

Curriculum vitae

Yusuke Hirabayashi Ph.D
Room 1104
Northwest Corner Building
550 W. 120th St.
New York, NY 10027
yh2674@cumc.columbia.edu

Work Experience

November 2013 – Post Doctoral Fellow

Franck Polleux lab, Department of Neuroscience, Columbia University

March 2013 – October 2013 Research Associate

Franck Polleux lab, Department of Cell Biology, The Scripps Research Institute

April 2007 – February 2013 Research Associate

Laboratory of Cell Signaling (Yukiko Gotoh Lab.), Institute of Molecular and Cellular Biosciences, The University of Tokyo

April 2006 - March 2007 Research Fellow

Laboratory of Cell Signaling (Yukiko Gotoh Lab.), Institute of Molecular and Cellular Biosciences, The University of Tokyo

Education

April 2003 - March 2006 Ph. D. student

Graduate School of Frontier Sciences, The University of Tokyo Awarded the degree of Ph.D. (Mar 23, 2006). (Supervisor: Yukiko Gotoh)

Thesis Title: Roles of the canonical Wnt pathway in neocortical neural precursor cells (Hirabayashi et al., Development 2004).

April 2001 - March 2003 M.S. student

Graduate School of Frontier Sciences, The University of Tokyo Awarded the

degree of M.S. (Supervisor: Yukiko Gotoh)

April 1997 - March 2001 Undergraduate student
Faculty of Engineering, University of Tokyo (Tokyo, Japan). Awarded the
degree of B.E. (Supervisor: Takuzo Aida)

Fellowship:

Present support

The Uehara Memorial Foundation

March 2015 – February 2016

Past support

Japan society promotion of science fellowship for research abroad

February 2013 – February 2015

Japan society promotion of science fellowship for Japanese junior scientists,
2003-2006

Grant:

The role of Polycomb group proteins in the spatial allocation of neocortical
functional areas (MEXT)

2011-2013

Analysis of the polycomb mediated regulation of neural stem cell multipotency

2011-2013 (JSPS)

Temporal regulation of cortical neural precursor cell fate by polycomb group
proteins

2009-2011 (MEXT)

The coupling of proliferation and differentiation of neural stem cells by Wnt
signaling

2008-2010 (JSPS)

The analysis of the mechanisms regulating the temporal changes of neurons produced from neural stem cells.

2008-2010 (JSPS)

The mechanism regulating the length of neuronal production

2007-2009 (MEXT)

Teaching experience and responsibilities:

Exercise Class of biology (2007-12), University of Tokyo

Ph.D./Master's Theses Trainees (2007-2013), University of Tokyo

Publications:

Original, Peer Reviewed Articles:

Slowly dividing neural progenitors are an embryonic origin of adult neural stem cells

Shohei Furutachi, Hiroaki Miya, Tomoyuki Watanabe, Hiroki Kawai, Norihiko Yamasaki, Yujin Harada, Itaru Imayoshi, Mark Nelson, Keiichi I Nakayama, Yusuke Hirabayashi and Yukiko Gotoh

Nature Neuroscience 2015, 18 (5), 657–665

Up-regulation of HP1 γ expression during neuronal maturation promotes axonal and dendritic development in mouse embryonic neocortex

Hiroaki Oshiro, Yusuke Hirabayashi, Yasuhide Furuta, Shigeo Okabe and Yukiko Gotoh

Genes to Cells 2015, 20(2), 108-20

The polycomb component Ring1B regulates the timed termination of subcerebral projection neuron production during mouse neocortical development

Nao Morimoto-Suzuki, Yusuke Hirabayashi* (*co-correspondence), Kelsey Tyssowski, Jun Shinga, Miguel Vidal, Haruhiko Koseki, and Yukiko Gotoh*

Development 2014, 141 (22), 4343-4353

Tcf3 Represses Wnt- β -Catenin Signaling and Maintains Neural Stem Cell Population during Neocortical Development

Atsushi Kuwahara , Hiroshi Sakai , Yuanjiang Xu , Yasuhiro Itoh, Yusuke Hirabayashi* (*correspondence), Yukiko Gotoh

PLOS ONE. 2014 9;5:e94408

A noncoding RNA regulates the neurogenin1 gene locus during mouse neocortical development

Masahiro Onoguchi, Yusuke Hirabayashi, Haruhiko Koseki, Yukiko Gotoh

Proc Natl Acad Sci USA. 2012 109(42):16939-44.

HMGA regulates the global chromatin state and neurogenic potential in neocortical precursor cells

Yusuke Kishi, Yuki Fujii, Yusuke Hirabayashi, Yukiko Gotoh

Nature Neuroscience 2012 15 (8):1127-33.

PDK1 regulates the generation of oligodendrocyte precursor cells at an early stage of mouse telencephalic development

Kenji Watatani, Yusuke Hirabayashi, Yasuhiro Itoh, Yukiko Gotoh

Genes Cells. 2012 17 (4):326-35

*Epigenetic control of neural precursor cell fate during development

Yusuke Hirabayashi and Yukiko Gotoh

Nature Reviews Neuroscience 2010, 11 (6) 377-388

Wnt signaling and its downstream target N-Myc regulate basal progenitors in the developing neocortex

Atsushi Kuwahara, Yusuke Hirabayashi*(*co-correspondence), Paul S. Knoepfler, Makoto M. Taketo, Juro Sakai, Tatsuhiko Kodama, and Yukiko Gotoh*

Development 2010, 137 (7), 1035-1044

*Polycomb limits the neurogenic competence of neural precursor cells to promote astrogenic fate transition

Yusuke Hirabayashi, Nao Suzuki, Masafumi Tsuboi, Takaho A Endo, Tetsuro Toyoda, Jun Shinga, Haruhiko Koseki, Miguel Vidal and Yukiko Gotoh

Neuron 2009, 63 (5), 600-13

JNK phosphorylates synaptotagmin-4 and enhances Ca²⁺-evoked release

Yasunori Mori, Maiko Higuchi, Yusuke Hirabayashi, Mitsunori Fukuda. and Yukiko Gotoh

EMBO J. 2008, 27 (1), 76-87

*Stage-dependent fate determination of neural precursor cells in mouse

forebrain

Yusuke Hirabayashi and Yukiko Gotoh

Neuroscience Research 2005, 51 (4) 331-336

*The Wnt-beta-catenin pathway directs neuronal differentiation of cortical neural precursor cells

Yusuke Hirabayashi, Yasuhiro Itoh, Hidenori Tabata, Kazunori Nakajima, Tetsu Akiyama, Norihisa Masuyama and Yukiko Gotoh

Development 2004, 131 (12), 2791-2801

A Supramolecular Oscillator Composed of Carbon Nanocluster C120 and a Rhodium(III) Porphyrin Cyclic Dimer

Kentaro Tashiro, Yusuke Hirabayashi, Takuzo Aida, Kazuhiko Saigo, Koichi Fujiwara, Koichi Komatsu, Shigeru Sakamoto, and Kentaro Yamaguchi

J. Am. Chem. Soc. 2002, 124 (41), 12086–12087.

Cyclic Dimers of Metalloporphyrins as Tunable Hosts for Fullerenes: A Remarkable Effect of Rh(III)

Jian–Yu Zheng, Kentaro Tashiro, Yusuke Hirabayashi, Kazushi Kinbara, Kazuhiko Saigo, Takuzo Aida, Shigeru Sakamoto, and Kentaro Yamaguchi

Angew. Chem. Int. Ed. 2001, 40 (10), 1857–1861