Objective: It is well known that different brainwave frequencies show the synchronies related to different perceptual, motor and cognitive states. Brainwaves have also been shown to synchronize with external stimuli by repetition rates of 10-40 Hz. Based on the human studies concerning brain physiology, it has been demonstrated that brain activities could also synchronize to external stimuli. But this physiology has not been investigated in any animal models yet.

Methods: We performed the analysis of brain waves entrainment to different binaural beat frequencies in rabbit, which are alpha, beta and theta. Rabbit was listened to binaural beat tapes, followed by shaving scalp and placing EEG electrode with paste at frontal and occipital scalp area. During this procedure, we observed that brainwaves had the potential to entrain the desired frequency in rabbit.

Results: According to our findings, the theta binaural stimulation led to increase the theta brainwaves, contrast to beta. In addition, alpha and beta binaural stimulation caused the increases in alpha and beta brain waves, respectively.