## ◆会長講演

日時：2 月 8 日（金）14：15〜14：45
演題：マウスの脳虚血・再灌流時の NO およびハイドロキシルラジカル変化に対するメマンチン、抑肝散の影響
座長：鈴木　則宏（医療法人社団健育会　湘南慶育病院　脳神経内科）
演者：荒木　信夫（埼玉医科大学　神経内科）

## ◆特別講演

＜特別講演 1＞
日時：2 月 8 日（金）11：00〜12：00
座長：三浦総一郎（国際医療福祉大学大学院）
「管腔内因子によるリンパ球系細胞の消化管微小循環における制御と病態への関わり」
穂刈　量太（防衛医科大学校　内科学（消化器））

＜特別講演 2＞
日時：2 月 9 日（土）10：40〜11：40
座長：荒木　信夫（埼玉医科大学　神経内科）
「脳微小循環と Glymphatic 系」
伊藤　義彰（大阪市立大学大学院医学研究科神経内科）

＜特別講演 3＞
日時：2 月 9 日（土）13：00〜14：00
座長：鈴木　秀和（慶應義塾大学　医学部　医学教育統轄センター）
「脳のリンパ流および神経変性疾患におけるアクアポリン 4 の役割」
安井　正人（慶應義塾大学　医学部　薬理学教室）

## ◆シンポジウム

＜シンポジウム 1＞
日時：2 月 8 日（金）14：50〜16：50
テーマ：微小環境をみる、はかる、感知する
オーガナイザー：梶村　眞弓（慶應義塾大学　医学部　生物学教室）
「組織内の溶媒・溶質動態の可視化」
塗谷　睦生（慶應義塾大学　医学部　薬理学教室）
「血管内皮細胞のメカノセンシング」
山本希美子（東京大学　大学院医学系研究科　医用生体工学講座　システム生理学）
「18F-FDG 標識赤血球 PET による局所血液量の in vivo imaging」
松坂　陽至（慶應義塾大学医学部　放射線科（診断））
「生体内の低酸素・pH を可視化する蛍光プローブの開発」
花岡健二郎（東京大学大学院薬学系研究科）

＜シンポジウム 2＞
日時：2 月 9 日（土）8：30〜10：30
テーマ：脳微小循環調節：基礎から臨床まで
オーガナイザー：正本　和人（電気通信大学脳科学ライフサポート研究センター）
齊藤　　聡（国立循環器病研究センター　脳神経内科）
「神経血管カップリング：局所 vs. 大域調節メカニズム」
正本　和人（電気通信大学　脳科学ライフサポート研究センター）

「嗅球と大脳皮質に投射する前脳基底部コリン作動性神経機能の解析」
　内田　さえ（東京都健康長寿医療センター研究所・自律神経機能研究室）
「全脳循環の物理解明に向けた大規模計算シミュレータの構築」
　伊井　仁志（首都大学東京大学院　システムデザイン研究科）
「脳微小循環とアミロイド、そしてタウ」
　齊藤　　聡（国立循環器病研究センター　脳神経内科）

## ◆ランチョンセミナー

＜ランチョンセミナー 1＞
日時：2 月 8 日（金）12：10〜13：10
座長：荒木　信夫（埼玉医科大学　神経内科）
「高齢者てんかんをめぐって」
　吉野　相英（防衛医科大学校精神科学講座）
共催：エーザイ株式会社

＜ランチョンセミナー 2＞
日時：2 月 9 日（土）11：50〜12：50
テーマ：腸管微小循環に迫る
座長：永田　博司（けいゆう病院　名誉院長）
「消化管のマイグレーションと α4β7 インテグリン製剤への期待」
　穂刈　量太（防衛医科大学校　内科学（消化器））
共催：武田薬品工業株式会社

# PROGRAM

## Friday, February 8, 2019

### Opening Remarks 8:50-9:00

President: Nobuo Araki
Department of Neurology, Saitama Medical University

### Applicants' Presentation for Young Investigators Award 9:00-11:00

Chair: Hiroshi Nagata
Jing-Yan Han

**Y-01** Protective roles played by heme oxygenase-2 against transhemispheric diaschisis

Shinichi Goto, Akiko Kubo, Takayuki Morikawa, Mayumi Kajimura, Makoto Suematsu

Department of Biochemistry, Keio University School of Medicine

**Y-02** Prostaglandin E receptor subtype EP3 promotes liver repair after acute liver injury

Shuji Nakamoto[1)], Yoshiya Ito[2)], Nobuyuki Nishizawa[3)], Hirotoki Ohkubo[4)], Masahiko Watanabe[3)], Masataka Majima[2)]

[1)]Departments of Surgery and Pharmacology, Kitasato University School of Medicine
[2)]Department of Pharmacology, Kitasato University School of Medicine
[3)]Department of Surgery, Kitasato University School of Medicine
[4)]Department of Cardiovascular Surgery Kitasato University School of Medicine

**Y-03** Effect of bile acid on lymphocyte migration into the small intestine.

Naoki Shibuya, Masaaki Higashiyama, Kazuki Horiuchi, Ryota Hokari

Department of Internal Medicine, National Defense Medical College

**Y-04** Foveal avascular zone and peripheral retinal ischemia detected by ultra-widefield fluorescein angiography

Noriaki Takase[1)], Miho Nozaki[1)], Katsuya Suzuki[1)], Aoi Kominami[1)], Hironori Ozeki[2)], Aki Kato[1)], Munenori Yoshida[1)], Yuichiro Ogura[1)]

[1)]Department of Ophthalmology & Visual Science, Nagoya City University Graduate School of Medical Sciences
[2)]Ozeki Eye Clinic

**Y-05** Pulmonary endothelial response to cognate anti-HLA antigen and leukocytes in a murine TRALI model

Hideyuki Ochi[1)], Akira Ushiyama[2)], Takehiko Iijima[1)]

[1)]Department of Perioperative Medicine, Division of Anesthesiology, Showa University, School of Dentistry
[2)]National Institute of Public Health

**Y-06** A case of cerebral air embolism after catheter examination：Possible mechanism of microcirculatory disturbance

Hiroko Kimura[1)], Reiko Sawada[1)], Marie Yamamoto[1)], Takato Abe[1)], Kenji Sawa[2)], Yoshiaki Itoh[1)]

[1)]Department of Neurology, Osaka City University Graduate School of Medicine
[2)]Department of Respiratory Medicine, Osaka City University Graduate School of Medicine

**Y-07** QiShenYiQi Pills® ameliorates fatigue-induced cardiac hypertrophy and dysfunction via regulation of energy metabolism

Rong Huang[1,2)], Yuan-Chen Cui[1,2)], Xiao-Hong Wei[1,2)], Chun-Shui Pan[1,2)], Quan Li[1,2)], Shu-Ya He[1,2)], Jing-Yu Fan[1,2)], Jing-Yan Han[1,2)]

[1)]Department of Integration of Chinese and Western Medicine, School of Basic Medical Sciences, Peking University
[2)]Tasly Microcirculation Research Center, Peking University Health Science Center

**Y-08** QiShenYiQi Pills® inhibits I/R-induced myocardial fibrosis via RP S19 through TGFβ1/Smads signaling pathway

Qian-Ning Zheng[1,2], Xiao-Hong Wei[1,2], Chun-Shui Pan[1,2], Quan Li[1,2], Yu-Ying Liu[1,2], Jing-Yu Fan[1,2], Jing-Yan Han[1,2]

[1]Department of Integration of Chinese and Western Medicine, School of Basic Medical Sciences, Peking University
[2]Tasly Microcirculation Research Center, Peking University Health Science Center

## Special Lecture 1 11:00-12:00

Chair: Soichiro Miura

**SL-1** Regulation of lymphocytes migration to intestinal microvessels by luminal antigens in health and diseases.

Ryota Hokari
Department of Internal Medicine, National Defense Medical College

## Luncheon Seminar 1 12:10-13:10

Chair: Nobuo Araki

**LS-1** Epilepsy in the elderly

Aihide Yoshino
Department of Psychiatry, National Defense Medical College

Sponsored by Eisai Company Limited.

## Council Meeting and General Assembly 13:15-14:15

## Presidential Lecture 14:15-14:45

Chair: Norihiro Suzuki

**PL** Effects of Memantine and Yokukansan on Nitric Oxide Production and Hydroxyl Radical Metabolism during Cerebral Ischemia and Reperfusion in Mice

Nobuo Araki
Department of Neurology, Saitama Medical University

## Symposium 1
## Spying into the microenvironment 14:50-16:50

Organizer: Mayumi Kajimura

**SY1-1** Imaging solutes & solvent in the living tissue

Mutsuo Nuriya
Department of Pharmacology, Keio University School of Medicine

**SY1-2** Mechanosensing in vascular endothelial cells

Kimiko Yamamoto[1], Joji Ando[2]

[1]System Physiology, Graduate School of Medicine, The University of Tokyo
[2]Biomedical Engineering, School of Medicine, Dokkyo Medical University

**SY1-3** $^{18}$F-FDG-labeled red blood cell PET for blood pool imaging and its application

Yohji Matsusaka[1)], Tadaki Nakahara[1)], Mayumi Kajimura[2)], Masahiro Jinzaki[1)]
[1)]Department of Radiology, Keio University School of Medicine
[2)]Department of Biology, Keio University School of Medicine

**SY1-4** Development of fluorescence probes for hypoxia and/or pH in living samples

Kenjiro Hanaoka
Graduate School of Pharmaceutical Sciences, The University of Tokyo

## Reception and Award Ceremony 17:15-19:15

# Saturday, February 9, 2019

## Symposium 2
## Regulation of Cerebral Microcirculation；from Basic Mechanisms to Clinical Implications 8:30-10:30

Organizer: Kazuto Masamoto
Satoshi Saito

**SY2-1** Neurovascular coupling：focal and global regulation of cerebral microcirculation
Kazuto Masamoto
Brain Science Inspired Life Support Research Center, Univ. of Electro-communications

**SY2-2** Physiological function of basal forebrain cholinergic fibers projecting to the olfactory bulb and neocortex
Sae Uchida
Department of Autonomic Neuroscience, Tokyo Metropolitan Institute of Gerontology

**SY2-3** Development of a large-scale simulator for clarification of physical mechanisms of full-scale cerebral circulation
Satoshi Ii[1)], Shigeo Wada[2)]
[1)]Graduate School of Systems Design, Tokyo Metropolitan University
[2)]Graduate School of Engineering Science, Osaka University

**SY2-4** Effects of cerebral microcirculation on Aβ and tau pathology in Alzheimer's disease
Satoshi Saito
Department of Neurology, National Cerebral and Cardiovascular Center

## Special Lecture 2 10:40-11:40

Chair: Nobuo Araki

**SL-2** Cerebral Microcirculation and Glymphatic System
Yoshiaki Itoh
Department of Neurology, Osaka City University Graduate School of Medicine

## Luncheon Seminar 2 11:50-12:50

Chair: Hiroshi Nagata

**LS-2** Migration of the digestive tract and expectation of the α4β7 integrin preparation in Ulcerative Colitis
Ryota Hokari
Professor of Medicine/ Gastroenterology Director, Department of Internal Medicine, National Defense Medical College

Sponsored by Takeda Pharmaceutical Company Limited.

## Special Lecture 3 13:00-14:00

Chair: Hidekazu Suzuki

**SL-3** Roles of aquaporin-4（AQP4）in brain lymphatic system and in neurodegenerative diseases
Masato Yasui
Dept. of Pharmacology, School of Medicine, Keio University

## Free Paper 1
## Brain 14:00-15:12

Chair: Toyotaka Yada
Mami Ishikawa

**F-01** Spreading depolarization evoked during middle cerebral artery occlusion may trigger a development of cerebral infarct in mice

Miyuki Unekawa[1)], Yutaka Tomita[1)], Yoshikane Izawa[1)], Chunhua Tang[1)], Kazuto Masamoto[2)], Iwao Kanno[3)], Norihiro Suzuki[4)], Jin Nakahara[1)]

[1)]Department of Neurology, Keio University School of Medicine
[2)]Brain Science Inspired Life Support Research Center, University of Electro-Communications
[3)]Department of Functional Brain Imaging Research, National Institute of Radiological Sciences
[4)]Department of Neurology, Shonan Keiiku Hospital

**F-02** Effects of Memantine on NO Production and Hydroxyl Radical Metabolism during Cerebral Ischemia and Reperfusion in Mice

Yasuo Ito[1)], Ai Tanaka[2)], Hitoshi Kawasaki[1)], Chika Kitabayashi[1)], Ryoji Nishioka[1)], Makiko Hirayama[1)], Kazushi Takahashi[1)], Toshimasa Yamamoto[1)], Nobuo Araki[1)]

[1)]Department of Neurology, Saitama Medical University
[2)]Department of Neurology, Tottori Medical Center

**F-03** Ultrasonography monitoring and magnetic resonance angiography in moyamoya disease

Mami Ishikawa[1)], Satoshi Terao[2)], Mutsumi Nagai[3)], Hiroshi Kagami[4)], Makoto Inaba[4)], Heiji Naritaka[5)]

[1)]Department of Neurosurgery, Tachikawa Hospital
[2)]Department of Neurosurgery, Saiseikai Central Hospital
[3)]Department of Neurosurgery, International university of health and welfare
[4)]Department of Neurosurgery, Saiseikai Yokohamashi Tobu Hospital
[5)]Department of Neurosurgery, Edogawa Hospital

**F-04** Ultrasonography using Superb Microvascular Imaging and contrast agent techniques during neurosurgery

Mami Ishikawa[1)], Satoshi Terao[2)], Mutsumi Nagai[3)], Kazuto Masamoto[4)], Ryota Hachiya[4)], Heiji Naritaka[5)]

[1)]Department of Neurosurgery, Tachikawa Hospital
[2)]Department of Neurosurgery, Saiseikai Central Hospital
[3)]Department of Neurosurgery, International university of health and welfare
[4)]Faculty of Informatics and Engineering, University of Electro-Communications
[5)]Department of Neurosurgery, Edogawa Hospital

**F-05** Abstract withdrawn

**F-06** Angioedema and hemorrhage after 4.5 h tPA thrombolysis ameliorated by T541 via regulating mitochondria metabolism

Jing-Yan Han[1,2)], Qing-Fang Chen[1,2)]

[1)]Department of Integration of Chinese and Western Medicine, School of Basic Medical Sciences, Peking University
[2)]Tasly Microcirculation Research Center, Peking University Health Science Center

**F-07** Analysis of indocyanine green（ICG）angiography during neurosurgical operation for intracerebral hemorrhage and arteriovenous malformation

Satoshi Terao[1)], Mutsumi Nagai[2)], Kazuto Masamoto[3)], Ryota Hachiya[3)], Hiroshi Kagami[4)], Makoto Inaba[4)], Mami Ishikawa[5)]

[1)]Department of Neurosurgery, Saiseikai Central Hospital
[2)]Department of Neurosurgery, International university of health and welfare
[3)]Faculty of Informatics and Engineering, University of Electro-Communications
[4)]Department of Neurosurgery, Saiseikai Yokohamashi Tobu Hospital
[5)]Department of Neurosurgery, Tachikawa and Edogawa Hospital

## Free Paper 2
## Digestive system/Heart/Eye/Basic 15:12-16:24

Chair: Yuji Naito
Masahiko Nakamura

**F-08** Microcirculation of cardiac stimuli conduction system：immunohitochemical observation of the microvasculature

Eikichi Okada
Department of Pathology, Toyama City Medical Association Health Control Center

**F-09** Unilateral Truncal Vagotomy Facilitatess MALT Lymphoma Formation：Relation to Substance P and NK-1R on Microvessels

Masahiko Nakamura[1)], Shinichi Takahashi[2)], Hidenori Matsui[3)]
[1)]School of Pharmacy, Kitasato University
[2)]School of Medicine, Kyorin University
[3)]Kitasato Institute for Life Sciences, Kitasato University

**F-10** Collateral Vessels on Optical Coherence Tomography Angiography in Eyes with Branch Retinal Vein Occlusion

Norihiro Suzuki, Yoshio Hirano, Taneto Tomiyasu, Ryo Kurobe, Yusuke Yasuda, Yuya Esaki, Tsutomu Yasukawa, Munenori Yoshida, Yuichiro Ogura
Department of Ophthalmology & Visual Science, Nagoya City University Graduate School of Medical Sciences

**F-11** Disruption of Glycocalyx on Cerebral and Glomerular Blood Vessel in a Rat Model of Pre-eclampsia and protective effects of Danaparoid Sodium

Hirofumi Hino, Yoshisuke Naitoh, Takanari Yoshikawa
Department of Anesthesiology, St. Marianna Univ. School of Medicine

**F-12** Protection of endothelial glycocalyx layer through localization of hydroxyethyl starch in murine models of acute severe hemorrhage

Kohji Uzawa[1)], Shingo Mitsuda[1)], Tomoko Yorozu[1)], Akira Ushiyama[2)]
[1)]Department of Anesthesiology, Kyorin University School of Medicine
[2)]National Institute of Public Health

**F-13** Challenge to clarify the physiological basis of obesity paradox using intravital microscopy

Shingo Mitsuda[1)], Kohji Uzawa[1)], Tomoko Yorozu[1)], Akira Ushiyama[2)]
[1)]Department of Anesthesiology, Kyorin University School of Medicine
[2)]National Institute of Public Health

## Closing Remarks 16:25-16:30