

## Schwann cells: The helpers of our feelings

by Patricia García-Fernández (ERS9)

Have you ever wondered where pain comes from? Why do you feel warm or cold? One of the main characters playing this role are our nerves. They connect every part of our body with our brain, making feelings, sensations and even movements possible. But, what is a nerve? You may have heard that our brain is formed by star shaped cells called neurons. Well, the nerves are formed by no other than very long prolongations of neurons, denominated axons. These axons, nevertheless, are not able to transmit the pain by themselves, but they need an assistant cell to help them: The Schwann cells.

The Schwann cells, named after their discoverer Theodor Schwann, create a very important protection layer around the axons that is essential for the transmission of the sensations we feel.

Polyneuropathies are a group of diseases that affect our nerves, causing the patients who suffer them to feel pain in different regions of their bodies. The axons of some of these patients lack this essential protection layer, suggesting that their Schwann cells might be sick or dying, and therefore not working properly.

My job is to study these cells in patients with polyneuropathies. To do this, we are obtaining a small piece of nerve from these patients and culturing exclusively the Schwann cells. This will allow us to study this specific type of cells and see how they behave and react upon different stimuli. Learning about the sickness is always the first step to treat it.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Grant Agreement No 764860