Imaging the brain in chronic pain

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Normally, when you think of pain, you think of yourself twisting your ankle or burning yourself when cooking pasta. If prolonged, pain from such a physical damage, however, can give rise to a form of chronic pain. Imagine now your doctor tells you your tissues are no longer injured, but your pain "simply" remains. Researchers, including me as an Early Stage Researcher in the TOBeATPAIN network, are trying to wrap our heads around what is hiding behind this word "simply". What are the actual mechanisms making pain transition into a status whereby pain persists but your tissues are just fine?

Imaging the structure and function of the brain might come into aid in solving the mystery. Think of the brain as the primary control booth of our body, combing and organizing all sorts of information, including painful one. How is the brain of patients with fibromyalgia, disc degenerative disease, and rheumatoid arthritis processing such painful information? How are brain regions talking to each other? What is their chemical composition? These questions become even more relevant when looked at in relation to the influence of genetics and in combination with behavioral measures of pain. This is what I am researching!

Are you wondering how genetics and behavioral measures can be possibly related to the brain? Recent focus of my research has been to explore whether two genetic variants in a gene have an influence on brain function, brain metabolism, and the modulation of pain in fibromyalgia patients and healthy individuals. Would you like to know more? Stay tuned – I am writing an article about it!

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