**Symposium 01**

**May 31 (Wed) 9:50 ~ 11:50  Room 03 (Makuhari Messe International Conference Hall 2F 201)**

**The current update of restless legs syndrome; from mechanisms to treatment**

Chairs: Yuichi Inoue
Department of Somnology, Tokyo Medical University, Japan
Naoko Tachibana
Center for Sleep-related Disorders, Kansai Electric Power Hospital, Japan

**S-01-1 Development and Importance for the Animal model of Restless Legs Syndrome**

Kazuhiro Muramatsu
Pediatrics and Center for Gene Therapy Research, Jichi Medical University, Japan

**S-01-2 Working memory deficits in patients with restless legs syndrome**

Ki-young Jung
Department of Neurology, Seoul National University College of Medicine, Korea

**S-01-3 Seasonal Exacerbation of Subjective Symptoms in Patients with Restless Legs Syndrome**

Kentaro Matsui
Department of Clinical Laboratory, National Center Hospital, National Center of Neurology and Psychiatry, Japan

**S-01-4 Treatment strategy for long-term management of patients with restless legs syndrome**

Naoko Tachibana
Center for Sleep-related Disorders, Kansai Electric Power Hospital, Japan / Division of Sleep Medicine, Kansai Electric Power Medical Research Institute, Japan

**S-01-5 Difference in background factors between treatment responders to gabapentin enacarbil and placebo**

Yuichi Inoue
Department of Somnology, Tokyo Medical University, Japan / Yoyogi Sleep Disorder Center, Japan

**Symposium 02**

**May 31 (Wed) 9:50 ~ 11:50  Room 05 (Makuhari Messe International Conference Hall 3F 304)**

**Knowledge and practical skills in rehabilitation medicine with non-invasive nerve stimulation**

Chairs: Naoki Wada
Department of Rehabilitation Medicine Gunma University Graduate School of Medicine, Japan
Yoshitaka Yamanaka
Urayasu Yamanaka Rehabilitation Education Center, Chiba University Hospital, Japan

**S-02-1 Commonalities and differences of tDCS and rTMS: toward the optimal stimulation**

Noriaki Hattori
Department of Rehabilitation, Faculty of Medicine, Academic Assembly, University of Toyama, Japan
**S-02-2**  Non-invasive brain stimulation for axial motor and non-motor symptoms in Parkinson’s disease  
Tomoo Mano  
Department of Rehabilitation Medicine, Nara Prefecture General Medical Center, Japan

**S-02-3**  Transcutaneous spinal electrical stimulation for gait rehabilitation  
Toshiyuki Fujiwara  
Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, Japan

**S-02-4**  Clinical applications of Quadripulse stimulation and Theta burst stimulation  
Michiyuki Kawakami  
Department of Rehabilitation Medicine, Keio University School of Medicine, Japan

Nominal supported by: the Japanese Association of Rehabilitation Medicine

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**S-03 Symposium 03**

May 31 (Wed) 9:50 ~ 11:50  Room 06 (Makuhari Messe International Conference Hall 3F 302)

**Overview of autoimmune peripheral neuropathies**

Chairs: Norito Kokubun  
Department of Neurology, Dokkyo Medical University, Japan  
Ryo Yamasaki  
Department of Neurology, Neurological Institute, Graduate School of Medical Sciences, Kyushu University, Japan

**S-03-1**  Overview of Guillain-Barré syndrome (GBS)  
Nortina Shahrizaila  
University of Malaya, Malaysia

**S-03-2**  CIDP overview  
Yu-ichi Noto  
Department of Neurology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan

**S-03-3**  Treatment selection according to the pathophysiology of autoimmune nodopathy  
Ryo Yamasaki  
Department of Neurology, Graduate School of Medical Sciences, Kyushu University, Japan

**S-03-4**  Vasculitic neuropathy: An overview  
Ryota Sato  
Department of Neurology and Clinical Neuroscience, Yamaguchi University Graduate School of Medicine, Japan

**S-03-5**  POEMS syndrome overview  
Tomoki Suichi  
Department of Neurology, Graduate School of Medicine, Chiba University, Japan
### S-04 Symposium 04

May 31 (Wed) 9:50 ~ 11:50  Room 07 (Makuhari Messe International Conference Hall 3F 303)

**Let's talk about the future of young doctors' training**

**Chairs:**
- Masatomi Ikusaka  
  Department of General Medicine, Chiba University Hospital, Japan
- Sonoko Misawa  
  Department of Neurology, Chiba University Graduate School of Medicine, Japan

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| S-04-1 | Developing the young: messages from the field of general medicine  
|--------|-------------------------------------------------------------------
|        | Masatomi Ikusaka  
|        | Department of General Medicine, Chiba University Hospital, Japan |

| S-04-2 | Boundary between "education" and "harassment" from the perspective of an occupational physician  
|--------|--------------------------------------------------------------------------------------
|        | Kensuke Yoshimura  
|        | Chiba University Hospital, Japan |

| S-04-3 | The career education for doctors under the work system reform  
|--------|-------------------------------------------------------------------------
|        | Yukari Sekiguchi  
|        | Department of neurology, JR Tokyo General Hospital, Japan |

| S-04-4 | Strategies to protect junior neurologists from burnout  
|--------|---------------------------------------------------------------------------------
|        | Takashi Ogawa  
|        | Department of Radiology, Faculty of Medicine, Juntendo University, Japan |

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### S-05 Symposium 05

May 31 (Wed) 9:50 ~ 11:50  Room 11 (Tokyo Bay Makuhari Hall 2F No.3, 4)

**Law, lawsuit and legal issue in neurology**

**Chairs:**
- Masayuki Ohira  
  Department of Clinical Laboratory, National Center of Neurology and Psychiatry National Center Hospital, Japan
- Hiroyuki Ishiura  
  Department of Neurology, Okayama University, Japan

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| S-05-1 | Law, lawsuit and legal issue in neurology -Overview  
|--------|--------------------------------------------------------------------------------------
|        | Takemori Yamawaki  
|        | Department of Neurology, Hiroshima Hakushima Hospital, Japan |

| S-05-2 | Legal Issues at the End of Life in Neurological Incurable Diseases  
|--------|-----------------------------------------------------------------------
|        | Mieko Ogino  
|        | International University of Health and Welfare, School of Medicine, Office of Medical Education, Department of Neurology, Japan / International University of Health and Welfare, Ichikawa hospital, Department of Neurology, Japan |

| S-05-3 | dementia and medical law  
|--------|---------------------------------------------------------------------------------
|        | Nobuya Kawabata  
|        | Yachiyo Hospital Dementia Treatment Center, Japan |
S-05-4 Common disease in neurology in terms of civil trials
-Focusing on cerebral infarction and headache-
Ryo Sumioka
Jinho Law office, Japan

S-05-5 The use of physical restraints and accidental fall of neurologic patients in the inpatient setting
Masayuki Ohira
Department of Clinical Laboratory, National Center of Neurology and Psychiatry (NCNP), Japan / Jinho Law Office, Japan

S-06 Symposium 06
May 31 (Wed) 9:50 ~ 11:50 Room 12 (Tokyo Bay Makuhari Hall 2F No. 5, 6)

How should we do early diagnosis and early intervention for ALS?

Chairs: Toshio Shimizu
Tokyo Metropolitan Neurological Hospital, Japan
Naoki Atsuta
Department of Neurology, Aichi Medical University School of Medicine, Japan

S-06-1 Early clinical and electrophysiological diagnosis of amyotrophic lateral sclerosis
Toshio Shimizu
Department of Neurology, Tokyo Metropolitan Neurological Hospital, Japan

S-06-2 An upper motor neuron sign and diagnostic criteria in amyotrophic lateral sclerosis
Kazumoto Shibuya
Department of Neurology, Chiba University Hospital, Japan

S-06-3 Importance of genetic diagnosis in ALS
Ryoichi Nakamura
Department of Neurology, Aichi Medical University School of Medicine, Japan

S-06-4 Early diagnosis of ALS: diagnostic approach from muscle pathology
Takashi Kurashige
Department of Neurology, National Hospital Organization Kure Medical Center and Chugoku Cancer Center, Japan

S-06-5 The protective role of lipids and early nutritional intervention in ALS
Ryutaro Nakamura
Department of Neurology, Shiga University of Medical Science, Japan

S-06-6 Early intervention for ALS:
From the point of view of rehabilitation medicine
Mitsuya Morita
Jichi Medical University Hospital, Rehabilitation Center, Japan
### S-07 Symposium 07

**Pathogenesis of Parkinson's Disease**

**Chairs:** Hideki Mochizuki  
Department of Neurology, Osaka University, Japan  
Ritsuko Hanajima  
Division of Neurology, Department of Brain and Neurosciences, Faculty of Medicine, Tottori University, Japan

- **S-07-1**  
  Alpha-synuclein aggregates polymorphism and the molecular basis of diverse synucleinopathies  
  **Ronald Melki**  
  CEA-CNRS-University Paris Saclay, France
- **S-07-2**  
  Parkinson Disease Pathogenesis and Disease Modification  
  **Ted M. Dawson**  
  Johns Hopkins University School of Medicine, USA
- **S-07-3**  
  LRRK2, alpha-synuclein and lysosomal dysfunction in Parkinson's disease  
  **Takeshi Iwatsubo**  
  Department of Neuropathology, The University of Tokyo, Japan
- **S-07-4**  
  An update of the prion-like propagation hypothesis in Parkinson's disease  
  **Yasuyoshi Kimura**  
  Department of Neurology, Osaka University Graduate School of Medicine, Japan

### S-08 Symposium 08

**Which treatment should we select in MG!?**

**Chairs:** Shigeaki Suzuki  
Department of Neurology, Keio University School of Medicine, Japan  
Akiyuki Uzawa  
Graduate School of Medicine, Chiba University, Japan

- **S-08-1**  
  Tips for using steroids in patients with MG: oral prednisolone and intravenous methylprednisolone  
  **Yukiko Ozawa**  
  Japanese Red Cross Narita Hospital, Japan / Department of Neurology, Chiba University Hospital, Japan
- **S-08-2**  
  How do you use Tacrolimus vs. Cyclosporin?  
  **Yoichiro Nishida**  
  Department of Neurology and Neurological Science, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University (TMDU), Japan
- **S-08-3**  
  How to treat myasthenia gravis with intravenous immunoglobulin or plasmapheresis  
  **Takamichi Sugimoto**  
  Department of Clinical Neuroscience and Therapeutics, Hiroshima University Hospital, Japan
### S-08-4
Which is better!? ~Complement C5 inhibitors vs. neonatal Fc receptor (FcRn) inhibitors
Yuriko Nagane
Department of Neurology, Hanamaki General Hospital, Japan

### S-08-5
Current status of thymectomy for myasthenia gravis
Meinoshin Okumura
National Hospital Organization Osaka Toneyama Medical Center, Japan

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### S-09 Symposium 09
May 31 (Wed) 13:20 ~ 15:20  Room 05 (Makuhari Messe International Conference Hall 3F 304)

Current status and prospects of stroke medical care expanding with AI support

Chairs: Takao Urabe
Department of Neurology, Juntendo University Urayasu Hospital, Japan
Kazunori Toyoda
National Cerebral and Cardiovascular Center, Japan

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### S-09-1
Diagnosis of Hemorrhagic Stroke by AI
Manabu Inoue
Division of Stroke Care Unit, National Cerebral and Cardiovascular Center, Japan

### S-09-2
AI Diagnosis of Ischemic Stroke
Soichiro Shibata
Division of Neurology, Department of Internal Medicine, St. Marianna University School of Medicine, Japan

### S-09-3
Prospects for post-stroke dementia prediction using AI
Kenji Ishii
Neuroimaging Research, Tokyo Metropolitan Institute for Geriatrics and Gerontology, Japan

### S-09-4
Evaluation of arteriosclerosis by artificial intelligence
Yuji Ueno
Department of Neurology, University of Yamanashi, Japan

### S-09-5
Study of Predicting Stroke Patients' Outcome using AI-analyzed Japan Stroke Data Bank
Sohei Yoshimura
Department of Cerebrovascular Medicine, National Cerebral and Cardiovascular Center, Japan
Hereditary leukodystrophies up to date

Chairs: Satoko Kumada
Department of Neuropediatrics, Tokyo Metropolitan Neurological Hospital, Japan
Jun-ichi Takanashi
Department of Pediatrics, Tokyo Women’s Medical University Yachiyo Medical Center, Japan

S-10-1 Elucidation of the pathogenesis of cerebral hypomyelinating leukodystrophy by genetic analysis
Hirotomo Saitsu
Department of Biochemistry, Hamamatsu University School of Medicine, Japan

S-10-2 MRI, MR spectroscopy in genetic white matter disorders
Jun-ichi Takanashi
Department of Pediatrics, Tokyo Women’s Medical University Yachiyo Medical Center, Japan

S-10-3 Hereditary White Matter Diseases; Expanding Clinical Landscape, Frontiers of Treatment
Hitoshi Osaka
Department of Pediatrics, Jichi Medical University, Japan

S-10-4 Approaches to white matter abnormalities in adults
Osamu Onodera
Brain Research Institute, Dept. of Neurology, Niigata Univ., Japan

State-of-the-art in electromyography and neuromuscular ultrasound supported by artificial intelligence

Chairs: Tomihiro Imai
National Hospital Organization Hakone Hospital, Japan
Kenji Sekiguchi
Division of Neurology, Kobe University Graduate School of Medicine, Japan

S-11-1 AI-based diagnostics of neuromuscular ultrasound
Komei Shimozono
Department of Neurology, Tenri Hospital, Japan

S-11-2 Quantitative muscle ultrasound for neuromuscular disease
Kitaoji Takamasa
Department of Neurology, Kyoto Prefectural University of Medicine, Japan

S-11-3 Development of real-time quantitative muscle ultrasound analysis program using machine-learning
Yoshikatsu Noda
Division of Neurology, Kobe University Graduate School of Medicine, Japan / Nakata Clinic, Japan
How detailed should we trace!? Usefulness of visualization of uncommon nerve by nerve ultrasound
Hiroki Yamazaki
Department of Neurology, Tokushima University Hospital, Japan

S-12 Symposium 12
May 31 (Wed) 13:20 ~ 15:20 Room 14 (Tokyo Bay Makuhari Hall 2F No. 9, 10)
Innovations and achievements in diseases affecting the central nervous system brought in by extensive research on gut microbiota
Chairs: Takashi Yamamura
National Institute of Neuroscience, NCNP, Japan
Kinji Ohno
Neurogenetics, Nagoya University Graduate School of Medicine, Japan

S-12-1 Multiple sclerosis and gut microbiome
Takashi Yamamura
Department of Immunology, National Institute of Neuroscience, NCNP, Japan

S-12-2 Relationship between dementia and the gut microbiome
Naoki Saji
Center for Comprehensive Care and Research on Memory Disorders, National Center for Geriatrics and Gerontology, Japan

S-12-3 Parkinson's disease and gut microbiota
Kinji Ohno
Neurogenetics, Nagoya University Graduate School of Medicine, Japan

S-12-4 Mood disorders and gut microbiota
Hiroshi Kunugi
Department of Psychiatry, Teikyo University School of Medicine, Japan / Department of Mental Disorder Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Japan

S-12-5 Role of gut microbiota in the pathology of stress-related disorders
Nobuyuki Sudo
Department of Psychosomatic Medicine, Graduate School of Medical Sciences, Kyushu University, Japan
S-13 Symposium 13
June 1 (Thu) 8:30 ~ 9:30  Room 01 (Makuhari Messe International Conference Hall 2F Convention Hall)

Problem and perspectives for STOP, Cerebrovascular Disease (CVD) Second Five-year Plan
Chairs: Yoichiro Hashimoto
Stroke center, Saiseikai Kumamoto Hospital, Japan
Hidehiro Takekawa
Stroke center, Dokkyo Medical University, Japan

S-13-1  Developing human resources for stroke care
Ryo Itabashi
Division of Neurology and Gerontology, Department of Internal Medicine, School of Medicine, Iwate Medical University, Japan

S-13-2  Enhancement of the medical system
Shigeru Fujimoto
Division of Neurology, Department of Medicine, Jichi Medical University, Japan

S-13-3  Promoting the stroke registry project
Masatoshi Koga
Department of Cerebrovascular Medicine, National Cerebral and Cardiovascular Center, Japan

S-13-4  Enlightenment to the citizen for stroke prevention
Yasuyuki Iguchi
Department of Neurology, the Jikei University School of Medicine, Japan

S-13-5  Promotion of clinical and basic research
Teruyuki Hirano
Department of Stroke and Cerebrovascular Medicine, Kyorin University, Japan

S-14 Symposium 14
June 1 (Thu) 8:00 ~ 9:30  Room 03 (Makuhari Messe International Conference Hall 2F 201)

New developments in the pathogenesis of Alzheimer's disease
Chairs: Takeshi Ikeuchi
Brain Research Institute, Niigata University, Japan
Kenjiro Ono
Department of Neurology, Kanazawa University Graduate School of Medical Sciences, Japan

S-14-1  New perspectives on glial pathology in Alzheimer Disease
Taisuke Tomita
Graduate School of Pharmaceutical Sciences, The University of Tokyo, Japan

S-14-2  Genome editing technologies and Alzheimer's disease
Hiroki Sasaguri
RIKEN Center for Brain Science, Japan

S-14-3  The evaluation of the environmental risk factors for dementia:
Ishikawa Healthy Longevity Project
Moeko Shinohara
Department of Neurology, Kanazawa University Graduate School of Medical sciences, Japan
Nucleic acid research on new AD pathology: development of nucleic acid aptamer and its application
Kazuma Murakami
Division of Food Science and Biotechnology, Graduate School of Agriculture, Kyoto University, Japan

Future of AI in neurological application: from basic research to clinical application
Chairs: Hiroyuki Nodera
Neuromuscular disease center, Tenri Hospital, Japan
Masahiro Takamura
Department of Neurology, Shimane University, Japan

Toward the development of AI-based dementia prediction systems
Masahiro Takamura
Department of Neurology, Shimane University Faculty of Medicine, Japan / Brain, Mind and KANSEI Sciences Research Center, Hiroshima University, Japan

The future brought by state-of-the-art speech information processing
Tomoki Toda
Information Technology Center, Nagoya University, Japan

Neuro-Rehabilitation using AI-aided brain-machine interface
Junichi Ushiba
Department of Biosciences and Informatics, Faculty of Science and Technology, Keio University, Japan

AI-guided automatic diagnostic system in nerve conduction study and electromyography
Hiroyuki Nodera
Department of Neurology, Tenri Hospital, Japan

Telemedicine in home medical care in cooperation with neurologists and multidisciplinary medical professionals
Chairs: Sonoko Nozaki
Kansai Rosai Hospital, Department of Neurology, Japan
Mitsuru Doi
National Hospital Organization Tottori Medical Center, Japan

Variety and Possibility of Online Tele-rehabilitation
Sonoko Nozaki
Kansai Rosai Hospital, Department of Neurology, Japan

Online collaboration with physicians in home-visit rehabilitation
Tetsuya Hirayama
Relight Rehabilitation Visiting nursing station (physical therapist), Japan
S-16-3 Needs of telemedicine from day care center staff and visiting medical staff
Emiko Nishi
Taste and see, Japan

S-16-4 Online Speech Rehabilitation
Kayoko Otsuka
kuruminomori (Speech Therapist), Japan

S-16-5 Online nutritional management for patients with Parkinson’s disease in Parkinson’s disease center
Mitsuru Doi
tottori medical center, Japan

S-17 Symposium 17
June 1 (Thu) 8:00 ~ 9:30 Room 11 (Tokyo Bay Makuhari Hall 2F No.3, 4)
The World of Cerebral Small Vessel Disease
Toward Aggressive Neurology with Cerebral Small Vessel Protection
Chairs: Toshiki Mizuno
Department of Neurology, Kyoto Prefectural University of Medicine, Japan
Osamu Onodera
Dep. Neurology, Brain Research Institute, Niigata Univ., Japan

S-17-1 Introduction
Osamu Onodera
Brain Research Institute, Dept. of Neurology, Niigata Univ., Japan

S-17-2 A history of cerebral small vessel disease in Japan: From Binswanger disease to HTRA1 disease
Toshio Fukutake
Department of Neurology Kameda Medical Center, Japan

S-17-3 Type-I cerebral small vessel disease: It’s time to move on!
Yusuke Yakushiji
Department of Neurology, Kansai Medical University, Japan

S-17-4 Cerebral amyloid angiopathy
Akihiko Ueda
Department of Neurology, Graduate School of Medical Sciences, Kumamoto University, Japan

S-17-5 HTRA1-related cerebral small vessel disease
Masahiro Uemura
Department of Neurology, Brain Research Institutes, Niigata University, Japan

S-17-6 Pathologic analysis for a better understanding of the cerebral small vessel disease
Rie Saito
Department of Pathology, Brain Research Institute, Niigata University, Japan
S-18 Symposium 18

June 1 (Thu) 8:00 ~ 9:30  Room 13 (Tokyo Bay Makuhari Hall 2F No. 7, 8)

Transition from child to adult health care services for people with neurological diseases: current status and issues

Chairs: Yoko Mochizuki
Department of Neurology, Tokyo Metropolitan Kita Medical and Rehabilitation Center for the Disabled, Japan
Katsuhisa Ogata
National Hospital Organization Higashisaitama National Hospital, Japan

S-18-1 Pediatric-Adult Transitional Medicine in Epilepsy: current state and future prospect
Akio Ikeda
Department of Epilepsy, Movement Disorders and Physiology, Kyoto University Graduate School of Medicine, Japan

S-18-2 Pediatric-adult transition medicine in movement disorders
Kazuko Hasegawa
NHO Sagamihara National Hospital, Japan

S-18-3 Proposal for transitional medical support based on the survey of neurological diseases in Chiba
Moeko Hino
Department of Pediatrics, Chiba University, Japan

S-18-4 Current Status and Issues of Pediatric-Adult Transition: Questionnaire survey for Members of the JSN
Toshio Saito
Division of Child Neurology, Department of Neurology, National Hospital Organization Osaka Toneyama Medical Center, Japan / The Special Committee for Measures Against Transition from Pediatric to Adult Health Care, Japanese Society of Neurology, Japan

Nominal supported by: The Japanese Society of Child Neurology

S-19 Symposium 19

June 1 (Thu) 8:00 ~ 9:30  Room 14 (Tokyo Bay Makuhari Hall 2F No. 9, 10)

Management of Cervical Spondylosis by neurologists

Chairs: Tetsuo Ando
Kameda Medical Center, Japan
Eiji Matsuura
Department of Neurology and Geriatrics, Kagoshima University Graduate School of Medical and Dental Sciences, Japan

S-19-1 The reasons why neurologist should treat cervical spondylosis
Tetsuo Ando
Kameda Medical Center, Japan

S-19-2 Differential diagnosis of cervical spondylosis
Takashi Kameyama
Department of Neurology, Chubu Rosai Hospital, Japan
Utility of electrophysiological examinations in the differential diagnosis of cervical spondylosis

Takamichi Kanbayashi
Teikyo University School of Medicine, Japan

ASK YOUR FAVOR FROM SPINE SURGEON TO NEUROLOGIST FOCUSED ON MYELOPATHY

Yukihiro Matsuyama
Department of Orthopaedic Surgery Hamamatsu University School of Medicine, Japan

Road to new treatments for autoimmune peripheral neuropathy

Chairs: Kenichi Kaida
Dept. of Neurology, Saitama Medical Center, Saitama Medical University, Japan
Masahiro Iijima
Pfizer Japan Inc., Japan

POEMS syndrome and thalidomide

Sonoko Misawa
Department of Neurology, Chiba University graduate School of Medicine, Japan

CIDP and rituximab

Masahiro Iijima
Department of Advanced Medicine, Nagoya University Hospital, Japan

Anti-MAG neuropathy and specific adsorbents against HNK-1 epitopes

Masanori Nakajima
Department of Neurology, Kyorin University School of Medicine, Japan

Clinical development of Efgartigimod and ARGX-117 for Treatment of Neurological Diseases

Peter Ulrichts
Chief Scientific Officer, argenx BV, Belgium
S-21 Symposium 21
June 1 (Thu) 15:35 ~ 17:35  Room 04 (Makuhari Messe International Conference Hall 3F 301)

Common Pathological Mechanisms of Psychiatric and Neurodegenerative Diseases Approached from Brain Energy Metabolism and Astrocytes

Chairs: Hirohisa Watanabe
Fujita Health University, Japan
Yuhei Takado
National Institutes for Quantum Science and Technology, Japan

S-21-1 Energy Metabolic Disorders and Neurodegenerative Diseases as Viewed by Brain Imaging and Biomarkers
Hirohisa Watanabe
Department of Neurology, Fujita Health University School of Medicine, Japan

S-21-2 Abnormal glucose metabolism in mouse models of psychiatric and neurological disorders
Shinobu Hirai
Brain Metabolic Regulation Group, Frontier Laboratory, Department of Psychiatry and Behavioral Sciences, Tokyo Metropolitan Institute of Medical Science, Japan

S-21-3 Brain Energy Metabolism Imaging to elucidate Astrocyte dysfunction in dementia
Yuhei Takado
Institute for Quantum Life Science, National Institutes for Quantum Science and Technology, Japan

S-21-4 Therapeutic potentials of astrocyte GPCR signaling for neurodegenerative diseases
Jun Nagai
RIKEN Center for Brain Science, Laboratory for Glia-Neuron Circuit Dynamics, Japan

S-22 Symposium 22
June 1 (Thu) 15:35 ~ 17:35  Room 06 (Makuhari Messe International Conference Hall 3F 302)

Seeing is believing: journey to identify culprit in ALS

Chairs: Koji Yamanaka
Research Institute of Environmental Medicine, Nagoya University, Japan
Masahisa Katsuno
Department of Neurology, Nagoya University Graduate School of Medicine, Japan

S-22-1 Autoregulation of TDP-43
Akihiro Sugai
Department of Molecular Neuroscience, Brain Research Institute, Niigata University, Japan

S-22-2 Using patient derived data and modeling to guide ALS drug development
Neta Zech
Hidenori Kamiguchi, Akiyoshi Kunugi
Takeda Pharmaceutical Company Limited, USA
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<td>June 1 (Thu)</td>
<td>15:35 ~ 17:35 Room 07 (Makuhari Messe International Conference Hall 3F 303)</td>
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<tr>
<td>Neurological</td>
<td>dysfunction in post COVID-19 condition/Long COVID: Future issues and countermeasures for neurologists</td>
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<td>Chairs: Hideto Nakajima&lt;br&gt;Nihon University, Neurology, Japan&lt;br&gt;Motohiro Yukitake&lt;br&gt;Kouhoukai Takagi Hospital, Japan</td>
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<td>S-23-1</td>
<td>COVID-19: Up to date&lt;br&gt;Norio Ohmagari&lt;br&gt;National Center for Global Health and Medicine Hospital, Japan</td>
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<td>S-23-2</td>
<td>Neurological symptoms, occurrence, and risks of Long COVID&lt;br&gt;Hideto Nakajima&lt;br&gt;Division of Neurology, Department of Medicine, Nihon University, Japan</td>
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<td>S-23-3</td>
<td>Diagnosis and clinical practice of long COVID&lt;br&gt;Hidehiro Mizusawa&lt;br&gt;National Center of Neurology and Psychiatry, Japan</td>
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<td>S-23-4</td>
<td>Pathogenesis of Long COVID&lt;br&gt;Takayoshi Shimohata&lt;br&gt;Department of Neurology, Gifu University Graduate School of Medicine, Japan</td>
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<td>S-23-5</td>
<td>Long COVID and myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS)&lt;br&gt;Wakiro Sato&lt;br&gt;National Center of Neurology and Psychiatry, Institute of Neuroscience, Dept of Immunology, Japan</td>
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<tr>
<td>S-23-6</td>
<td>Preventions, Treatments and Future Topics of Discussion of Long COVID&lt;br&gt;Akihiro Ueda&lt;br&gt;Fujita Health University Okazaki Medical Center, Internal Medicine, Department of Neurology, Japan / Fujita Health University School of Medicine, Department of Neurology, Japan</td>
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### S-24 Symposium 24
June 1 (Thu) 15:35 ~ 17:35 Room 11 (Tokyo Bay Makuhari Hall 2F No.3, 4)

**Curable dystonia!~recent advance**

Chairs: Kazuko Hasegawa  
Department of Neurology, National Hospital Organization, Sagamihara National Hospital, Japan  
Ryosuke Miyamoto  
Department of Neurology, Tokushima University Hospital, Japan

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<td>S-24-1</td>
<td>Advances in understanding genetic dystonias and botulinum toxin therapy</td>
<td>Ryosuke Miyamoto</td>
<td>Department of Neurology, Tokushima University, Japan</td>
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<tr>
<td>S-24-2</td>
<td>The landscape of Intrathecal Baclofen Infusion Therapy for a Dystonia case</td>
<td>Daitoku Mishima</td>
<td>National Hospital Organization National Sagamihara Hospital Department of Neurosurgery, Japan</td>
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<td>S-24-3</td>
<td>Stereotactic neurosurgery for dystonia -Recent progress and future challenges-</td>
<td>Hideo Mure</td>
<td>Center for Neuromodulation, Kurashiki Heisei Hospital, Japan / Department of Neurosurgery, Kurashiki Heisei Hospital, Japan</td>
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<td>S-24-4</td>
<td>Pathophysiology of Musicians’ Dystonia</td>
<td>Shinichi Furuya</td>
<td>Sony Computer Science Laboratories Inc., Japan</td>
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### S-25 Symposium 25
June 1 (Thu) 15:35 ~ 17:35 Room 13 (Tokyo Bay Makuhari Hall 2F No. 7, 8)

**Autoimmune myositis - How much is known?**

Chairs: Ichizo Nishino  
Department of Neuromuscular Research, National Institute of Neuroscience, NCNP, Japan  
Tsuyoshi Matsumura  
National Hospital Organization Osaka Toneyama Medical Center, Japan

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<tr>
<td>S-25-1</td>
<td>Inclusion body myositis: an update on pathogenesis</td>
<td>Akinori Uruha</td>
<td>Department of Neurology, Tokyo Metropolitan Neurological Hospital, Japan</td>
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<td>S-25-2</td>
<td>Recent findings in immune-mediated necrotizing myopathy</td>
<td>Akatsuki Kubota</td>
<td>Department of Neurology, The University of Tokyo, Japan</td>
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</table>
S-25-3 Is the pathogenesis of dermatomyositis different for each myositis-specific autoantibody?
Naoko Okiyama
Department of Dermatology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Japan

S-25-4 What is antisynthetase syndrome or additional subsets?
Shigeaki Suzuki
Department of Neurology, Keio University School of Medicine, Japan

S-25-5 Targeting muscle fiber necroptosis for treatment of inflammatory myopathies
Mari Kamiya
Department of Rheumatology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University (TMDU), Japan

S-26 Symposium 26
June 2 (Fri) 8:00 ~ 9:30 Room 01 (Makuhari Messe International Conference Hall 2F Convention Hall)
Expansion of repeat expanded diseases by neurogenetics
Chairs: Masayuki Nakamori
Department of Neurology, Yamaguchi University Graduate School of Medicine, Japan
Wataru Satake
Dept Neurol, The Univ of Tokyo, Japan

S-26-1 Repeat conformation heterogeneity in CANVAS
Satoko Miyatake
Department of Clinical Genetics, Yokohama City University Hospital, Japan

S-26-2 Targeting Expanded Repeats by Small Molecules in Huntington's Disease and DRPLA
Masayuki Nakamori
Department of Neurology, Yamaguchi University Graduate School of Medicine, Japan

S-26-3 Regulation of RAN translation in C9orf72-FTD/ALS
Kohji Mori
Psychiatry, Osaka University Graduate School of Medicine, Japan

S-26-4 Understanding the pathogenesis of SCA31
Kinya Ishikawa
The Center for Personalized Medicine for Healthy Aging, Tokyo Medical and Dental University, Japan / Department of Personalized Genomic Medicine for Health, Graduate School, Tokyo Medical and Dental University, Japan / Department of Neurology and Neurological Science, Graduate School, Tokyo Medical and Dental University, Japan
S-27 Symposium 27

Direct connection of medical care to patients: telemedicine spreads to the future

Chairs: Atsushi Nagai
Internal Medicine III, Shimane University Faculty of Medicine, Japan
Genko Oyama
Department of Neurology, Juntendo University, Japan

S-27-1 Teleneurology, Current status and Perspective
Yasuhiro Hasegawa
Stroke Center, Shin-Yurigaoka General Hospital, Japan

S-27-2 Current status and future perspective of the interactive 3-dimensional telemedicine
Genko Oyama
Juntendo University Faculty of Medicine, Department of Neurology, Japan

S-27-3 Academic Ophthalmologist Establishes Medical AI Company
Hidenori Takahashi
Department of Ophthalmology, Jichi Medical University, Japan

S-27-4 Non-invasive brain machine interfaces based on electroencephalography
Natsue Yoshimura
Department of Computer Science, School of Computing, Tokyo Institute of Technology, Japan / ATR Brain Information Communication Research Laboratory Group, Japan

S-28 Symposium 28

Prospects and Challenges of Developing Individualized Medicine for Neurological Rare Diseases

Chairs: Hidehiro Mizusawa
National Center of Neurology and Psychiatry, Japan
Tojo Nakayama
Harvard Medical School, Boston Children’s Hospital, USA

S-28-1 Individualized medicine with antisense oligonucleotides for neurological disorders
Tojo Nakayama
Harvard Medical School Boston Children’s Hospital, USA / Tokyo Medical and Dental University, Japan

S-28-2 Accomplishment of Initiative on Rare and Undiagnosed Diseases (IRUD) and perspectives towards cures
Yuji Takahashi
Department of Neurology, National Center Hospital, National Center of Neurology and Psychiatry, Japan
S-28-3  Challenges and Prospects for Nonclinical Safety Evaluation of ONTs for Application to Rare Diseases
Yoko Hirabayashi
National Institute of Health Sciences, Japan

S-28-4  Challenges towards N-of-one medicine from a view point of Industry
Yasushi Kajii
T-CiRA Discovery and Innovation, Takeda Pharmaceutical Company Limited, Japan

S-29 Symposium 29

Women in Neurology in the USA and Japan

Chair: Vanda A. Lennon
Department of Neurology, Mayo Clinic, USA
Izumi Kawachi
Dept. of Neurology, Brain Research Institute, Niigata University, Japan

S-29-1  A woman’s journey in translational neuroscience in Australia and North America
Vanda A. Lennon
Department of Neurology, Mayo Clinic, USA

S-29-2  Female neurologists in Japan as the first baby-boomer generation
Keiko Tanaka
Dept. Animal Model Development, Brain Research Institute, Niigata University, Japan / Dept. Multiple Sclerosis Therapeutics, Fukushima Medical University, School of Medicine, Japan

S-29-3  Women in Neurology in Japan since 1990s
Ritsuko Hanajima
Division of Neurology, Department of Brain and Neurosciences, Faculty of Medicine, Tottori University, Japan

S-29-4  Women in Neurology in Japan in future
Yukiko Hayashi
Department of Pathophysiology, Tokyo Medical University, Japan

Nominal supported by: The Japanese Society of Internal Medicine
The Dawn of A New Era - Therapy for GNE Myopathy

Chairs: Madoka Mori-yoshimura
Department of Neurology, National Center Hospital, National, National Center of Neurology and Psychiatry, Japan
Naoki Suzuki
Department of Neurology, Tohoku University Hospital, Japan

S-30-1 Distal myopathy - an overview
Ichizo Nishino
Department of Neuromuscular Research, National Institute of Neuroscience, National Center of Neurology and Psychiatry, Japan

S-30-2 Clinical characteristics and differential diagnosis of GNE myopathy
Madoka Mori-yoshimura
Department of Neurology, National Center Hospital, National Center of Neurology and Psychiatry, Japan

S-30-3 Clinical trials of GNE myopathy in Japan
Naoki Suzuki
Department of Neurology, Tohoku University Hospital, Japan

S-30-4 N-acetylmannosamine (ManNAc) in GNE myopathy: clinical trials and future prospects
May Christine V. Malicdan
National Institute of Health Undiagnosed Diseases Program, USA / Medical Genetics Branch, National Human Genome Research Institute, USA

S-30-5 Mutation profile of GNE Gene in Chinese cohort with GNE Myopathy: an update
Wen-hua Zhu
Department of Neurology, Huashan Hospital Fudan University, China / National Center for Neurological Disorders (NCND), China / Huashan Rare Disease Center, Shanghai Medical College, Fudan University, China

S-30-6 Therapy development for GNE myopathy beyond oral sialic acid supplementation
Wakako Yoshioka
National Center of Neurology and Psychiatry (NCNP), Japan

Nominal supported by: Japan Muscle Society
S-31  Symposium 31
June 2 (Fri)  13:45 ~ 15:45  Room 06 (Makuhari Messe International Conference Hall 3F 302)

Lessons Learned from Imaging on Clinical Issues in Parkinson’s Disease and related disorders

Chairs: Yasuomi Ouchi
Hamamatsu University School of Medicine, Department of Biofunctional Imaging, Japan
Hitoshi Shimada
Department of Functional Neurology & Neurosurgery, Center for Integrated Human Brain Science, Brain Research Institute, Niigata University, Japan

S-31-1  Clinical issues in Parkinson’s Disease and Related disorders
Francisco Cardoso
The Federal University of Minas Gerais, Brazil

S-31-2  Challenges and Future Prospects for Diagnostic Imaging and Biomarker of PD and Atypical Parkinsonism
Taku Hatano
Department of Neurology, Juntendo University Faculty of Medicine, Japan

S-31-3  Gait-combined closed-loop brain stimulation can improve walking dynamics in Parkinson’s disease
Yoshino Ueki
Department of Rehabilitation medicine, Nagoya City University Graduate School of Medicine, Japan

S-31-4  Pathophysiological Imaging of PD and APS -Toward Realization of Disease-Modifying Therapies-
Hitoshi Shimada
Department of Functional Neurology & Neurosurgery, Center for Integrated Human Brain Science, Brain Research Institute, Niigata University, Japan / Department of Functional Brain Imaging, Institute for Quantum Medical Science, Institutes for Quantum and Radiological Science and Technology, Japan / Department of Neurology, Chiba University, Japan

Nominal supported by: Movement Disorder Society of Japan

S-32  Symposium 32
June 3 (Sat)  8:00 ~ 10:00  Room 02 (Makuhari Messe International Conference Hall 2F International Conference Room)

Functional neurological disorders: updates and the role of neurologists

Chairs: Jon Stone
The University of Edinburgh, UK
Masahiro Sonoo
Department of Neurology, Teikyo University School of Medicine, Japan

S-32-1  Functional weakness
Masahiro Sonoo
Department of Neurology, Teikyo University School of Medicine, Japan

S-32-2  Functional Movement disorders: The Role of Neurologists
Masahiko Tomiyama
Department of Neurology, Hirosaki University Graduate School of Medicine, Japan
S-32-3  Functional Neurological Disorder (FND) - an overview and "the assessment as treatment"
Jon Stone
University of Edinburgh, UK

S-33  Symposium 33
June 3 (Sat) 8:00 ~ 10:00  Room 04 (Makuhari Messe International Conference Hall 3F 301)
The forefront of development in collaboration with the regulatory authorities and ARO in neurological disorders.

Chairs: Masashi Aoki
Department of Neurology, Tohoku University School of Medicine, Japan
Takashi Moritoyo
Department of Clinical Research Support, Clinical Research & Education Promotion Division, National Center Hospital National Center of Neurology and Psychiatry, Japan

S-33-1  Public support for medical research and development
Yuko Masamura
Ministry of Health, Labour and Welfare, Japan

S-33-2  Current trends in newly drug development for neurological diseases
Masahiro Uemura
Office of new drug 2, Pharmaceuticals and Medical Devices Agency, Japan

S-33-3  Research and Development in Academia Supported by ARO
Takashi Moritoyo
Clinical Research Promotion Center, The University of Tokyo Hospital, Japan

S-33-4  The Road to New Drug Approval, based on our experience
Harumasa Nakamura
Clinical Research & Education Promotion Division, National Center Hospital National Center of Neurology and Psychiatry, Japan

S-33-5  Expectations for Academia in clinical development of Neurology - Pharmaceutical company’s viewpoint
Yoko Fujimoto
Pfizer, Japan

Withdrawn
S-34 Symposium 34

June 3 (Sat) 8:00 ~ 10:00  Room 05 (Makuhari Messe International Conference Hall 3F 304)

Current Progress in Reproductive Medicine and Neurology

Chairs: Shigeo Murayama
United Graduate School of Child Development, Japan
Ryosuke Takahashi
Department of Neurology, Kyoto University Graduate School of Medicine, Japan

S-34-1 Hot topics, the Japanese Society of Neuropathology
Shigeo Murayama
United Graduate School of Child Development, Japan / Tokyo Metropolitan Institute of Geriatrics and Gerontology, Japan

S-34-2 Pathophysiological analysis of neurological diseases and drug discovery using iPSCs technology
Hideyuki Okano
Department of Physiology, Keio University School of Medicine, Japan

S-34-3 An Invitation to Basic Neuroscience Research - To Change a Game
Michisuke Yuzaki
Dept. Physiol, Keio Univ. Sch. Med., Japan

S-34-4 Hot topics in Japanese Society for Biological Psychiatry
Tadafumi Kato
Department of Psychiatry and Behavioral Science, Juntendo University Graduate School of Medicine, Japan


S-35 Symposium 35

June 3 (Sat) 8:00 ~ 10:00  Room 07 (Makuhari Messe International Conference Hall 3F 303)

Present and future of Segawa Disease;
50th memorial symposium for discover of Segawa disease

Chairs: Yasuo Terao
Department of Medical Physiology, Kyorin University, Japan
Kyoko Hoshino
Segawa Memorial Neurological Clinic for Children, Japan

S-35-1 Decoding the initial process of the establishment of Segawa's disease from his medical records
Masaya Kubota
Department of Pediatrics, Shimada Ryoiku Medical Center for Challenged Children, Japan

S-35-2 Basal ganglia pathophysiology of Segawa's disease as studied by saccade recording
Yasu Terao
Department of Medical Physiology, Kyorin University, Japan
Pathophysiology of Segawa’s disease analyzed by biopterin-deficient mice
Hiroshi Ichinose
School of Life Science and Technology, Tokyo Institute of Technology, Japan

Clinical variations of Segawa disease -based on national survey result-
Kyoko Hoshino
Segawa Memorial Neurological Clinic for Children, Japan

Symposium 36
June 3 (Sat) 8:00 ~ 10:00 Room 11 (Tokyo Bay Makuhari Hall 2F No.3, 4)

Differential diagnosis of neuropathies that lead to treatment
Chairs: Haruki Koike
Division of Neurology, Department of Internal Medicine, Faculty of Medicine, Saga University, Japan
Yu-ichi Noto
Department of Neurology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Japan

Differential diagnosis of neuropathy by electrophysiological examination
Tomohiko Nakamura
Department of neurology, Hamamatsu University Hospital, Japan

Differential diagnosis of peripheral neuropathy in pathology
Ryota Sato
Department of Neurology and Clinical Neuroscience, Yamaguchi University Graduate School of Medicine, Japan

Drug-induced, metabolic, and nutritional neuropathies frequently encountered in daily practice
Haruki Koike
Division of Neurology, Department of Internal Medicine, Faculty of Medicine, Saga University, Japan

The Need for Early Diagnosis and Current Treatment in Hereditary Neuropathies
Yoshiki Sekijima
Department of Medicine (Neurology & Rheumatology), Shinshu University School of Medicine, Japan
Dawn of Telestroke

Chairs: Yasuhiro Hasegawa
       Stroke Center, Shin-yurigaoka General Hospital, Japan
       Shigeru Fujimoto
       Division of Neurology, Department of Medicine, Jichi Medical University,
       Japan

S-37-1 Current status and issues of the medical resources for stroke in
Japanese rural areas
Takafumi Mashiko
Division of Neurology, Department of Internal Medicine, Jichi Medical University, Japan

S-37-2 Telestroke in Nagasaki
Akira Tsujino
Department of Neurology and Strokology, Nagasaki University Hospital, Japan

S-37-3 Telestroke in Tochigi Prefecture
Hidehiro Takekawa
Stroke Center, Dokkyo Medical University, Japan

S-37-4 Stroke care using telemedicine information sharing
Kenichiro Sakai
The JIKEI University School of Medicine, Department of Neurology, Japan

S-37-5 telemedicine guideline (telestroke guideline)
Yoichiro Hashimoto
Saiseikai Kumamoto Hospital, Stroke Center, Japan