



# CDB SEMINAR

**Speaker:** Mitsuko Watabe - Uchida  
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**Title:** “ A Role for DOCK7, a Novel Activator of Rac,  
in Neuronal Polarization. ”

<b>Date:</b>	<b>Tuesday, August 30</b>
<b>Time:</b>	<b>16:00 - 17:00</b>
<b>Place:</b>	<b>7F Conference Room of Building A,CDB</b>

## **Summary:**

Neurons are one of the most highly polarized cell types in nature. They have specialized structures, dendrites and axons, so as to receive and transmit information, respectively within a complex neuronal circuit. Recently, several molecules important for neuronal polarity formation have been identified. My main focus is to understand how cells integrate those signals and acquire morphological changes in well defined manners.

Rho family GTPases cycle between active and inactive forms and function as molecular switches to regulate signals spatially and timely. They are known to play important roles in many signaling events during development. Recent evidence suggests the involvement of Rho GTPases in the establishment of neuronal polarity. To define the molecular mechanisms by which Rho GTPases integrate signals and mediate their effects on neuronal polarity, we performed yeast two hybrid screens to isolate positive regulators of Rac, a member of Rho GTPases. This resulted in the identification of DOCK7, a member of DOCK180 related family member. We found that DOCK7 is highly expressed in the developing brain. Data will be presented supporting a role for DOCK7 in axon formation during early stages of neuronal polarization of hippocampal neurons.

**Host:** Masatoshi Takeichi <Cell Adhesion/Tissue Patterning, CDB >  
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