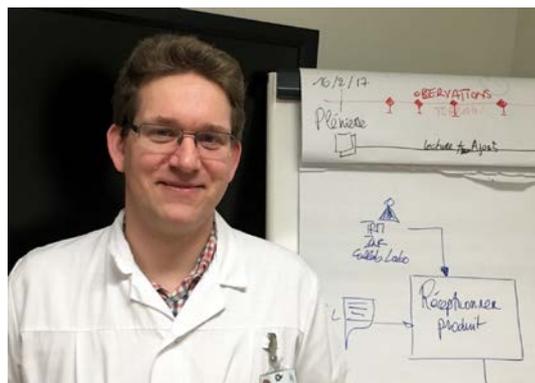


An interview with Gilles Allenbach

“The SYNAPSY grant is a real launching pad!”



Gilles Allenbach, a CHUV medical doctor specialized in both nuclear medicine and psychiatry, has been awarded a SYNAPSY clinician-scientist grant to investigate neuroinflammation in schizophrenia. He speaks to us about his current research and his vision of psychiatry.

SYNAPSY : *Your combination of medical specialties is rather unusual. How did you come to this choice?*

Gilles Allenbach : Yes it's true; I have a rather atypical profile. And interestingly, as I started out in nuclear medicine, my colleagues don't even know that I'm also a psychiatrist. Nuclear medicine attracted me because it's a multidisciplinary speciality and the range of techniques used such as PET scanning, scintigraphy and therapeutic imaging touch almost all other specialties. Of the different imaging modalities, molecular imaging is particularly elegant. The technique uses state of the art methods to answer precise questions : for example, the use of tiny amounts of radioactive substances (tracers) allows us to visualize physiological changes occurring in regions of interest at the cellular and molecular levels. Its complexity demands incredible teamwork – something that really motivates me.

I then decided to move on from my very “technology-oriented” start to specialise in psychiatry, a field that has always fascinated me.

Indeed, psychiatry is a rapidly changing discipline as medicine and research have barely begun to hint at some of the neurobiological mechanisms at the roots of mental illness. For some diseases of the nervous system, such as multiple sclerosis or Alzheimer's disease, the origins and causes are starting to be identified, but for the majority of mental illnesses a lot of research remains to be done.

S : *What is your SYNAPSY project about?*

GA : The project is a collaboration with the lab of Prof Kim Do and with the Department of nuclear medicine at the Geneva University Hospitals (HUG). I carry out brain imaging techniques in order to highlight potential molecular changes relating to those found in schizophrenia patients and which could be involved in the neuroinflammation process. The measurements are actually done in animal models of

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schizophrenia where brain inflammation is induced to determine whether the observed changes are similar to those observed in schizophrenia patients. Our main goal is to understand at what stage of the disease the neuroinflammation process takes place.

S : *It's not always easy to bring together neurobiology and psychiatry; what's your experience of this interaction?*

GA : I work really well with Kim Do, I think certainly because she works very closely with the medical world and is used to it. Nevertheless, in clinical psychiatry it is sometimes difficult to reconcile some of the neurobiological explanations for the causes of mental illness. Not all new ideas for example are accepted, especially the prospect that one day psychiatric diseases might be diagnosed by biological tests. At the moment, most diagnoses are based on the medical interview as discriminating biomarkers are not yet readily available.

On the contrary, fundamental neuroscience research may have some reservations about the medical world, typically concerning brain imaging. It is seen as a powerful technological tool to study disease processes, but only at a large scale, which sometimes discredits it in the eyes of scientists. There is often a misunderstanding on the scientists' part because the subtlety of nuclear medicine is not in the anatomical or morphological aspects, but rather in the observation of metabolic processes, of actual physiological functions. The lack of spatial resolution of some techniques is compensated for by their ease of use in vivo in a non-invasive manner. Notably, a PET-scan on small animals followed by a detailed immunohistochemistry analysis after sacrifice allows for the examination of molecular expression, bringing the required high resolution.

S : *How is the SYNAPSY Clinician Scientist Award helping you?*

GA : The SYNAPSY grant allows me to define time for clinical research by assuring 50% of my salary. This provides a real opportunity to develop my own line of research and consequently to obtain further research funds to carry on my future research projects. The grant is a real launching pad! My goal is to direct meaningful research for clinical application, while also being the specialist doctor who refers the clinical cases who may one day benefit.

Interview made by Yann Bernardinelli, March 2017.