



SILVIA FANTON (ESR3)

MY THREE-MONTH SECONDMENT AT KANCERA

During my three-month secondment at KANCERA (January 2021 – April 2021), I substantially contributed to data collection for a research project whose overarching aim is to test for potential autoimmune mechanisms in fibromyalgia (FM) patients. The idea for this project stems from a previous translational collaboration between Prof Camilla Svensson (my main supervisor at KANCERA) and Prof Eva Kosek (my PhD supervisor) which showed that IgG antibodies from FM patients, when injected into mice, induce a FM-like state, by affecting the dorsal root ganglia (DRG) [1] (preprint bio-archive, Journal of Clinical Investigation, in press). The data collection phase led me to constantly interact with a number of researchers and a professional, medical team and allowed me also to witness how the collection and preparation of serum sampled from patients' blood is carried out. In addition, given the multi-faceted approach undertaken in this project, part of data analyses will consist in assessing, via confocal imaging, whether FM IgG antibodies exert a direct or indirect influence on processes in the mice brain. As a preparatory learning experience, I had the possibility to witness first-hand how high-resolution confocal imaging of the central nervous system can be performed. More specifically, I took part in imaging relative to samples of the DRG acquired from naïve mice who had been injected with an anti-inflammatory drug under development at KANCERA. The underlying aim was to assess, in a biologically ingrained fashion, whether the tested drug had an effect on the distribution of macrophages within the DRG and to further determine the distribution volume taken up by macrophages. I had the chance to inspect and learn about how such estimation can be achieved through the use of imaging software such as IMARIS (<https://imaris.oxinst.com>) or by the employment of a more automatized, free to biases, in-house analysis software. Drugs targeting the DRG could potentially provide a new treatment strategy for pain conditions such as FM.



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Reference

- [1] Andreas Goebel*, Emerson Krock*, Clive Gentry, Mathilde R. Israel, Alexandra Jurczak, Carlos Morado Urbina, Katalin Sandor, Nisha Vastani, Margot Maurer, Ulku Cuhadar, Serena Sensi, Yuki Nomura, Joana Menezes, Azar Baharpoor, Louisa Brieskorn, Angelica Sandström, Jeanette Tour, Diana Kadetoff, Lisbet Haglund, Eva Kosek, Stuart Bevan, Camilla I. Svensson* and David A. Andersson*. Passive transfer of fibromyalgia symptoms from patients to mice. *Journal of Clinical Investigation*, 2021, In Press.