



TARA

Life Science Center of  
Tsukuba Advanced Research Alliance

# TARA Seminar

16:30~18:00, Thu. February 9th, 2017

Seminar room, Building A, TARA Center

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Group Leader

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## Reconstitution of organs and their functional connections for drug screening and testing

Morphology and function of the nervous system are maintained via well-coordinated processes both in central and peripheral nervous tissues, which govern the homeostasis of organs/tissues. We reconstructed the neuronal network in vitro either between neurons of iPSC derived peripheral nervous system (PNS) and central nervous system (CNS), or between PNS neurons and cardiac cells in a morphologically and functionally compartmentalized manner. Compartmentalized culture devices are promising tools for reconstructing network-wide connections between PNS neurons, including sympathetic and parasympathetic neurons, and various internal organs, and might help to build a pivotal drug screening device as well as to understand patient-specific molecular and functional mechanisms under normal and pathological conditions.

Takayama Y, and Kida YS: *PLoS One* (2016)

Kida YS, Kawamura Y *et al.*: *Cell Stem Cell* (2015)

Sugii S, Kida *et al.*: *Nature Protoc.* (2011)

Sugii S, Kida *et al.*: *PNAS* (2010)

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