



# Academy for Multidisciplinary Neurotraumatology

## Yoichi Katayama, MD, PhD

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## CURRICULUM VITAE

### Present position

Professor and Chairman of the Department of Neurological Surgery,  
Nihon University School of Medicine, Tokyo 173-8610, Japan  
Secondary Appointment:  
Professor and Chairman of the Division of Applied System Neuroscience  
Nihon University Graduate School of Medical Science

### Personal data

Born December 14, 1949.  
Citizenship Japan.

### Educational background and academic titles

1974 MD, Nihon University School of Medicine, Tokyo, Japan  
1978 PhD, Nihon University Graduate School of Medical Science, Tokyo, Japan  
1974-1980 Residency at Department of Neurological Surgery, Nihon University Hospital, Tokyo, Japan  
1981-1983 Clinical Fellow, Division of Neurosurgery, Medical College of Virginia, Richmond, Virginia  
1983-1984 Instructor, Division of Neurosurgery, Medical College of Virginia, Richmond, Virginia  
1987-1989 Assistant Professor, Division of Neurosurgery, University of California at Los Angeles School of Medicine, California  
1988-1989 Director of Brain Injury Research, Division of Neurosurgery, University of California at Los Angeles School of Medicine, California  
1989-2001 Visiting Professor in continuum, Division of Neurosurgery, University of California at Los Angeles School of Medicine, California  
1989-1995 Associate Professor, Department of Neurological Surgery, Nihon University Hospital, Tokyo, Japan  
1995- Professor and Chairman, Department of Neurological Surgery, Nihon University School of Medicine, Tokyo, Japan  
2002- Professor and Chairman, Division of Applied System Neuroscience, Nihon University Graduate School of Medical Science, Tokyo, Japan

### Academic activities (selected)

1998-1999 President, Japan Society for Stereotactic and Functional Neurosurgery (JSSFN)  
1999-2000 President, Japanese Congress of Neurological Surgeons (JCNS)  
2001-2002 President, Japanese Society for Neurosurgical Emergency  
2001-2002 President, Japan Coma Society (JCS)  
2002-2003 President, Japanese Association for the Study of Pain (IASP)  
2003- President, Japan Society for Neurotraumatology  
2002-2003 Chairman-elect, Neurorehabilitation Committee of the World Federation of Neurosurgical Societies (WFNS)  
2003- Chairman, Neurorehabilitation Committee of the World Federation of Neurosurgical Societies (WFNS)  
1993- Executive Board Member, International Neurotrauma Society (INTS)  
1996- Secretary, Japan Society for Stereotactic and Functional Neurosurgery (JSSFN)  
2000- Executive Board Member, International Society of Brain Edema  
2001- Advisory Board Member, Neurorehabilitation Committee, World Federation of Neurosurgical Societies (WFNS)  
2002- Advisory Board Member, Stereotactic and Functional Neurosurgery Committee, World Federation of Neurosurgical Societies (WFNS)

- 2002- Senior Delegate from Japanese Congress of Neurological Surgeons (JCNS) to World Federation of Neurosurgical Societies (WFNS)
- 1994 Chairman of the Organizing Committee: 1st International Symposium on Neurochemical Monitoring in ICU (ISNM I), Tokyo, Japan
- 1998 Chairman of the Scientific Program Committee: 7th International Symposium on Spinal Cord Monitoring, Osaka, Japan
- 2002 Congress President, 2nd International Symposium on Neurosurgical Re-engineering of the Damaged Brain and Spinal Cord (NRDBS'02) / Neurorehabilitation Congress of the World Federation of Neurosurgical Societies (WFNS), Tokyo Desney Resort, Japan
- 2004 Honorary Congress President, 3rd International Symposium on Neurosurgical Re-engineering of the Damaged Brain and Spinal Cord (NRDBS'04) / Neurorehabilitation Congress of the World Federation of Neurosurgical Societies (WFNS), Hanover, Germany
- 1990- Associate Editor, Journal of Neurotrauma (National [American] Neurotrauma Society and International Neurotrauma Society [INTS])
- 1993- Editorial Board, Clinical Rehabilitation (British Society of Rehabilitation Medicine)
- 1997- Editor-in-Chief, Pain Research (Japanese Association for the Study of Pain [JASP])
- 1998- Editorial Board, Japanese Journal of Neurosurgery (Japanese Congress of Neurological Surgeons [JCNS])
- 1997- Editorial Board, Neurologia Medico-chirurgica (Japan Neurosurgical Society [JNSS])
- 1999- Associate Editor, Brain Pathology (International Society of Neuropathology [ISNP])
- 2001- Editor-in-Chief, Neurotraumatology (Japanese Society of Neurotraumatology)
- 2002- Co-Editor, Brain Injury (International Association for the Study of Brain Injury)
- 2002- Editor-in-Chief, Neurotrauma Research (Japanese Society for Neurotrauma Research)

#### **Original papers published in peer-reviewed journals**

- 001 Tsubokawa T, Katayama Y, Nishimoto H, Moriyasu N: Emotional slow negative potential shift (CNV) in the human thalamus. *Applied Neurophysiology* 39:261-267, 1976/77
- 002 Katayama Y, Tsubokawa T and Moriyasu N: Slow rhythmic activity of caudate neurons in the cat. Statistical analysis of caudate neuronal spike trains. *Experimental Neurology* 68:310-321, 1980
- 003 Tsubokawa T, Katayama Y, Kondo T, Ueno Y, Hayashi N and Moriyasu N: Changes in local cerebral blood flow and neuronal activity during sensory stimulation in normal and sympathectomized cats. *Brain Research* 190:51-65, 1980
- 004 Tsubokawa T, Nishimoto H, Kitamura M, Katayama Y and Moriyasu N: Assessment of brainstem damage by the auditory brainstem response in acute severe head injury. *Journal of Neurology Neurosurgery Psychiatry* 43:1005-1011, 1980
- 005 Katayama Y, Ueno Y, Tsukiyama T and Tsubokawa T: Long lasting suppression of neuronal firing and cortical blood flow following train pulse stimulation of the locus coeruleus in the cat. *Brain Research* 216:173-179, 1981
- 006 Katayama Y, Miyazaki S and Tsubokawa T: Electrophysiological evidence favoring intracaudate axon collaterals of GABAergic caudate output neurons in the cat. *Brain Research* 216:180-186, 1981
- 007 Tsubokawa T, Katayama Y, Ueno Y and Moriyasu N: Evidence for involvement of the frontal cortex in pain-related cerebral events in cats: Increase in local cerebral blood flow by noxious stimuli. *Brain Research* 217:179-185, 1981
- 008 Tsubokawa T, Yamamoto T, Miyazaki S, Kondo T, Katayama Y, Tomizawa N, Sugawara T and Moriyasu N: Pathogenic mechanism of cerebral concussion due to rotational angular acceleration impact. *Neurologia Medicochirurgica* 21:657-668, 1981
- 009 Tsubokawa T, Yamamoto T, Katayama Y and Moriyasu N: Diencephalic modulation of activities of raphe-spinal neurons in the cat. *Experimental Neurology* 74:561-572, 1981
- 010 Tsubokawa T, Yamamoto T, Katayama Y and Moriyasu N: Clinical results and experimental basis of thalamic relay nucleus stimulation for relief of intractable pain with morphine tolerance. *Applied Neurophysiology* 45:143-155, 1982
- 011 Hayes RL, Pechura CM, Katayama Y, Povlishock JT, Giebel ML and Becker DP: Activation of pontine cholinergic sites implicated in unconsciousness following cerebral concussion in the cat. *Science* 223:301-303, 1984
- 012 Katayama Y, DeWitt DS, Becker DP and Hayes RL: Behavioral evidence for cholinceptive pontine inhibitory area. Descending control of spinal motor output and sensory input. *Brain Research* 296:241-262, 1984
- 013 Katayama Y, Watkins LR, Becker DP and Hayes RL: Non-opiate analgesia induced by carbachol microinjection into the pontine parabrachial region of the cat. *Brain Research* 296:263-283, 1984
- 014 Katayama Y, Watkins LR, Becker DP and Hayes RL: Evidence for involvement of cholinceptive cells of the pontine parabrachial region in environmentally induced nociceptive suppression in the cat. *Brain Research* 299:348-353, 1984
- 015 Watkins LR, Katayama Y, Kinscheck IB, Mayer DJ and Hayes RL: Muscarinic cholinergic mediation of opiate and non-opiate environmentally induced analgesia. *Brain Research* 300:231-242, 1984
- 016 Hayes RL, Katayama Y, Watkins LR and Becker DP: Bilateral lesions of the dorsolateral funiculus of the spinal cord. Effects on basal nociceptive reflexes and nociceptive suppression produced by cholinergic activation of the pontine parabrachial region of the cat. *Brain Research* 311:267-280, 1984

- 017 Katayama Y, Reuther S, Nakamura T, Becker DP and Hayes RL: Continuous recording of intracranial pressure in the awake drug-free cat. *Brain Research Bulletin* 12:581-583, 1984
- 018 Katayama Y, Nakamura T, Becker DP and Hayes RL: Intracranial pressure variations associated with activation of cholinceptive pontine inhibitory area in the awake, drug-free cat. *Journal of Neurosurgery* 61:713-724, 1984
- 019 Tsubokawa T, Yamamoto T, Katayama Y, Hirayama T and Shibuya H: Thalamic relay nucleus stimulation for relief of intractable pain. Clinical results and beta-endorphine immunoreactivity in the cerebrospinal fluid. *Pain* 18:115-126, 1984
- 020 DeSalles AAF, Katayama Y, Becker DP and Hayes RL: Pain suppression induced by electrical stimulation of the pontine parabrachial region. Experimental study in cats. *Journal of Neurosurgery* 62:397-407, 1985
- 021 Katayama Y, Glisson JD, Becker DP and Hayes RL: Concussive head injury producing suppression of sensory transmission within the spinal cord. *Journal of Neurosurgery* 63:97-105, 1985
- 022 Katayama Y, Reuther S, Dixon CE, Becker DP and Hayes RL: Dissociation of endogenous components of auditory evoked potentials following carbachol microinjection into the cholinceptive pontine inhibitory area. *Brain Research* 334:366-371, 1985
- 023 Katayama Y, Becker DP and Hayes RL: Depression of afferent-induced primary afferent depolarization at the lumbar spinal cord following concussive head injury. *Brain Research* 335:392-395, 1985
- 024 Katayama Y, Tsukiyama T and Tsubokawa T: Thalamic negativity associated with endogenous late positive components (P300) of cerebral evoked potentials: Recordings using discriminative aversive conditioning in humans and cats. *Brain Research Bulletin* 14:223-226, 1985
- 025 Katayama Y, Tsubokawa T, Harano S and Tsukiyama T: Dissociation of subjective pain report and pain-related late positive components of cerebral evoked potentials in subjects with brain lesions. *Brain Research Bulletin* 14:423-426, 1985
- 026 Tsubokawa T and Katayama Y: Active neural processes within the brain stem for production of coma: Araki's coma puncture revisited. *Neurologia Medicochirurgica* 25:503-514, 1985
- 027 DeSalles AAF, Katayama Y, Becker DP and Hayes RL: Parabrachial modulation of pain and blood pressure. *Journal of Neurosurgery* 63:478-479, 1985
- 028 Katayama Y, Tsubokawa T, Hirayama T and Yamamoto T: Pain relief from stimulation of the pontomesencephalic parabrachial region in humans: Brain stem sites for non-opiate-mediated pain control. *Applied Neurophysiology* 48:195-200, 1985
- 029 Tsubokawa T, Katayama Y, Yamamoto T and Hirayama T: Deafferentation pain and stimulation of thalamic sensory relay nucleus: Clinical and experimental study. *Applied Neurophysiology* 48:166-171, 1985
- 030 Katayama Y, Tsubokawa T, Abekura M, Hayes RL and Becker DP: Coma induced by cholinergic activation of restricted pontine reticular formation: A model of reversible forms of coma. *Neurologia Medicochirurgica* 26:1-10, 1986
- 031 Katayama Y, Tsubokawa T and Yoshida K: Cystic meningiomas in infancy. *Surgical Neurology* 25:43-48, 1986 [reproduced in *Pediatric Digest* 6:8-9, 1986]
- 032 Hayes RL and Katayama Y: Range of environment stimuli producing nociceptive suppression: Implications for neural mechanisms. *Annals of New York Academy of Science* 467:1-13, 1986
- 033 Katayama Y, Tsubokawa T, Tsukiyama T and Hirayama T: Changes in regional cerebral blood flow and oxygen metabolism following VL thalamotomy in Parkinson Syndrome as revealed by positron emission tomography. *Applied Neurophysiology* 49:76-85, 1986
- 034 Katayama Y, Tsubokawa T, Sugitani M, Maejima S, Hirayama T and Yamamoto T: Assessment of spinal cord injury with multimodality evoked spinal cord potentials. Part 1. Localization of lesions in experimental spinal cord injury. *Neuroorthopedics* 1:130-141, 1986
- 035 Katayama Y, Tsubokawa T, Sugitani M and Hirayama T: Inhibition of hyperactive trigeminal subnucleus caudalis neurons after experimental trigeminal rhizotomy in response to thalamic sensory relay nucleus stimulation. *Neurological Research* 8:97-101, 1986
- 036 Katayama Y, Tsubokawa T, Hirayama T, Tsukiyama T and Iio M: Responses in regional cerebral blood flow and oxygen metabolism to thalamic stimulation of humans as revealed by positron emission tomography. *Journal of Cerebral Blood Flow and Metabolism* 6:632-641, 1986
- 037 Katayama Y, Tsubokawa T, Maejima S and Yamamoto T: Responses of raphe-spinal neurons to stimulation of the pontine parabrachial region which produced pain suppression in the cat. *Applied Neurophysiology* 49:112-120, 1986
- 038 DeSalles AAF, Newlon PG, Katayama Y, Dixon CE, Becker DP, Stonnington HH and Hayes RL: Transient suppression of event-related evoked potentials produced by mild head injury in the cat. *Journal of Neurosurgery* 66:102-108, 1987
- 039 Katayama Y and Tsubokawa T: Somatosensory evoked potentials from the thalamic sensory relay nucleus (VPL) in humans. Correlation with short latency somatosensory evoked potentials recorded at the scalp. *Electroencephalography and clinical Neurophysiology* 68:187-201, 1987
- 040 Tsubokawa T, Katayama Y, Hirayama T, Yamamoto T and Nishimoto H: Effects of thalamic sensory relay nucleus stimulation on jaw-opening reflex in response to tooth pulp stimulation. *Applied Neurophysiology* 49:229-236, 1987
- 041 Tsubokawa T, Katayama Y and Hirayama T: Effects of thalamic sensory relay nucleus stimulation on trigeminal subnucleus caudalis neurons in the cat. Inhibition of nociceptive activity to tooth pulp stimulation. *Neurologia*

- Medicochirurgica 27:594-600, 1987
- 042 Tsubokawa T, Katayama Y and Hirayama T: Effects of thalamic sensory relay nucleus stimulation on trigeminal subnucleus caudalis neurons in the cat: Inhibition of abnormal bursting hyperactivity after trigeminal rhizotomy. *Neurologia Medicochirurgica* 27:601-606, 1987
- 043 Tsubokawa T, Katayama Y, Maejima S, Hirayama T and Yamamoto T: Assessment of spinal cord injury with multimodality evoked spinal cord potentials. Part 2. Correlation with neurological outcome in clinical spinal cord injury. *Neuroorthopedics* 3:82-89, 1987
- 044 Katayama Y, Tsubokawa T, Yamamoto T, Hirayama T and Maejima S: Preoperative determination of the level of spinal cord lesions with the killed end potential. *Surgical Neurology* 29:91-94, 1988
- 045 Katayama Y, Tsubokawa T, Maejima S, Hirayama T and Yamamoto T: Corticospinal direct responses in humans. Identification of the motor cortex during intracranial surgery under general anesthesia. *Journal of Neurology Neurosurgery and Psychiatry* 51:50-59, 1988
- 046 Tsubokawa T, Katayama Y, Kawamata T and Hirayama T: Impaired hippocampal plasticity in experimental chronic hydrocephalus. *Brain Injury* 2:19-30, 1988
- 047 Hayes RL, Katayama Y, Young HF, Dunbar JG: Coma associated with flaccidity produced by fluid percussion concussion in the cat. Part 1. Behavioral study. *Brain Injury* 2:31-49, 1988
- 048 Katayama Y, Young HF, Dunbar JG and Hayes RL: Coma associated with flaccidity produced by fluid percussion in the cat. Part 2. Physiological study. *Brain Injury* 2:51-66, 1988
- 049 Tsubokawa T, Katayama Y, Miyazaki S, Ogawa H, Iwasaki M, Shibasaki S and Ishikawa K: Supranormal levels of serotonin and its metabolite after raphe-cell transplantation in serotonin-denervated rat hippocampus. *Brain Research Bulletin* 20:303-306, 1988
- 050 Tsubokawa T, Katayama Y, Miyazaki S, Ogawa H, Iwasaki M and Sako H: Brain cell transplantation into the hydrocephalic rat hippocampus. *Brain Injury* 2:67-74, 1988
- 051 Hayes RL, Katayama Y, Povlishock JT, Jenkins LW, Lyeth BG, Clifton GL and Young HF: Regional rates of glucose utilization in the cat following concussive head injury. *Journal of Neurotrauma* 5:121-137, 1988
- 052 Leichnetz GR, Carlton SM, Katayama Y, Gonzalo-Ruiz A, Holstege G, DeSalles AAF and Hayes RL: Afferent and efferent connections of the cholinceptive medial pontine reticular formation (region of the ventral tegmental nucleus) in the cat. *Brain Research Bulletin* 22:665-688, 1989
- 053 Tsubokawa T, Katayama Y and Ishii S: Fructose-added glycerol (Glyceol) for the therapy of elevated intracranial pressure. An analysis of side effects of long-term administration in multi-institutional trial with 1346 cases. *Neurological Research* 11:249-252, 1989
- 054 Yamamoto T, Katayama Y, Tsubokawa T, Sasaki J, Kumagawa H, Sugitani M: Features of chronic subdural haematoma developing from definitely identified acute subdural haematoma. *Brain Injury* 4:135-160, 1990
- 055 Miyazaki Y, Katayama Y, Tsubokawa T, Ogawa H, Iwasaki M and Ishikawa K: Effects of interstitial edema on brain cell transplantation. *Stereotactic and Functional Neurosurgery* 54/55:364-367, 1990
- 056 Xing J, Katayama Y, Yamamoto T, Hirayama T and Tsubokawa T: Quantitative evaluation of hemiparesis with corticomyographic motor evoked potential recorded by transcranial magnetic stimulation. *Journal of Neurotrauma* 7:57-64, 1990
- 057 Tsubokawa T, Yamamoto T and Katayama Y: Prediction of outcome of prolonged coma caused by brain damage. *Brain Injury* 4:329-337, 1990
- 058 Tsubokawa T, Yamamoto Y, Katayama Y, Hirayama T, Maejima S and Moriya S: Deep brain stimulation of persistent vegetative state. Follow up results and criteria for selection of candidate. *Brain Injury* 4:315-327, 1990
- 059 Ogawa H, Tsubokawa T, Katayama Y, Miyazaki S, Iwasaki M, Shibasaki S and Ishikawa K: Facilitated growth of fetal brain cells transplanted into the interstitial edema areas. *Brain Research Bulletin* 24:769-774, 1990
- 060 Katayama Y, Becker DP, Tamura T and Hovda D: Massive increase in extracellular potassium and indiscriminate glutamate release after concussive brain injury. *Journal of Neurosurgery* 73:889-900, 1990
- 061 Yamamoto T, Xing J, Katayama Y, Tsubokawa T, Hirayama T and Maejima S: Spinal cord responses to feline transcranial brain stimulation. Evidence for involvement of cerebellospinal responses. *Journal of Neurotrauma* 7:247-256, 1990
- 062 Katayama Y, Tsubokawa T, Miyazaki S, Yoshida K and Himi K: Magnetic resonance imaging of cavernous sinus cavernous hemangiomas. *Neuroradiology* 33:118-122, 1991
- 063 Katayama Y, Tsubokawa T, Hirayama T, Himi K and Yamamoto T: Embolization of the intramedullary spinal arteriovenous malformation fed by anterior spinal artery under monitoring of corticospinal motor evoked potential. *Neurologia Medicochirurgica* 31:401-405, 1991
- 064 Katayama Y, Tsubokawa T, Miyazaki S, Furuichi M, Hirayama Y and Himi K: Growth of totally thrombosed giant aneurysm within the posterior cranial fossa. Diagnostic and therapeutic considerations. *Neuroradiology* 33:168-170, 1991 [reproduced in *Yearbook of Neurology* vol. 1 (Eds, AG Osborn, HR Harnsberger, RI Grossman and VV Halbach) Mosby, Chicago, pp 248-249, 1992]
- 065 Tsubokawa T, Katayama Y, Yamamoto T, Hirayama T and Koyama S: Treatment of thalamic pain with chronic motor cortex stimulation. *Pacing and Clinical Electrophysiology* 14:131-134, 1991
- 066 Katayama Y, Tsubokawa T, Yamamoto T, Hirayama T and Koyama S: Characterization and modification of brain activity with deep brain stimulation in patients in a persistent vegetative state. *Pacing and Clinical Electrophysiology* 14:116-121, 1991

067 Tsubokawa T, Katayama Y, Kawamata T and Miyazaki S: Difference in Temporal Patterns of Impairment of Hippocampal Synaptic Plasticity and Elevation of Intraventricular Pressure in Experimental Hydrocephalus. *Current Treatment for Hydrocephalus* 1:1-5, 1991

068 Katayama Y, Tsubokawa T, Yamamoto T, Hirayama T and Koyama S: Thalamic pain and brain stimulation therapy. *Pain Research* 6:147-151, 1991

069 Yamamoto T, Hirayama T, Katayama Y, Tsubokawa T and Koyama S: Usefulness of the morphine/thiamylal test for the treatment of deafferentation pain. *Pain Research* 6:143-146, 1991

070 Katayama Y, Kawamata T, Tamura T, Hovda DA, Becker DP and Tsubokawa T: Calcium-dependent glutamate release concomitant with massive potassium flux during cerebral ischemia in vivo. *Brain Research* 558:136-140, 1991 [reproduced in *Current Opinion in Neurobiology*, Current Biology Ltd, London, June issue, 1992]

071 Yoshino A, Hovda DA, Kawamata T, Katayama Y and Becker DP: Dynamic changes in local cerebral glucose utilization following fluid-percussion injury. Evidence of a hyper- and subsequent hypometabolic state. *Brain Research* 561:106-119, 1991

072 Katayama Y, Tsubokawa T, Koshinaga M and Miyazaki S: Temporal pattern of survival and dendritic growth of fetal hippocampal cells transplanted into ischemic lesions of the adult rat hippocampus. *Brain Research* 562:352-355, 1991

073 Hovda DA, Yoshino A, Kawamata T, Katayama Y and Becker DP: Diffuse prolonged depression of cerebral oxidative metabolism following concussive brain injury in the rat. A cytochrome oxidase histochemistry study. *Brain Research* 567:1-10, 1991

074 Katayama Y, Tamura T, Becker DP and Tsubokawa T: Calcium-dependent component of massive increase in extracellular potassium during cerebral ischemia as demonstrated by microdialysis in vivo. *Brain Research* 567:57-63, 1991

075 Katayama Y, Tamura T, Becker DP and Tsubokawa T: Inhibition of massive potassium flux during cerebral ischemia in vivo by an excitatory amino acid antagonist. *Brain Research* 568:294-298, 1991

076 Kawamata T, Katayama Y, Hovda DA, Yoshino A and Becker DP: Administration of excitatory amino acid antagonists via microdialysis attenuates the increase in glucose utilization seen following concussive brain injury. *Journal of Cerebral Blood Flow and Metabolism* 12:12-24, 1992

077 Katayama Y, Tamura T, Becker DP and Tsubokawa T: Early cellular swelling during cerebral ischemia in vivo is mediated by excitatory amino acids released from nerve terminal. *Brain Research* 577:121-126, 1992

078 Miyazaki S, Katayama Y, Lyeth BG, Jenkins LW, DeWitt DS, Goldberg SJ, Newlon PG and Hayes RL: Enduring suppression of hippocampal long-term potentiation following traumatic brain injury in rat. *Brain Research* 585:335-339, 1992

079 Katayama Y, Tsubokawa T, Kinoshita K and Himi K: Intra-parenchymal fluid-blood levels in traumatic intracerebral hematomas. *Neuroradiology* 34: 381-383, 1992 [reproduced in *Yearbook of Neurology* vol. 2, (Eds, AG Osborn, HR Harnsberger, RI Grossman and JM Eskridge) Mosby, Chicago, pp 102-106, 1993]

080 Yoshino A, Katayama Y, Kawamata T and Becker DP: Hippocampal CA3 lesion prevents the post-concussive metabolic derangement in CA1. *Journal of Cerebral Blood Flow and Metabolism* 12:996-1006, 1992

081 Katayama Y, Kawamata T, Kano T and Tsubokawa T: Excitatory amino acid antagonist administered via microdialysis attenuates lactate accumulation during cerebral ischemia and subsequent hippocampal damage. *Brain Research* 584:329-333, 1992

082 Kano T, Katayama Y, Miyazaki S, Kinoshita K, Kawamata K and Tsubokawa T: Effects of indeloxazine on hippocampal CA1 pyramidal cell damage following transient cerebral ischemia in the gerbil. *Neuropharmacology* 32:307-310, 1993

083 Tsubokawa T, Katayama Y, Yamamoto T, Hirayama T and Koyama S: Chronic motor cortex stimulation in patients with thalamic pain. *Journal of Neurosurgery* 78: 393-401, 1993 [reproduced in *Critical Reviews of Neurosurgery* 3:325-33, 1993]

084 Katayama Y, Tsubokawa T, Tanaka A, Koshinaga M and Nemoto N: Magnetic resonance imaging of xanthomatous meningioma. *Neuroradiology* 35:187-189, 1993

085 Miyazaki S, Katayama Y, Furuichi M, Kinoshita K, Kawamata T and Tsubokawa T: Impairment of hippocampal long-term potentiation following transient cerebral ischemia in rats. Effects of bifemelane, a potent inhibitor of ischemia-induced acetylcholine release. *Neurological Research* 15:249-252, 1993

086 Miyazaki S, Katayama Y, Furuichi M, Kinoshita K and Tsubokawa T: Post-ischemic potentiation of Schaffer collateral /CA1 pyramidal cell responses of the rat hippocampus. Involvement of N-methyl-D-aspartate receptors. *Brain Research* 611:155-159, 1993

087 Koyama S, Katayama Y, Maejima S, Hirayama T, Fujii M and Tsubokawa T: Thalamic neuronal hyperactivity following transection of the spinothalamic tract in the cat. Involvement of N-methyl-D-aspartate receptor. *Brain Research* 612:345-350, 1993

088 Fujii M, Katayama Y, Makiyama Y, Maejima S and Tsubokawa T: Dynamic changes in cytochrome oxidase activity of the rat somatosensory cortex after thalamocortical deafferentation. *Neurological Research* 15:384-388, 1993

089 Katayama Y, Fujii M, Makiyama Y, Maejima S and Tsubokawa T: Functional changes in the rat somatosensory cortex after thalamocortical deafferentation as demonstrated by cytochrome oxidase histochemistry. *Pain Research* 8:89-92, 1993

090 Katayama Y, Tsubokawa T, Maeda T and Yamamoto T: Surgical managements of cavernous malformations within the third ventricle. *Journal of Neurosurgery* 80:64-72, 1994

- 091 Katayama Y, Kawamata T, Maeda T, Tsubokawa T and Ishikawa K: Inhibition of early phase of free fatty acid liberation during cerebral ischemia by excitatory amino acid antagonist administered by microdialysis. *Brain Research* 635:331-334, 1994
- 092 Hirayama T, Katayama Y, Kano N and Tsubokawa T: Control of systemic hypertension with diltiazem, calcium antagonist, in patients with mildly elevated intracranial pressure. a comparative study. *Neurological Research* 16:97-99, 1994
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- 095 Yamamoto T, Katayama Y and Tsubokawa T: Persistent absence of auditory brainstem responses with preserved hearing and recovery from a prolonged comatose state. *Brain Injury* 8:623-629, 1994
- 096 Miyazaki S, Katayama Y, Furuichi M, Kano T and Tsubokawa T: N-methyl-D- aspartate receptor-mediated, prolonged afterdischarges of CA1 pyramidal cells following transient cerebral ischemia in the rat hippocampus in vivo. *Brain Research* 657:325-329, 1994
- 097 Rossini PM, Barker AT, Berardelli A, Caramia MD, Caruso G, Cracco RQ, Dimitrijevic MR, Hallett M, Katayama Y, Lucking CH, Maertens de Noordhout AL, Marsden CD, Murray NMF, Rothwell JC, Swash M and Tomberg C: Non-invasive electrical and magnetic stimulation of the brain, spinal cord and roots. Basic principles and procedures for routine clinical application. Report of an IFCN committee. *Electroencephalography and clinical Neurophysiology* 91:79-92, 1994
- 098 Katayama Y, Tsubokawa T, Tsuji N, Fujii M, Kawamata T and Nishimoto H: Depressed cortical cytochrome oxidase activity in experimental chronic hydrocephalus. *Current Treatment for Hydrocephalus* 3:12-15, 1994
- 099 Katayama Y, Tsubokawa T and Yamamoto T: Chronic motor cortex stimulation for central deafferentation pain. Experience with bulbar pain secondary to Wallenberg syndrome. *Stereotactic and Functional Neurosurgery* 62:295-299, 1994
- 100 Hirota H, Katayama Y, Kawamata T, Kano N and Tsubokawa T: Inhibition of high-affinity glutamate uptake system facilitates the massive potassium flux during cerebral ischaemia in vivo. *Neurological Research* 17:94-96, 1994
- 101 Kawamata T, Katayama Y, Hovda DA, Yoshino A and Becker DP: Lactate accumulation following concussive brain injury. The role of ionic fluxes induced by excitatory amino acids. *Brain Research* 674:196-204, 1995
- 102 Tsubokawa T, Katayama Y and Yamamoto T: Control of persistent hemiballismus by chronic thalamic stimulation. *Journal of Neurosurgery* 82:501-505, 1995
- 103 Katayama Y, Koyama S, Maejima S, Yamamoto T and Tsubokawa T: Cortical hyperactivity following thalamocortical deafferentation in the rat. The role of N-methyl-D-aspartate receptor-coupled ion channels. *Pain Research* 10:71-76, 1995
- 104 Katayama Y, Hirayama T and Yamamoto T: Neurological characteristics of post-stroke pain patients with favorable therapeutic responses to motor cortex stimulation. *Pain Research* 11:159-163, 1996
- 105 Yamamoto T, Katayama Y, Maejima S and Hirayama T: 5-HT<sub>3</sub> antagonist for the treatment of central pain. Comparison with the results of pharmacological test. *Pain Research* 12:109-114, 1997
- 106 Yamamoto T, Katayama Y, Hirayama T and Fukaya C: Pharmacological classification of central post-stroke pain: Comparison with the results of chronic motor cortex stimulation. *Pain* 72:5-12, 1997
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