

### S51-3 Consequences of pentylenetetrazole kindling on psychic function in the mice

○Kenshi TAKECHI<sup>1</sup>, Katsuya SUEMARU<sup>1</sup>, Hiroaki ARAKI<sup>1</sup>

<sup>1</sup>Department of Clinical Pharmacology and Pharmacy, Neuroscience, Ehime University Graduate School of Medicine

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It is well recognized that epilepsy is characterized by recurrent seizures due to excessive discharge of cerebral neurons. In clinical practice, patients with epilepsy are frequently associated with depression and cognitive impairment. However, it remains unclear whether epilepsy is associated with psychic function. Therefore, the present study was undertaken to clarify the effect of kindling with epileptic seizure in psychic function using behavioral pharmacology test. PTZ kindled mice showed cognitive impairment in objective location test, but no significant effect of PTZ kindling was observed in Y-maze test. These findings suggested that PTZ kindled caused the impairment of reference memory, but not of working memory. In the emotional test, PTZ kindled mice showed no significant effect on immobility time of forced swimming test. However, the kindled mice showed antianxiety-like effect in elevated-plus maze test. In summary, our results indicate that PTZ kindling have specific characteristics with psychic function. In this presentation, we would review whether kindling make contribution to neurobehavioral function.