

As a child, almost every person started to wonder about how their body actually works. We were asking questions such as how are we able stimulate our bodies into movement just by thinking about it or how are we able to maintain breath without giving it a conscious thought? The sad truth is that we are still not able to fully answer these questions, however scientists are getting closer every day to fulfilling humanity's desire for such knowledge and our studies are aiming to decipher these mysteries on a molecular level. We will conduct experiments that are going to help us understand how the connections between the nerves and muscles, or the so-called neuromuscular junction are formed and maintained. So far we know that these complicated contacts are very dynamic- they undergo significant changes from the day of birth until adulthood. Errors during this development can lead to severe diseases that are very often fatal. Despite of the great effort that scientists around the globe put in order to understand how the changes that occur in neuromuscular junctions, a majority of the identified diseases of the neuromuscular system are still incurable, which is why in this project we decided to focus our interests on this particular aspect of biology.