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Publications:

1. Imamura, K., Morii, K., Nakadate, K., Yamada, T., Mataga, N., Watanabe, Y., and Mori, N.,
Brain-derived neurotrophic factor enhances expression of superior cervical ganglia clone 10 in lateral geniculate nucleus and visual cortex of developing kittens,
Eur. J. Neurosci., 23, 637-648, 2006.

2. Mataga, N., and Hensch, T.K.,
Serine proteases and neuronal plasticity in vivo, "Proteases in the Brain" (Proteases in Biology and Disease, volume 3), pp271-301, U. Lendeckel and N. Hooper, eds. (New York: Springer), 2005.
3. Mataga, N., Mizuguchi, Y., and Hensch, T.K.,
Experience-dependent pruning of dendritic spines in visual cortex by tissue plasminogen activator,
Neuron, 44, 1031-1041, 2004.
4. Mataga, N., Nagai, N., and Hensch, T.K.,
Permissive proteolytic activity for visual cortical plasticity,
Proceedings of the National Academy of Sciences, U.S.A., 99, 7717-7721, 2002.
5. Mataga, N., Fujishima, S., Condie, B.G., and Hensch, T.K.,
Experience-dependent plasticity of mouse visual cortex in the absence of the neuronal activity-dependent marker egr1/zif268,
J Neurosci., 21, 9724-9732, 2001.
6. Takazawa, Y., Nifuji, A., Mataga, N., Yamaguchi, Y., Kurosawa, H., and Noda, M.,
Articular cartilage cells immortalized by a temperature sensitive mutant of SV40 large T antigen serve and form cartilage tissue in articular cartilage environment,
J Cellular Biochemistry, 75, 338-345, 1999.
7. Hada, Y., Yamada, Y., Imamura, K., Mataga, N., Watanabe, Y., and Yamamoto, M.,
Effect of monocular enucleation on parvalbumin in rat visual system during postnatal development,
Investigative Ophthalmology & Visual Science, 40, 2535-2545, 1999.
8. Yamada, Y., Hada, Y., Imamura, K., Mataga, N., Watanabe, Y., and Yamamoto, M.,
Differential expression of immediate-early genes, c-fos and zif 268 in the visual cortex of young rats: effects of a noradrenergic neurotoxin on their expression,
Neuroscience, 92, 473-484, 1999.
9. Hensch, T.K., Fagiolini, M., Mataga, N., Stryker, M.P., Baekkeskov, S.,
and Kash, S.F.,
Local GABA circuit control of experience-dependent plasticity in developing visual cortex,
Science, 282, 1504-1508, 1998.
10. Kawauchi, T., Nifuji, A., Mataga, N., Olson, E.N., Bonaventure, J., Shinomiya, K. Liu, Y.,
and Noda, M.,

- Fibroblast growth factor down-regulates expression of a basic helix-loop-helix-type transcription factor, scleraxis, in a chondrocyte-like cell line, TC6, J. Cell Biochem., 70, 468-477, 1998.
11. Kasamatsu, T., Imamura, K., Mataga, N., Hartveit, E., Heggelund, U., and Heggelund, P., Roles of N-methyl-D-aspartate receptors in ocular dominance plasticity in developing visual cortex: re-evaluation, Neuroscience, 82(3) 687-700, 1998.
 12. Fukamauchi, F., Wang, Y-J., Mataga, N., and Kusakabe, M., Paradoxical behavioral response to apomorphine in tenascin-gene knockout mouse, Eur. J. Pharmacol., 338, p7-10, 1997.
 13. Fukamauchi, F., Wang, Y-J., Mataga, N., and Kusakabe, M., Effects of cholecystokinin-B receptor antagonist on dopamine system in tenascin mutant mice, NeuroReport, 8, 3919-1922, 1997.
 14. Fukamauchi, F., Mataga, N., Wang, Y-J., Sato, S., Yoshiki, A., and Kusakabe, M., Tyrosine hydroxylase activity and its mRNA level in dopaminergic neurons of tenascin gene knockout mouse, BBRC, 231, 356-359, 1997.
 15. Mataga, N., Imamura, K., Shiomitsu, T., Yoshimura, Y., Fukamauchi, F., and Watanabe, Y., Enhancement of mRNA expression of tissue-type plasminogen activator by L-threo-3,4-dihydroxyphenylserine in association with ocular dominance plasticity, Neurosci. Lett., 218, 149-152, 1996.
 16. Semba, J., Sakai, M., Miyoshi, R., Mataga, N., Fukamauchi, F., and Kito, S., Differential expression of c-fos mRNA in rat prefrontal cortex, striatum, N. accumbens and lateral septum after typical and atypical antipsychotics: An in situ hybridization study, Neurochem. Int., 29(4) 435-442, 1996.
 17. Mataga, N., Tamura, M., Yanai, N., Shinomura, T., Kimata, K., Obinata, M., and Noda, M., Establishment of a novel chondrocyte like cell line derived from transgenic mice harboring temperature sensitive simian virus 40 Large T antigen gene, J. Bone Mineral Res., 11(11), 1646-1654, 1996.

18. Fukumauchi, F., Mataga, N., Wang, Y-J., and Chuang D-M.,
Differential effects of butyrate and dibutyryl cAMP on mRNA levels of muscarinic acetylcholine receptor subtypes expressed in neurohybrid cell lines,
Neurosci. Lett., 212, 49-52, 1996.
19. Fukumauchi, F., Mataga, N., Wang, Y-J., Sato, S., Yoshiki, A., and Kusakabe, M.,
Abnormal behaviors and neurotransmissions of tenascin gene knockout mice,
BBRC, 221, 151-156, 1996.
20. Onoe, H., Inoue, O., Suzuki, K., Tsukada, H., Itoh, T., Mataga, N., and Watanabe, Y.,
Ketamine increases the striatal N-[¹¹C] methylspiperone binding in vivo: Positron emission tomography study using conscious rhesus monkey,
Brain Res., 663, 191-198, 1994.
21. Osborne, P.G., Mataga, N., Onoe, H., and Watanabe, Y.,
Behavioral activation by stimulation of a GABAergic mechanism in the preoptic area of rat,
Neurosci. Lett., 158,201-204, 1993.
22. Imamura, K., Mataga, N., and Watanabe, Y.,
Gliotoxin-induced suppression of ocular dominance plasticity in kitten visual cortex,
Neurosci. Res., 16, 117-124, 1993.
23. Mataga, N., Imamura, K., and Watanabe, Y.,
L-threo-Dihydroxyphenylserine enhanced ocular dominance plasticity in adult cats,
Neurosci. Lett., 142,115-118, 1992.
24. Imamura, K., Mataga, N., and Mori, K.,
Coding of odor molecules by mitral/tufted cells in rabbit olfactory bulb. I. Aliphatic compounds,
J. Neurophysiol., 68(6), 1986-2002, 1992.
25. Motohashi, N., Takashima, M., Mataga, N., Nishikawa, T., Ogawa, A., Watanabe, S., and Toru, M.,
Effects of sulpiride and oxypertine on the dopaminergic system in the rat striatum,
Pharmacopsychiatry, 25, 29-33, 1992.
26. Mori, K., Mataga, N., and Imamura, K.,
Differential specificities of single mitral cells in rabbit olfactory bulb for a homologous series of fatty acid odor molecules,
J. Neurophysiol., 67(3), 786-789, 1992.

27. Mataga, N., Imamura, K., and Watanabe, Y.,
6R-tetrahydrobiopterin perfusion enhances dopamine, serotonin, and glutamate outputs
in dialysate from rat striatum and frontal cortex,
Brain Res., 551(1/2), 64-71, 1991.
28. Mataga, N., Hayashi, T., Naruse, H., and Iida, Y.,
Sensitive determination of kynurenine in human plasma by gas chromatography-negative
ion chemical ionization mass spectrometry,
Mass spectroscopy, 36(3), 99-105, 1988.
29. Mitsushio, H., Takashima, M., Mataga, N., and Toru, M.,
Effects of chronic with trihexyphenidyl and carbamazepine alone or in combination with
haloperidol on substance P in affective disorders,
J. Pharmacol. Exp. Ther., 245(3), 982-989, 1988.
30. Toru, M., Watanabe, S., Shibuya, H., Nishikawa, T., Noda, K., Mitsushio, H., Ichikawa,
H., Kurumazi, A., Takashima, M., Mataga, N., and Ogawa, A.,
Neurotransmitters, receptors, and neuropeptides in post-mortem brains of chronic
schizophrenic patients,
Acta Psychiatr. Scand., 78, 121-137, 1988.
31. Shono, S., Mataga, N., and Toda, K.,
The two dimensional peptide mappings of the nail low sulfur S-carboxy-methyl keratin,
J. Dermatology, 14(5), 419-426, 1987.
32. Semba, J., Toru, M., and Mataga, N.,
Twenty-four-hour rhythms of norepinephrine and serotonin in N.
supra-chiasmaticus, raphe nuclei and locus coeruleus in the rat,
Sleep, 7(3), 211-218, 1984.