

# BDR SEMINAR (Kobe/online hybrid)

## Takeshi Imai

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**Thursday, April 14, 2022**

16:00-17:00

1F Auditorium, DB Building C, Kobe / Broadcast online via Zoom

Zoom meeting URL will be announced on the event day by e-mail.

※Non-BDR members: Please register from the following link.

<https://krs1.riken.jp/m/bdrseminarregistration>

## Lateral inhibition signals for synaptic competition

### Summary

In developing brains, neurons initially form excessive connections, but then remodel them to form functional neuronal circuitry. It is known that synaptic competition facilitates synapse elimination to establish specific connectivity, but it remains unknown how a postsynaptic cell eliminates all but one type of synaptic inputs. We study the synaptic competition in the mouse olfactory bulb, where mitral cells initially extend multiple dendrites but prune all but one primary dendrite during development. In this talk, I show that activity-dependent lateral inhibition among dendrites establishes just one dendritic connection in a mitral cell. Lateral inhibition across synapses may be a general strategy for synaptic competition in the developing nervous system.

In this talk, I will also introduce our recent efforts toward large-scale imaging and reconstruction of neuronal circuits with tissue clearing and multicolor imaging.



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**Host: Dan Ohtan Wang**

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