1, which is a new biomarker for heart failure, and a project on cardiorenal syndrome with Matthieu Legrand.

### What is your main research project?

My main project concerns the metabolism of human BNP. The work that I have

already done shows that BNP, which was thought to have an effector function in the response to heart failure, could be a major regulator of this response, which opens a new angle of attack for achieving a better understanding of heart failure. In the long term, I hope that this work will improve the interpretation of assays carried out in clinics, and possibly help discover new biomarkers.

### What is the advantage of collaborating with INI-CRCT?

When it comes to studying issues of public health, some clinicians are very close to their patients and to clinical reality but occasionally fail to see the bigger picture. In my work in fundamental research, I tend to consider the patient as a biological object and look closely at what is happening to him or her in scientific terms, but sometimes without considering the clinical side. The results are often almost entirely fundamental and it can be difficult achieving a clinical perspective. The advantage of working in close collaboration with clinicians within the laboratory is therefore the possibility of reconciling very fundamental research with the clinical issues and jointly placing the results of this research in a clinical context. This synergy between clinical and fundamental research thus allows us to go down some unexplored paths while still being able to ground the work in clinical reality.

## Portrait