1-JS1-3**Joint Symposium****Development of a new in vitro neurotoxicity method using iPS cell technology and international trend**

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The central nervous system is a target organ for environmental toxicants and medicinal drugs. Since the central nervous system is complex and it is difficult to obtain human neuronal cells, establishment of complete neuronal functionality of in vitro cellular models is a great challenge for chemical/drug safety issues. Here we present the framework of iPS cell-based assays regarding neurodevelopmental studies and drug safety assessment toward global standardization. Neurotoxicity can be divided into structural and functional aspects and we have collaborated with OECD developmental neurotoxicity group as well as international consortium HESI (NeuTox subteam) to make new test methods. I would like to show our research activities and discuss future perspectives toward in vitro neurotoxicity method using iPS cell technology.