

Evaluation of Stimulation Threshold in Nerve Cells by Exposure to Alternative Magnetic Field in *In Vitro*

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International guidelines that aim to protect people from adverse health effect by exposure to magnetic fields (MF) have been established by international organizations such as the International Commission on Non-Ionizing Radiation Protection (ICNIRP) or the Institute of Electrical and Electronic Engineers (IEEE). In the guidelines, one of the target effects below 100 kHz is nerve stimulation based on a few provocation studies. Because of a few studies, the value of basic restriction of the guidelines adopt extrapolation widely such as 45Hz to 400Hz and 7kHz to 100kHz. Therefore, determination of threshold value among extrapolated frequencies is important for verification and improving of the current basic restriction. Here, we report progress of our study to determine threshold value of nerve stimulation by magnetic or electric field in *in vitro*.