**Project**

The auditory processing is the brain activity which it is responsible of understands what we are hearing such as sounds, words and music. The areas are the temporal lobes but the research show that the other lobes and subcortical areas are involved throughout the sound recognition processing.

Nevertheless, the auditory cortex is the main region that processing the auditory input in the two hemispheres. It is divided is 6 layer and every layers have different kind of neurons which are connecting among them (neuronal circuits), but the glutamate and the GABA are more frequency.

The properties of these neurons, how they are connecting among them and the cognitive neuronal circuits which they are making during the auditory processing are the main objectives to Auditory Cortex. We are working to knowing the morphologic, electrofiologic and transcriptomic information from neurons of this brain area with the purpose of knowing the neuronal circuits which they are underlying throughout auditory processing, specifically, the human language.

Our methodology is based in the use of software as python, deep learning and machine learning, among other, to analyzing date and answer the hypothesis. Auditory Cortex use the date extracted by neuroscientifics as “raw material” to solve research questions.

On the other hand, traditional neurological rehabilitation has focused on mitigating the alterations that produced limitations in daily life. However, the world of technology is advancing very fast and, in fact, there are several technological therapies with Artificial Intelligence (AI) that are helping people to their neurological recovery. For this reason, at Auditory Cortex we believe that this information is very useful to be able to design rehabilitation devices when the patient has lost a skill and it is not possible to recover it.

In summary, Auditory Corte x is looking for being in a tecnological lab of research on auditory cortex to studying this area and offering answer and solutions to the people who they are presenting problems to understand what they are hearing.