



京都大学大学院医学研究科
てんかん・運動異常生理学講座

Department of Epilepsy, Movement Disorders and Physiology
Kyoto University Graduate School of Medicine

年次報告書

Annual Report

2014年 8月

<表紙の言葉>

表紙のデザインは、波形様の曲線と異なる色彩からなります。脳波の波形と周波数を想像させます。脳波のサーフィンがもっと上手になることを目指して。

<Front cover>

Design of the cover page is the slow waveforms with different colors, which may remind you brain waveforms and different frequencies.

Hoping to enjoy EEG wave surfing.

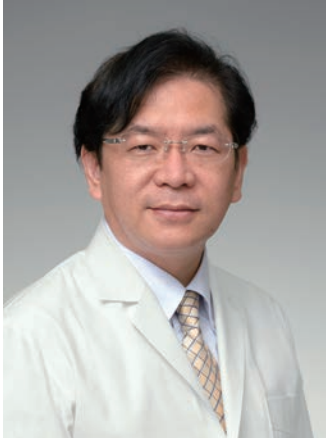
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Kyoto University Graduate School of Medicine

年次報告書

Annual Report

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Preface

It is my great honor and pleasure that we could issue the first annual report of the Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine. It was decided to establish in June, 2013, and then I was appointed as the Chairman and the Professor of this Department in August, 2013. It is the endowed Department, supported by GlaxoSmithKline K.K., NIHON KOHDEN CORPORATION, Otsuka Pharmaceutical Co., and UCB Japan Co., Ltd. The activity of this Department is officially supported by the Department of Neurology (chaired by Prof. Ryosuke Takahashi), and also by the Departments of Neurosurgery (Prof. Susumu Miyamoto), Human Brain Research Center (Prof. Hidenao Fukuyama), Psychiatry (Prof. Toshiya Murai), and Pediatrics (Prof. Toshio Heike).

Based on or in addition to the daily, clinical practice for patients with epilepsy and movement disorders in the Kyoto University Hospital, the aim of this Department was planned as follows.

- 1) To solve pathophysiology of epilepsy and movement disorders, and to develop new treatments that could lead to the advanced medical care. We also aim at standardizing it in clinical practice.
- 2) To promote clinical practice and research of clinical neurophysiology on epilepsy and movement disorders and its clinical application, because basic- and clinical epileptology and movement disorders are very closely related to neurophysiological knowledge and methods.
- 3) To provide the integrated teaching opportunity for training of physician-scientists, clinical specialists and leaders of related fields internationally.

In the last year we tried to conduct our initial purposes. However, since it was the first year after launching, it was spent more to prepare to conduct the various listed activities. Fortunately, we could at least partly continue our activity because many of us used to do in the Department of Neurology until its was founded, because we were allowed to continue with the great support by the Department of Neurology (Prof. Takahashi).

Upon the completion of the first year, we greatly appreciate all of the Departments of Kyoto University Graduate School of Medicine and all of the Clinical Divisions of the Kyoto University Hospital for their warmest and sincere support to our activity. Without this support, we could not complete any of them by all means that were reported in this annual report. It was also strongly supported by so many collaborators, researchers and friends in Japan and also internationally.

We tried to summarize what we could do and not, which help us analyze and understand the situation, and then help us improve and modify the current condition, and also start the new concerns. We would greatly appreciate your any feedback to us which is very helpful for our future contribution to the patients in this planet.

At the end of my preface, I thank all of our friends very much whoever kindly worked hard to make and edit this annual report.

August 2014

With my best wishes,

Akio IKEDA, M.D., Ph.D.
Chairman and Professor
Department of Epilepsy, Movement Disorders and Physiology
Kyoto University Graduate School of Medicine

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I Introduction

To begin with

The details of the annual report in each aspect are shown in the following pages, and thus as the general message directly related to our Department, I am briefly listing them which occurred or appeared in the last year. I would greatly appreciate your comment and feedback.

- 1) Significantly increased members of the Japan Epilepsy Society (JES) recently
 - 2) Multidisciplinary care system for epilepsy patients in Japan
 - 3) Translatability between basic and clinical science in epilepsy
 - 4) Active interaction for teaching in the nationwide and international fields
 - 5) Nationwide and international collaborative study
 - 6) Scientific clinical paper is the message to the readers in the future.
-
- 1) It has been criticized that patient care for epilepsy in Japan was behind the world standard. Since the members of JES (2641 members in 2013) have been increasing much more in the last decade by ~1000 members or by 73%, and since more neurologists have participated in, the condition has been improving. In the Japan Neurology Society, five common neurological disorders, i.e., headache, dementia, stroke, epilepsy and Parkinson' disease, were labeled as the most important, representative common diseases which are to be cared by neurologists. Epilepsy used to be recognized as a neuropsychiatric disease and used to be cared mainly by neuropsychiatrists in Japan historically. Once recently the genetic study, neurophysiological analysis and pathological approach have advanced better understanding of epilepsy, it is now recognized one of the most representative disorder of clinical neuroscience for both neurology and neuropsychiatry.
 - 2) In Japan epilepsy has been cared by many different clinical divisions such as pediatric neurology, neuropsychiatry, neurology and neurosurgery. It may blur the selection of doctors for patients with epilepsy, and also may blur the role and responsibility in clinical care for doctors-in-charges. Since epilepsy involves patients with wide range of age from children to the elderly with different etiology, so-called multidisciplinary care system for epilepsy patients in Japan can help epilepsy patients more effectively in the individualized manner as long as good communication is kept among each clinical divisions.
 - 3) Translatability between basic and clinical science in epilepsy is recommended, and ILAE/AES Translational Task Force of the Neurobiology Commission of the ILAE member has started this year. It enhances the translatability between the two sides, to promote more effective outcome for clinical treatment and care.
 - 4) Internet communication extraordinarily has enhanced the capability of information acquisition. It enables us to obtain many teaching materials and any scientific publication no matter how large it is in size. However, at the same time, face-to-face interaction such as interactive lecture and skills workshop plays more important role because it complements and by far crystalizes the essential points. It helps us for continuous medical teaching course of epilepsy and EEG in the nationwide and international level. Continuous teaching with close collaboration by international staffs is very popular and important now.
 - 5) In association with translatability works as listed in 3), nationwide and international collaborative study benefit each other to complement and promote.

- 6) Scientific clinical paper is the message not only to the current readers but also to ones in the future in this planet.
We think that sincere, clear documents are the crystalized, real property and will be cited in the future.

In the last, for young people, we very much welcome all of you who are interested in this field from any places, and we hope to work and learn together.

With my best wishes,

Akio IKEDA, M.D., Ph.D.

Funding prospects

Establishment June 1st, 2013
Arrival of staffs August 1st, 2013

Name of the Endowed Department

Department of Epilepsy, Movement of Disorders and Physiology
Kyoto University Graduate School of Medicine

Founding vision

- 1) As an academic department in the university hospital, we promote researches and clinical applications of clinical neurophysiology, which is essential for elucidating the pathophysiology and developing the treatment of clinical epileptology.
- 2) It is our mission to elucidate the pathophysiology and develop the treatment of epilepsy and movement disorders so as to develop the highly advanced medicine for its application to clinical practice. We also make best efforts to offer opportunities of trainings and educations to young physicians both from Japan and abroad to foster the specialists and physician-scientists in the field of epilepsy.

Research vision

In close collaboration with the Department of Neurology, we aim at achieving the following projects in a comprehensive, efficient and multidisciplinary manner.

1. Development of medical devices for wide-band EEG recording&analysis, and its application to elucidation of epileptogenicity
2. Promotion of epilepsy surgery and research on higher brain functions&its plasticity under epileptic conditions
3. Combined imaging and neurophysiological researches on the pathophysiology of the epileptic focus
4. Research on the pathophysiology and treatment of movement disorders
5. iPS (induced pluripotent stem) cell research on epileptogenesis
6. Establishment of the training programs for the advanced specialists in the related fields

Companies of endowment (in alphabetical order)

GlaxoSmithKline K.K.
NIHON KOHDEN CORPORATION
Otsuka Pharmaceutical Co., Ltd.
UCB Japan Co., Ltd.

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Members of this Department and Affiliated Persons

Members of Department of Epilepsy, Movement Disorders and Physiology

Professor	Akio Ikeda, M.D., Ph.D.
Associate Professor	Riki Matsumoto, M.D., Ph.D.
Secretary	Miki Watanabe

Affiliated members from Department of Neurology

Assistant Professor	A. Shimotake, M.D.
Medical Staff	K. Kobayashi, M.D.
Graduate Students (Doctoral course)	
	K. Usami
	K. Kanazawa
	K. Kobayashi
	B. Borgil
	T. Sakurai
	M. Ota
	K. Sato
	H. Takeyama
	M. Daifu-Kobayashi
	M. Kinboshi
	T. Murai
	M. Nakatani
	J. Togawa
	K. Yoshinaga
EEG/Epilepsy fellowship	T. Inoue
Visiting Physician	S. Sultana

Affiliated members

Department of Neurosurgery

Senior Lecturer	T. Kunieda, M.D., Ph.D.
Assistant Professor	T. Kikuchi, M.D., Ph.D.
Assistant Professor	Y. Yamao, M.D., Ph.D.

Human Brain Research Center

Research and Educational Unit of Leaders for Integrated Medical System

Program-specific Associate Professor	M. Matsuhashi, M.D., Ph.D.
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Research and Educational Unit of Leaders for Integrated Medical System

Program-specific Researcher	T. Fumuro, PhD., R. EEG T.
-----------------------------	----------------------------

Department of Clinical Laboratory Medicine

Assistant Professor	T. Hitomi, M.D., Ph.D.
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Department of Respiratory Care and Sleep Control Medicine

Assistant Professor	M. Inouchi, M.D., Ph.D.
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Research activities

Our main goal is to solve so-called "clinical questions", which have been raised in the daily clinical activity, and have remained unsolved yet.

Based on the concept of system neuroscience, by means of established and newly developed various methods, many clinical- and basic researches are conducted as follows.

KEY WORDS

General key words: epilepsy, epilepsy surgery, higher cortical function (motor control, praxis, language, semantic cognition, vision, will), Bereitschaftspotentials (BPs), cortico-cortical network, movement disorders, sleep disorders, autoimmune epilepsy

Unique key words: ictal DC shifts, cortico-cortical evoked potentials (CCEP), cortical tremor, ictal apraxia, ictal paresis

1) Pathophysiology of medically intractable epilepsy and its treatment

a) Shaping presurgical evaluations for intractable epilepsy

Even in the 21st century, electroencephalography (EEG) remains essential in the diagnosis of "epileptogenicity". Simultaneous recording of EEG and fMRI (EEG-fMRI) is a new technique that takes advantages of both modalities and complements each other to delineate both the cortical and subcortical structures related with epileptic activities. We for the first time introduced this technique to Japan to investigate the epileptic network and underlying pathophysiology in various types of epileptic syndromes such as praxis-induced epilepsy and hypothalamic hamartoma.

Epilepsy surgery has been established as an option for treatment of intractable partial epilepsy. The epileptogenic lesions, such as hippocampal sclerosis, cavernous angioma, and brain tumor, are the most common candidates for the one-stage surgery. It is still a challenge to localize the epileptic focus in 'MRI-negative' patients. We have extensively made multidisciplinary approaches with MEG, EEG-fMRI and FDG-PET to 'visualize' the epileptic focus in these MRI-negative patients for possible treatment with epilepsy surgery. Especially in the MRI-negative cases, we occasionally need invasive evaluation with intracranial electrodes to precisely delineate the epileptic focus and map the eloquent cortices at and around the epileptic focus. In addition to the conventional frequency band (Berger rhythm: 0.3-70 Hz), advancement in medical engineering has enabled us to record electrocorticogram with a broader frequency band (wideband EEG), ranging from direct current shifts to high frequency oscillation (HFO) (Fig. 1). We have been applying the wideband EEG technology (ictal/interictal DC shift and HFO) to further localize the core epileptogenic zone for epilepsy surgery.

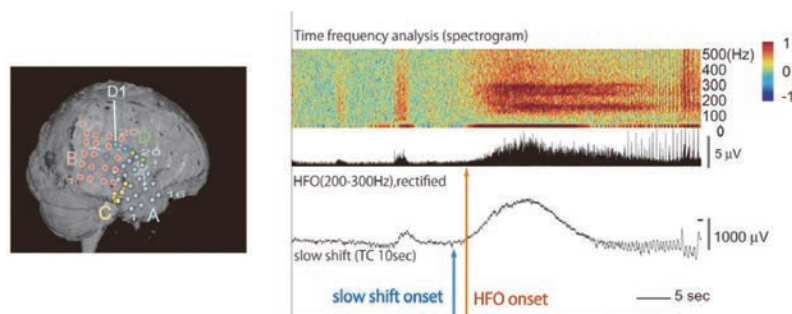


Figure 1. Wideband EEG change at the seizure onset.

Ictal wideband EEG: Direct comparison between slow activity (ictal slow shift) and high frequency activity (HFO: high frequency oscillation) at the epileptic focus (D1 electrode). Ictal slow shift occurs earlier than ictal HFO. (Imamura et al., 2011)

An *in vivo* electrical tract tracing method of cortico-cortical evoked potentials (CCEPs) is an exciting new presurgical technique developed in Cleveland Clinic and Kyoto University. By means of subdural electrodes implanted for presurgical evaluation, electrical pulses (0.3-ms duration, frequency of 1 Hz, alternating polarity, 1–10 mA) are directly delivered to the cortex, and cortico-cortical evoked potentials (CCEPs) are obtained from adjacent and remote cortical regions by averaging the electrocorticogram time-locked to the stimulus onset. It promises to refine our understanding of surgical candidacy, first through a more precise and tailored evaluation of the seizure network in each individual patient, and second through greater understanding of the functional systems of the brain involved. Both are important for improving our ability to identify patients at high risk for poor surgical outcomes across multiple outcome measures.

b) Unraveling pathophysiology for treatment of epilepsy

As described above, EEG-fMRI could estimate the whole brain including the subcortical structures. Using this technique, we have been studying the pathological basis of praxis-induced epilepsies and symptomatic epilepsy caused by hypothalamic hamartoma, a model of subcortical epilepsy and epileptic encephalopathy.

Recently the role of autoimmunity has been highlighted for a subset of encephalitis and epileptic seizures. Nowadays, high-resolution MRI can depict subtle structural changes in the medial temporal lobe, such as hippocampus and amygdala, which are often the main inflammatory foci in autoimmune limbic encephalitis. By means of video-EEG monitoring (VEEG), we have revealed the smoldering nature of the autoimmune limbic encephalitis. We have been utilizing multidisciplinary approach (VEEG, FDG-PET and 3T MRI) for offering tailor-made immunotherapy for patients with autoimmune epilepsy. Interestingly, LGI1 antibody and *LGI1* gene mutation present different phenotypes: LGI1 antibody could mediate autoimmune limbic encephalitis whereas *LGI1* is the causative gene for autosomal dominant lateral temporal lobe epilepsy (ADLTE). We established *Lgi1* heterozygous mutant rats (*Lgi1*^{L385R/+}) as an animal model of ADLTE in close cooperation with Prof. Serikawa's lab in the Institute of Laboratory Animals. While interictal EEG was normal, ictal EEG showed bilateral rhythmic spikes. An elevated Fos expression in the temporal lobe etc., neural excitability increased after seizures. Microarray analysis revealed genes that may be involved in epilepsy.

In collaboration with the Department of Pharmacy in Kyoto University Hospital, we have extensively investigated the effect of the gene polymorphism to tailor dosage of antiepileptic medication, such as CYP2C19 polymorphism for efficacy of clobazam.

As an interventional neurophysiology, we have introduced neuro-feedback therapy for patients with intractable epilepsy. Using the DC-EEG machine, we have performed clinical trials which the patients learn to regulate their slow cortical potential (SCP) and thereby decrease their cortical excitability. The neuro-feedback therapy is side-effect free and regarded as one of the promising alternative therapies.

We started conducting collaborative researches in epilepsy by means of iPS cells with Prof. Haruhisa Inoue (Center for iPS Cell Research and Application: CiRA).

c) Advanced EEG analysis

EEG now has a history of more than 80 years for evaluation of brain functions and diagnosis of brain diseases, ranging from brain death, coma to epilepsy. Medico-engineering collaboration between Prof. Shibasaki's group (Kyoto University School of Medicine, Neurology, Human Brain Research Center) and Prof. Nakamura's group (Saga University, Faculty of Science and Engineering) has been done to develop the automatic EEG interpretation system, and it is currently under clinical investigation.

2) Mapping higher cortical functions/network and elucidating its functional alteration under pathological condition

In epilepsy surgery, it is important to map cortical functions to preserve eloquent cortices in addition to the localization of the epileptic focus. We have made vigorous attempts at developing various techniques for mapping

higher cortical functions (e.g., language, motor control etc.) and their network for clinical application.

Functional neuroimaging generates important hypotheses about the contribution of specific brain regions, but activation by itself does not demonstrate the necessity of those areas. In contrast, electrical cortical stimulation, a gold standard method since mid-20th century, can delineate the cortex responsible for a particular task by making functional impairment. The functional interference is temporary (~ 5 s), discretely focal (~ 1 cm²), and in sharp contrast to chronic stroke lesions that are relatively large and usually associated with cortical plastic compensation. However, high frequency electrical stimulation often results in afterdischarges that delay functional mapping and potentially harbor a risk of seizure induction. Recent technical advances have enabled to record the cortical activities relevant to higher cortical functions with wideband EEG technology- from infraslow to high gamma activities. In our institute, in addition to the gold standard method of high frequency electrical stimulation, we perform comprehensive mapping of higher cortical functions by recording epicortical event-related potential, Bereitschaftspotential (BP) and high frequency oscillation/activity. Recently, we investigated reaching movement by combining BP and direct cortical stimulation in epilepsy patients undergoing invasive presurgical evaluation. The study demonstrated that a certain region of the posterior parietal cortex produces BPs specific for reaching, and that direct cortical stimulation there resulted in reaching error similar to optic ataxia. Higher cortical functions such as language, praxis and semantics are orchestrated by multiple cortical regions (i.e., 'system' of a specific function). We incorporate CCEPs to probe inter-areal functional connectivity (Fig. 2) in order to perform 'system mapping'. These comprehensive invasive findings could help neurosurgeons to make strategy of surgery for individual patients. Furthermore, by gathering data from many patients and put them into the standardized space such as MNI space, we attempt to feedback these valuable information into the system neuroscience by providing functional/connectivity references for non-invasive researches.

We have demonstrated the central mechanisms and functional alteration under pathological condition relevant to i) the motor control (conflict monitoring, negative motor phenomena, praxis and reaching), ii) language (dorsal and ventral language networks with emphasis on semantic cognition) and iii) visual functions (retinotopic mapping by functional MRI), combined with non-invasive evaluation (functional MRI, diffusion tractography,

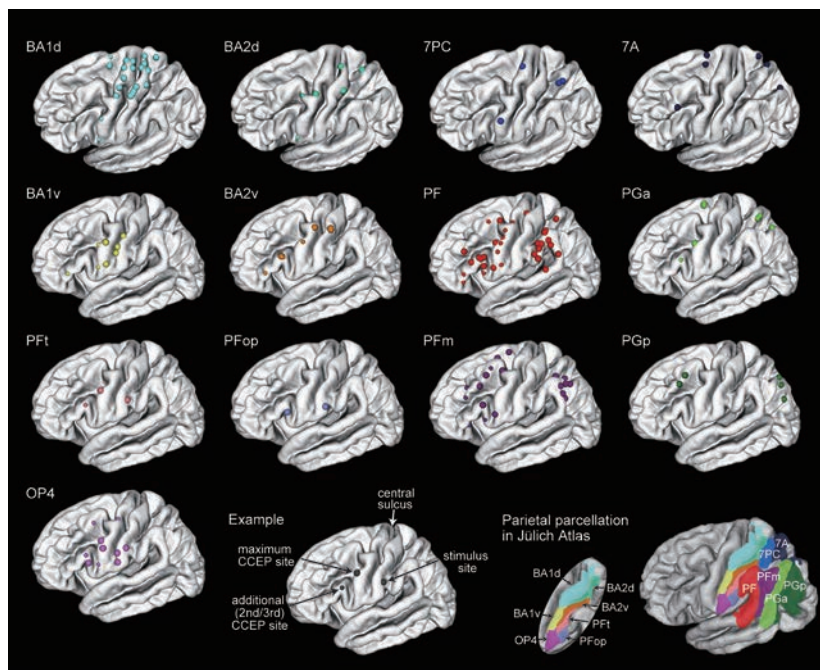


Figure 2. Standardized CCEP connectivity map in the MNI space.

Lateral parietal area was stimulated and CCEPs were recorded from the lateral frontal area. i) A near-to-near and distant-to-distant, mirror symmetric configuration across the central sulcus, ii) preserved dorso-ventral organization, iii) projections to more than one frontal cortical sites in 56% of explored connections were observed (Matsumoto et al., Hum Brain Mapp 2012).

MEG, neuropsychology). Additionally, we are applying multidisciplinary system mapping to awake surgery for the improvement of functional outcome, as a collaborative research with the Department of Neurosurgery. We have a monthly joint research conference with the electrophysiology group of HBRC, and are currently doing collaborative research on decoding motor activities from electrocorticogram.

3) Pathogenesis of movement disorders and its treatment

We have investigated movement disorders, mainly myoclonus and myoclonus epilepsy, by way of epidemiological, genetical and electrophysiological methods. BAFME (benign adult onset familial myoclonus epilepsy) has been investigated mainly in Japan and European countries for 20 years. The clinical pictures are as follows: i) adult onset, ii) autosomal dominant (unknown causative gene), iii) cortical (myoclonic) tremor (tremulous myoclonus), iv) infrequent generalized seizure, v) cortical reflex myoclonus disclosed by electrophysiological study. We have also been studying BAFME since it was first reported in 1990. As its name suggests, BAFME was considered to present no progression and good prognosis. However, cortical myoclonic tremor has been proved to worsen with aging. Recently, we demonstrated slow progression of the disease, based on the electrophysiological evidence. Namely, the amplitude of somatosensory evoked potential, reflecting the cortical excitability in the primary sensori-motor cortices, more exaggerated with aging in BAFME patients than normal volunteers (Fig. 3). We also demonstrated clinical anticipation in BAFME, in which the onset of generalized seizure and cortical (myoclonic) tremor became earlier in the next generation. The anticipation in BAFME was more apparent in patients with maternal transmission. These findings would be helpful to search a causative gene of BAFME. In addition, the nationwide questionnaire for neurologists and epileptologists in Japan revealed that BAFME patients were found diffusely without regional accumulation (Fig. 4: right).

Unverricht-Lundborg disease (ULD) is the most common form of progressive myoclonus epilepsy syndrome (PME) in the world, but mainly reported from Baltic and Mediterranean region. The symptoms consist of epileptic seizure, myoclonus, ataxia and cognitive impairment and are gradually deteriorated. We reported ULD cases in Japan, in some of which the development of symptoms and increase of SEP amplitude became very subtle for long-term follow-up. Similar to BAFME, PME including ULD also presented no regional clustering in Japan (Fig.4: left).

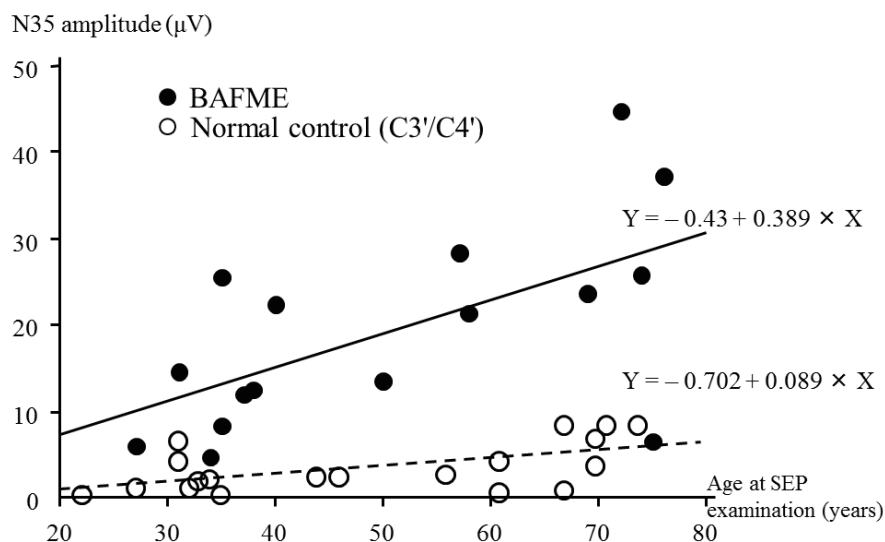


Figure 3. Linear regression between the age at the time of SEP examination and N35 amplitude in 16 patients with BAFME and 19 age - matched normal subjects for control at C3'/C4'.

Black line indicates the simple linear regression line of patients with BAFME and dashed line indicates that of normal controls. There is a significant linear regression between the age and N35 amplitude in both groups. In addition, the regression gradient is significantly steeper in BAFME group than that in control subjects. (Hitomi et al., 2011)

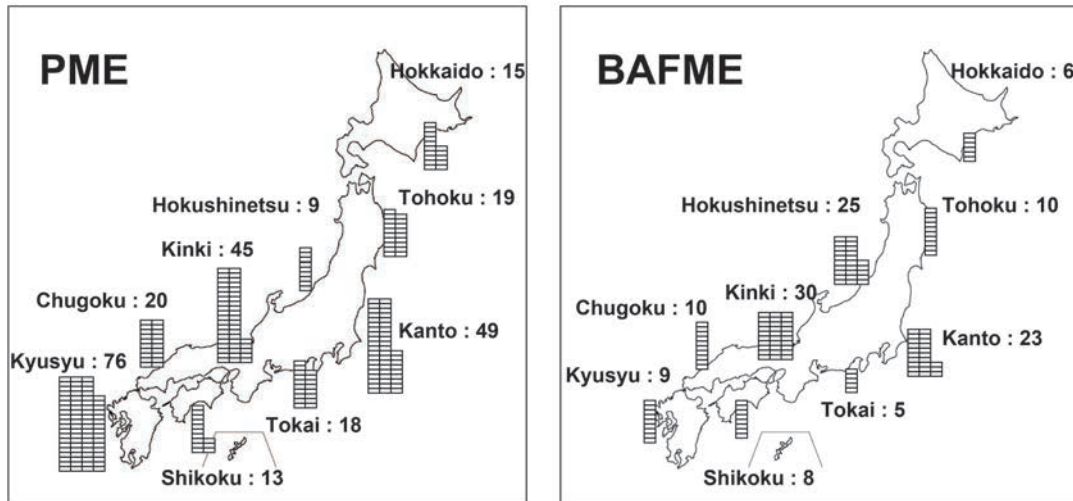


Figure 4. Regional distribution of PME and BAFME in Japan investigated by the nationwide questionnaire. There is no regional clustering in both diseases.

Collaborators

We have been collaborating closely with the Departments that officially support our department. Other collaborators are listed below.

[Overseas]

Dr. Stéphanie Baulac, Ph.D.

Affiliation: Institut du Cerveau et de la Moelle épinière (ICM), Epilepsy Unit

Position: Research Director

Prof. Matthew A. Lambon-Ralph, FRSLT (hons), FBPsS

Affiliation: School of Physiological Sciences, The University of Manchester

Position: Professor of Cognitive Neuroscience & Associate Vice-President (Research)

Dr. Dileep R. Nair, M.D.

Affiliation: Epilepsy Center, Cleveland Clinic

Position: The Section Head of Adult Epilepsy and Director of Intraoperative Neurophysiologic monitoring

Prof. Angela Vincent, Ph.D.

Affiliation: University of Oxford

Position: Emeritus Professor of Neuroimmunology

[Domestic]

Dr. Koji Iida, M.D., Ph.D.

Affiliation: Department of Neurosurgery, Hiroshima University Hospital

Position: Lecturer

Dr. Yushi Inoue, M.D., Ph.D.

Affiliation: Shizuoka Institute of Epilepsy and Neurological Disorders, National Epilepsy Center, Department of Clinical Research

Position: Hospital director

Prof. Shigeki Kameyama, M.D., Ph.D.

Affiliation: Nishi-Niigata Chuo National Hospital

Position: Hospital director

Prof. Amami Kato, M.D., Ph.D.

Affiliation: Department of Neurosurgery, Kinki University Hospital

Position: Professor

Dr. Tomohisa Okada, M.D., Ph.D.

Affiliation: Department of Diagnostic Imaging and Nuclear Medicine, Kyoto University Graduate School of Medicine

Position: Senior Lecturer

Prof. Takashi Nagamine, M.D., Ph.D.

Affiliation: Department of Systems Neuroscience, School of Medicine, Sapporo Medical University

Position: Professor

Dr. Teiichi Onuma, M.D., Ph.D.

Affiliation: Musashino Kokubunji Clinic

Position: Hospital director

Dr. Rieko Osu, Ph.D.

Affiliation: Department of Motor Control and Rehabilitation, ATR Computational neuroscience Labs

Position: Department Head

Dr. Tomoji Mashimo, Ph.D.

Affiliation: Institute of Laboratory Animals, Graduate School of Medicine, Kyoto University

Position: Associate professor

Prof. Masatoshi Nakamura, Ph.D.

Affiliation: Research Institute of Systems Control, Institute for Advanced Research and Education, Saga University

Position: Emeritus professor

Prof. Shigeto Nishida, Ph.D.

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Position: Professor

Dr. Satoru Saito, Ph.D.

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Position: Associate Professor

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Position: Professor

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Affiliation: Department of Neurology, Kyoto University Graduate School of Medicine

Position: Emeritus professor

Dr. Takenao Sugi, Ph.D.

Affiliation: Institute of Ocean Energy, Saga University

Position: Associate professor

Prof. Shoji Tsuji, M.D., Ph.D.

Affiliation: Department of Neurology, The University of Tokyo Hospital

Position: Professor

Dr. Hiroki Yamamoto, Ph.D.

Affiliation: Graduate School of Human and Environmental Studies, Kyoto University

Position: Assistant professor

Dr. Ikuko Yano, Ph.D.

Affiliation: Department of Pharmacy, Kyoto University Hospital

Position: Deputy director of pharmacy/Associate professor

(Listed in the alphabetical order of their family names)

Clinical activities

1) Outpatient Epilepsy Clinic. Promoting cooperation between hospitals and clinics for epilepsy care

As a team of specialists, we have made full efforts to provide the best care to patients suffering from epilepsy or movement disorders. Until recently, epilepsy has been recognized as a childhood-onset disease. However, with the advent of a superaging society, epilepsy that develops in the middle-aged or elderly has become a current problem in Japan. In addition, the number of the hospitals and physicians that can offer the epilepsy care is not adequate. Moreover, it is unclear which department, neurology, neurosurgery, or psychiatry, is in charge for the adult epilepsy service. In order to offer the optimal epilepsy care, it is very important to establish the cooperation model among general physicians and epilepsy specialists for epilepsy care like that in European and North American countries. As a tertiary care institute for epilepsy in Kyoto, we have led cooperation among primary, secondary and tertiary facilities in the Kinki district (esp. in Kyoto-Shiga region) to provide a comprehensive epilepsy service with a dedicated team of neurologists, neurosurgeons, pediatricians and psychiatrists.

In the fiscal year 2013, we saw 1660 outpatients. 236 patients were newly consulted from other hospitals and clinics in the Kinki district. We promoted hospital-clinic cooperation by returning the referral patients to their local clinics and hospitals.

2) Inpatient evaluation and treatment for epilepsy (including video-EEG monitoring)

Since 1991, we have been running the epilepsy monitoring unit (EMU) in the Neurology Ward for evaluation of patients with epilepsy. We now have two dedicated rooms for EMU, equipped with the digital video-EEG system. By capturing seizures with simultaneous video and EEG recording, we can perform

- i) An accurate diagnosis of epilepsy: To determine whether the seizure is epileptic or non-epileptic, including movement or psychogenic disorders,
- ii) Identification of epileptic focus: To locate the epileptic focus for epilepsy surgery in patients with medically intractable epilepsy.

In the fiscal year 2013, we examined 44 patients in the EMU (subdural/depth electrode implantation: 5, presurgical evaluation: 29, evaluation of limbic encephalitis: 9, diagnosis of epilepsy: 5, polygraphic recording: 1).

In addition, we provide patients with multidisciplinary studies for comprehensive evaluation, such as 3 tesla MRI, routine EEG, FDG-PET/SPECT, MEG and neuropsychological testing. Routine EEGs were performed in 1374 patients (including 972 outpatients) in this fiscal year.

3) Epilepsy surgery

We have established an epilepsy surgery program with close collaboration with the Department of Neurosurgery since 1991. Since the first epilepsy surgery in 1992, we have performed more than 190 epilepsy surgeries, with the majority of patients having seizure freedom or substantial decrease leading to better QOL. We provide each patient with the individually tailored surgery plan by incorporating the findings of the multimodal studies (see below) as well as the Wada test. The patients may proceed to the invasive presurgical evaluation with intracranial electrodes (subdural and/or depth electrodes) when the epileptic focus cannot be precisely localized (such as in cases with non-lesional MRI) or the focus is located at or around the functionally important areas such as motor or language cortices. In such cases, the patients undergo the first surgery for implantation of intracranial electrodes. After electrode implantation, the patients are evaluated for the epileptic focus (by recording seizures) and the functional cortical areas (by incorporating the state-of-art mapping techniques) for 1-2 weeks. Then, the patients undergo the second surgery for resection of the epileptic focus. The patients may undergo the awake brain surgery, where the patients wake up from anesthesia if necessary. Awake surgery has the advantage to evaluate the brain functions such as motor and language during resection and monitor the 'natural' epileptic spikes without any influence from anesthetics. In the fiscal 2013, our team performed epilepsy surgery in 15 patients (5 with chronic intracranial electrode implantation) and awake brain surgery about 50 patients (including non-epilepsy cases).

4) Examinations for epilepsy

As the tertiary care epilepsy facility, we provide patients with the state-of-arts studies for the evaluation of epilepsy. As the comprehensive epilepsy program in the national university hospital, we incorporate the leading techniques as clinical research studies (IRB approved) for the optimal presurgical evaluations.

- Electroencephalography (EEG)
- Magnetoencephalography (MEG)
- FDG-PET (18F-fluorodeoxyglucose positron emission tomography)
SPECT (Single photon emission computed tomography) including ictal SPECT
- 3 tesla MRI
- functional MRI (fMRI)
- EEG-fMRI (simultaneous EEG and functional MRI recording)
- invasive EEG monitoring with intracranial electrodes

5) Development of novel treatments for epilepsy

- i) Interventional Neurophysiology: Recently, neurophysiology has been highlighted for its application to treatment of various neurological diseases. In our hospital, we apply a novel interventional neurophysiology method, neurofeedback treatment, to medically intractable patients in whom epilepsy surgery is not applicable. Patients train themselves to control the brain activity (by adjusting slow EEG potentials) to suppress epileptic seizure activity. Our preliminary study shows a good efficacy as comparable to that for the Vagus Nerve Stimulation.
- ii) Promoting the clinical trials for new anti-epileptic drugs.

6) Diagnosis and treatment for movement disorders

It is also our mission to provide the optimal care for patients with movement disorders. We provide precise diagnosis using advanced diagnostic tools for better treatment of movement disorders such as tremor, myoclonus, dystonia and other involuntary movements.

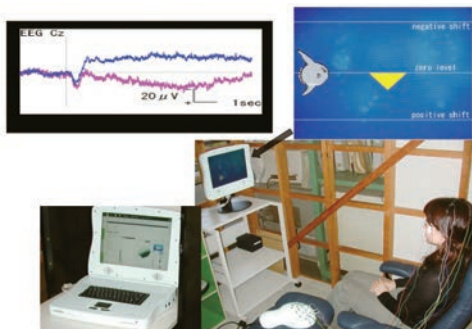
The pathophysiology of movement disorders, however, is not fully understood. We have been investigating their pathophysiology and treatment in close collaboration with the Department of Neurology and Human Brain Research Center (HBRC).

7) Simulation training of brain death determination

Since Organ Transplant Law went into force in 1997, we, in close collaboration with the affiliated departments, have been regularly practicing the course 'Simulation-based training in brain death determination'. In this course, we simulate the management about how and what to do when the donor is found and until organs are taken. The training is highly practical for those in charge of brain death determination in our hospital.



Neuro-feedback therapy for epilepsy & movement disorders



Annual course 'Simulation-based training in brain death determination' in Kyoto University Hospital



Educational activities

1) Offering the optimal education and research to Japanese and foreign physicians

■ EEG/Epilepsy fellowship

With great support by the Department of Neurology, we have set up the EEG/Epilepsy fellowship for training young neurologists, neurosurgeons, pediatricians, and psychiatrists. One adult neurologist and one pediatric neurologist have already completed this fellowship. Our education covers various fields of epileptology with a focus on clinical neurophysiology. We plan to welcome foreign young doctors for fellowship training as well.

Contents of the fellowship program are listed as follows;

- 1) Training of routine EEG reading (emergency EEG as well)
- 2) Analysis of the long-term video-EEG monitoring for diagnosis and presurgical evaluation
- 3) Clinical practice of adult epilepsy
- 4) Training of medical treatment with anti-epileptic drugs

■ Intramural, multidisciplinary monthly case conference

In cooperation of the Departments of Neurology, Neurosurgery, Pediatrics, Diagnostic Radiology, Psychiatry, Rehabilitation, and Clinical Laboratory Medicine, and Human Brain Research Center, we have been holding the intramural, multidisciplinary monthly case conference for more than a decade. In the conference, we discuss the diagnosis and surgical indication of epilepsy patients for comprehensive epilepsy practice as a tertiary epilepsy special facility. As a training facility certified by Japan Epilepsy Society (JES), this conference is open for doctors outside the hospital to discuss their problem case or to obtain the credit to apply board examination of JES-certified epileptologist.

■ EEG conferences and so on

For our graduate students and EEG/Epilepsy fellows, we have been offering multifaceted educational and research trainings, such as EEG reading skills in EEG conferences twice a week, seeing outpatients and inpatients with staffs, and epilepsy/clinical neurophysiology researches. One EEG conference and research conference are held in English for training skills in English presentation. The other conference is held in Japanese and open for the in-hospital technicians and out-hospital doctors for providing them with training opportunities for the practical basic EEG reading skills.

■ Specialist training

In the fiscal year 2013, our department produced one board-certified epileptologist (JES), and 5 board-certified neurophysiologists (EEG part, Japanese Society of Clinical Neurophysiology).

■ Extramural workshops

Regarding educational activities outside the institute, as the secretary office in general, we have organized the district EEG & EMG teaching course for the young doctors and technicians in Kansai (Kansai EEG & EMG workshop) every year since 2008. We also have provided educational activities by complying the request of lectures nationwide (please refer to the achievements for details).

2) Offering medical staffs' education for caring of epilepsy patients

In the Kyoto University Hospital, we have offered education for epilepsy and related disorders to doctors and medical staffs. For the medical staffs in the Neurology clinic and ward, we hold comprehensive monthly lectures about pathophysiology of epilepsy, seizure semiology, and medical care of patients living with epilepsy.

3) Providing patients, family and society with valuable information

We have responded to the request by the patients, family, and society in cooperation with Japan Epilepsy Association. For example, we have joined the lectures sponsored by Japan Epilepsy Association for the public, and also the continuing medical education lectures for physicians by Japan Medical Association.

Interdisciplinary monthly case conference




EEG reading room (Department of Neurology)



Lecture for medical staffs in the Neurology clinic



Recruitment of EEG/Epilepsy fellowship

 **京都大学神経内科**
EEG/Epilepsy Fellowship 募集

1.対象 卒後4年目以降の段階の神経内科、脳外科、小児科、精神科等の若手医師

2.専門研修内容

- i. 幅広い脳波判読の研修と経験
- ii. 長時間ビデオ脳波モニターの解析
- iii. てんかんの診療
- iv. 各種抗てんかん薬の臨床研修

3.期間 単年度単位で1年間（より短期研修も希望に応じて可能）

4.処遇 非常勤医師待遇

少しでも興味がある方は、一度是非ご連絡ください

連絡先：京都大学神経内科事務室、担当：松本理器、池田昭夫
tel: 075-751-3771, fax: 075-751-3265, email: neuroofc@kuhp.kyoto-u.ac.jp

Research grants obtained from extramural sources & awards

The Ministry of Education, Culture, Sports, Science and Technology of Japan Grant-in-Aids for Scientific Research (KAKENHI)

Fiscal years 2011 - 2013
Grant-in-Aid for Scientific Research (C)
Principal investigator: Akio Ikeda
Subject number: 23591275

Fiscal years 2011 - 2013
Grant-in-Aid for Scientific Research (C)
Principal investigator: Riki Matsumoto
Subject number: 23591273

Fiscal years of 2014 - 2016
Grant-in-Aid for Scientific Research (B)
Principal investigator: Akio Ikeda
Subject number: 26293209

Fiscal years 2014 - 2015
Grant-in-Aid for Exploratory Research
Principal investigator: Riki Matsumoto
Subject number: 26560465

Fiscal years 2014 - 2017
Grant-in-Aid for Scientific Research (B)
Principal investigator: Riki Matsumoto
Subject number: 26282218

Health Labour Sciences Research Grant

Fiscal years 2011 - 2013
Principal investigator: Taisuke Otsuki
Co-investigator: Akio Ikeda
Subject number: H23 - 精神 - 004

Fiscal years 2012 - 2013
Principal investigator: Taisuke Otsuki
Co-investigator: Akio Ikeda
Subject number: H24 - 難治等 - 一般 - 029

Fiscal years 2014 - 2016
Principal investigator: Taisuke Otsuki
Co-investigator: Akio Ikeda
Subject number: H26 - 精神 - 一般 - 013

Fiscal years 2014 - 2016
Principal investigator: Yushi Inoue
Co-investigator: Akio Ikeda
Subject number: H26 - 難治等 - 一般 - 051

Other sources

The Kato Memorial Trust for Nambyo Research
Fiscal years 2012 - 2013
Principal investigator: Riki Matsumoto

The Kyoto University Supporting Program for Interaction-based Initiative Team Studies (SPIRITS)
Fiscal years 2013 - 2014
Principal investigator: Riki Matsumoto

The Japan Epilepsy Research Foundation Research Grant
Fiscal years 2014 - 2016
Principal investigator: Riki Matsumoto

Awards

Affiliated members from Department of Neurology

Kyoko Kanazawa: English Presentation Award
2013 The Japan Epilepsy Society Sponsored Award (UCB & Otsuka Award)
47th Congress of the Japan Epilepsy Society (Oct 11th, 2013, Kitakyushu)

Naohiro Fumoto: Excellent Poster Award (Neurology)
47th Congress of the Japan Epilepsy Society (Oct 12th, 2013, Kitakyushu)
「Analysis of seizure-related lesions and genes in *Lgi1L385R/+* mutant rat」

Affiliated members

Tomoyuki Fumuro: International federation of clinical neurophysiology (IFCN) Fellowship
30th International Congress of Clinical Neurophysiology
(Mar 19th - 23rd, 2014, Berlin/Germany)

誌上発表 Publications

原著 Original articles

〈英文 English articles〉

1. Fumuro T, Matsuhashi M, Miyazaki T, Inouchi M, Hitomi T, Matsumoto R, Takahashi R, Fukuyama H, Ikeda A: Alpha-band desynchronization in human parietal area during reach planning. *Clin Neurophysiol* 2014, (in press).
2. Fumuro T, Matsumoto R, Shimotake A, Matsuhashi M, Inouchi M, Urayama S, Sawamoto N, Fukuyama H, Takahashi R, Ikeda A: Network hyperexcitability in a patient with partial reading epilepsy: Converging evidence from magnetoencephalography, diffusion tractography, and functional magnetic resonance imaging. *Clin Neurophysiol* 2014, (in press).
3. Kanazawa K, Matsumoto R, Imamura H, Matsuhashi M, Kikuchi T, Kunieda T, Mikuni N, Miyamoto S, Takahashi R, Ikeda A: Intracranially-recorded ictal direct current shifts may precede high frequency oscillations in human epilepsy. *Clin Neurophysiol* 2014, (in press) DOI 10.1016/j.clinph.2014.05.028.
4. Kanazawa K, Matsumoto R, Shimotake A, Kinoshita M, Otsuka A, Watanabe O, Tanaka K, Takahashi R, Ikeda A: Persistent frequent subclinical seizures and memory impairment after clinical remission in smoldering limbic encephalitis. *Epileptic Disord* 2014, (in press).
5. Kobayashi K, Hitomi T, Matsumoto R, Kondo T, Kawamata J, Matsuhashi M, Hashimoto S, Ikeda H, Koide Y, Inoue Y, Takahashi R, Ikeda A: Long-term follow-up of cortical hyperexcitability in Japanese Unverricht–Lundborg disease. *Seizure* 2014, (in press).
6. Yamao Y, Matsumoto R, Kunieda T, Arakawa Y, Kobayashi K, Usami K, Shibata S, Kikuchi T, Sawamoto N, Mikuni N, Ikeda A, Fukuyama H, Miyamoto S: Intraoperative dorsal language network mapping by using single-pulse electrical stimulation. *Human Brain Mapping* 2014, (in press) DOI 10.1002/hbm.22479.
7. Fumoto N, Mashimo T, Masui A, Ishida S, Mizuguchi Y, Minamimoto S, Ikeda A, Takahashi R, Serikawa T, Ohno Y: Evaluation of seizure foci and genes in the *Lgi1L385R/+* mutant rat. *Neuroscience Research* 2014, 80: 69-75, DOI 10.1016/j.neures.2013.12.008.
8. Jingami N, Matsumoto R, Ito H, Ishii A, Ihara Y, Hirose S, Ikeda A, Takahashi R: A novel SCN1A mutation in a cytoplasmic loop in intractable juvenile myoclonic epilepsy without febrile seizures. *Epileptic Disord* 2014, 16: 227-31, DOI 10.1684/epd.2014.0657.
9. Murai T, Tohyama T, Kinoshita M: Recurrent diarrhea as a manifestation of temporal lobe epilepsy case report. *Epilepsy & behavior Case Report* 2014, 2: 57-9.
10. Takaya S, Ikeda A, Mitsueda-Ono T, Matsumoto R, Inouchi M, Namiki C, Oishi N, Mikuni N, Ishizu K, Takahashi R, Fukuyama H: Temporal Lobe Epilepsy with Amygdala Enlargement: A Morphologic and Functional Study. *J Neuroimaging* 2014, 24: 54-62, DOI 10.1111/j.1552-6569.2011.00694.x
11. Wang B, Wang X, Ikeda A, Nagamine T, Shibusaki H, Nakamura M: Automatic reference selection for quantitative EEG interpretation: Identification of diffuse/localised activity and the active earlobe reference, iterative detection of the distribution of EEG rhythms. *Med Eng Phys* 2014, 36: 88-95, DOI:10.1016/j.medengphy.2013.10.002.
12. Araki Y, Minakawa EN, Ono M, Matsumoto R, Kinoshita M: Topiramate add-on therapy for adult patients with refractory epilepsy in Japan. *Epilepsy and Seizure* 2013, 6: 10-18.

13. Enatsu R, Matsumoto R, Piao Z, O'Connor T, Horning K, Burgess RC, Bulacio J, Bingaman W, Nair DR: Cortical negative motor network in comparison with sensorimotor network: A cortico-cortical evoked potential study. *Cortex* 2013, 49: 2080-96, DOI 10.1016/j.cortex.2012.08.026.
14. Hitomi T, Kobayashi K, Jingami N, Nakagawa T, Imamura H, Matsumoto R, Kondo T, Chin K, Takahashi R, Ikeda A: Increased clinical anticipation with maternal transmission in benign adult familial myoclonus epilepsy in Japan. *Epileptic Disorders* 2013, 15: 428-32, DOI 10.1684/epd.2013.0608.
15. Inouchi M, Matsumoto R, Taki J, Kikuchi T, Mitsueda-Ono T, Mikuni N, Wheaton L, Hallett M, Fukuyama H, Shibasaki H, Takahashi R, Ikeda A: Role of posterior parietal cortex in reaching movements in humans: Clinical implication for 'optic ataxia'. *Clin Neurophysiol* 2013, 124: 2230-41, DOI 10.1016/j.clinph.2013.05.011.
16. Kunieda T, Mikuni N, Shibata S, Inano R, Yamao Y, Kikuchi T, Matsumoto R, Takahashi J, Ikeda A, Fukuyama H, Miyamoto S: Long-term seizure outcome following resective surgery for epilepsy: To be or not to be completely cured? *Neurol Med Chir (Tokyo)* 2013, 53: 805-13, DOI 10.2176/nmc.0a2013-0065.
17. Mitsueda-Ono T, Ikeda A, Sawamoto N, Aso T, Hanakawa T, Kinoshita M, Matsumoto R, Mikuni N, Amano S, Fukuyama H, Takahashi R: Internal structural changes in the hippocampus observed on 3-Tesla MRI in patients with mesial temporal lobe epilepsy. *Internal Medicine* 2013, 52: 877-85, DOI.org/10.2169/internalmedicine.52.8852.
18. Morimoto E, Kanagaki M, Okada T, Yamamoto A, Mori N, Matsumoto R, Ikeda A, Mikuni N, Kunieda T, Paul D, Miyamoto S, Takahashi R, Togashi K: Anterior temporal lobe white matter abnormal signal (ATLAS) as an indicator of seizure focus laterality in temporal lobe epilepsy: comparison of double inversion-recovery, FLAIR and T2W MR imaging. *Eur Radiol* 2013, 23: 3-11, DOI 10.1007/s00330-012-2565-4.
19. Morimoto E, Okada T, Kanagaki M, Yamamoto A, Fushimi Y, Matsumoto R, Takaya S, Ikeda A, Kunieda T, Kikuchi T, Paul D, Miyamoto S, Takahashi R, Togashi K: Evaluation of Focus Laterality in Temporal Lobe Epilepsy: A Quantitative Study Comparing Double Inversion-Recovery MR Imaging at 3T with FDG-PET. *Epilepsia* 2013, 54: 2174-83, DOI 10.1111/epi.12396.
20. Murahara T, Kinoshita M, Matsui M, Yamashita K, Ikeda A, Takahashi R: Prolonged ictal monoparesis with parietal PLEDs. *Epi Disord* 2013, 15: 197-202, DOI 10.1684/epd.2013.0567.
21. Takeuchi Y, Arakawa Y, Mikami Y, Matsumoto R, Miyamoto S: Dysembryoplastic neuroepithelial tumor with rapid recurrence of pilocytic astrocytoma component. *Brain Tumor Pathol* 2013, 31: 144-8, DOI 10.1007/s10014-013-0155.
22. Usami K, Matsumoto R, Kunieda T, Shimotake A, Matsushashi M, Miyamoto S, Fukuyama H, Takahashi R, Ikeda A: Pre-SMA actively engages in conflict processing in human: A combined study of epicortical ERPs and direct cortical stimulation. *Neuropsychologia* 2013, 51: 1011-7, DOI 10.1016/j.neuropsychologia.2013.02.002.

〈和文 Japanese articles〉

23. 戸島麻耶, 人見健文, 陣上直人, 谷岡光介, 山門穂高, 松本理器, 高橋幸利, 池田昭夫, 高橋良輔: 急性無菌性髄膜脳炎の経過中に局所性皮質反射性ミオクローヌスを呈し抗グルタミン酸受容体抗体が検出された2例. 臨床神経学 2014, 54: 543-9.
24. 中奥由里子, 眞木崇州, 金澤恭子, 松本理器, 福山秀直, 高橋良輔, 池田昭夫: Faciobrachial dystonic seizureで初発したくすぶり型の抗leucine-rich glioma-inactivated 1 (LGI1)抗体陽性辺縁系脳炎の1例. 臨床神経学 2013, 53: 706-11, http://dx.doi.org/10.5692/clinical_neurol.53.706.
25. 西田茂人, 杉剛直, 松橋眞生, 池田昭夫, 長峯隆, 柴崎浩, 中村政俊: 脳波自動判読システムにおける短時間脳波の自動検出と特徴抽出—優位律動と徐波の検出. 臨床神経生理学 2013, 41: 127-33.

編集書籍 Edited books

1. 池田昭夫主編集:松本理器, 木下真幸子副編集:症例から学ぶ戦略的てんかん診断・治療. 東京, 南山堂, 2014.
2. 日本てんかん学会 (亀山茂樹, 馬場啓至主編集; 池田昭夫ほか副編集): てんかん専門医ガイドブック てんかんにかわる医師のための基本知識. 東京, 診断と治療社, 2014.

書籍 Book chapters

1. 井上岳司, 人見健文: 1 シアリドーシス. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
2. 井上岳司, 人見健文: 2 ゴーシェ病. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
3. 宇佐美清英, 松本理器: 2 前頭葉てんかん (ジャクソン発作を除く). 4. 年齢非依存性焦点性てんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
4. 宇佐美清英, 池田昭夫: 高齢発症てんかんの治療. てんかん治療ガイドライン. 日本神経治療学会, 2014 (印刷中).
5. 宇佐美清英, 松本理器, 池田昭夫: 10章: 睡眠と前頭葉てんかん. 睡眠とてんかん (千葉茂編). 東京, ライフ・サイエンス, 2014 (印刷中).
6. 太田真紀子, 人見健文: 4 ラフォラ病. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
7. 金澤恭子, 松本理器: 3 後頭葉てんかん. 4. 年齢非依存性焦点性てんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
8. 金澤恭子, 池田昭夫: DC 電位, Annual Review 神経 2015, 東京, 中外医学社, 2014 (印刷中).
9. 小林勝哉, 人見健文: 5 セロイドリポフスチン病. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
10. 小林勝哉, 人見健文: 6 ウンフェルリヒト・ルンドボルグ病. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
11. 芝田純也, 松本理器: 4 ジャクソン発作関連てんかん. 4. 年齢非依存性焦点性てんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
12. 下竹昭寛, 松本理器: 1 側頭葉てんかん. 4. 年齢非依存性焦点性てんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
13. 十川純平, 人見健文: 7 DRPLA. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
14. 人見健文, 池田昭夫: 8 良性成人型家族性ミオクローヌステんかん. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).
15. 松本理器: てんかん脳波とその評価. 脳神経外科診療プラクティス 3. 脳神経外科医のための脳機能と局在診断 (橋本信夫監修, 三國信啓・深谷親編集). 東京, 文光堂, 2014 (印刷中).
16. 村井智彦, 人見健文: 3 MERRF. 9. 進行性ミオクローヌステんかん. 第11章てんかんおよびてんかん類似症候群. 臨床てんかん学 (兼本浩祐ら編). 東京, 医学書院, 2014 (印刷中).

17. 池田昭夫：今日の治療指針 2014 年版．私はこう治療している vol 56．東京，医学書院，2014，879-82.
18. 池田昭夫：今日の治療指針 2014 年版．私はこう治療している（ポケット版）．東京，医学書院，2014，879-82.
19. 小林勝哉，池田昭夫：てんかんの診断と治療．診療ガイドライン up to date 2013-2014（門脇孝，小室一成，宮地良樹監修）．東京，メディカルレビュー社，2014，477-89.
20. 松本理器：頭蓋内脳波記録．てんかん専門医ハンドブック．東京，診断と治療社，2014，105-9.
21. 池田昭夫，小林勝哉：ヒトの運動の制御機構と病態．パーキンソン病と運動異常．東京，中山書店，2013，21-30.
22. 池田昭夫：てんかん．神経疾患．内科処方実践マニュアル（日本臨床内科医会編）．東京，日本医学出版，2013，348-54.
23. 池田昭夫：機能的疾患（てんかん，けいれん重積状態，片頭痛）．神経・運動器疾患．わかりやすい内科学（井村裕夫編）第 4 版．東京，文光堂，2014，653-64.
24. 木下真幸子，池田昭夫：認知症とてんかん発作を見誤らないために，認知症とてんかん発作の合併を見落とさないために．精神科臨床エキスパートシリーズ「誤診症例から学ぶ認知症と老年期の精神・神経疾患の鑑別」（朝田隆編）．東京，医学書院，2013，99-115.
25. 小林勝哉，松本理器：突発性不随意運動．パーキンソン病と運動異常．東京，中山書店，2013，248-59.
26. 人見健文，池田昭夫：ミオクローヌス．パーキンソン病と運動異常．東京，中山書店，2013，119-27.
27. 人見健文，池田昭夫：進行性ミオクローヌス．てんかん稀少難治てんかん診療マニュアル 疾患の特徴と診断のポイント．東京，診断と治療社，2013，43-6.
28. 人見健文：糖尿病神経障害．最新内分泌代謝学．東京，診断と治療社，2013，535-7.
29. 松本理器，池田昭夫：てんかん重積の治療．今日の神経疾患治療指針第 2 版．東京，医学書院，2013，694-700.
30. 三枝隆博，池田昭夫：成人脳波検査データの判読時のポイント．検査診断学への展望（野村努編）．東京，南江堂，2013，493-502.

総説 Review papers

〈英文 English review paper〉

1. Shibasaki H, Nakamura M, Sugi T, Nishida S, Nagamine T, Ikeda A: Automatic interpretation and writing a report of the adult waking electroencephalogram. *Clin Neurophysiol* 2014, 125: 1081-94, DOI 10.1016/j.clinph.2013.12.114.

〈和文 Japanese review papers〉

2. 井上岳司，松本理器，池田昭夫：思春期・成人発症のてんかんの治療．日本臨床 2014，172，2014-5.
3. 小林勝哉，松本理器：6. 皮質脳波．C. ヒトでの計測．脳のゆらぎ・同期・オシレーション．Clinical Neuroscience 2014，32，792-6.
4. 下竹昭寛，松本理器，池田昭夫：てんかん治療の進歩．神経内科 2014，80，210-7.
5. 武山博文，松本理器，三枝隆博，池田昭夫：側頭葉てんかんの認知機能と扁桃体．Clinical Neuroscience 2014，32，680-2.

6. 池田昭夫：ヒトの脳機能局在，機能外科と神経科学．脳神経外科ジャーナル 2013，22，170-7.
7. 池田昭夫：抗てんかん薬の催奇形性・周産期における管理指針．第31回 The Mt. Fuji Workshop in CVD Proceeding 2013，31，59-64.
8. 井内盛遠，石尾ゆきこ，池田昭夫：非けいれん性てんかん重積状態（non-convulsive status epilepticus: NCSE）．救急・集中治療 2013，25，1366-72.
9. 宇佐美清英，池田昭夫：脳波検査からわかる脳の病態と疾患－脳波は局在情報を有する「機能」検索のgold standard．日本精神科病院協会雑誌 2013，32，119-28.
10. 宇佐美清英，池田昭夫：高齢者のけいれん．救急・集中治療 2013，25，1262-9.
11. 木下真幸子，中野仁，池田昭夫：プラクティス・ノート「高齢者の見えにくいてんかん，どう見る？どうケアする？」月刊ナーシング 2013，33，95-7.
12. 木下真幸子，池田昭夫：高齢者の発作時症状－てんかん発作か？高齢者の精神症状．日本臨床 2013，71，1851-63.
13. 國枝武治，池田昭夫：てんかん．ブレインナーシング 2013，春期増刊，102-9.
14. 國枝武治，池田昭夫：抗てんかん薬．ブレインナーシング 2013，春期増刊，236-7.
15. 人見健文，池田昭夫：けいれん（手足が勝手に動く）．神経・精神疾患診療マニュアル．日本医師会雑誌 2013，142，93-4.
16. 松本理器，國枝武治，池田昭夫：てんかんと脳内ネットワーク機構．医薬ジャーナル 2013，49，1312-20.
17. 松本理器，中奥由里子，金澤恭子，池田昭夫：くすぶり型辺縁系脳炎と faciobrachial dystonic seizure．神経内科 2013，79，712-7.
18. 山尾幸広，國枝武治，菊池隆幸，松橋眞生，澤本伸克，松本理器，岡田知久，宮本享，池田昭夫：てんかんの神経画像．Brain and Nerve 2013，65，573-81.

書籍翻訳 Translated chapters

1. 山尾幸広，芝田純也，宇佐美清英，松本理器：第45章 脳幹の感覚機能，連動機能，反射機能（パートVII 無意識下および意識下の神経情報処理）．カンデル神経学（日本語翻訳版）．東京，メディカル・サイエンス・インターナショナル，2014，999-1015.
2. 井上岳司，小林勝哉，下竹昭寛，池田昭夫：第50章 てんかん発作とてんかん（パートVII 無意識下および意識下の神経情報処理）．カンデル神経学（日本語翻訳版）．東京，メディカル・サイエンス・インターナショナル，2014，1091-114.

学会・研究会発表 Presentations

学会発表 Congress presentations

■ 招請講演・シンポジウムなど Invited lectures and symposium etc.

〈国際学会 International presentations〉

1. Ikeda A: Future electrophysiological approaches in defining the epileptogenic zone. Electrophysiological markers of the epileptogenic zone. 10th Asian & Oceanian Epilepsy Congress (第10回アジアオセアニアてんかん学会) (August 7-10, 2014, Singapore)
2. Ikeda A: Is it Epilepsy? Using Cutting Edge Technology to Make a Diagnosis, Choosing the Right Antiepileptic Drug (AED) for the Long Term Management of Epilepsy. 10th Asian & Oceanian Epilepsy Congress (第10回アジアオセアニアてんかん学会) (August 7-10, 2014, Singapore)
3. Ikeda A: How to get published in Epilepsia and Epileptic Disorders, How to get published in Epilepsia. 10th Asian & Oceanian Epilepsy Congress (第10回アジアオセアニアてんかん学会) (August 7-10, 2014, Singapore)
4. Ikeda A: Epilepsy Cares in Japan. 19th Korean Epilepsy Congress (第19回韓国てんかん学会) (June 12-14, 2014, Seoul/Korea)
5. Inouchi M: Posterior Parietal Cortex in Reaching Movements of Humans in Epilepsy Surgery. 19th Korean Epilepsy Congress (第19回韓国てんかん学会) (June 12-14, 2014, Seoul/Korea)
6. Matsumoto R: In vivo investigation of functional brain networks by CCEPs. Single pulse electrical stimulation to probe human brain connectivity and epileptogenicity. 30th International Congress of Clinical Neurophysiology (ICCN) (第30回国際臨床神経生理学会) (March 19-23, 2014, Berlin/Germany)
7. Matsumoto R: Reducing morbidity and mortality in the epilepsy monitoring unit. 10th Asian & Oceanian Epilepsy Congress (第10回アジアオセアニアてんかん学会) (August 7-10, 2014, Singapore)
8. Ikeda A: Normal wakeful EEG in adults and children. KES-ANZAN EEG Teaching Course (September 28-29, 2013, Seoul/Korea)
9. Ikeda A: Basic Knowledge of EEG recording and its pitfall. 5th Asian Oceanian Congress of Clinical Neurophysiology (AOCCN) (第5回アジアオセアニア臨床神経生理学会) (August 28-31, 2013, Bali/Indonesia)
10. Ikeda A: Invasive EEG Recording of Define Epileptic Zone. 5th Asian Oceanian Congress of Clinical Neurophysiology (AOCCN) (第5回アジアオセアニア臨床神経生理学会) (August 28-31, 2013, Bali/Indonesia)
11. Ikeda A: What's new in diagnostics. The new EEG era Recording and interpreting, DC shifts and ultra-slow activity. (教育講演) 30th International Epilepsy Congress (IEC) (第30回国際てんかん学会) (June 23-27, 2013, Montreal/Canada)
12. Ikeda A: Localization: electrophysiology vs. metabolism Seizures: EEG and MEG are the best. (Controversy session) 30th International Epilepsy Congress (IEC) (第30回国際てんかん学会) (June 23-27, 2013, Montreal/Canada)
13. Ikeda A: Movement disorders and epilepsy, The relationship between myoclonus and epilepsy: New insights from, neurophysiological and genetic studies in myoclonus dystonia and familial cortical tremor. 17th International Congress of Parkinson's Disease and Movement Disorders (第17回国際パーキンソン病・運動異常症学会) (June 16-20, 2013, Sydney/Australia)

14. Ikeda A: Microelectrode recording and intraoperative electrophysiology, Mirror neuron system as revealed by subdural recording in humans from observation, preparation to execution. 2013 The World Society for Stereotactic and Functional Neurosurgery (2013 WSSFN) (2013 世界定位機能脳神経外科学会) (May 27-30, 2013, Tokyo/Japan)

〈国内学会 Domestic presentations〉

15. 池田昭夫: 脳波判読ハンズオン, hands on セミナー. 第12回日本神経学会生涯教育セミナー(平成26年5月29日, 福岡)
16. 人見健文, 高橋良輔, 池田昭夫: 良性成人型家族性ミオクローヌスてんかん (BAFME) の最近の進歩: 進行性疾患か?: てんかん研究の最前線 第55回日本神経学会(平成26年5月21日~24日, 福岡)
17. 松本理器: 自己免疫介在性脳炎のジストニア・ジスキネジア: てんかん発作か運動異常症か? 第55回日本神経学会(平成26年5月21日~24日, 福岡)
18. 松本理器, 國枝武治, 池田昭夫: てんかん病態下の脳内ネットワークの探索. 第37回日本脳神経CI学会(平成26年2月28日, 大宮)
19. 松本理器: 症候学. 生理学的診断. 合同教育セミナーてんかん外科学会の部. 第37回日本てんかん外科学会(平成26年2月7日, 大阪)
20. 池田昭夫: 入門編1 脳波判読の基本, デジタル脳波の利便性を含めて. (教育講演) 第31回日本神経治療学会(平成25年11月21日, 東京)
21. 池田昭夫: 脳波判読の基礎と臨床, デジタル脳波による異常脳波の実例提示(てんかん性, 非てんかん性異常など). (教育講演) 第43回日本臨床神経生理学会(平成25年11月7日~9日, 高知)
22. 池田昭夫: 自律神経症状のみが発作症状として出現する場合の診断は?(教育講演) 第66回自律神経学会総会(平成25年10月25日, 名古屋)
23. 池田昭夫: グリアとてんかん病態 発作時DC脳波の発生機構: てんかん焦点のグリアの関与. 第47回日本てんかん学会(平成25年10月11日, 北九州)
24. 池田昭夫: てんかん医療と教育: 人材育成と啓発のための提言 指定発言 医学教育におけるてんかん. 第47回日本てんかん学会(平成25年10月11日, 北九州)
25. 池田昭夫: 成人脳波の判読 How to read adult EEG in epilepsy. (教育講演) 第47回日本てんかん学会(平成25年10月11日, 北九州)
26. 池田昭夫: 包括的てんかん治療の実際: デジタル脳波時代のてんかん診療での脳波判読の実際と重要性. 第47回日本てんかん学会(平成25年10月11日, 北九州)
27. 池田昭夫: DC脳波の新展開. 第7回日本てんかん学会東北地方会(平成25年7月20日, 仙台)
28. 池田昭夫: 脳波判読セミナー, 脳波レポート作成の基本的考え方と実例. 日本神経学会第98回近畿地区地方会(平成25年6月22日, 大阪)
29. 池田昭夫: てんかん診断の基本. 第109回日本精神神経学会学術大会(平成25年5月25日, 福岡)
30. 芝田純也, 松橋眞生, 國枝武治, 山尾幸広, 稲野理賀, 菊池隆幸, 松本理器, 池田昭夫, 高橋良輔, 美馬達哉, 福山秀直, 三國信啓, 宮本享: てんかん外科術前検査におけるMEGの有用性一病変診断と機能検査一. 第28回日本生体磁気学会(平成25年6月8日, 新潟)

31. 松本理器：脳波判読セミナー：症例検討。日本神経学会第 99 回近畿地方会（平成 25 年 12 月 21 日，大阪）
32. 松本理器，國枝武治，池田昭夫：てんかんと脳内ネットワーク。第 18 回日本神経精神医学会（平成 25 年 12 月 14 日，大阪）
33. 松本理器，宇佐美清英，國枝武治，池田昭夫：ヒトの睡眠は脳皮質の興奮性・機能的結合性を変容させる：てんかん性放電・皮質単発電気刺激からの知見。シンポジウム 11 てんかんと睡眠—その密接な関連性 第 43 回日本臨床神経生理学会（平成 25 年 11 月 7 日～9 日，高知）
34. 松本理器，國枝武治，池田昭夫：機能的線維追跡法を用いた脳機能結合地図の臨床応用。（シンポジウム 5 頭蓋内電極による脳機能検査の新展開）。第 43 回日本臨床神経生理学会（平成 25 年 11 月 7 日～9 日，高知）
35. 松本理器，山尾幸広，國枝武治，池田昭夫：度重なる突然のおかしみと動作のしにくさで来院した右利き男性。第 47 回日本てんかん学会（平成 25 年 10 月 11 日，北九州）
36. 松本理器，高橋良輔，池田昭夫：くすぶり型辺縁系脳炎と Faciobrachial dystonic seizure。第 7 回パーキンソン病・運動障害疾患コンgres（平成 25 年 10 月 10 日，東京）

■一般発表 Oral and poster presentations

国際学会 International presentations

1. Fumuro T, Matsumoto R, Matsushashi M, Shimotake A, Usami K, Kunieda T, Takahashi R, Ikeda A: Correlation between scalp-recorded and subdural slow cortical potentials: direct comparison during neuro-feedback training. (ポスター) 30th International Congress of Clinical Neurophysiology (第 30 回国際臨床神経生理学会) (March 19-23, 2014, Berlin/Germany)
2. Hitomi T, Kobayashi K, Kondo T, Matsumoto R, Terada K, Kanda M, Takahashi R, Ikeda A: Diffuse brain dysfunction in benign adult familial myoclonus epilepsy (BAFME). (ポスター) 30th International Congress of Clinical Neurophysiology (第 30 回国際臨床神経生理学会) (March 19-23, 2014, Berlin/Germany)
3. Usami K, Matsumoto R, Hitomi T, Kobayashi K, Shimotake A, Kunieda T, Mikuni N, Miyamoto S, Fukuyama H, Takahashi R, Ikeda A: Single-pulse electrical cortical stimulation reveals dynamic modulation of cortico-cortical connectivity during sleep: Direct evidence from induced neural activities. (ポスター) 30th International Congress of Clinical Neurophysiology (第 30 回国際臨床神経生理学会) (March 19-23, 2014, Berlin/Germany)
4. Usami K, Matsumoto R, Sawamoto N, Murakami H, Inouchi M, Fumuro T, Shimotake A, Kato T, Mima T, Masuda H, Fukuyama H, Kameyama S, Ikeda A: Epileptic network associated with hypothalamic hamartoma: an EEG-fMRI. (ポスター) 14th Asia and Oceanian Congress of Neurology (第 14 回アジアオセアニア神経学会) (March 2-5, 2014, Macao/China)
5. Yamao Y, Matsumoto R, Kunieda T, Arakawa Y, Shibata S, Inano R, Kikuchi T, Sawamoto N, Mikuni N, Ikeda A, Fukuyama H, Miyamoto S: Intraoperative language network monitoring by means of cortico-cortical evoked potential. (ポスター) 30th International Congress of Clinical Neurophysiology (第 30 回国際臨床神経生理学会) (March 19-23, 2014, Berlin/Germany)
6. Kanazawa K, Matsumoto R, Matsushashi M, Kunieda T, Miyamoto S, Takahashi R, Ikeda A: Are afterdischarges by cortical stimulation at seizure onset zones similar to clinical seizures? A study by subdural electrodes in partial epilepsy patients. (ポスター) 30th International Epilepsy Congress (平成 25 年 6 月 23～26 日，Montreal/Canada). 日本てんかん学会 Sponsored Award UCB&Otsuka 賞
7. Matsumoto R, Kunieda T, Shimotake A, Imamura H, Kobayashi K, Usami K, Kikuchi T, Fukuyama H, Takahashi R,

- Mikuni N, Miyamoto S, Ikeda A: Basal temporal language area revisited in Japanese-its anatomy, function and connectivity. (ポスター) 67th American Epilepsy Society (第 67 回米国てんかん学会) (December 6-12, 2013, Washington D.C./USA)
8. Shibata S, Matsuhashi M, Kunieda T, Yamao Y, Inano R, Kikuchi T, Imamura H, Takaya S, Matsumoto R, Ikeda A, Takahashi R, Mima T, Fukuyama H, Mikuni N, Miyamoto S: Magnetoencephalography with Temporal Spread Image method could show propagation of epileptic activities. (ポスター) 67th American Epilepsy Society (第 67 回米国てんかん学会) (December 6-12, 2013, Washington D.C./USA)
9. Shibata S, Matsuhashi M, Kunieda T, Yamao Y, Inano R, Nakae T, Kikuchi T, Matsumoto R, Ikeda A, Takahashi R, Mima T, Fukuyama H, Miyamoto S: Analysis of somatosensory evoked field by using temporal spread image. (ポスター) International Society for the Advancement of Clinical Magnetoencephalography 2013 (Augus29, 2013, Sapporo-Japan)
10. Usami K, Matsumoto R, Sawamoto N, Murakami H, Inouchi M, Fumuro T, Shimotake A, Kato T, Mima T, Masuda H, Fukuyama H, Kameyama S, Ikeda A: Epileptic network associated with hypothalamic hamartoma: an EEG-fMRI study. (ポスター) 67th American Epilepsy Society (AES) (第 67 回米国てんかん学会) (December 6-12, 2013, Washington D.C./USA)

国内学会 Domestic presentations

〈英語発表 English presentations〉

11. Borgil B, Matsumoto R, Nakano N, Matsuhashi M, Shimotake A, Fumuro T, Kunieda T, Kato A, Takahashi R, Ikeda A: Slow cortical potentials by vagus nerve stimulation for seizure suppression (English Session in the domestic meeting). (ポスター) 第 55 回日本神経学会 (平成 26 年 5 月 21 日～ 24 日, 福岡)
12. Shibata S, Kunieda T, Matsumoto R, Yamao Y, Inano R, Kikuchi T, Arakawa Y, Sugino T, Funaki T, Mitsuhara T, Koyanagi M, Yoshida K, Takagi Y, Takahashi J, Ikeda A, Miyamoto S: Intraoperative Supplementary Motor Area (SMA) Monitoring for Medial Frontal Lesions (English Session in the domestic meeting). (口演) 第 37 回日本てんかん外科学会 (平成 26 年 2 月 7 日, 大阪)
13. Borgil B, Matsumoto R, Nakano N, Matsuhashi M, Shimotake A, Fumuro T, Kunieda T, Kato A, Ikeda A: Scalp-recorded slow cortical shifts associated with vagus nerve stimulation: Is it a good biomarker to predict good responders? (English Session in the domestic meeting). (口演) 第 43 回日本臨床神経生理学会 (平成 25 年 11 月 7 日～ 9 日, 高知)
14. Fumuro T, Matsumoto R, Matsuhashi M, Usami K, Shimotake A, Kunieda T, Takahashi R, Ikeda A: Correlation between scalp-recorded and subdural slow cortical potentials: direct comparison during neuro-feedback training (English Session in the domestic meeting). (口演) Neuro 2013 (平成 25 年 6 月 20 日, 京都)
15. Hitomi T, Kobayashi K, Jingami N, Nakagawa T, Imamura H, Matsumoto R, Kondo T, Chin K, Takahashi R, Ikeda A: Clinical anticipation more in maternal transmission in benign adult familial myoclonus epilepsy in Japan (English Session in the domestic meeting). (口演) 第 47 回日本てんかん学会 (平成 25 年 10 月 11 日, 北九州)
16. Shibata S, Kunieda T, Inano R, Sawada M, Yamao Y, Arakawa Y, Takahashi J, Takagi Y, Matsumoto R, Ikeda A, Miyamoto S: The influence of propofol on electrocorticography at the irritable zone and the seizure onset zone (English Session in the domestic meeting). (口演) 第 47 回日本てんかん学会 (平成 25 年 10 月 11 日, 北九州)
17. Shibata S, Kunieda T, Matsumoto R, Yamao Y, Inano R, Kikuchi T, Arakawa Y, Sugino T, Funaki T, Mitsuhara T, Koyanagi M, Yoshida K, Takagi Y, Takahashi J, Ikeda A, Miyamoto S: Intraoperative Supplementary Motor Area (SMA)

Monitoring for Medial Frontal Lesions (English Session in the domestic meeting). (ポスター) 第72回脳神経外科学会総会 (平成25年10月18日, 横浜)

18. Shimotake A, Matsumoto R, Ueno T, Hoffman P, Kunieda T, Fukuyama H, Miyamoto S, Takahashi R, Lambon Ralph M.A, Ikeda A: The ventral anterior temporal lobe actively engages in semantic judgment: direct evidence from electrical cortical stimulation and local field potential recording. (English Session in the domestic meeting). (ポスター) Neuro 2013 (平成25年6月20日, 京都)
19. Matsumoto R, Kunieda T, Shimotake A, Usami K, Kobayashi K, Mikuni N, Miyamoto S, Fukuyama H, Takahashi R, Ikeda A: Language comprehension network: imaging cortico-cortical connectivity from the posterior middle temporal gyrus with cortical stimulation (English Session in the domestic meeting). (口演) Neuro 2013 (平成25年6月20日, 京都)

〈日本語発表 Japanese presentations〉

20. 井上岳司, 松本理器, 櫻井健世, 下竹昭寛, 井内盛遠, 人見健文, 高橋良輔, 池田昭夫: 成人発症のてんかん性スパズムスの2例: 帯状異所性灰白質との関連性. (ポスター) 第55回日本神経学会 (平成26年5月21日~24日, 福岡)
21. 武山博文, 松本理器, 井上岳司, 金澤恭子, 下竹昭寛, 井内盛遠, 人見健文, 澤本伸克, 岡田知久, 福山秀直, 高橋良輔, 池田昭夫: 高齢発症の側頭葉てんかんの臨床・神経画像・脳波の特徴. (口演) 第55回日本神経学会 (平成26年5月21日~24日, 福岡)
22. 井上岳司, 松本理器, 前田和彦, 太田真紀子, 櫻井健世, 澤本伸克, 池田昭夫, 高橋良輔: 成人期発症の左側頭葉てんかんが難治に経過する神経線維腫症1型の一例. (口演) 第9回日本てんかん学会近畿地方会 (平成25年7月6日, 大津)
23. 宇佐美清英, 松本理器, 人見健文, 小林勝哉, 下竹昭寛, 國枝武治, 三國信啓, 宮本享, 福山秀直, 高橋良輔, 池田昭夫: ヒト大脳皮質間の機能結合は睡眠段階により変容する: 皮質・皮質間誘発電位 (CCEP) を用いた研究. (口演) 第43回日本臨床神経生理学会 (平成25年11月7日~9日, 高知)
24. 金澤恭子, 松本理器, 今村久司, 松橋眞生, 國枝武治, 宮本享, 高橋良輔, 池田昭夫: 部分発作重積に伴う発作時直流電位及び高周波数律動の変化の検討. (口演) 第47回日本てんかん学会 (平成25年10月11日, 北九州)
25. 小林勝哉, 人見健文, 近藤孝之, 松本理器, 川又純, 高橋良輔, 池田昭夫: ウンベルリヒト・ルンドボルグ病と良性成人型家族性ミオクローヌステんかんの全国調査. (ポスター) 第54回日本神経学会学術大会 (平成25年5月29日, 東京)
26. 下竹昭寛, 松本理器, 上野泰治, Hoffman P, 澤本伸克, 國枝武治, 福山秀直, 宮本享, 高橋良輔, Lambon Ralph M. A, 池田昭夫: 側頭葉底部前方の意味処理機構: 類義語判断を用いた機能的MRI・事象関連電位による研究. (ポスター) 第54回日本神経学会学術大会 (平成25年5月29日, 東京)
27. 人見健文, 松本理器, 小林勝哉, 高橋良輔, 池田昭夫: 日本神経学会認定教育施設におけるてんかん診療実態のアンケート調査. (ポスター) 第54回日本神経学会学術大会 (平成25年5月29日, 東京)
28. 文室知之, 松橋眞生, 西川知沙, 人見健文, 松本理器, 高橋良輔, 池田昭夫: 随意運動の開始に先行する運動意思の自覚時点と脳波周波数変化との相関: 手の到達運動と単純伸展運動による違いからの検討. (口演) 第43回日本臨床神経生理学会 (平成25年11月7日~9日, 高知)
29. 松本理器, 國枝武治, 池田昭夫: 機能的線維追跡法を用いた脳機能結合地図の臨床応用. (口演) 第43回日本臨床神経生理学会 (平成25年11月7日~9日, 高知)
30. 山尾幸広, 國枝武治, 松本理器, 荒川芳輝, 菊池隆幸, 芝田純也, 稲野理賀, 澤本伸克, 池田昭夫, 三國信啓, 宮本享:

皮質－皮質間誘発電位を用いた言語白質線維路の術中機能モニタリング. (ポスター) 第72回脳神経外科学会総会 (平成25年10月18日, 横浜)

その他研究会など Other presentations

〈英語発表 English presentations〉

1. Borgil B, Matsumoto R, Nakano N, Matsuhashi M, Shimotake A, Fumuro T, Kunieda T, Kato A, Takahashi R, Ikeda A: Slow cortical potentials by vagus nerve stimulation for seizure suppression. (ポスター) Neural Oscillation Conference 2014 (平成26年7月17～18日, 岡崎)
2. Fumuro T, Matsuhashi M, Nishikawa C, Hitomi T, Matsumoto R, Takahashi R, Ikeda A: Relationship between neuronal activity and onset of awareness of will to move: a study for praxis in humans. (ポスター) Neural Oscillation Conference 2014 (平成26年7月17～18日, 岡崎)
3. Ikeda A: Ictal slow- and high frequency EEG oscillations in human epilepsy. (講演) Neural Oscillation Conference 2014 (平成26年7月17～18日, 岡崎)
4. Nakae T, Matsumoto R, Kunieda T, Matsuhashi M, Shimotake A, Usami K, Kobayashi K, Kikuchi T, Shibata S, Inano R, Nishida S, Fukuyama H, Ikeda A, Miyamoto S: Oscillatory response in CCEP. (ポスター) Neural Oscillation Conference 2014 (平成26年7月17～18日, 岡崎)
5. Borgil B, Matsumoto R, Nakano N, Matsuhashi M, Shimotake A, Fumuro T, Kunieda T, Kato A, Ikeda A: VNS mechanism of action: from view point of scalp-recorded slow cortical shifts. (口演) てんかん外科と迷走刺激神経療法京滋地区講演会 (平成25年11月29日, 京都)
6. Fumuro T, Matsumoto R, Matsuhashi M, Usami K, Shimotake A, Kunieda T, Takahashi R, Ikeda A: Correlation between scalp-recorded and subdural slow cortical potentials: direct comparison during neuro-feedback training. (ポスター) Neural Oscillation Conference 2013 (平成25年7月18～19日, 岡崎)
7. Ikeda A: Current state of epilepsy and EEG teaching in the Asian and Oceanian region. (講演) Neuro-global Symposium (平成25年10月27日, 東京)
8. Ikeda A: DC Shifts in new EEG & technology era for epilepsy. (講演) Shunsuke Ohtahara Memorial International Symposium & Public Seminar on Developmental Disabilities (平成25年9月22日, 岡山)
9. Kanazawa K, Matsumoto R, Matsuhashi M, Kunieda T, Miyamoto S, Takahashi R, Ikeda A: Are afterdischarges by cortical stimulation at seizure onset zones similar to clinical seizures? A study by subdural electrodes in partial epilepsy patients. (ポスター) Neural Oscillation Conference 2013 (平成25年7月18～19日, 岡崎)
10. Kobayashi K, Matsumoto R, Matsuhashi M, Usami K, Shimotake A, Kunieda T, Mikuni N, Miyamoto S, Fukuyama H, Takahashi R, Ikeda A: HFO correlates of cortico-cortical evoked potentials reveal altered excitability in the human epileptic focus. (ポスター) Neural Oscillation Conference 2013 (平成25年7月18～19日, 岡崎)
11. Matsumoto R, Kunieda T, Ikeda A: Dynamic modulation of neural oscillation under physiological and epileptic conditions. (招待講演) Neural Oscillation Conference 2013 (平成25年7月18～19日, 岡崎)
12. Usami K, Matsumoto R, Hitomi T, Kobayashi K, Shimotake A, Kunieda T, Mikuni N, Miyamoto S, Fukuyama H, Takahashi R, Ikeda A: Sleep stage changes connectivity in human cortices: A cortico-cortical evoked potential study. (ポスター) Neural Oscillation Conference 2013 (平成25年7月18～19日, 岡崎)
13. Yamao Y, Matsumoto R, Kunieda T, Kikuchi T, Shibata S, Inano R, Sawamoto N, Mikuni N, Ikeda A, Fukuyama H, Miyamoto S: Intraoperative language network monitoring by means of cortico-cortical evoked potentials. (ポス

ター) Neural Oscillation Conference 2013 (平成 25 年 7 月 18 ~ 19 日, 岡崎)

〈日本語発表 Japanese presentations〉

14. 池田昭夫: 最近のてんかん診療の話題: 新規薬の使い方と新しいてんかん症候群の紹介. (講演) 第 21 回福井県てんかん懇話会 (平成 26 年 7 月 4 日, 福井)
15. 池田昭夫: てんかん・運動異常生理学 過去, 現在, 未来. 第 47 回 OSK (平成 26 年 5 月 17 日, 大阪)
16. 池田昭夫: てんかん薬物治療の最近の動向, 「神経内科領域におけるてんかんの最新治療戦略」に関する座談会 (平成 26 年 4 月 20 日, 京都)
17. 池田昭夫: 脳の緩電位変化とてんかん・脳機能研究の現状. (講演) 第 29 回「てんかんの精神症状と行動」研究会 (平成 26 年 4 月 5 日, 東京)
18. 池田昭夫: てんかん脳波判読の基礎と実例 デジタル脳波の活用を含めて. (講演) 八戸てんかん治療研究会 (平成 26 年 3 月 28 日, 八戸)
19. 池田昭夫: てんかんの診断と治療の最近の話題. (講演) Hiroshima Epilepsy Conference (平成 26 年 3 月 5 日, 広島)
20. 池田昭夫: 神経内科よりみた知的障害合併例のてんかんの診療. (講演) 滋賀精神科でてんかんを考える会 (平成 26 年 2 月 28 日, 大津)
21. 井上岳司: 当院でのラミクタールの使用経験. (講演) 第 8 回 Kyoto Neuroscience Conference (平成 26 年 7 月 10 日, 京都)
22. 小林勝哉: 若年てんかん患者の治療~実際の症例を交えて~ (講演) 第 4 回滋賀県のてんかんを考える会 (平成 26 年 7 月 19 日, 草津)
23. 芝田純也, 國枝武治, 稲野理賀, 山尾幸広, 菊池隆幸, 松本理器, 池田昭夫, 高橋良輔, 宮本享: 薬剤難治性てんかん患者への硬膜下電極埋め込み術に伴う感染症のリスク因子. (口演) 第 55 回京滋てんかん懇話会 (平成 26 年 3 月 15 日, 京都)
24. 人見健文: けいれんの診療について てんかん・不随意運動を中心に. (講演) 第 19 回林病院開放型病診連携医講演会 (平成 26 年 5 月 17 日, 越前)
25. 松本理器: てんかん診療ネットワークについて. (講演) 北和てんかんネットワーク (平成 26 年 2 月 13 日, 奈良)
26. 池田昭夫: てんかんの診断と治療の基本. (講演) てんかん診療を考える会 (平成 25 年 10 月 18 日, 倉敷)
27. 池田昭夫: 日常てんかん臨床における病歴の重要性. (講演) てんかん連携講演会 (平成 25 年 10 月 18 日, 大阪)
28. 池田昭夫: てんかん 側頭葉てんかん ミオクローヌスてんかん. (講演) 分科会 2: 神経難病に関する情報交換会 文部科学省「疾患特異的 iPS 細胞を活用した難病研究事業・共同研究拠点」による理化学研究所-京大拠点 (平成 25 年 8 月 6 日, 京都)
29. 池田昭夫: てんかんの最新の薬物治療とピットフォール. (講演) 「てんかん治療を考える」講演会 (平成 25 年 6 月 6 日, 西宮)
30. 池田昭夫: 側頭葉由来の新しいてんかん症候群 扁桃体腫大 免疫性くすぶり型辺縁系脳炎 家族性外側側頭葉てんかんを中心に. (講演) Meeting of Neurology and Psychiatry (平成 25 年 4 月 23 日, 京都)
31. 池田昭夫: てんかんと認知症~見誤りやすいてんかん発作~. (講演) てんかん診療を考える会 (平成 25 年 4 月 19 日, 大阪)

32. 宇佐美清英, 松本理器, 國枝武治, 下竹昭寛, 松橋眞生, 宮本享, 福山秀直, 高橋良輔, 池田昭夫: Pre-SMA actively engages in conflict processing in human: A combined study of epicortical ERPs and direct cortical stimulation- A single case study. (口演) てんかん学術講演会 (平成 25 年 7 月 17 日, 京都)
33. 下竹昭寛, 松本理器, 今村久司, 國枝武治, 三國信啓, 宮本享, 高橋良輔, 池田昭夫: 内側側頭葉てんかんでの言語・意味処理機能: てんかん手術例での検討. 第 25 回臨床神経生理研究会 (平成 25 年 8 月 17 日, 福岡)
34. 松本理器: 脳波・機能的 MRI 同時計測によるてんかん病態の解明. (特別講演) 第 18 回東京臨床脳画像解析研究会 (平成 25 年 11 月 20 日, 東京)
35. 松本理器: 運動調節機構と病態生理: fMRI および頭蓋内脳波記録による検討. (講演) 6th J-CAN 2013 Japanese Consortium for Age-related Neurodegenerative disorders. (平成 25 年 8 月 31 日, 東京)
36. 松本理器: 正常・てんかん病態下の脳機能結合地図. (教育講演) 第 25 回臨床神経生理研究会 (平成 25 年 8 月 17 日, 福岡)
37. 松本理器: てんかん, 意識障害における基礎からの脳波判読. (講演) てんかん勉強会 (平成 25 年 10 月 18 日, 金沢)

講義, セミナー, 勉強会など Educational lectures

1. 池田昭夫: てんかんの薬物治療の基本と具体例. (ランチョンセミナー) 第55回日本神経学会 (平成26年5月21日~24日, 福岡)
2. 池田昭夫: てんかんレクチャー(1) 病歴聴取のポイント. (講演) 近畿てんかんセミナー大阪(平成26年3月2日, 大阪)
3. 池田昭夫: 「てんかん・運動異常生理学講座」のご紹介. 平成25年度第17回京大病院臨床懇談会 (平成26年2月23日, 京都)
4. 下竹昭寛: 神経内科診療ーてんかん・運動異常を中心にー. (講演) 第1回京大連携わかさせミナー (平成26年7月16日, 福井)
5. 人見健文: 脳波レクチャー(1) 脳波判読の基礎. (講演) 近畿てんかんセミナー大阪(平成26年3月2日, 大阪)
6. 人見健文: 脳波判読. (中級) 第7回脳波・筋電図セミナー (平成26年1月25日, 京都)
7. 松本理器: てんかんレクチャー(2) 発作時ビデオ. (講演) 近畿てんかんセミナー大阪(平成26年3月2日, 大阪)
8. 池田昭夫: 異常脳波: 意識障害時, 非てんかん性の脳波所見. (講演) Advanced Epilepsy Seminar (平成25年12月1日, 東京)
9. 池田昭夫: てんかんによる自動車運転事故を防ぐにはどうすればよいのか?ーわが国のてんかん医療の現状と対策: 子供のてんかん, 大人のてんかん. (講演) 厚労省班会議ー市民公開講座 (平成25年11月16日, 東京)
10. 池田昭夫: 本講座の使命と展望: 診療, 研究, 教育の進歩へ. 「てんかん・運動異常生理学講座」設立シンポジウム (平成25年11月3日, 京都)
11. 池田昭夫: 包括的てんかん治療の実際: デジタル脳波時代のてんかん診療での脳波判読の実際と重要性. (ランチョンセミナー) 第47回日本てんかん学会 (平成25年10月11日, 北九州)
12. 池田昭夫: てんかんの薬物治療 てんかんと治療の多様化の中での具体例. (ランチョンセミナー) 第66回日本脳神経外科学会近畿支部学術集会 (平成25年9月7日, 大阪)
13. 池田昭夫: 病態・機能・治療の(システム神経科学的)臨床研究. 京都大学神経内科フレッシュセミナー (平成25年8月7日)
14. 池田昭夫: てんかんの定義, 分類, 診断. (講演) 第2回サマーてんかんセミナー (平成25年8月4日, 東京)
15. 池田昭夫: 抗てんかん薬の使い方: 救急時を含めて. 第2回京都大学神経内科研修セミナー(平成25年8月1日)
16. 池田昭夫: ミオクローヌスとてんかん: 最近の話題. (ランチョンセミナー) 第9回日本てんかん学会近畿地方会 (平成25年7月6日, 大津)
17. 池田昭夫: ノーベル博士もてんかんだった. 神経内科は面白い! 京都大学神経内科セミナー(平成25年6月9日)
18. 池田昭夫: てんかんの最新の薬物治療とピットフォール. (ランチョンセミナー) 第54回日本神経学会学術大会 (平成25年5月31日, 東京)
19. 池田昭夫: 妊娠・出産とてんかん発作の管理. 妊娠分娩と脳卒中: 妊産婦における神経合併症の管理 (イブニングセミナー) 第38回日本脳卒中学会総会 Stroke 2013 (平成25年3月22日, 東京)
20. 池田昭夫: 脳波レポート作成の基本的考え方と実例. 第7回脳波・筋電図セミナー (平成25年1月25日, 京都)
21. 池田昭夫: てんかん性異常と関連脳波所見 (初級). 第7回脳波・筋電図セミナー (平成25年1月25日, 京都)

22. 松本理器: てんかん発作症候を見極めるー発作型判別の重要性と実際ー. (ランチョンセミナー) 第31回日本神経治療学会総会 (平成25年11月22日, 東京)
23. 松本理器: 非てんかん性異常. (講演) 第7回脳波・筋電図セミナー (平成25年1月25日, 京都)

学部講義, 院内講義 Intramural lectures

1. 池田昭夫: S7ab 臨床神経学 (神経内科学・脳神経外科学) 15. てんかん・運動異常症の診断と治療. (平成 26 年 5 月 28 日)
2. 井内盛遠: 第 10 回 睡眠障害について. 平成 25 年度神経内科研修セミナーシリーズ 平成 26 年 2 月 6 日)
3. 下竹昭寛: 長時間ビデオ脳波モニタリング 病棟ナース講義 (平成 26 年 7 月 23 日)
4. 下竹昭寛: てんかんの検査 病棟ナース講義 (平成 26 年 6 月 27 日)
5. 下竹昭寛: てんかんの診断と治療 病棟ナース講義 (平成 26 年 5 月 26 日)
6. 人見健文: S7ab 臨床神経学 (神経内科学・脳神経外科学) 19. 末梢神経疾患, 神経伝導検査と筋電図. (平成 26 年 5 月 30 日)
7. 松本理器: S7ab 臨床神経学 (神経内科学・脳神経外科学) 6. 脱髄疾患・自己免疫疾患. (平成 26 年 5 月 20 日)
8. 池田昭夫: 脳波: 異常所見 (病態), 医学部保健学科, 後期臨床生理学 (平成 25 年 11 月 29 日)
9. 池田昭夫: 精神・神経系の副作用. フィジカルアセスメント講習会 院内薬剤部講義 (平成 25 年 11 月 22 日)
10. 池田昭夫: 脳波: 正常所見 (脳生理), 医学部保健学科, 後期臨床生理学 (平成 25 年 11 月 15 日)
11. 池田昭夫: 医学総論-17 脳と心 3 (神経疾患) ヒトの脳機能解明の歴史と進歩. (平成 25 年 10 月 8 日)
12. 池田昭夫: 脳波: 発生機構と基礎, 医学部保健学科, 後期臨床生理学 (平成 25 年 10 月 18 日)
13. 池田昭夫: てんかん発作の実際. 外来ナース講義 (平成 25 年 9 月 13 日)
14. 池田昭夫: 第 2 回 抗てんかん薬の使い方; 救急時を含めて. 平成 25 年度神経内科研修 セミナーシリーズ (平成 25 年 8 月 1 日)
15. 池田昭夫: てんかんと, 患者指導のポイント. 外来ナース講義 (平成 25 年 7 月 25 日)
16. 池田昭夫: てんかんの診療と治療の基礎. 外来ナース講義 (平成 25 年 5 月 24 日)
17. 池田昭夫: S7ab 臨床神経学 (神経内科学・脳神経外科学) 15. てんかん・運動異常の診断と治療 (脳波の基礎を含む). (平成 25 年 5 月 20 日)
18. 池田昭夫: てんかん勉強会. 外来ナース講義 (平成 25 年 3 月 14 日)
19. 下竹昭寛: 第 4 回 成人脳波判読の実際. 平成 25 年度神経内科研修セミナーシリーズ (平成 25 年 10 月 17 日)
20. 下竹昭寛: 長時間ビデオ脳波モニタリング 病棟ナース講義 (平成 25 年 10 月 16 日)
21. 人見健文: 第 8 回 針筋電図の基礎. 平成 25 年度神経内科研修セミナーシリーズ (平成 25 年 12 月 26 日)
22. 人見健文: S7ab 臨床神経学 (神経内科学・脳神経外科学) 19. 末梢神経疾患, 神経伝導検査と筋電図. (平成 25 年 6 月 7 日)
23. 松本理器: 第 5 回 発作ビデオから学ぶてんかん発作. 平成 25 年度神経内科研修セミナーシリーズ (平成 25 年 10 月 31 日)
24. 松本理器: S7ab 臨床神経学 (神経内科学・脳神経外科学) 7. 脱髄疾患・自己免疫疾患. (平成 25 年 5 月 20 日)

以上



Attached materials

The Founding Commemorative Symposium of the Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine

The founding commemorative symposium of our department was held on November 3, 2013 at the Westin Miyako Kyoto in cooperation with the Department of Neurology. Drs. Yushi Inoue (Director of Shizuoka Institute of Epilepsy and Neurological Disorders), Sunao Kaneko (Ex-Chief Director of the Japan Epilepsy Society (JES)), and Tatsuya Tanaka (Vice Chief Director of the International League Against Epilepsy) kindly gave a lecture. A lot of doctors in JES and those belonging to the Alumni association of the Department of Neurology and so on kindly attended the celebration after the symposium.

Congratulation letters from abroad

On 2013/10/28, at 15:32, 이병인 wrote:

Dear Akio:

Congratulations! Establishment of Department of Epileptology in Kyoto University is a very important event meaning a new era proclaiming Epilepsy as a major field of clinical and research challenges in Japan, which is undoubtedly going to expedite the progress of Epilepsy Care, Education, and Research not only in Japan but also in the Asian and Oceanian region.

On behalf of the Commission of Asian and Oceanian Affairs of ILAE, I am very delighted to congratulate you for the excellent dedications and contributions to the development of Epileptology, which was essential for the outstanding accomplishment in your institution. The opening of new department of epileptology in Kyoto University should be regarded as the expression of Japanese new initiatives in this field of neuroscience. I am sure that the event is going to stimulate the new research and educational efforts in Japan as well as interactions and collaborations with other worldwide epilepsy centers, which will also strongly contribute to the promotion of epilepsy care and research in our region.

It is really a great news for our region and we all congratulate you and Kyoto University for this excellent achievement.

Best regards,

Byung-In Lee, MD
Chair, CAO-ILAE

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October 28, 2013

Dear Colleagues and Friends,

It is with great pleasure that I am writing this address to greet the participants of the inauguration symposium celebrating the new Department of Epilepsy, Movement Disorders and Physiology led by Professor Akio Ikeda and organized under the auspices of Professor Takahashi, Chairman of Department of Neurology at Kyoto University Graduate School of Medicine.

The International League Against Epilepsy has the goal of improving the lives of persons with epilepsy throughout the world. Epilepsy is a disease that can devastate the lives of people of all ages. It is an indiscriminate, unpredictable, debilitating condition with far-reaching implications. It can cause seizures, brain damage, and cognitive and psychiatric disabilities. Even without such comorbidities, people with epilepsy live with constant fear that they will have a seizure that may result in a loss of control.

The creation of the new Department of Epilepsy, Movement Disorders and Physiology at Kyoto University brings to the forefront the commitment of the Japanese medical and higher education communities to improve the care of people with epilepsy. Under the expert guidance of Professor Akio Ikeda, a worldwide authority in clinical epileptology and translational research, the newly founded Department will undoubtedly enhance the delivery of care, promote ground-breaking research and help reduce the multiple gaps that exist in the fight to eliminate this disease. Furthermore, the close ties with the Japanese Epilepsy Society reinforce the resolution to continue working country wide and even internationally to accomplish our mission.

With recent advances in research, the most important impediments to curing epilepsy are lack of awareness, the need for better communication between health professionals and stakeholders, and lack of funding opportunities. Establishing this new Department signals to government agencies, non-governmental organizations and other partners, including industry and philanthropists, that epilepsy is a priority. It begins to address the need to develop an infrastructure based on public education and effective legislation that will provide access to treatments leading to a productive life for people with epilepsy. Under the skilled leadership of Professor Ikeda, a new generation of physicians with expertise in epilepsy and related disorders will be trained, from which the new leaders and pioneers in the field will emerge.

Congratulations. I wish you a successful and productive symposium.

With the warmest personal regards,

Solomon L. Moshé, M.D.
Past President, International League Against Epilepsy
Charles Frost Chair in Neurosurgery & Neurology
Professor of Neurology, Neuroscience & Pediatrics
Director of Pediatric Neurology
Director of Clinical Neurophysiology
Albert Einstein College of Medicine

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Conference on Neural Oscillation

【Concept】

We have co-organized the academic conference named as “Conference on Neural Oscillation” for 3 years at the Okazaki Conference Center in National Institute of Natural Sciences. The purpose of this conference is to create a new unitary framework for understanding the functional relevance of neural oscillations from single neuron recording and animal models to human non-invasive studies. Topic of this conference will include the temporal pattern of neural firing, neural ensembles, coherence between discrete neural populations, distributed coding, large-scale EEG/ECOG correlation, and others.

The last conference was held on July 2014. In the symposium, we were specially focusing on 1) Cortico-basal ganglia network, 2) Neuromodulation, 3) Epilepsy & higher brain functions, and 4) Neural network oscillation, regulation and pathophysiology. The educational lecture was given about the diversity and universality of neural oscillations from the aspect of mathematical modeling. In addition, the young researchers and postgraduate students presented their posters and enjoyed discussion with senior participants.

【Organizer】

2012 ~ 2014

Akio Ikeda, M.D., Ph.D. (Kyoto University)

Tatsuya Mima, M.D., Ph.D. (Kyoto University)

2012

Ryosuke Kakigi, M.D., Ph.D. (National Institute for Physiological Sciences)

2013, 2014

Atsushi Nambu, M.D., Ph.D. (National Institute for Physiological Sciences)

【Number of participants】

2012: 82 people (including 27 students)

2013: 112 people (including 31 students)

2014: 83 people (including 20 students)



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Department of Epilepsy, Movement Disorders and Physiology
Kyoto University Graduate School of Medicine

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