## GS01-5 A novel strategy for developing treatment of obsessive-compulsive disorder

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Obsessive-compulsive disorder (OCD) is a common psychiatry disorder characterized by repetitive thoughts (obsessions) and behaviors to get rid of obsessions (compulsions). There are many types of symptoms, such as endless hand-washing with contamination fears and repetitive checking to see if a door is properly locked. While most patients know that their obsessions are inappropriate, they cannot stop compulsions. These repetitive obsessions and compulsions often require a long time and cause difficulty in daily activities. In Japan, only selective serotonin reuptake inhibitors (SSRIs) are approved for OCD, however, SSRI medication for OCD needs higher dose and longer time compared to those for major depression. Additionally, SSRI are known to be ineffective against several types of symptoms, inasmuch as about 50% of OCD patients showed poor treatment response. Although novel anti-OCD drugs are strongly desired for a long time, it still remains challenging, partly because of the lack of validated animal models. Recent clinical researches revealed that OCD is not an anxiety disorder owing to monoamine deficits, but is a deficit in cognitive and behavioral control caused by abnormal glutamatergic transmissions in several brain regions such as frontal cortex. In this study, we established a novel OCD mouse model, which mimic clinically observed behavioral and neurological symptoms. Using this model, we found a novel candidate therapeutic agent that is more effective than SSRI treatment. In this symposium, we will show the details of the present research and discuss about the probability of novel anti-OCD treatments.