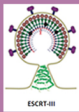




NEKKEN Special Seminar

Mechanisms of enveloped RNA virus budding and cytokinesis

The ESCRT pathway mediates membrane fission in several important biological processes including intraluminal vesicle formation at the multivesicular body (MVB), abscission during cytokinesis, and budding of enveloped viruses from the plasma membrane. In each case, the ESCRT machinery functions from the cytoplasmic face of the bilayer and draws the closing membrane neck toward itself. We have systematically examined the requirements for each of the different human ESCRT proteins in HIV-1 budding, and determined their redundancy and functional importance.



Electron microscope (EM) picture (LEFT) and molecular model (RIGHT) of the HIV-1 budding.

Date: **July 18 Wed, 2012**

Time: 17:30-18:30

Place: Main meeting room (No. 120), NEKKEN 1F

Language: English

Speaker: **Dr. Eiji Morita**

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International Research Center for Infectious Diseases,

Research Institute for Microbial Diseases, Osaka University

Selected Publications

- ◆ Morita, E., Sandrin, V., McCullough, J., Katsuyama, A., Hamilton, IB., Sundquist, WI. ESCRT-III protein requirements for HIV-1 budding. *Cell Host Microbe* 2011, 3:235-42.
- ◆ Morita, E., Colf, LA., Karren, MA., Sandrin, V., Rodesch, CK., Sundquist, WI. Human ESCRT-III and VPS4 proteins are required for centrosome and spindle maintenance. *Proc Natl Acad Sci U S A.* 2010 107(29):12889-94
- ◆ Morita, E., Sandrin, V., Chung, HY., Morham, SG., Gygi, SP., Rodesch, CK. and Sundquist, WI. Human ESCRT and ALIX Proteins Interact with Proteins of the Midbody and Function in Cytokinesis. *EMBO J.* 2007, 26(19):4215-27.
- ◆ Morita, E., Sandrin, V., Alam, SL., Eckert, DM., Gygi, SP., Sundquist, WI. Identification of MVB12 Proteins as Human ESCRT-1 Subunits that Function in HIV Budding. *Cell Host Microbe* 2007, 2(1):19-28
- ◆ Morita, E., Sundquist, WI. Retrovirus budding. *Annu Rev Cell Dev Biol.* 2004 20:395-425.