# DESCRIPTION FOR THE GENERAL PUBLIC

Pain is a normal, physiological experience of every human being. It serves a variety of purposes – steers our attention towards potential threats, tells us that something is wrong with our body, helps in healing wounds. However, strong and prolonged pain causes suffering – a highly unpleasant sensation that significantly lowers our satisfaction and quality of life. Scientists are constantly searching for new, often non-pharmacological ways to treat pain.

One of the most interesting mechanisms of pain relief is the phenomenon of music-induced analgesia (a lowered perception of pain while listening to music). Scientific research aimed to determine the strength of this phenomenon and its probable causes showed mixed results. Some of studies report a significant reduction in pain during music listening, in clinical (after surgery, in cancer, in chronic pain) as well as laboratory (experimentally induced pain while listening to music) contexts. Other studies show no significant effect of music on pain, or the effect that is equal to that of other distracting stimuli (noise, nature sounds, mental arithmetic).

One probable cause of these mixed results may be a problem with finding the right musical pieces. People react differently to different types of music – one song may by pleasant, mellow and put somebody in a good mood, while somebody else may feel just the opposite. The purpose of this project is to study the impact of music preferences on music-induced analgesia. The psychological literature enables us to formulate a hypothesis that preferred music will be better at reducing pain than non-preferred music.

To verify this hypothesis an experimental study will be performed, in which light pain will be induced in healthy volunteers while listening to various types of music. The subjects will rate the intensity of pain, as well as their liking of the music. The musical stimuli will be selected to include a broad spectrum of different genres and styles and different emotional sensations and connotations.

The results of this project may significantly improve our knowledge of the mechanisms of music-induced analgesia. They may also help in determining the kinds of music that are best used as a pain-reliever for a specific person. In future, new ways of non-pharmacological treatment of pain based on music may be developed. This is important, as these methods are safe, cheap and can significantly improve the quality of life of patients suffering from different kinds of pain.