

# 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 Mariana Ferreira Pereira De Araujo  
助教 Aversi Ferreira Tales Alexandre

### ◆ 著 書

- 1) 西条寿夫, 小野武年: 大脳辺縁系の解剖・生理学をわかりやすく説明してください。「高次脳機能障害 Q&A 基礎編」河村満編, 81-88, 新興医学出版社, 2011.
- 2) 西条寿夫, 四十竹美千代, 村井智英: 18 章 恒常性, 動機付け, 情動 (翻訳)。「神経科学」Nolte J. 著, 白尾智明監訳, 189-204, 東京化学同人, 2011.
- 3) 西条寿夫, 四十竹美千代, 中村友也: 19 章 意識と認知 (翻訳)。「神経科学」Nolte J. 著, 白尾智明監訳, 205-219, 東京化学同人, 2011.

### ◆ 総 説

- 1) 西条寿夫, 小野武年: 情動学習および記憶における扁桃体の役割. *Clinical Neuroscience*, 29 : 182-187, 2011.
- 2) 西条寿夫, 小野武年: 辺縁系概念の成立. *分子精神医学*, 11 : 48-57, 2011.

### ◆ 原 著

- 1) Nguyen P.T.H., Nakamura T., Hori E., Urakawa S., Uwano T., Zhao J., Li R., Bac N.D., Hamashima T., Ishii Y., Matsushima T., Ono T., Sasahara M., and Nishijo H. : Cognitive and socio-emotional deficits in platelet-derived growth factor receptor- $\beta$  gene knockout mice. *PLoS ONE* 6(3): e18004, 2011.
- 2) Matsuyama N., Uwano T., Hori E., Ono T., and Nishijo H. : Reward contingency modulates neuronal activity in rat septal nuclei during elemental and configural association tasks. *Frontiers in Behavioral Neuroscience*, 5: doi 10.3389/fnbeh.2011.00026, 2011.
- 3) Ho A.S., Hori E., Nguyen T.H.P., Urakawa S., Kondoh T., Torii K., Ono T., and Nishijo H. : Hippocampal Neuronal Responses During Signaled Licking of Gustatory Stimuli In Different Contexts. *Hippocampus*, 21: 502-519, 2011.
- 4) Aitake M., Hori E., Matsumoto J., Umeno K., Fukuda M., Ono T., and Nishijo H. : Sensory mismatch induces autonomic responses associated with hippocampal theta waves in rats. *Behavioural Brain Research*, 220: 244-253, 2011.
- 5) Maior R.S., Hori E., Barros M., Teixeira D.S., Tavares M.C.H., Ono T., Nishijo H., and Tomaz C. : Superior colliculus lesions impair threat responsiveness in infant capuchin monkeys. *Neuroscience Letters*, 504: 257-260, 2011.
- 6) Hori E., Tabuchi E., Matsumura N., Ono T., and Nishijo H. : Task-dependent and independent synchronous activity of monkey hippocampal neurons in real and virtual translocation. *Frontiers in Behavioral Neuroscience*, 5: 36, 2011.
- 7) Takakura H., Shojaku H., Takamoto K., Urakawa S., Nishijo H., and Watanabe Y. : Cortical hemodynamic responses to intravenous thiamine propyldisulphide administration detected by multichannel near infrared spectroscopy (NIRS) system. *Brain Topography*, 24: 114-126, 2011.
- 8) Aversi-Ferreira TA., Maior R.S., Carneiro-e-Silva F.O., Aversi-Ferreira R.A.G.M.F., Tavares M.C., Nishijo H., and Tomaz C. : Comparative anatomical analyses of the forearm muscles of *Cebus libidinosus* (Rylands et al. 2000) (PRIMATES, CEBIDAE): manipulatory behavior and tool use. *PLoS ONE* 6(7): e22165, 2011.
- 9) Nogami T., Beppu H., Tokoro T., Moriguchi S., Shioda N., Fukunaga K., Ohtsuka T., Ishii Y., Sasahara M., Shimada Y., Nishijo H., Li E., and Kitajima I. : Reduced expression of the ATRX gene, a chromatin-remodeling factor, causes hippocampal dysfunction in mice. *Hippocampus*, 21: 678-687, 2011.
- 10) Nascimento N.L.N., Daniel L.R., Nishijo H., and Tales A.A.F. : Validation of a spectrophotometric method to determine ciprofibrate content in tablets. *Brazilian Journal of Pharmaceutical Sciences*, 47: 23-29, 2011.
- 11) Izumi H., Ishimoto T., Yamamoto H., Nishijo H., and Mori H. : Bioluminescence imaging of Arc expression enables detection of activity-dependent and plastic changes in the visual cortex of adult mice. *Brain Struct. Funct*, 216: 91-104, 2011.

- 12) Mata J.R., Mata F.R., Nishijo H., and Aversi-Ferreira T.A. : Brain damages by *Tripanossoma cruzi* increased blood brain barrier permeability in Holtzman rats: blood brain barrier permeability in Chagas' disease. *Open Tropical Medicine Journal*, 4: 39-43, 2011.
- 13) Nascimento G.N.L., Pereira K.C.F., Nishijo H., and Aversi-Ferreira T.A. : Development and validation of the analytical method by high performance liquid chromatography (HPLC) for Lamotrigine raw material. *Acta Scientiarum - Health Sciences*, 33: 153-157, 2011.
- 14) Rodrigues H.G., Penha-Silva N., Araujo M.F.P., Nishijo H., and Aversi-Ferreira T.A. : Effects of Roundup® pesticide on the stability of human erythrocyte membranes and micronuclei frequency in bone marrow cells of Swiss mice. *Open Biology Journal*, 4: 54-59, 2011,
- 15) Neres Alessandro Camilo., Leitão Diniz., Aversiferreira Roqueline Ametila e Gloria Martins., and Aversi-Ferreira Tales Alexandre. : Estruturas parasitarias encontradas em alfaces em Anapolis-Go-Brasil. *Bioscience Journal (UFU. Impresso)*, 27: 336-341, 2011.
- 16) Aversi-Ferreira R.A.G.M.F., Marin K.A., Carneiro e Silva F.O., and Aversi-Ferreira T.A. : Comparative anatomy of the thigh nerves of *Cebus libidinosus* (Rylands et al., 2000). *Pesquisa Veterinária Brasileira (Impresso)*, 31: 261-266, 2011.
- 17) Vera, Ivania., Aversi-Ferreira Tales Alexandre., and Lucchese Roselma. : A experiência do professor orientador de estudante indígena em enfermagem. *Acta Paulista de Enfermagem (UNIFESP. Impresso)*, 24: 289-293, 2011.
- 18) Pham T.T., Nishijo M., Kido T., Nakagawa N., Maruzeni S., Nguyen T.N.A., Morikawa Y., Hoang V.L., Tran H.A., Nguyen N.H., Le K.S., and Nishijo H. : Dioxin concentrations in breast milk of Vietnamese nursing mothers; –A survey after four decades from the end of spraying herbicides. *Environ. Sci. Technol.*, 45: 6625-6632, 2011.
- 19) Nishijo M., Pham T.T., Nguen T.N.A., Maruzeni S., Nakagawa H., Nishijo H., Tran H.A., Hoang V.L., Kido T., Naganuma R., Hung N.N., Nguen M.H., and Le K.S. : Effects of dioxins exposure on infant growth in a hot spot area, Vietnam. *Organohalogen Compounds*, 73: 1745-1748, 2011.
- 20) 奈良原光隆, 松井三枝, 宮崎 淳, 小林恒之, 西条寿夫 : 自己意識的情動の生起がモラル意識に与える影響—近赤外線分光法による検討—。 *人間環境学研究*, 9 (1) : 1348-5253, 2011.
- 21) 坪田雅仁, 將積日出夫, 堀 悦郎, 藤坂実千郎, 西条寿夫, 渡辺行雄 : 強大音刺激により無麻酔サル眼窩周囲で記録される誘発反応の検討。 *Equilibrium*, 70 (6) : 497-503, 2011.
- 22) 近藤高史, 松永哲郎, 中村和弘, 堀 悦郎, 西条寿夫 : かつおだし嗜好性における学習の関与。 *日本味と匂学会誌*, 18 : 301-302, 2011.

#### ◆ 学会報告

- 1) Matsumoto J., Urakawa S., Hori E., Ono T., and Nishijo H. : Number of delta oscillating neurons increases after ejaculation in the nucleus accumbens in male rats. *ASSC15, 2011, 6, 9-12, Kyoto.*
- 2) Mariana F.P.A., Hori E., Rafael S.M., Carlos T., Ono T., and Nishijo H. : Monkey medial prefrontal cortical involvement in social-based decision-making. *ASSC15, 2011, 6, 9-12, Kyoto.*
- 3) Nakamura T., Phuong T.H.N., Hori E., Urakawa S., Wano T., Juanjuan Z., Ruixi L., Nguyen D.B., Hamashima T., Ishii Y., Matsushima T., Ono T., Sasahara M., and Nishijo H. : Schizophrenia and autism-like symptom in Platelet-Derived Growth Factor Receptor-β Gene Knockout mice. *The 6th International Conference of Neurons and Brain Diseases, 2011, 8, 5, Toyama.*
- 4) Nguyen M.N., Hori E., Urakawa S., Nguyen T.N.A., Pham T.T., Nishijo M., Nakagawa H., Maruzeni S., Ono T., and Nishijo H. : Effects of maternal exposure to TCDD on parvalbumin-positive neurons in the limbic system of rat offspring. *The 6th International Conference of Neurons and Brain Diseases, 2011, 8, 5, Toyama.*
- 5) Nishijo M., Pham T.T., Nguyen T.N., Maruzeni S., Nishijo H., Tran H.A., Hoang V.L., Kido T., Naganuma R., Nguen M.H., and Le K.S. : Effects of Dioxins Exposure on infant growth in a hot spot area, Vietnam. *31th International Symposium on Halogenated persistent Organic Pollutants; Dioxin 2011, 2011, 8, 21-27, Brussels.*
- 6) Takamoto K., Fukuda S., Urakawa S., Hori E., Sakai S., Bito N., Ono T., and Nishijo H. : Effect of ischemic compression at myofascial trigger points in patients with neck pain on cerebral hemodynamics and autonomic nervous activity. *The 5th International Symposium, 2011, 9, 15-16, Ulan Bator, Mongol.*
- 7) Nishijo H., Hori E., Uwano T., Matsumoto J., Kondoh T., Torii K., and Ono T. : Behavioral significance of umami taste in the forebrain. *The 9th International Symposium on Molecular and Neural Mechanisms of Taste and Olfactory Perception. 2011, 11, 4-6, Fukuoka (Invited lecture).*

- 8) Matsumoto J., Munkhzul D., Hori E., Kondo T., Kitamura A., Matsumoto H., Torii K., Ono T., and Nishijo H. : Neuronal response of amygdala and lateral hypothalamic area to intragastric administration of amino acids. The 9th International Symposium on Molecular and Neural Mechanisms of Taste and Olfactory Perception, 2011, 11, 4-6, Fukuoka.
- 9) Nishijo H., Hori E., Uwano T., Matsumoto J., Kondo T., Torii K., and Ono T. (Invited lecture) : Behavioral significance of umami taste in the forebrain. The 9th International Symposium on Molecular and Neural Mechanisms of Taste and Olfactory Perception. 2011, 11, 4-6, Fukuoka.
- 10) Takamoto K. : Effect of ischemic compression at myofascial trigger points in patients with neck pain on cerebral hemodynamics and autonomic nervous activity. The 5th International Symposium, 2011, 9, 15-16, Mongolian.
- 11) Urakawa S., Sakai N., Takamoto K., Hori E., Sakai S., Ono T., and Nishijo H. : Effects of environmental enrichment on behavioral alteration and parvalbumin-positive neurons in the basolateral amygdala. 41th annual meeting of Society of Neuroscience 2011, 11, 12-16, Washington.
- 12) Matsui M., Miyazaki A., and Nishijo H. : Selection of memory strategy and brain activity during metamemory process: a near-infrared spectroscopy study. 2011 International Neuropsychological Society Mid-year Meeting, 2011, 7, 6-9, Auckland, New Zealand.
- 13) Nishijo H., Hori E., Uwano T., Kondo T., and Ono T.: Representation of umami taste in the forebrain. 第88回日本生理学会大会, 2011, 3, 28-30, 横浜.
- 14) Hori E., Nguyen M.N., Maior R.S., Ono T., and Nishijo H. : A role of the subcortical visual pathway in social cognition. 第88回日本生理学会大会, 2011, 3, 28-30, 横浜.
- 15) 西条寿夫 (特別講演) : 口唇運動と脳機能. 第28回日本顎顔面補綴学会, 2011, 6, 3-4, 富山.
- 16) 西条寿夫, 笹原正清, 小野武年 : 統合失調症の動物モデルを用いた検討. 日本学術会議中部地区会議学術講演会, 2011, 6, 24, 富山.
- 17) 浦川 将, 坂井奈津子, 高本考一, 堀 悦郎, 酒井重数, 小野武年, 西条寿夫 : 豊かな環境飼育がもたらす扁桃体パルブアルブミンニューロンの変化. 第15回行動神経内分泌研究会, 2011, 6, 30-7, 2, 東京.
- 18) 浦川 将, 高本考一, 坂井奈津子, 堀 悦郎, 酒井重数, 小野武年, 西条寿夫 : 豊かな環境飼育による扁桃体パルブアルブミン陽性ニューロンの可塑性. 第34回日本神経科学大会, 2011, 9, 15-17, 東京.
- 19) 松本惇平, 古谷陽一, 堀 悦郎, Cyrus A. Villas-Boas, 嶋田 豊, 小野武年, 西条寿夫 : サル海馬体および海馬傍回場所ニューロンは仮想空間を用いたナビゲーション課題において特定方向からの眺望に対する応答性が異なる. 第34回日本神経科学大会, 2011, 9, 15-17, 東京.
- 20) 中村友也, Phuong Thi Hong Nguyen, 堀 悦郎, 浦川 将, 上野照子, Juanjuan Zhao, Ruixi Li, Nguyen Duy Bac, 濱島 丈, 石井陽子, 小野武年, 笹原正清, 西条寿夫 : マウスにおける血管由来成長因子受容体  $\beta$  遺伝子欠損は認知および社会行動障害を誘導する. 第34回日本神経科学大会, 2011, 9, 15-17, 東京.
- 21) 近藤高史, 松永哲郎, 上田陽一, 志水泰武, 西条寿夫 : かつおだし嗜好性に対する高脂肪食または高砂糖食摂取の影響. 第32回日本肥満学会, 2011, 9, 23-24, 兵庫.
- 22) 近藤高史, 松永哲郎, 中村和弘, 堀 悦郎, 西条寿夫 : かつおだし嗜好性における学習の関与. 日本味と匂学会第45回大会, 2011, 10, 5-7, 金沢.
- 23) 浦川 将, 坂井奈津子, 高本考一, 堀 悦郎, 石川亮宏, 小野武年, 西条寿夫 : 乳児の認知機能発達 : 目と目を合わせることの重要性を脳科学により検証する. 第27回東海北陸理学療法学会大会, 2011, 10, 29-30, 富山.
- 24) 石黒幸治, 浦川 将, 高本考一, 堀 悦郎, 石川亮宏, 河野 理, 川合 宏, 小野武年, 西条寿夫 : 異なる巧緻性課題遂行中の脳機能イメージング. 第27回東海北陸理学療法学会大会, 2011, 10, 29-30, 富山.
- 25) 中田健史, 浦川 将, 高本考一, 堀 悦郎, 石川亮宏, 金川善洋, 小西秀男, 小野武年, 西条寿夫 : 健康人における口唇閉鎖運動が口輪筋の運動機能ならびに前頭前野の活動性に及ぼす影響. 第27回東海北陸理学療法学会大会, 2011, 10, 29-30, 富山.
- 26) 松井一訓, 浦川 将, 西野大助, 野上静恵, 石黒幸治, 石川亮宏, 小野武年, 西条寿夫 : 巧緻性課題遂行中の声かけ効果検討. 第27回東海北陸理学療法学会大会, 2011, 10, 29-30, 富山.
- 27) 福田紗恵子, 高本考一, 浦川 将, 石黒幸治, 中田健史, 堀 悦郎, 小野武年, 西条寿夫 : トリガーポイント圧迫による痛み軽減と, 自律神経機能および脳血行動態の変化. 第27回東海北陸理学療法学会大会, 2011, 10, 29-30, 富山.
- 28) 中村友也, Phuong T.H.N., 堀 悦郎, 浦川 将, 上野照子, Juanjuan Z., Ruixi L., Nguyen D.B., 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における

ガンマオシレーションの障害. 第 58 回中部日本生理学会, 2011, 11, 1-2, 福井.

- 29) Nyamdavaa E., 松本惇平, 堀 悦郎, 小野武年, 西条寿夫: Activity of head direction cells in the thalamus is modulated by movement direction and locomotion. 第 58 回中部日本生理学会, 2011, 11, 1-2, 福井.
- 30) 西条寿夫:NIRS 計測とリハビリテーション医学. NIRS in rehabilitation medicine. 第 41 回日本臨床神経生理学会, 2011, 11, 12, 静岡.
- 31) 伊丸岡俊秀, 國見充展, 松田幸久, 松本 圭, 松井三枝, 西条寿夫: 表情判断の神経基盤と社交不安特性の関係. 日本基礎心理学会第 30 回大会, 2011, 12, 3-4, 東京.
- 32) 西条寿夫, 堀 悦郎, 浦川 将, 小野武年: こころの研究へのアプローチ —神経生理学—. 第一回日本情動学会, 2011, 12, 17, 東京.

#### ◆ その他

- 1) Nishijo H., Hori E., Uwano T., and Ono T. (Invited lecture) : Red Ginseng Ameliorates Learning and Memory Deficits in an Animal Model of Amnesia. Symposium for Glocalization. 2011, 9, 21-22, Seoul.
- 2) Pham T.T., Nishijo M., Nakagawa H., Shoko M., Nguyen T.N.A., Morikawa Y., Hoang V.L., Tran H.A., Tran V.N., Ton T.T., Phan T.P., Le T.M.N., and Nishijo H. : Effects of Perinatal Dioxin Exposure on Neurodevelopment of Vietnamese Infants. Dioxin conference on the collaborative projects between Japan and Vietnam in Danang co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 24, Danang.
- 3) Nguyen T.N.A., Pham T.T., Nishijo M., Maruzeni S., Morikawa Y., Tran H.A., Hoang V.L., Pham M.D., Nakagawa H., Le K.S., and Nishijo H. : Relationships between food intake and dioxin concentrations in breast milk of mothers living in a dioxin hot spot in Vietnam. Dioxin conference on the collaborative projects between Japan and Vietnam in Danang co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 24, Danang.
- 4) Nishijo M., Pham T.T., Nguen T.N.A., Maruzeni S., Nakagawa H., Nishijo H., Tran H.A., Hoang V.L., Le K.S., Tran V.N., Ton T.T., Phan T.P., and Le T.M.N. : Effects of dioxins exposure on infant growth in a hot spot, Vietnam. Dioxin conference on the collaborative projects between Japan and Vietnam in Danang co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 24, Danang.
- 5) Nishijo M., Pham T.T., Nguen T.N.A., Maruzeni S., Nakagawa H., Nishijo H., Tran H.A., Hoang V. L., Le K.S., Tran V.N., Ton T.T., Phan T.P., and Le T.M.N. : Effects of dioxins exposure on infant growth in a hot spot, Vietnam. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 28, Hanoi.
- 6) Nguyen M.N., Hori E., Urakawa S., Nguyen T.N.A., Pham T.T., Nishijo M., Nakagawa H., Maruzeni S., Tran H.A., Ono T., and Nishijo H. : Effects of maternal exposure to tcdd on inhibitory interneurons in the limbic system of rat offspring. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 28, Hanoi.
- 7) Nguyen T.N.A., Pham T.T., Nishijo M., Maruzeni S., Morikawa Y., Tran H.A., Hoang V.L., Pham M.D., Nakagawa H., Le K.S., and Nishijo H. : Relationships between food intake and dioxin concentrations in breast milk of mothers living in a dioxin hot spot in Vietnam. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 28, Hanoi.
- 8) Nguyen T.N.A., Nishijo M., Hori E., Nguyen M.N., Pham T.T., Nakagawa H., and Nishijo H. : Effects of maternal exposure to TCDD on social behaviour of rat offspring. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 28, Hanoi.
- 9) Pham T.T., Nishijo M., Nakagawa H., Shoko M., Nguyen T.N.A., Morikawa Y., Hoang V.L., Tran H.A., Tran V.N., Ton T.T., Phan T.P., Le Thi M.N., and Nishijo H. : Effects of Perinatal Dioxin Exposure on Neurodevelopment of Vietnamese Infants. Dioxin conference on the collaborative projects between Japan and Vietnam in VMMU co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 28, Hanoi.
- 10) Nishijo M., Nguyen M.N., Nguyen M.H., and Nishijo H. : A survey in 2011; Social behavior, Autistic spectrum, and eating behavior questionnaires. Dioxin conference on the collaborative projects between Japan and Vietnam in Danang co-hosted by the VMMU and JSPS Asian CORE Program, 2011, 11, 24, Danang.