

June 24, 2016

## Curriculum Vitae

**Kumi O. KURODA** (maiden family name: Ozaki)  
Japanese citizen



### Address

Office: Laboratory for Affiliative Social Behavior  
RIKEN Brain Science Institute  
2-1 Hirosawa, Wako-shi, Saitama 351-0198, JAPAN  
E.mail: [oyako@brain.riken.jp](mailto:oyako@brain.riken.jp)  
Website: <http://asb.brain.riken.jp/index.html>

### Research Interest

Neural mechanism of mammalian parent-infant relationship

### Education

B.S. 03/1992, Kyoto University (Japan), Physics (Prof. Fumitaka Satou)  
M.D. 03/1997, Osaka University (Japan), Medicine (Dean: Prof. Tadimitsu Kishimoto)  
Ph.D. 03/2002, Osaka University Graduate School of Medicine (Japan), Biochemistry and Molecular Biology (Prof. Yoshimi Takai)

### Professional Experience

1997-1998 Intern, Dept. Psychiatry, Osaka University Hospital  
1999-2002 Research fellow, the Japan Society for the Promotion of Science  
2002-2004 Postdoctoral fellow, Dept. Neuroscience and psychiatry, McGill University, Canada  
2004-2007 Special Postdoctoral Researcher, RIKEN Brain Science Institute  
2007-2008 Research scientist, Research Team for Molecular Dynamics of Mental Disorder, RIKEN Brain Science Institute (Team Leader: Tadafumi Kato)  
2008-2014 Unit Leader of Kuroda Research Unit for Affiliative Social Behavior, RIKEN Brain Science Institute  
2009-present Visiting Associate professor, Hiroshima University Medical School  
2010-2013 Visiting Associate professor, Waseda University Faculty of Science and Engineering  
2015-present Team Leader of Laboratory for Affiliative Social Behavior, RIKEN Brain Science Institute

### Certification

May 8, 1997 Japanese Medical License Registration (License No. 390085)

### Awards and Honors

1999-2002 Research Fellowship of the Japan Society for the Promotion of Science (DC-1)  
2002-2004 Long-term Fellowship of the Human Frontier Science Program  
2004-2007 Special Postdoctoral Research fellowship, RIKEN Brain Science Institute (2007 final presentation won the first prize in biology field)

2009 Research fund, Uehara Memorial Foundation

**Research Publications (Peer reviewed)**

1. Hirano, H., Tanaka, K., Ozaki, K., Imamura, H., Kohno, H., Hihara, T., Kameyama, T., Hotta, K., Arisawa, M., Watanabe, T., Qadota, H., Ohya, Y. & Takai, Y. ROM7/BEM4 encodes a novel protein that interacts with the Rho1p small GTP-binding protein in *Saccharomyces cerevisiae*. *Mol Cell Biol*, 16, 4396-403. (1996).
2. Ozaki, K., Tanaka, K., Imamura, H., Hihara, T., Kameyama, T., Nonaka, H., Hirano, H., Matsuura, Y. & Takai, Y. Rom1p and Rom2p are GDP/GTP exchange proteins (GEPs) for the Rho1p small GTP binding protein in *Saccharomyces cerevisiae*. *EMBO J*, 15, 2196-207. (1996).
3. Kamei, T., Tanaka, K., Hihara, T., Umikawa, M., Imamura, H., Kikyo, M., Ozaki, K. & Takai, Y. Interaction of Bnr1p with a novel Src homology 3 domain-containing Hof1p. Implication in cytokinesis in *Saccharomyces cerevisiae*. *J Biol Chem*, 273, 28341-5. (1998).
4. Kikyo, M., Tanaka, K., Kamei, T., Ozaki, K., Fujiwara, T., Inoue, E., Takita, Y., Ohya, Y. & Takai, Y. An FH domain-containing Bnr1p is a multifunctional protein interacting with a variety of cytoskeletal proteins in *Saccharomyces cerevisiae*. *Oncogene*, 18, 7046-54. (1999).
5. Tachibana, K., Nakanishi, H., Mandai, K., Ozaki, K., Ikeda, W., Yamamoto, Y., Nagafuchi, A., Tsukita, S. & Takai, Y. Two cell adhesion molecules, nectin and cadherin, interact through their cytoplasmic domain-associated proteins. *J Cell Biol*, 150, 1161-76. (2000).
6. Ozaki-Kuroda, K., Yamamoto, Y., Nohara, H., Kinoshita, M., Fujiwara, T., Irie, K. & Takai, Y. Dynamic localization and function of Bni1p at the sites of directed growth in *Saccharomyces cerevisiae*. *Mol Cell Biol*, 21, 827-39. (2001).
7. Mizoguchi, A., Nakanishi, H., Kimura, K., Matsubara, K., Ozaki-Kuroda, K., Katata, T., Honda, T., Kiyohara, Y., Heo, K., Higashi, M., Tsutsumi, T., Sonoda, S., Ide, C. & Takai, Y. Nectin: an adhesion molecule involved in formation of synapses. *J Cell Biol*, 156, 555-65. (2002).
8. Ozaki-Kuroda, K., Nakanishi, H., Ohta, H., Tanaka, H., Kurihara, H., Mueller, S., Irie, K., Ikeda, W., Sakai, T., Wimmer, E., Nishimune, Y. & Takai, Y. Nectin couples cell-cell adhesion and the actin scaffold at heterotypic testicular junctions. *Curr Biol*, 12, 1145-50. (2002).
9. Honda, T., Shimizu, K., Kawakatsu, T., Yasumi, M., Shingai, T., Fukuhara, A., Ozaki-Kuroda, K., Irie, K., Nakanishi, H. & Takai, Y. Antagonistic and agonistic effects of an extracellular fragment of nectin on formation of E-cadherin-based cell-cell adhesion. *Genes Cells*, 8, 51-63. (2003).

10. Okabe, N., Ozaki-Kuroda, K., Nakanishi, H., Shimizu, K., Takai, Y., Honda, T., Kawakatsu, T., Yasumi, M., Shingai, T., Fukuhara, A. & Irie, K. Expression patterns of nectins and afadin during epithelial remodeling in the mouse embryo. *Dev Dyn*, 230, 174-86 (2004).
11. Okabe, N., Shimizu, K., Ozaki-Kuroda, K., Nakanishi, H., Morimoto, K., Takeuchi, M., Katsumaru, H., Murakami, F. & Takai, Y. Contacts between the commissural axons and the floor plate cells are mediated by nectins. *Dev Biol*, 273, 244-56 (2004).
12. Kuroda K.O., Meaney M.J., Uetani N., Fortin Y., Ponton A., Kato T. ERK-FosB signaling in dorsal MPOA neurons plays a major role in the initiation of parental behavior in mice. *Mol Cell Neurosci*, 36:121-131. (2007)
13. Ozaki T., Ozaki S. and Kuroda, K. Premolar and additional first molar extraction effects on soft tissue. Effects on high Angle Class II division 1 patients. *Angle Orthod*, 77, 244-53. (2007)
14. Kuroda K.O., Meaney M.J., Uetani N., Kato T. Neurobehavioral basis of the impaired nurturing in mice lacking the immediate early gene *FosB*. *Brain Res*, 1211, 57-71. (2008)
15. Kuroda K.O., Ornthanalai V.G., Kato T. and Murphy N.P. FosB null mutant mice display enhanced methamphetamine neurotoxicity, decreased brain serine content and reduced intracellular feedback regulators. *Neuropsychopharmacology*, 35, 641-655. (2010)
16. Tsuneoka Y., Maruyama T., Yoshida S., Nishimori K., Kato T., Numan M., and Kuroda K.O. Functional, anatomical, and neurochemical differentiation of medial preoptic area subregions in relation to maternal behavior in the mouse. *J Comp Neurol*, 521, 1633-63. (2013) (e-pub ahead: 2012)
17. Tachikawa K.S., Yoshihara Y., and Kuroda K.O. Behavioral transition from attack to parenting in male mice: a crucial role of the vomeronasal system. *J Neurosci*, 33, 5120-6. (2013)
18. Esposito G.\*, Yoshida S.\*, Ohnishi R., Tsuneoka Y., Rostagno M.C., Yokota S., Okabe S., Kamiya K., Hoshino M., Shimizu M., Venuti P., Kikusui T., and Kato T. and Kuroda K.O. Infant calming responses during maternal carrying in humans and mice. *Curr Biol*, 23, 739-745. \*Equal contribution. (2013)
19. Yoshida S., Esposito G., Ohnishi R., Tsuneoka Y., Okabe S., Kikusui T., Kato T., and Kuroda K.O. Transport Response is a filial-specific behavioral response to maternal carrying in C57BL/6 mice. *Front Zool*, 10:#50 (2013)
20. Tsuneoka Y, Tokita K, Yoshihara C, Amano T, Esposito G, Huang AJ, Yu LM, Odaka Y, Shinozuka K, McHugh TJ, Kuroda KO "Distinct preoptic-BST nuclei dissociate paternal and infanticidal behavior in mice.", *EMBO Journal*, 34(21),

2652-70 (2015)

**Review Articles in English (Peer reviewed)**

1. Cameron, N.M., Champagne, F.A., Parent, C., Fish, E.W., Ozaki-Kuroda, K. & Meaney, M.J. The programming of individual differences in defensive responses and reproductive strategies in the rat through variations in maternal care. *Neurosci Biobehav Rev*, 29, 843-65 (2005).
2. Kuroda K.O., Neurobiological basis of parent-infant relationship. Preface. *Prog Neuropsychopharmacol Biol Psychiatry*, 35(5), 1165-6 (2011)
3. Kuroda K.O., Tachikawa K., Yoshida S., Tsuneoka Y., and Numan M. Neuromolecular basis of parental behavior in laboratory mice and rats: with special emphasis on technical issues of using mouse genetics., *Prog Neuropsychopharmacol Biol Psychiatry*, 35, 1205-31 (2011)
4. Esposito G., Yoshida S., Venuti P., and Kuroda K.O. Three lessons from Philip Teitelbaum and their application to studies of motor development in humans and mice. *Behav Brain Res*, 231, 366-70 (2012)
5. Kuroda K.O., and Numan M. The medial preoptic area and the regulation of parental behavior., *Neurosci Bulletin*, 30(5), 863-5 (2014)

**Book Chapters in English (Peer reviewed)**

1. Kuroda, K.O. and Tsuneoka Y., Assessing postpartum maternal care, alloparental behavior, and infanticide in mice: with notes on chemosensory influences. *Methods Mol Biol*, 1068, 331-47 (2013)

**Review Articles and Book Chapters in Japanese**

- 1 尾崎公美 & 高井義美. in *実験医学増刊* Vol. 17 1715-1721 (羊土社, 1999).
- 2 黒田 (尾崎) 公美, 的崎尚 & 高井義美. in *シグナル伝達* Vol. 9 シリーズ・バイオサイエンスの新世紀 (共立出版, 2002).
- 3 黒田公美. 母子関係が児の精神発達に与える影響. *臨床精神医学* **33**, 1423-1431 (2004).
- 4 黒田公美. 母性行動の神経生物学的基盤. *分子精神医学* **4**, 296-301 (2004).
- 5 黒田公美. 養育と乳幼児の発達: ジェンダー学との関連. *学術の動向* **11**, 32-33 (2006).
- 6 黒田公美. 養育行動とその異常の分子機構. *実験医学増刊* **25**, 199-204 (2007).
- 7 黒田公美. 養育行動とその異常. *生体の科学* **59**, 482-483 (2008).

- 8 黒田公美. 哺乳類養育行動とその異常のメカニズム. *精神医学* **50**, 387-392 (2008).
- 9 黒田公美. in *学術会議叢書 14 : 性差とは何か* Vol. 14 *学術会議叢書* (ed 日本学術会議事務局) 181-198 (日本学術協力財団, 2008).
- 10 黒田公美. 視床下部一視策前野複合体. *分子精神医学* **9**, 54-59 (2009).
- 11 大西竜子, 恒岡洋右 & 黒田公美. マウスの養育 (子育て) 行動とその異常: スクリーニングのためのプロトコル. *実験医学増刊* **30**, 2012-2111 (2012).
- 12 黒田公美. 哺乳類子育て (養育) 行動の神経基盤. *化学と生物* **51**, 746-753 (2013).
- 13 黒田公美, 吉田さちね & Esposito, G. 親に対する子の愛着の脳神経基盤. *分子精神医学* **13**, 278-286 (2013).
- 14 黒田公美. 父性愛と母性愛. *生体の科学* **66(1)**, 58-65 (2015)
- 15 吉田さちね & 黒田公美. 親に運ばれるときに子が示す協調的反応「輸送反応」の意義と神経機構. *心身医学* **55(8)**, 958-966 (2015)

#### Invited talks in English

1. Kuroda, K. O. (Oct 24, 2008). *Neurological and behavioral analyses of the nurturing-deficient FosB null mutant mice*. The Strategies to Reduce Risks on the Brain Development Contingent to Urbanization (JSPS bilateral research exchange program), Tsukuba, Japan.
2. Kuroda, K. O. (Oct 15, 2009). *Parent-infant relationship*. The 1st meeting of BSI-ICM cooperative program Paris, France.
3. Kuroda, K. O. (Sep 30, 2012). *Filial response to maternal carrying: implication for developmental disorders*. The Joint symposium of 11th Biennial Asian-Pacific society for neurochemistry, 55th annual meeting of Japanese society for neurochemistry and 34th annual meeting of Japanese Society for Biological Psychiatry Kobe, Japan.
4. Kuroda, K. O., Tsuneoka, Y., & Tachikawa, K. (Aug 28, 2012). *Behavioral choice between parenting or infanticide and the underlying neural mechanism in mice*. The 14th International Congress of Histochemistry and Cytochemistry, Kyoto, Japan.
5. Kuroda, K. O., Tsuneoka, Y., & Tachikawa, K. (Sep 30, 2012). *Neural mechanism of the behavioral choice between parenting and infanticide in mice*. The 2012 Cold Spring Harbor Conferences Asia, "Neural Circuit Basis of Behavior and its Disorders", Suzhou, China.

#### Selected invited talks in Japanese

1. 黒田公美. (Jan 10, 2008). *親子関係の分子神経基盤*. 脳と心のメカニズム 第8回冬のワークショップ「社会行動の脳機構」, 北海道.
2. 黒田公美. (Nov12, 2009). *親子の絆を支える脳内メカニズム～子育ての*

- 神経機構研究とその背景～. 第 182 回生命科学フォーラム, 東京.
3. 黒田公美. (Dec 4, 2010). 哺乳類子育て行動の脳内基盤. 日本学術会議第四回合同シンポジウム「脳と教育」, 東京.
  4. 黒田公美. (Dec 4, 2010). 養育と子育て: 親子関係を支える行動の脳内メカニズム. 独立行政法人理化学研究所 2012 年度科学講演会, 東京.
  5. 黒田公美. (Dec 6, 2013). 親と子～絆はどのように育まれるのか～. 第 36 回日本分子生物学会 公開シンポジウム「生命世界を問う」, 神戸.
  6. 黒田公美. (Sep 11, 2013). 親子関係をはぐくむ脳の働き～子育てと愛着の相互作用～. Paper presented at the 第 21 回「脳の世紀」シンポジウム, 東京.