

## システム情動科学講座

## System Emotional Science

教授	西条 寿夫	Hisao Nishijo
准教授	堀 悦郎	Etsuro Hori
助教	松本 惇平	Junpei Matsumoto
助教	Mariana Ferreira Pereira De Araujo	

## ◆ 著 書

- 1) 西条寿夫, 竹内幹伸, 小野武年 : EEG と NIRS の同時計測. 「NIRS-基礎と臨床-」酒谷 薫監修, 岡田英史, 星 祥子, 宮井一郎, 渡辺英寿編, 90-96, 新興医学出版社, 東京, 2012.

## ◆ 原 著

- 1) Matsumoto J., Urakawa S., Hori E., Mariana F.P.A., Sakuma Y., Ono T., and Nishijo H. : Neuronal responses in the nucleus accumbens shell during sexual behavior in male rats. *J. Neurosci.*, 32: 1672-1686, 2012.
- 2) De Araujo M.F.P., Hori E., Maior R.S., Tomaz C., Ono T., and Nishijo H. : Neuronal activity of the anterior cingulate cortex during an observation-based decision making task in monkeys. *Behav. Brain Res.*, 230: 48-61, 2012.
- 3) Hori E., Shojaku H., Watanabe N., Kawasaki Y., Suzuki M., de Araujo M.F.P., Nagashima Y., Yada Y., Ono T., and Nishijo H. : Effects of direct cedrol inhalation into the lower airway on brain hemodynamics in totally laryngectomized subjects. *Auton. Neurosci.*, 168: 88-92, 2012.
- 4) Ono K., Li L., Takamura Y., Yoshiike Y., Zhu L., Han F., Mao X., Ikeda T., Takasaki J. I., Nishijo H., Takashima A., Teplow D. B., Zagorski M. G., and Yamada M. : Phenolic compounds prevent amyloid  $\beta$ -protein oligomerization and synaptic dysfunction by site-specific binding. *J. Biol. Chem.*, 287: 14631-14643, 2012.
- 5) Shioda N., Moriguchi S., Oya T., Ishii T., Shen J., Matsushima T., Nishijo H., Sasahara M., and Fukunaga K. : Aberrant hippocampal spine morphology and impaired memory formation in neuronal platelet-derived growth factor  $\beta$ -receptor lacking mice. *Hippocampus*, 22: 1371-1378, 2012.
- 6) Nishijo M., Tai P. T., Nakagawa H., Maruzeni S., Anh N. T. N., Luong H. V., Anh T. H., Honda R., Morikawa Y., Kido T., and Nishijo H. : Impact of perinatal dioxin exposure on infant growth: a cross-sectional and longitudinal studies in dioxin-contaminated areas in Vietnam. *PLoS One*, 7: e40273, 2012.
- 7) Mata J. R., Mata F. R., Souza M. C. R., Nishijo H., and Aversi Ferreira T. A. : Arrangement and prevalence of branches in the external carotid artery in humans. *Ital. J. Anat. Embryol.*, 117: 65-74, 2012.
- 8) Aversi-Ferreira T. A., Aversi-Ferreira R. A. G. M., Nascimento G. N. L., Araújo M. F. P., Ribeiro P. P., Silva N. C., Brandão L. D., Gratão L. H. A., Abreu T., Pfrimer G., Vieira V. S., Soares N. P., Hori E., and Nishijo H. : Teaching embryology using models construction in practical classes. *Int. J. Morphol.*, 30: 188-195, 2012.
- 9) Pfrimer G., Abreu T., Vieira V. S., Soares N. P., Aversi-Ferreira R. A. G. M., Gratão L. H. A., Nascimento G. N. L., Nishijo H., Aversi-Ferreira T. A. : Historic and teaching aspects of the anatomy and the Cebus genus role in contemporary anatomy. *Int. J. Morphol.*, 30: 607-612, 2012.
- 10) Nascimento G. N. L., Valadares M. C., Nishijo H., and Aversi-Ferreira T. A. : Investigation of the toxic potential of crude ethanol extract of *Annona coriacea* (araticum) seeds in acute exposed mice. *Brazilian Journal of Pharmacognosy*, 22: 580-586, 2012.
- 11) Santos C. C. S., Silva R., Bergamaschi E. M. M., Bergamaschi P. R., Neres A. C., Leitao V. O., Nishijo H., and Aversi-Ferreira T. A. : A critical analysis on waste and environmental education: a case study. *Educ. Res.*, 3: 851-859, 2012.
- 12) Abreu T., Pfrimer G. A., Aversi-Ferreira R. A. G. M. F., Brandão L. D., Ribeiro P. P., Nishijo H., and Aversi-Ferreira T. A. : Comparative anatomical study of leg's nerve of *Cebus libidinosus* (Rylands et al., 2000) with baboons, chimpanzees and modern humans. *Pesq. Vet. Bras.* 32(Suppl.1): 113-117, 2012.
- 13) Uematsu A., Matsui M., Tanaka C., Umeno K., Takahashi T., Suzuki M., and Nishijo H. : Developmental

trajectories of amygdala and hippocampus from infancy to early adulthood in healthy individuals. PLoS One, 7: e46970, 2012.

- 14) Tai P. T., Nishijo M., Nakagawa H., Maruzeni S., Anh N. T. N., Luong H. V., Anh T. H., Morikawa Y., Kido T., and Nishijo H. : Dioxin exposure and infant neurodevelopment – a follow up study in Vietnamese infants. Organohalogen Compounds, 74: 1369-1372, 2012.
- 15) Nishijo M., Tai P. T., Nui N. M., Anh N. T. N., Hai N. M., Maruzeni S., Nghi T. N., Phuong P. T., Nishijo H., Anh T. H., Luong H. V., Kido T., Okamoto R., Son L. K., Nakagawa H. : Effects of dioxins exposure on social emotional behavior of children living in a hot spot area, Vietnam. Organohalogen Compounds, 74: 1332-1335, 2012.
- 16) 四十竹美千代, 堀 悦郎, 八塚美樹, 矢田幸博, 永嶋義直, 小野武年, 西条寿夫 : 天然匂い物質“セドロール”の生理学的作用とアロマセラピーへの応用. The Journal of Nursing Investigation, 10: 56-63, 2012.
- 17) 四十竹美千代, 堀 悦郎, 八塚美樹, 小野寺孝一, 浜出絵理子, 横井秀輔, 小野武年, 西条寿夫 : 前腕の皮膚水分喪失量 (TEWL) 簡易計測パッチによる全身発汗量の推定. 看護研究, 45: 80-85, 2012.
- 18) 四十竹美千代, 安井 宏, 堀 悦郎, 八塚美樹, 笠島 茂, 小野武年, 西条寿夫 : 温熱環境の睡眠および自律神経活動に及ぼす影響. 富山大学看護学会誌, 11: 19-28, 2012.

#### ◆ 総 説

- 1) 西条寿夫, 小野武年 : 食べ物のおいしさを引き出すうま味とコクを考える. 日本味と匂学会誌, 19: 215-222, 2012.

#### ◆ 学会報告

- 1) Anh N. T. N., Tai P. T., Nishijo M., Nakagawa H., Maruzeni S., Anh T. H., Luong H. V., Phan T. P., Le T. M. N., Ton T. T., Tran V. N., and Nishijo H. : The effects of dioxin on infant growth in dioxin contaminated areas in Danang City – Dioxin Hot Spot in Vietnam. 第 22 回日本疫学会学術総会, 2012, 1, 26-28, 東京.
- 2) Tai P. T., Nishijo M., Kido T., Nakagawa H., Maruzeni S., Naganuma R., Nguyen T. N. A., Morikawa Y., Luong H. V., Anh T. H., Nguyen N. H., Le K. S., Tawara K., and Nishijo H. : Dioxin concentrations in breast milk of Vietnamese nursing mothers: A survey four decades after the herbicide spraying. 第 22 回日本疫学会学術総会, 2012, 1, 26-28, 東京.
- 3) Numano T., Hata J., Muzuhara K., Takamoto K., Katagiri H., Washio T., Nishijo H., Yagi K., and Homma K. : Measurement of thigh muscle stiffness by using simple method of magnetic resonance elastography. European Congress of Radiology (ECR), 2012, 3, 1-5, Austria.
- 4) Nguyen T. N. A., Nishijo M., Hori E., Nguyen M. N., Tai P. T., Nakagawa H., and Nishijo H. : Effects of maternal exposure to TCDD on social behaviour of rat offspring. 第 82 回日本衛生学会学術総会, 2012, 3, 24-26, 京都.
- 5) 浦川 将, 高本考一, 堀 悦郎, 酒井重数, 松井 輝, 田口 徹, 水村和枝, 小野武年, 西条寿夫 : 徒手療法刺激は, ラット腓腹筋の伸張性収縮による筋機械痛覚過敏を緩和する. 第 89 回日本生理学会大会, 2012, 3, 29-31, 松本.
- 6) 高村雄策, 寺澤彩乃, 中村友也, 堀 悦郎, 小野武年, 西条寿夫 : サル初代培養神経細胞を用いたアッセイ系の開発: 酸化ストレスに対する T-817MA の神経保護作用の検討. 第 89 回日本生理学会大会, 2012, 3, 29-31, 松本.
- 7) 浦川 将, 高本考一, 堀 悦郎, 酒井重数, 小野武年, 西条寿夫 : 豊かな環境刺激がもたらす扁桃体抑制性ニューロンの変化と情動行動. 第 2 回日本基礎理学療法学会学術大会, 2012, 5, 24, 神戸.
- 8) Nishijo H., Matsumoto J., Davaasuren M., Hori E., Uwano T., Kondo T., and Ono T. : Multiple effects of umami compounds in the forebrain. The 16th meeting of ISOT, 2012, 6, 24, Stockholm. (Invited lecture)
- 9) 西条寿夫, Bretas V. R., 堀 悦郎, Jargalsaikhan U., 小野武年, 近藤高史 : サルにおけるかつおだし摂取体験と嗜好性変化. だしのおいしさと健康機能～ここまでわかった, かつおだしの秘密～, 2012, 8, 24, 京都.
- 10) 堀 悦郎, Jargalsaikhan U., 近藤高史, 小野武年, 西条寿夫 : かつおだし摂取による情動/社会行動の改善. だしのおいしさと健康機能～ここまでわかった, かつおだしの秘密～, 2012, 8, 24, 京都.
- 11) Nshijo M., Tai P. T., Nui N. M., Anh N. T. N., Hai N. M., Maruzeni S., Nghi T. N., Phuong P. T., Nishijo H., Anh T. H., Luong H. V., Kido T., Okamoto R., Son L. K., and Nakagawa H. : Effecte of dioxins exposure on social emotional behavior of children living in a hot spot area, Vietnam. Dioxin 2012, 2012, 8, 25 -9, 1, Australia.

- 12) Tai P.T., Nishijo M., Nakagawa H., Maruzeni S., Anh N.T.N., Luong H.V., Anh T.H., Morikawa Y., Kido T., and Nishijo H. : Dioxin exposure and infant neurodevelopment - a follow up study in Vietnamese infants. 32nd International Symposium on Halogenated Persistent Organic Pollutants. Dioxin 2012, 2012, 8, 25 -9, 1, Australia.
- 13) Nakamura T., Phuong T.H.N., Hori E., Urakawa S., Uwano T., Hamashima T., Ishii Y., Matsushima T., Ono T., Sasahara M., Nishijo H. : T-817MA, a novel neurotoxic agent ameliorate behavior and gamma oscillation of PDGFR- $\beta$  KO mice that displayed schizophrenia- and autism-like symptoms. The 35<sup>th</sup> Annual Meeting of the Japan Neuroscience Society, 2012, 9, 18-21, Nagoya.
- 14) Matsumoto J., Urakawa S., Hori E., Mariana F.P.A., Sakuma Y., Ono T., and Nishijo H. : Nucleus accumbens shell neuronal responses and their relationships with neural subtypes during sexual behavior in male rats. The 35<sup>th</sup> Annual Meeting of the Japan Neuroscience Society, 2012, 9, 18-21, Nagoya.
- 15) Davaasuren M., Matsumoto J., Hori E., Kondoh T., Kitamura A., Matsumoto H., Torii K., and Ono T. : Neuronal responses to intragastric administration of amino acids in the rat amygdala and lateral hypothalamic area. The 35<sup>th</sup> Annual Meeting of the Japan Neuroscience Society, 2012, 9, 18-21, Nagoya.
- 16) Nguyen M.N., Hori E., Matsumoto J., Anh H.T., Ono T., and Nishijo H. : Monkey pulvinar neuronal responses to face-like and facial stimuli. The 35<sup>th</sup> Annual Meeting of the Japan Neuroscience Society, 2012, 9, 18-21, Nagoya.
- 17) Yasumoto F., Takamura Y., Nishijo H., and Negishi T. : The morphological analysis of primary cultured monkey cortical interneurons. 第 55 回日本神経化学会大会, 2012, 9, 30 -10, 2, 神戸.
- 18) 堀 悦郎, Bretas V.R, Jargalsaikhan U., 近藤高史, 小野武年, 西条寿夫 : サルにおけるかつおだしに対する摂取経験依存性の嗜好性. 日本味と匂学会第 46 回大会, 2012, 10, 3-5, 大阪.
- 19) Jargalsaikhan U., 堀 悦郎, 近藤高史, 小野武年, 西条寿夫 : マウスの情動行動に対するかつおだし摂取の効果. 日本味と匂学会第 46 回大会, 2012, 10, 3-5, 大阪.
- 20) Urakawa S., Takamoto K., Hori E., Sakai N., Ishikawa A., Ono T., and Nishijo H. : Eye contact-dependent hemodynamic responses in the prefrontal pole of infants: A near-infrared spectroscopic study. Neuroscience 2012, 2012, 10, 13-17, New Orleans.
- 21) Matsumoto J., Urakawa S., Hori E., Mariana F.P.A., Sakuma Y., Ono T., and Nishijo H. : Sexual behavior-related neuronal responses in the nucleus accumbens shell of male rats. Neuroscience 2012, 2012, 10, 13-17, New Orleans.
- 22) Le V.Q., Hori E., Nguyen M.N., Ono T., and Nishijo H. : Neuronal responses to dangerous stimuli in the monkey pulvinar. 第 59 回中部日本生理学会, 2012, 11, 16-17, 岡崎.
- 23) Jargalsaikhan U., 堀 悦郎, 近藤高史, 小野武年, 西条寿夫 : 情動行動に及ぼすかつおだし摂取の影響. 第 59 回中部日本生理学会, 2012, 11, 16-17, 岡崎.
- 24) Nishijo H., Le V.Q., Hori E., Nguyen M.N., and Ono T. : Neuronal responses to dangerous stimuli in the monkey pulvinar. Vietnamse Physiological Meeting, 2012, 12, 1, Hue.
- 25) Nishijo M., Pham T.T., Nguyen T.N.A., Tran H.A., Nguyen D.B., Hoang V.L., Maruzeni S., Nakagawa H., and Nishijo H. : Dioxin health effects on infant growth and neurodevelopment in Vietnam. Vietnamse Physiological Meeting, 2012, 12, 1, Hue. (Invited lecture)
- 26) Le V.Q., Hori E., Nguyen M.N., Ono T., and Nishijo H. : Neuronal responses to dangerous stimuli in the monkey pulvinar. Vietnamse Physiological Meeting, 2012, 12, 1, Hue.
- 27) Pham M.D., Vi T.P.L., Can V.M., Vu T.C., Luu T.T.P., Hisao N., and Tran H.A. : The effect of Tieu Dao Tan-Dich Dam Thang remedy on learning and memory in animals injected with Ketamine. Vietnamse Physiological Meeting, 2012, 12, 1, Hue.
- 28) Can V.M., Vu t.C., Vi T.PL., Pham M.D., Luu T.T.P., Hisao N., and Tran H.A. : Learning and memory in animals injected with a drug to induce modeled schizophrenia. Vietnamse Physiological Meeting, 2012, 12, 1, Hue.
- 29) Nguyen T.N.A., Nishijo M., Hori E., Nguyen N.M., Pham T.T., Nakagawa H., Tran H.A., Nguyen D.B., and Nishijo H. : Effects of maternal exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin on socio-emotional behaviour in offspring rats. Vietnamse Physiological Meeting, 2012, 12, 1, Hue.
- 30) Pham T.T., Nishijo M., Nakagawa H., Maruzeni S., Nguyen T.N.A., Hoang V.L., Tran H.A., Nguyen D.B., Morikawa

Y., Kido T., and Nishijo H. : Effects of dioxin exposure in breast milk of nursing mothers on neurodevelopment of infants in Vietnam. Vietnamese Physiological Meeting, 2012, 12, 1, Hue.

- 31) 浦川 将, 高本考一, 堀 悦郎, 石川亮宏, 小野武年, 西条寿夫 : アイコンタクトによる赤ちゃんの前頭前野脳活動. 第30回日本感覚統合学会研究大会, 2012, 12, 8-9, 京都.
- 32) 松本惇平, 浦川 将, 堀 悦郎, MFP アラウジョ, 佐久間康夫, 小野武年, 西条寿夫 : オスラット性行動における側坐核ニューロンの応答性. 第2回日本情動学会大会, 2012, 12, 22, 東京.
- 33) 中村友也, Phuong T.H.N, 堀 悦郎, 浦川 将, 上野照子, 濱島 丈, 石井陽子, 松島貴子, 小野武年, 笹原正清, 西条寿夫 : 血小板由来成長因子  $\beta$  受容体遺伝子ノックアウトマウスは統合失調症陰性症状および自閉症様症状を呈する. 第2回日本情動学会大会, 2012, 12, 22, 東京.
- 34) 中村友也, Phuong T.H.N, 堀 悦郎, 浦川 将, 上野照子, 濱島 丈, 石井陽子, 松島貴子, 小野武年, 笹原正清, 西条寿夫 : 新規栄養因子様化合物 T-817MA は統合失調症および自閉症様症状を呈する PDGFR- $\beta$  KO マウスの症状を改善する. 第2回日本情動学会大会, 2012, 12, 22, 東京.
- 35) Nguyen M.N., Hori E., Matsumoto J., Tran H.A., Ono T., and Nishijo H. : Monkey pulvinar neuronal responses to face-like and facial stimuli. 第2回日本情動学会大会, 2012, 12, 22, 東京.
- 36) 浦川 将, 高本考一, 堀 悦郎, 石川亮宏, 小野武年, 西条寿夫 : 乳児のアイコンタクトによる前頭極特異的な脳活動上昇. 第2回日本情動学会大会, 2012, 12, 22, 東京.

#### ◆ その他

- 1) Pham T.T., Nishijo M., Nguen T.N.A., and Nishijo H. : Introduction of dioxin health effect on infant neurodevelopment. - Our experience in DaNang - . Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 9, 10, BienHoa.
- 2) Tran N.N, Pham T.T., Nguen T.N.A., Nishijo M., and Nishijo H. : Aim and plan of the dioxin study at Bien Hoa. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 9, 10, BienHoa.
- 3) Pham T.T., Nishijo M., Nguen T.N.A., and Nishijo H. : Dioxin exposure and infant neurodevelopment in Danang. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 9, 10, BienHoa.
- 4) Nishijo M., Pham T.T., Nguen T.N.A., Tran N.N., and Nishijo H. : Effects of dioxin exposure on neurodevelopment and social and eating behavior of 3-year old children in Danang. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 11, 29, DaNang.
- 5) Nguen T.N.A., Pham T.T., Nishijo M., and Nishijo H. : Relationships between food eating pattern and dioxin levels of breast milk in Danang. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 11, 29, DaNang.
- 6) Pham T.T., Nishijo M., Nguen T.N.A., Tran N.N., and Nishijo H. : Effects of dioxin exposure on neurodevelopment and social-emotional behavior of 3-year old children. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 12, 5, Hanoi.
- 7) Nishijo M., Pham T.T., Nguen T.N.A., Tran N.N., and Nishijo H. : Neurological examination methods for screening of neurodevelopmental disorders and preliminary results in a hot spot in DaNang city. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 12, 5, Hanoi.
- 8) Nguen T.N.A., Pham T.T., Nishijo M., and Nishijo H. : Relationships between infant growth and infant daily dioxin intake through breast feeding Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2012, 12, 5, Hanoi.
- 9) 西条寿夫 : 情動とうま味. うま味研究会「食べ物のおいしさを引き出すうま味とこくを考える」. 2012, 5, 25, 東京.