



Oxytocin and more: what we have learned from the developmental disorders of the brain

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Autism spectrum disorders (ASD) is not a sole disorder but a group of disorders, which is characterized by persistent deficits in social communication and social interaction as well as restricted, repetitive patterns of behavior and/or interests. So far, there exist no verified treatments for ASD. Oxytocin has attracted much attention for its potential as a new pharmacological treatment for ASD. Several studies demonstrated that an application of a single-dose of oxytocin nasal spray results in an improvement of the social communication of ASD patient for a while, but whether a continuous oxytocin application has pro-longed therapeutic effects or not remains open. Our Research Center for Child Mental Development at University of Fukui found that such continuous application is effective for a limited group of patients. This observation reinforced the concept that ASD is a mixture of disorders of which etiologies are varied. To elucidate etiologies, we examined the roles of specific molecules, of which functions are likely to be involved in ASD. We then identified novel molecular machinery for modulating neurotransmission in the spine. In my talk, I will also introduce our recent attempts for elucidating the development of neuronal circuits underlying higher brain functions.

Date: **Friday December 11th, 2015**

Time: **4.00pm to 5.00pm**

Venue: **Room C700, Lab 3, OIST Graduate University**