Philipp Baumann, could you kindly tell us about your «parcours»?
P.B: I obtained my medical degree from the University of Lausanne in 2003. I started my training in psychiatry at the psychiatric hospital of Yverdon (Centre Psychiatrique du Nord Vaudois), which confirmed my interest in the field. After completing one year of somatic medicine, I decided to go abroad to continue my education in psychiatry. I moved to Melbourne (Australia) and took a position as a registrar in psychiatry at the Early Psychosis Prevention and Intervention Centre (EPPIC) for a year. This is a psychiatric service implemented by Prof. Pat McGorry and aimed at addressing the needs of patients aged 15-24 yo with emerging psychotic disorders. I became interested in the care of patients suffering from psychotic disorders and was very impressed by the positive and stimulating atmosphere within the EPPIC clinical team. Then, for 6 months I also had the great opportunity to collaborate with the team of Prof. C. Pantelis (Melbourne Neuropsychiatric Centre) on a small project, which triggered my interest for neuroimaging in psychotic disorders.

When I came back to Switzerland, my main objective was to move on with my board certification in psychiatry. I continued my clinical training and, in 2007, started to work for the TIPP program (Traitement et Intervention dans la phase Précoce des trouble Psychotiques) which was set up by Prof. Ph. Conus. This clinical program was inspired by the Australian EPPIC program but was reorganised and adapted to fulfill the needs of the young adults living in the Lausanne area. I was very happy to find a similar enthusiastic and motivated clinical team working in a youth friendly manner and promoting a “positive and realistic” approach.
Since 2009 I’ve been working part time for the TIPP and part time in research within the translational research program that was set up as a joint venture between the PGE, the CNP, the CHUV and the EPFL. In this frame, I have active collaborations with Prof. Ph. Conus (head of the PGE), Prof. Kim Do (CNP) as well as Dr Patric Hagmann (radiology-CHUV) and Prof. Jean-Philippe Thiran (ITS, EPFL).

You are an MD, how did you get interested in psychiatry?
During my medical studies, I became fascinated by the relationship between mind and brain. When I had to decide on a clinical specialization, I chose psychiatry because I liked the fact that it was more people and relationship oriented than any other medical disciplines. During my stay in Australia, I had the opportunity to work with psychiatrists who were combining clinical work with research, especially brain imaging. I found this very captivating and decided to get involved with research as a way to explore not only the mind, but also the brain as well as their relationships through translational research.

What is your motivation in research?
An important goal is to further improve the care of patients. To do so we need to increase our understanding of the disorders and develop tools that help clinicians to detect the disease earlier and treat patients more efficiently. I chose the field of imaging because I felt that it allowed a good interface between clinical psychiatry and neurosciences. I became to realize that it is a very powerful instrument in combination with fields such as genetics, biochemistry and of course clinical psychiatry. This works well since I enjoy working in multidisciplinary teams with people from different backgrounds like engineers, radiologists, biologists and psychologists.

What are the characteristics of the disorder you are studying and how can imaging techniques help to better understand the disease?
In the TIPP program, we treat patients experiencing first episodes of psychosis and our purpose is to optimize care and hopefully improve outcome. Psychosis is a generic term which includes several diagnoses and some patients have just one episode of psychosis while others progress towards illnesses such as schizophrenia. Patients typically develop symptoms during adolescence and early adulthood. The illness often interferes with the development of different aspects of the individual, including identity, relationships, schooling and education. The TIPP program lasts for 3 years and, in addition to offering intensive follow up, it is also a unique opportunity to document and study how patients evolve. We realize however that our limited knowledge of the neurobiological aspects of such disorders hampers the implementation of more efficient early intervention strategies and that medications we use may not be specific enough to really target stage specific mechanisms of the illness. This is why we need to develop translational research projects. We therefore work in close collaboration with the Unit for Research in Schizophrenia (led by Prof. Kim Do) that developed important expertise in the pathophysiological mechanisms of schizophrenia and proposed a novel and integrating hypothesis that implicates redox dysregulation as a vulnerability factor in schizophrenia. This interdisciplinary project has been growing over the last few years and I'm currently coordinating the structural imaging part.

Schizophrenia is a multisided and complex disorder characterized by disturbances in perception, speech, cognition as well as delusions and more subtle changes such as basic symptoms. Converging evidence points towards an interaction between biological and environmental factors occurring in the developing brain and leading to neural disconnectivity. The nature of this faulty connectivity is of multiple origin and certain aspects of it can be measured by brain imaging. Subtle but important changes occur in the brain of patients especially during the first years of illness. While concerning, it is also an opportunity for intervention. The non-invasive nature of MRI imaging makes it the perfect tool to better study this dynamic process and understand trajectories of brain modifications in relation to clinical and biological changes.

What is in your eyes the benefit of the NCCR Excellence Fellowship?
This fellowship is really an invitation to participate in bridging the gap between clinical sciences and neurosciences. It is a major encouragement to acquire research skills in neuroscience and at the same time continue clinical work and stimulate synergies between the two. As far as I know this program is really an important innovation, even worldwide.
Neurosciences were historically present in psychiatry essentially by psychopharmacology. Recent research indicates that this is likely to change in a not too distant future. I think psychiatrists have a responsibility to reflect how progress in neuroscience can be integrated into clinical practice while not "forgetting" important knowledge and know-how that has been accumulated in psychiatry over many decades. Participating in the identification of valid phenotypes (or clinical presentations) is another important aspect of psychiatric neurosciences. This is of great importance as the selection of clinical presentations will have a direct impact on the identification of pathophysiology and etiology of illnesses (see Nancy Andreasen, Schizophrenia: the fundamental questions). Last but not least, this fellowship will help

to further develop research projects that find their roots in the clinical world.

What is your long term goal?
On the scientific side, an important future project will be to develop in Lausanne brain imaging at all stages of psychosis including the prodrome period, preceding the first episode of psychosis.
So far, my experience has been very positive and working with patients on the one hand and brain imaging on the other hand is very stimulating. In order to keep this position, I need to further develop my research skills and expertise in my specific area (brain imaging and psychosis) and on the long term develop my profile for an academic position as a clinician-scientist. I think there is a need for clinician-scientists who can bring together brain imaging and clinical work, in order to develop research projects that are connected to patients needs. I would be happy to participate in this development within the Department of psychiatry.