

POSTER SESSIONS | OVERVIEW

Poster sessions will be held on July 5-7, 2019 in the Rooms 301-304, 3rd floor, Conference Center. Each day, two poster sessions (morning & evening) are assigned for each abstract. For the morning session, the presenting author will present his/her work in front of the poster (Poster Presentation Session) according to time schedule defined (2 min for presentation & 1 min for Q & A). For the evening session, the presenters freely look around other posters or stand in front of their own poster and discuss with attendees (Poster Viewing Session). There are a total of 4 Brain PET sessions (July 5-6) and 6 Brain sessions (July 5-7), including one ECI session (July 5-6).

Friday, July 5th 2019

- Put up your poster on Friday, July 5th 2019 from 8:00-9:00. Take it down on Friday, July 5th from 16:00-17:00. (Except Early Career Investigator Awardee)
- Poster presentation session 10:00-11:00
(Poster presentation* starts from 10:10)
- Poster viewing session 15:00-16:00
- *Each author presents the poster (2-min presentation & 1-min discussion) in front of the poster sequentially in each session (a pointer rod will be available)

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	A43-49	

All Early Career Investigator Awardee's poster will be displayed for the first two days (July 5th-6th) of the conference. Poster should be set up on July 5th (all posters must be set up during this time irrespective of which day you are scheduled to present), and remove it on July 6th.

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Saturday, July 6th 2019

- All Early Career Investigator Awardee's poster should be set up on July 5th
- Put up your poster on Saturday, July 6th 2019 from 8:00-9:00.

Take it down on Saturday, July 6th from 16:00-17:00.

Poster presentation session 9:30-10:30

(Poster presentation* starts from 9:40)

Poster viewing session 14:30-15:30

*Each author presents the poster (2-min presentation & 1-min discussion) in front of the poster sequentially in each session (a pointer rod will be available)

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All Early Career Investigator Awardee's poster will be displayed for the first two days (July 5th-6th) of the conference. Poster should be set up on July 5th (all posters must be set up during this time irrespective of which day you are scheduled to present), and remove it on July 6th.

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Sunday, July 7th 2019

- Put up your poster on Sunday, July 7th 2019 from 8:00-9:00.

Take it down on Sunday, July 7th from 16:00-17:00.

Poster presentation session 10:00-11:00

(Poster presentation* starts from 10:10)

Poster viewing session 15:00-16:00

*Each author presents the poster (2-min presentation & 1-min discussion) in front of the poster sequentially in each session (a pointer rod will be available)

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	E01-06 White Matter Injuries I: SVD	134
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	U01-13 Neuroinflammation I: Post-Ischemia/Stroke	151
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PA00 **Early Career Investigator Awardee I**

Chair(s) A. Mishra (United States)

- PA00-A01 Characteristics of the capillary bed-flow resistance, capillary dilation and red blood cell motion
F. Schmid, P. Jenny, B. Weber (Switzerland)
- PA00-A02 Acute phase of concussion in recreational rugby players is associated with changes in cerebral blood flow that are dependent on sex
M.E. Favre, S.G. Iring, L. De La Cruz-Alvarez, K. Brewer, J. Liu, P.P. Breen, J. Tosto, M.J. Falvo, J.M. Serrador (United States, Australia)
- PA00-A03 Microglia monitor and protect neuronal function via specialized somatic contact sites in an activity- and P2Y₁₂R-dependent manner
C. Cserép, B. Pósfai, B. Orsolits, G. Molnár, S. Heindl, N. Lénárt, R. Fekete, Z. László, Z. Lele, A.D. Schwarcz, K. Ujvári, L. Csiba, T. Hortobágyi, Z. Maglóczki, B. Martinecz, G. Szabó, F. Erdélyi, R. Szipőcs, I. Katona, A. Liesz, G. Tamás, Á. Dénes (Hungary, Germany)
- PA00-A04 Characterizing microglial and macrophage-mediated repair of cerebral microbleeds in a mouse model of type 1 diabetes mellitus
E. Mehina, S. Taylor, S. Choi, C.E. Brown (Canada, Germany)
- PA00-A05 Inhaled nitric oxide reduces adhesion molecule expression and blunts vascular inflammation after experimental stroke
R. SieneI, N. Terpolilli, B. Seker, N. Plesnila (Germany)
- PA00-A06 The microRNA-7a-5p ameliorates ischemic brain damage by repressing alpha-synuclein
T. Kim, S.L. Mehta, K.C. Morris-Blanco, A.K. Chokkalla, B. Chelluboina, M. Lopez, H. Kim, J. Kim, R. Vemuganti (United States)
- PA00-A07 Healthy adult blood treatment attenuates blood-brain barrier disruption and promotes re-myelination via FGF21/ β -klotho signaling in a mouse model of middle cerebral artery occlusion
Y. Tang, M. Mamtilahun, L. Jiang, Y. Song, Z. Zhang, Y. Wang, GY. Yang (China)

Early Career Investigator Awardee I (cont.)

Chair(s) Y. Yao (United States)

- PA00-A15 Rapamycin induces an eNOS dependent increase in brain collateral perfusion after acute experimental stroke in rats
D.J. Beard, Y. Couch, Z. Li, M.J. Cipolla, A.M. Buchan (United Kingdom, United States)

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PA00-A16 Pharmacological targeting of von Willebrand factor (VWF) strings provides improved stroke outcomes in aged mice
SH. Hong, V. Christian, M. Martinez-Vargas, M. Cruz, S. Marrelli (United States)

PA00-A17 Differentiation between recovered and deteriorated tissue after cerebral ischemia-reperfusion, based on MRI of blood-brain barrier leakage and cerebrovascular reactivity in a rodent stroke model
B.A.A. Franx (Netherlands)

PA00-A18 DI-3-N-butylphthalide promotes angiogenesis and upregulates sonic hedgehog expression after cerebral ischemia in rats
P. Zhou, L. Wang, M. Qu, H. Shen, H. Zheng, Y. Wang, Y. Tang, H. Tian, Z. Zhang, GY. Yang (China)

PA00-A19 Cortical pericytes are more resistant to experimental stroke than neurons and start proliferating after reperfusion
J.J. Shrouder, B. Bulut, S. Besson-Girard, O. Gokce, N. Plesnila (Germany)

PA00-A20 Endovascular model of ischemic stroke in swine
D. Golubczyk, I. Malysz-Cymborska, L. Kalkowski, J. Kwiatkowska, M. Zawadzki, P. Holak, J. Glodek, K. Milewska, M. Janowski, P. Walczak (Poland, United States)

PA00-A21 Extravasation of microspheres in a rat model of silent brain infarcts
AE. van der Wijk, N. Lachkar, J. de Vos, A.E. Grootemaat, N.N. van der Wel, P.L. Hordijk, E.N.T.P. Bakker, E. vanBavel (Netherlands)

Early Career Investigator Awardee I (cont.)

Chair(s) T. Yamashita (Japan)

PA00-A29 Major strain differences in a mouse model of intracranial aneurysm formation and rupture
T. Yanagisawa, T. Suzuki, K. Sugimoto, T. Takizawa, D.Y. Chung, T. Qin, Y. Murayama, A.B. Patel, C. Ayata (United States, Japan)

PA00-A30 Mechanisms triggering spreading depolarizations in a mouse model of intracortical hemorrhage
P. Fischer, K. Sugimoto, D.Y. Chung, I. Tamim, T. Takizawa, T. Qin, M.A. Yaseen, F. Schlunk, M. Endres, C. Ayata (Germany, United States)

PA00-A31 Assessment of territory-specific perfusion delay and its recovery after revascularization treatment in asymptomatic carotid stenosis patients
J. Goettler, S. Kaczmarz, N. Sollmann, L. Schmitzer, C. Zimmer, C. Preibisch (Germany, United States)

- PA00-A32 TLR2 stimulation and neonatal stroke recruit myeloid cells through the choroid plexus in a Cx3Cr1⁺CCR2 manner
A. Rayasam, J. Faustino, Z. Vexler (United States)
- PA00-A33 Regional assessment of aquaporin-4 polarisation dependent vascular water permeability in mouse brain using non-invasive multiple echo time arterial spin labelling (multi-TE ASL) MRI
Y. Ohene, I.F. Harrison, P. Nahavandi, O. Ismail, P. Evans, O.P. Ottersen, E.A. Nagelhus, D.L. Thomas, M.F. Lythgoe, J.A. Wells (United Kingdom, Sweden, Norway)
- PA00-A34 Relationship between brain temperature during and after therapeutic hypothermia and neurodevelopmental outcome in neonates with hypoxic-ischemic encephalopathy
TW. Wu, J. Wisnowski, R. Chapman, B. Tamrazi, D. Vanderbilt, S. Bluml (United States)
- PA00-A35 Non-invasive diffuse optical neuromonitoring predicts return of spontaneous circulation during CPR following asphyxial cardiac arrest in pediatric swine
T.S. Ko, C.D. Mavroudis, R.W. Morgan, A.M. Marquez, W. Guo, T.W. Boorady, M. Devarajan, Y. Lin, W.P. Landis, A.J. Lautz, V.M. Nadkarni, R.A. Berg, R.M. Sutton, A.G. Yodh, D.J. Licht, T.J. Kilbaugh (United States)
- Early Career Investigator Awardee I (cont.)**
- Chair(s) M. Rega (United Kingdom)
- PA00-A43 A comparative study between ¹⁸F-FDG and ¹⁸F-DPA-714 PET for assessing neuroinflammation in multiple sclerosis
M. Tonietto, G. Bera, E. Poirion, B. Bodini, B. Stankoff (France)
- PA00-A44 Non-invasive kinetic modelling using a constrained simultaneous estimation method: Further evaluation of proof of concept
H. Sari, H.Y. Wey, C. Catana, J.C. Price (United States)
- PA00-A45 Occupancy of the kappa opioid receptor predicts reduction in drinking after naltrexone
B. de Laat, A. Goldberg, N. Nabulsi, Y. Huang, S.S. O'Malley, E.D. Morris, S. Krishnan-Sarin (United States)
- PA00-A46 Obsessive compulsive disorder-like grooming in SAPAP3 knockout mice: a longitudinal evaluation with [¹¹C]ABP688 PET targeting the metabotropic glutamate receptor 5
D. Glorie, J. Verhaeghe, A. Miranda, K. Cybulska, S. Stroobants, S. Staelens (Belgium)

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- PA00-A47 [18F]FDG is associated with CSF neurofilament light chain in mild cognitive impairment
M. Kang, A.L. Benedet, S. Mathotaarachchi, T.A. Pascoal, J. Therriault, M. Chamoun, JP. Soucy, S. Gauthier, G. Massarweh, P. Rosa-Neto (Canada)
- PA00-A48 SV2A synaptic density PET may be affected by neuronal activity
T. Toyonaga, Z. Cai, D. Holden, K. Fowles, S.J. Finnema, Y. Huang, R.E. Carson (United States)
- PA00-A49 *In vivo* PET determination of dose and strain-dependency for the delivery of CRISPR/Cas9 into the brain of rats using AAV-PHP.eb vectors
S. Marciano, A. Maurer, B.J. Pichler, K. Herfert (Germany)

PB01 Cerebral Hemorrhage

Chair(s) K.R. Dave (United States)

- PB01-B01 The effects of an iron chelator, deferasirox, on the hemorrhagic cellular damage
T. Imai, S. Nakamura, M. Shimazawa, H. Hara (Japan)
- PB01-B02 Unraveling mechanisms of axonal degeneration and endothelial cell damage in intracerebral hemorrhage
M. Zille, A. Palumbo, M. Ikhsan (Germany)
- PB01-B03 Nogo-A/PIR-B/TrkB signaling pathway activation inhibits neuronal survival and axonal regeneration after experimental intracerebral hemorrhage in rats
G. Chen (China)
- PB01-B04 Thrombin-induced miRNA-24-1-5p upregulation promotes angiogenesis by targeting PHD1 in intracerebral hemorrhagic rats
H. Cui, T. Tang, Y. Wang, J. Luo, E. Hu, W. Hu (China)
- PB01-B05 Rbfox-1 contributes to CaMKII α expression and intracerebral hemorrhage-induced secondary brain injury via blocking the binding of microRNA-124 to CaMKII α mRNA
X. Li (China)
- PB01-B06 Siponimod reduces perihemorrhagic edema and improves neurological outcome in experimental intracerebral hemorrhage
T. Bobinger, A. Manaenko, T. Bäuerle, L. Seyler, A. Nagel, T. Engelhorn, A. Dörfler, J.B. Kuramatsu, S. Schwab, H.B. Huttner (Germany)
- PB01-B07 Early rehabilitation inhibits inflammation of the sensorimotor cortex and promotes motor function recovery in intracerebral hemorrhage rats
K. Tamakoshi, K. Hayao, H. Takahashi, H. Tamaki (Japan)

- PB01-B08 Activation of NLRP3 inflammasome is associated with down-regulation of estrogen receptor alpha in ovariectomized rat intracranial aneurysm model
T. Yamaguchi, K.T. Kitazato, E. Shikata, I. Yamaguchi, T. Miyamoto, M. Korai, K. Shimada, Y. Tada, Y. Kanematsu, Y. Takagi (Japan)

Cerebral Hemorrhage (cont.)

Chair(s) H. Yoshioka (Japan)

- PB01-B09 Study on effectiveness of prothrombin complex concentrate on emergency correction of anticoagulant effect
Y. Funamizu, M. Yasaka, M. Tomoda, S. Goto, K. Mori, K. Tokunaga, T. Kuwashiro, Y. Okada (Japan)
- PB01-B10 Leakage sign for intracerebral hemorrhage in relation to the site of hemorrhage
K. Orito, M. Yoshitomi, M. Yamamoto, Y. Takeuchi, M. Hirohata, M. Morioka (Japan)
- PB01-B11 Perihemorrhagic edema revisiting hematoma volume, location and surface
M.I. Sprügel, J.B. Kuramatsu, B. Volbers, K. Kölbl, S.T. Gerner, H. Lücking, P. Hoelter, A. Dörfler, S. Schwab, H.B. Huttner (Germany)
- PB01-B12 Crossed cerebellar tracer uptake on acute-stage^{123I}-iomazenil SPECT imaging predicts 3-month functional outcome in patients with non-fatal hypertensive putaminal or thalamic hemorrhage
D. Kojima, N. Komoribayashi, S. Omama, K. Oikawa, S. Fujiwara, M. Kobayashi, Y. Kubo, K. Terasaki, K. Ogasawara (Japan)
- PB01-B13 Hypo-intensity of the drainage vessels in Susceptibility-weighted MR image may relate to lower risk of the intracerebral hemorrhage in patients with intracranial arteriovenous shunt(s)
S. Yamaguchi, E. Sadakata, N. Horie, K. Suyama (Japan)
- PB01-B14 Role of complement system in SAH-induced hippocampal alterations
E. Golanov, A.S. Regnier-Golanov, G.W. Britz (United States)
- PB01-B15 Subarachnoid hemorrhage leads to hippocampal atrophy and suppresses oligodendrocyte genes expression
A.S. Regnier-Golanov, C. Karmonik, L. Phan, L. Peterson, E.V. Golanov, G.W. Britz (United States)
- PB01-B16 RIP3 mediates early brain injury by inducing necroptosis and promoting inflammation after subarachnoid hemorrhage in rats
H. Shen (China)
- PB01-B17 Relationship between blood cholesterol level and cerebral aneurysm
K. Hokamura, H. Makino, T. Suzuki, T. Iwaki, R. Imai, Y. Nakajima, H. Namba, K. Umemura (Japan)

PB01 **Subarachnoid Hemorrhage (SAH)/Vasospasm**

Chair(s) T. Miyamoto (Japan)

- PB01-C01 Osteoprotegerin prevents the growth of intracranial aneurysms promoting collagen biosynthesis and vascular smooth muscle cell proliferation via TGF β 1
T. Miyata, M. Minami, H. Kataoka, K. Hayashi, K. Shimizu, T. Yang, Y. Yamamoto, M. Yokode, S. Miyamoto (Japan)
- PB01-C02 A pilot study to detect intracranial aneurysm rupture using a video tracking system on iPad application
H. Makino, K. Hokamura, T. Suzuki, R. Imai, Y. Kamio, T. Kimura, T. Katoh, Y. Nakajima, H. Namba, K. Umemura (Japan)
- PB01-C03 Cerebral blood flow after bypass with parent artery occlusion for ruptured blister aneurysms of the internal carotid artery
H. Endo, M. Fujimura, H. Shimizu, T. Inoue, T. Endo, T. Tominaga (Japan)
- PB01-C04 Possible role of matricellular protein tenascin-C after subarachnoid hemorrhage: clinical and experimental studies
F. Nakano, H. Nishikawa, Y. Nakatsuka, F. Kawakita, H. Kanamaru, T. Okada, M. Shiba, H. Suzuki (Japan)
- PB01-C05 Altered expression of microRNAs in body fluids in after aneurysmal subarachnoid hemorrhage
K. Mihara, S. Takahasi, K. Yanagisawa, K. Mizutani, T. Akiyama, M. Katayama, K. Akaji, T. Horiguchi, S. Suga, K. Yoshida (Japan)
- PB01-C06 Characteristics of nonconvulsive status epilepticus in patients with aneurysmal subarachnoid hemorrhage
Y. Kikuta, Y. Kubota, H. Nakamoto, T. Kawamata (Japan)
- PB01-C07 Factors that predicts poor outcome in patients with subarachnoid hemorrhage
S. Takahashi, T. Akiyama, T. Horiguchi, K. Yoshida (Japan)

PB01 **Developing Brain I: Methodology**

Chair(s) T. Durduran (Spain)

- PB01-D01 Mapping the laminar activity and connectivity of the newborn pig cortex affected by hypercapnia and NMDA stimulation
G. Remzsó, J. Németh, V. Kovács, V. Tóth-Szűki, V. Varga, F. Domoki (Hungary)
- PB01-D02 Live imaging of cerebrovascular remodeling and barrier properties in the postnatal brain using in vivo two-photon microscopy
V. Coelho-Santos, A. Shih (United States)
- PB01-D03 Neurochemical evolution of murine embryonic brain, an in vivo 1H MRS study at 14.1T
H. Lei, J.C. Martinou (Switzerland)
- PB01-D04 Development of a neonatal neuromonitor for concurrent measurements of cytochrome c oxidase and CMRO₂
A. Rajaram, L.C.M. Yip, M. Kewin, L.B. Morrison, M. Diop, K. St. Lawrence (Canada)
- PB01-D05 Over-estimation of cerebral oxygen saturation by commercial oximeter during deep hypothermic circulatory arrest
J.M. Lynch, T. Ko, C.D. Mavroudis, K. Mensah-Brown, D.R. Busch, S.C. Nicolson, J.W. Gaynor, A.G. Yodh, D.J. Licht (United States)
- PB01-D06 Noninvasive optical measurement of microvascular cerebral blood flow in children with sickle cell disease
S. Lee, K. Cowdrick, B. Sanders, E. Sathialingam, C.E. McCracken, W. Lam, C.H. Joiner, E.M. Buckley (United States)
- PB01-D07 Validation of diffuse correlation spectroscopy (babylux device) against ¹⁵O-water PET for regional cerebral blood flow measurement in neonatal piglets
M. Giovannella, B. Andresen, J.B. Andersen, S. El-Mahdaoui, D. Contini, L. Spinelli, A. Torricelli, G. Greisen, T. Durduran, U.M. Weigel, I. LaW (Spain, Denmark, Italy)
- PB01-D08 Non-invasive detection of intracranial hypertension with near-infrared light: Pilot results in infant hydrocephalus patients
W.B. Baker, T.M. Flanders, K. Heye, J.J. Flibotte, D.J. Licht, G.G. Heuer (United States)
- PB01-D09 Cerebral hemodynamic measurements predict treatment response and neurodevelopmental outcome in hydrocephalus infants
PY. Lin, J. Sutin, S. Rudisill, B. Chimileski, C. Ha, S. Freeman, H. Do, P.E. Grant, J. Turek Queally, B. Warf (United States)

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- PB01-D10 Is the enlargement of subarachnoid spaces benign? building a pathophysiological frame through the psychomotor development assessment and continuous non invasive optical monitoring
F. Maruccia, S. Tagliabue, L. Gomariz, J. Sahuquillo Barris, T. Durduran, M. Poca Pastor (Spain)

PB01

Developing Brain II: Neonatal Stroke

Chair(s) A. Obenaus (United States)

- PB01-E01 Delayed melatonin treatment improves white striatal white matter content after perinatal stroke and promotes oligodendrocyte maturation *in vitro*
A. Dingman, D. Verden, A. Frazier, B. Wasserman, W. Macklin, P. Herson (United States)
- PB01-E02 N-SMase2-dependent vesicle release and injury after neonatal stroke
M. Lecuyer, J. Faustino, P. Pathipati, Z. Vexler (United States)
- PB01-E03 Alteration of brain-derived neurotrophic factor expression in a piglet model of neonatal hypoxic-ischemic encephalopathy
V. Kovács, G. Remzsó, J. Németh, V. Tóth-Szúki, V. Varga, F. Domoki (Hungary)
- PB01-E04 Combination of therapeutic hypothermia and H₂ treatment in a piglet model of neonatal hypoxic-ischemic encephalopathy
V. Tóth-Szúki, V. Kovács, G. Remzsó, J. Németh, V. Varga, L. Tóth, F. Domoki (Hungary)
- PB01-E05 Estrogen receptor alpha and tyrosine kinase B signaling in long-term neurological recovery following neonatal hypoxia and ischemia
P. Cengiz, J.E. Levine, P. Ferrazzano, D. Zafer, P. Kemanli, D. Kintner, V. Chanana, N. Aycan, B. Ozaydin (United States)
- PB01-E06 The HDAC inhibitor, sodium butyrate, stimulates neurogenesis in subventricular zone in a rat model of neonatal hypoxia-ischemia
M. Ziemka-Nalecz, J. Jaworska, J. Sypecka, H. Zajac, T. Zalewska (Poland)
- PB01-E07 Novel mechanism of rescuing synaptic dysfunction following juvenile global ischemia using AMPAkinases
R. Dietz, J. Orfila, N. Chalmers, A. Frazier, P. Herson (United States)
- PB01-E08 Experimental pediatric stroke shows age-specific recovery of cognition and role of hippocampal Nogo-A receptor signaling
J.E. Orfila, R.M. Dietz, K.M. Rodgers, A. Dingman, O.P. Patsos, I. Cruz-Torres, H. Grewal, F. Strnad, C. Schroeder, P.S. Herson (United States)

- PB01-E09 Enhanced stem cell therapy provides more long-term histological and behavioral improvement for neonatal stroke than stem cells alone
A. Larphaveesarp, P. Patipathi, A.M. Rajah, S. Ostrin, D.M. Ferriero, F.F. Gonzalez (United States)
- PB01-E10 Selective brain cooling with transnasal flow of ambient air is neuroprotective in a model of pediatric cardiac arrest
R.C. Koehler, C.D. Hopkins, S. Adams, E. Kulikowicz, J.K. Lee, H. Tandri, Z.J. Yang (United States)
- PB01-E11 Mild neonatal hypoxia-ischemia in rats induces long-term behavior and cerebellar abnormalities
 Y. Van de Looij, E.F. Sanches, S. Sizonenko, **H. Lei** (Switzerland)

PB01 Developing Brain III: Other Models & Clinical

Chair(s) E. Rocha Ferreira (Sweden)

- PB01-F01 NMDA attenuates the neurovascular response to hypercapnia in the neonatal cerebral cortex
F. Domoki, J. Németh, V. Tóth-Szűki, V. Varga, V. Kovács, G. Remzső (Hungary)
- PB01-F02 Neuroprotective effects of metabotropic glutamate receptor blockers on ketamine and dexmedetomidine induced neonatal brain injury in a rat model
T. Chabrashvili, J. Azpcar, R. Schumann, R. Azocar (United States)
- PB01-F03 Early calcium responses and AQP4 changes in reactive astrocytes after juvenile mild traumatic brain injury
A. Ichkova, J. Aussudre, A.S. Verkman, U.V. Nägerl, J. Badaut (France, United States)
- PB01-F04 Brain structure, functional connectivity and cerebrovascular reactivity outcomes of mitochondrial treatment for developmental traumatic brain injury
B.G. Sangannahalli, M. Parent, J. Chitturi, V. Santhakumar, F. Hyder, S.S. Kannurpatti (United States)
- PB01-F05 Mesenchymal stromal cell delivery through cardiopulmonary bypass for neuroprotection in a juvenile porcine model
K. Sarkisli, T. Maeda, N. Saric, P. Vyas, Y.I. Kawasawa, K. Hashimoto-Torii, P.J. Hanley, J.A. Frank, R.A. Jonas, N. Ishibashi (United States)
- PB01-F06 Cerebellar development in preterm infants at term-equivalent age : Assessment using MRI
H. Jeong, SY. Shim, H. Cho (Republic of Korea)

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PB01 Energy Metabolism I: Oxygen/Glucose & Mitochondria

Chair(s) WT. Zhang (United States)

- PB01-G01 Hyperglycemia increases regional brain glucose consumption but not oxygen consumption or blood flow
T. Blazey, J.J. Lee, A. Arbeláez, A.Z. Snyder, T. Hershey, M.E. Raichle (United States)
- PB01-G02 Acute insulin-induced hypoglycemia impairs mitochondrial respiration and vasoreactivity in brain microvasculature without altering blood-brain-barrier permeability
P.V. Katakam, W. Evans, J.A. Sperling, V.N. Sure, R. Mostany, S.S. Sakamuri (United States)
- PB01-G03 Ketone body prevents the induction of PTZ kindling and the reduction of glucose metabolism in mouse brain
R. Hosoi (Japan)
- PB01-G04 Regional difference in energy metabolism in murine hippocampus
O. Tokumaru, M. Goto, S. Abe, M. Tandai-Hiruma, S. Maruyama, T. Kemuriyama, K. Ogata, T. Kitano, M. Setou, Y. Nishida (Japan)
- PB01-G05 Human brain gray matter energy map computed on the basis of cellular staining from BigBrain
Y. Yu, P. Herman, D.L. Rothman, D. Agarwal, F. Hyder (China, United States)
- PB01-G06 Computer-aided construction of metabolic pathway models for brain energy metabolism and synaptic neurotransmission
P.K. Maciejewski (United States)
- PB01-G07 Simultaneous glucoCEST and optical measurements of glucose in the brain
A. Eleftheriou, M.T. Wyss, G. Warnock, S.A. Vinogradov, B. Weber (Switzerland, United States)

PB01 Energy Metabolism II: MRS & MRI Techniques

Chair(s) Y. Takado (Japan)

- PB01-H01 Glucosamine a non-toxic candidate for metabolic imaging of the healthy brain
E. Demetriou, X. Golay (United Kingdom)

- PB01-H02 Neuronal energy metabolism in the mouse brain measured by ^1H - ^{13}C MRS at 14.1T under $[3\text{-}^{13}\text{C}]$ -Lactate infusion: a feasibility study
B. Lanz, L. Xin, N. Kunz, **H. Lei** (Switzerland)
- PB01-H03 Nutritional ketosis increases NAD⁺/NADH ratio in healthy human brain: an in vivo study by ^{31}P -MRS
L. Xin, Ö. Ipek, M. Beaumont, M. Shevlyakova, N. Christinat, M. Masoodi, N. Greenberg, R. Gruetter, B. Cuenoud (Switzerland)
- PB01-H04 Mitochondrial dysfunction contributed to cerebral metabolic abnormalities detected by proton MR spectroscopy in patients with mitochondrial encephalomyopathy subtypes
F. Niu, HL. Meng, L. Chang, Y. Xu (China)
- PB01-H05 Assessing cerebral metabolism and physiology in post-stroke mice by dynamic oxygen-17 MRI
Y. Gu, K. Kim, Y. Zhang, Y. Liu, H. Gao, Y. Luo, Y. Wang, C. Ramos-Estebanez, X. Yu (United States)
- PB01-H06 Metabolic alterations in the hippocampus, cortex and hypothalamus of mice exposed to long-term high-fat diet
J. Duarte, A. Soares, S. Larsson, B. Lizarbe (Sweden, Switzerland, Spain)
- PB01-H07 Metabolic profile alterations in the hippocampus of mice under chronic high-fat and high-sucrose feeding
A.M. García-Serrano, J.M.N. Duarte (Sweden)

PB01 **Imaging Clinical I: BOLD/Resting State fMRI**

Chair(s) D. Chung (United States)

- PB01-J01 Metabolic basis of deactivation and activation in default mode and sensory networks
Y. Koush, R. de Graaf, R. Kupers, L. Dricot, M. Ptito, D. Rothman, F. Hyder (United States, Denmark, Belgium, Canada)
- PB01-J02 Dynamic brain functional connectivity change analysis based on random matrix theory
J. Kim (Republic of Korea)
- PB01-J03 Resting state fMRI in stroke patients with individual ROI segmentation
K. Nakamura, S. Minakata, H. Toyoshima, T. Kinoshita (Japan)
- PB01-J04 Resting state and task BOLD fMRI signals for patients with AVM
B.L. Hou, S. Bhatia, J.S. Carpenter (United States)

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- PB01-J05 The effects of masking therapy in tinnitus patients are characterized by longitudinally altered local activity and functional connectivity
H. Lv, P. Zhao, Z. Wang (China)
- PB01-J06 Baseline functional connectivity features of the neural network nodes can predict improvement after masking therapy in tinnitus patients
H. Lv, P. Zhao, Z. Wang (China)
- PB01-J07 Measurements of CMRO₂ and its relationship with CBF in hypoxia with an extended calibrated-BOLD method
Y. Zhang, Y. Yin, JH. Gao (China)
- PB01-J08 Relating lateralized mq-BOLD-based relative oxygen extraction fraction to areas of elevated DSC-based oxygen extraction capacity in asymptomatic unilateral carotid artery stenosis
J. Kufer, J. Goettler, M. Hansen, A. Hock, C. Zimmer, K. Mouridsen, F. Hyder, C. Preibisch, S. Kaczmarz (Germany, United States, Denmark)
- PB01-J09 Recovery of cerebrovascular reactivity after treatment of asymptomatic carotid artery stenosis is assessable by non-invasive breath-hold fMRI within global watershed areas
S. Kaczmarz, J. Goettler, N. Sollmann, A. Hock, C. Sorg, C. Zimmer, K. Mouridsen, F. Hyder, C. Preibisch, J. Petr (Germany, United States, Denmark)
- PB01-J10 Relationship between breath-hold reactivity dynamics and the amplitude of resting-state fluctuations in bold fMRI
J. Pinto, J. Moreira, T. Charrua, A. Fouto, L. Alves, S. Calado, P. Vilela, M.V. Baptista, R.G. Nunes, P. Figueiredo (Portugal)
- PB01-J11 Activation of mirror neuron system during gait observation in sub-acute stroke patients and healthy persons
A. Hioka, Y. Tada, K. Kitazato, N. Akazawa, Y. Matsumoto, M. Harada, Y. Takagi, S. Nagahiro (Japan)
- PB01-J12 Dependence of slice selection on cerebral blood flow signals during visual stimulation: a study using simultaneous ASL and BOLD measurement
Y. Ikoma, Y. Hirano, A. Tachibana, Y. Tachibana, K. Murata, T. Higashi, T. Obata (Japan)

PB01 Imaging Clinical II: Perfusion/Other MRI

Chair(s) Y. Ishii (United States)

- PB01-K01 A frequency-domain machine learning (FML) method for dual-calibrated MRI estimation of oxygen extraction fraction (OEF) and cerebral metabolic rate of oxygen consumption (CMRO₂)
M. Germuska, H.L. Chandler, R. Stickland, E. Patitucci, C. Foster, J. Steventon, V. Tomassini, K. Murphy, R.G. Wise (United Kingdom)
- PB01-K02 A pilot study to characterize the sensitivity of MRI measures of cerebral blood flow and brain tissue oxygenation to a hyperventilation challenge
A. Colasanti, I. Asllani, R. De Marco, N. Blockley, A. Stone, M. Cercignani (United Kingdom, Ireland)
- PB01-K03 Does methylene blue affect brain perfusion and oxygenation in the healthy human brain? a multi-modal MRI study
A. Colasanti, N. Singh, O. Dipasquale, K. Randall, D. Lythgoe, N. Mazibuko, P. Selvaggi, S. Stephenson, F. Turkheimer, F. Zelaya (United Kingdom)
- PB01-K04 Arterial spin labeling MR imaging at short post-labeling delay reflects CBF/CBV verified by ¹⁵O-PET in cerebrovascular steno-occlusive disease
H. Itagaki, Y. Kokubo, K. Kawanami, Y. Yamada, Y. Sonoda (Japan)
- PB01-K05 Quantitative evaluation of cerebral blood flow by enhanced arterial spin labeling (eASL) technique in patients with steno-occlusive disease
M. Isozaki, Y. Higashino, H. Kimura, H. Okazawa, K. Kikuta (Japan)
- PB01-K06 Arterial spin-labeling magnetic resonance imagings in stroke patients with atherosclerotic middle cerebral artery disease
H. Ueda, K. Akeura, K. Yamashita, H. Terakawa (Japan)
- PB01-K07 Reliability and reproducibility of pseudo-continuous arterial spin labeling (pCASL) derived measurements of cerebral blood flow: a replication study
J. Debatisse, C.J. McGinnity, S.N. Yaakub, S. Jeljeli, J. Stirling, M. Koutroumanidis, G. Charles-Edwards, E. De Vita, A. Hammers (United Kingdom, France)
- PB01-K08 Hyperventilation-induced reduction of cerebral blood flow measured with pseudo-continuous arterial spin labeling (pCASL)
J. Debatisse, C.J. McGinnity, S.N. Yaakub, S. Jeljeli, J. Stirling, M. Koutroumanidis, G. Charles-Edwards, E. De Vita, A. Hammers (United Kingdom, France)

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- PB01-K09 Changes in cerebral blood flow during pregnancy detected by arterial spin labeling MRI in healthy subjects and in the patients with moyamoya disease
Y. Tanaka, N. Miyasaka, S. Hara, M. Inaji, T. Maehara, T. Nariai (Japan)
- PB01-K10 T2-weighted imaging may be indicative of drug distribution in glioblastoma patients
P.R. Jackson, M. Kim, A. Hawkins-Daarud, K.W. Singleton, A.S. Mohammad, T.C. Burns, I.F. Parney, L.S. Hu, T.J. Kaufmann, W.F. Elmquist, J.N. Sarkaria, K.R. Swanson (United States)
- PB01-K11 The feasibility of deep learning to predict final stroke lesion using baseline diffusion-weighted imaging only in non-recanalized acute ischemic stroke patients
Y. Yu, Y. Xie, T. Thamm, E. Gong, S. Christensen, M.G. Lansberg, G.W. Albers, G. Zaharchuk (United States)
- PB01-K12 Evaluation of tissue reversibility by relative apparent diffusion coefficient value in acute ischemic stroke patients treated with successful thrombectomy
T. Ueda, T. Takada, N. Usuki, S. Takaishi, Y. Tokuyama, K. Tatsuno, Y. Hamada, H. Ohtsubo (Japan)

PB01 **Imaging Clinical III: US/NIRS/MRS and Others**

Chair(s) O. Wu (United States)

- PB01-L01 The effects of acute dopamine depletion on restingstate functional connectivity and striatal glutamate in healthy humans
F. Caravaggio, Y. Iwata, A. Barnett, S. Nakajima, C. Borlido, E. Plitman, Y. Mihashi, J. Kim, P. Gerretsen, A. Graff-Guerrero (Canada)
- PB01-L02 Radiation-induced and non-radiation-induced carotid atherosclerosis: computer-aided sonographic evaluation for plaque characterization and stroke risk assessment
M.T.C. Ying, Y. Li, V.W.C. Wu, D.L.W. Kwong, SP. Yip, H.K.W. Law, S.W.Y. Lee (Hong Kong)
- PB01-L03 Ultrasonographic micro-calcification indicate vulnerability of carotid atherosclerosis plaque
B. Liu (China)
- PB01-L04 The correlation of carotid web and ischemic stroke evaluated by ultrasonography
Y. Hua, J. Yang, Y. Liu, J. Li, J. Liu (China)

- PB01-L05 Lipid core plaque evaluation using NIRS-IVUS predicts thromboembolic complications in patients undergoing carotid artery stenting
M. Kotsugi, I. Nakagawa, H. Park, T. Furuta, F. Nishimura, S. Yamada, Y. Motoyama, Y. Park, H. Nakase (Japan)
- PB01-L06 Hyperventilation test with indocyanine green kinetics under near-infrared spectroscopy predicts cerebral hyperperfusion and indicate an efficacy of staged strategy of carotid artery stenting
I. Nakagawa, H. Park, M. Kotsugi, T. Furuta, T. Takamura, F. Nishimura, S. Yamada, Y. Motoyama, Y. Park, H. Nakase (Japan)
- PB01-L07 Angiographic circulation time and cerebral blood flow during balloon test occlusion of the internal carotid artery
K. Sato, M. Fujimura, T. Endo, H. Endo, H. Shimizu, T. Tominaga (Japan)
- PB01-L08 2D X-ray angiography perfusion and transcranial cerebral oxygen saturation monitoring during carotid artery stenting for the detection of post-stenting hyperperfusion
S. Inoue, H. Kubo, M. Katayama, S. Suga (Japan)
- PB01-L09 Cerebral hemodynamic disturbance in dural arteriovenous fistula with retrograde leptomeningeal venous drainage: a prospective study using ¹²³I-iodoamphetamine single photon emission computed tomography
K. Kanemaru, H. Yoshioka, K. Hashimoto, T. Tateoka, N. Fukuda, H. Kinouchi (Japan)
- PB01-L10 Exploring the effect on cerebral blood flow after acupuncture in elderly normal subjects using ^{99m}Tc-ECD imaging
CH. Chiu, CH. Lin, YJ. Liao, IJ. Chen, CY. Li (Taiwan)
- PB01-L11 Management of intraoperative technological advances [intraoperative MRI, neuronavigation system using PET, and 5-aminolevulinic acid (5-ALA)-induced fluorescence image-guided surgery] for glioblastoma
K. Miyake, D. Ogawa, M. Okada, T. Hatakeyama, M. Okauchi, A. Shindo, M. Kawanishi, T. Tamiya (Japan)

PB01 Neurovascular Coupling I: Physiological Mechanisms

Chair(s) R.L. Rungta (France)

- PB01-T01 Bidirectional control of neurovascular coupling by pyramidal cells
B. Le Gac, B. Cauli (France)

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- PB01-T02 Coupling of neuronal activity to blood flow in dendrodendritic synapses is mediated by postsynaptic gabaergic cells in olfactory bulb
M. Fukuda, A.J. Poplawsky, B. Iordanova, A.L. Vazquez, SG. Kim (United States, Republic of Korea)
- PB01-T03 Linear and non-linear temporal features of vascular responses evoked by photo-stimulation in excitatory and inhibitory optogenetic mouse models
A. Vazquez, M. Krawchuk, A. Altamirano, C. Ruff, S. Ross, M. Fukuda (United States)
- PB01-T04 Vasodilatory response to optogenetic activation of neurons or astrocytes in the anesthetized mouse cortex
Y. Tomita, N. Hatakeyama, M. Unekawa, K. Tanaka, K. Matsui, N. Suzuki, I. Kanno, K. Masamoto, J. Nakahara (Japan)
- PB01-T05 The differential contribution of vascular gap junctions to pial and penetrating artery dilation induced by forepaw electrical stimulation in isoflurane-anesthetized rats
N. Watanabe, S. Sasaki, K. Masamoto, H. Hotta (Japan)
- PB01-T06 Stimulation-induced vasodilation and vasoconstriction depend on conducted vascular responses in cerebral capillaries
C. Cai, J. Fordsmann, M. Lønstrup, S. Zambach, M. Lauritzen (Denmark)
- PB01-T07 Hippocampal neurovascular coupling is reduced compared to visual cortex
C. Hall, K. Shaw, K. Boyd, D. Grijseels, D. Clarke, L. Bell, O. Bonnar (United Kingdom)

PB01

Neurovascular Coupling II: Blood Flow & Dysfunction

Chair(s) K. Sugimoto (United States)

- PB01-U01 Two-photon and functional ultrasound transfer functions: from neuronal calcium to local capillary and regional vascular responses
D. Boido, AK. Aydin, W. Haselden, C. Pouzat, Y. Goulam Houssen, R.L. Rungta, P.J. Drew, S. Charpak (France, United States)
- PB01-U02 The cortical vasculature of mouse affects the pattern of hemodynamic responses under dual sensory stimulus
J. Ye, BM. Kang, H. Lim, H. Kim, M. Suh (Republic of Korea)
- PB01-U03 An oligarchy of no-producing neurons controls basal and evoked blood flow in the cortex
P. Drew, C. Echagarruga (United States)

- PB01-U04 Deciphering the role of neurons and vessels in neurovascular coupling in cerebrovascular disease through aging
M. Bourourou, M. Khouider, A. Machado, F. Lesage, C. Lecrux, E. Hamel (Canada)
- PB01-U05 Noradrenergic deficit affects whisker-evoked neurovascular coupling responses
C. Lecrux, M. Bourourou, F. Lesage, E. Hamel (Canada)
- PB01-U06 Capillary endothelial phosphatidylinositol 4,5-bisphosphate (PIP2) rescues the disruption of Kir2-mediated retrograde hyperpolarization during neurovascular coupling in CADASIL mouse model
F. Dabertrand, O.F. Harraz, M. Koide, T.A. Longden, A. Joutel, M.T. Nelson (United States, France, United Kingdom)
- PB01-U07 *In vivo* veritas: importance of in situ readouts of neurovascular dysfunction
P. Bazzigaluppi, C. Adams, E.M. Lake, B. Stefanovic (Canada, United States)
- PB01-U08 Increased susceptibility of ischemic penumbra to optogenetic functional activation-induced peri-infarct spreading depolarizations
K. Sugimoto, D.Y. Chung, M. Böhm, P. Fischer, T. Takizawa, S.A. Aykan, T. Qin, T. Yanagisawa, S. Sakadžić, C. Ayata (United States, Japan)
- PB01-U09 Neurovascular sequelae of repeated mild traumatic brain injury in an optogenetic mouse model
J. Mester, P. Bazzigaluppi, A. Dorr, T. Beckett, J.G. Sled, B. Stefanovic (Canada)

PB01 Stroke Clinical I: Biomarkers

Chair(s) A. Marushima (Japan)

- PB01-V01 Time-evolution biomarkers of wake-up stroke
R. Iglesias-Rey, M. Rodríguez-Yáñez, S. Arias, M. Pérez-Mato, M. Santamaría, E. Rodríguez-Castro, T. Sobrino, F. Campos, J. Castillo, P. Hervella (Spain)
- PB01-V02 MicroRNA profiles in peripheral neutrophils of acute ischemic stroke patients and their predicted gene targets
Z. Han (China)
- PB01-V03 Genetic variant *RNF213* c.14576G>A in intracranial atherosclerosis of the anterior and posterior circulation
Y. Shinya, S. Miyawaki, H. Imai, H. Hongo, H. Ono, A. Takenobu, H. Nakatomi, A. Teraoka, N. Saito (Japan)

- PB01-V04 Accurate etiology diagnosis in patients with stroke and atrial fibrillation: a role for brain natriuretic peptide
Y. Sakamoto, C. Nito, K. Kimura (Japan)
- PB01-V05 Biomarker for diagnosis of intracerebral hemorrhage in the early stage
T. Inoue, T. Ishida, T. Inoue, A. Saito, M. Ezura, H. Uenohara, K. Niizuma, H. Endo, M. Fujimura, T. Tominaga (Japan)
- PB01-V06 Distinctive transcriptomic profiles for ischemic stroke etiologies and intracerebral hemorrhage in whole blood and leucocyte subtypes
P.L. Carmona-Mora, B.P. Ander, G.C. Jickling, F. Hamade, H. Hull, E. Ferino, X. Zhan, X. Cheng, F.R. Sharp, B. Stamova (United States, Canada)
- PB01-V07 Hemodynamic or thromboembolic stroke—what have we learned from cardiac surgery?
O.B. Paulson, A.G. Vedel, F. Holmgaard, L.S. Rasmussen, E.R. Danielsen, A. Langkilde, T. Lange, P.S. Olsen, H.B. Ravn, J.C. Nilsson (Denmark)
- PB01-V08 Significance of microembolic signals in the acute period for stroke subtypes
E. Higuchi, S. Toi, Y. Shirai, T. Hoshino, U. Adachi, K. Kitagawa (Japan)
- PB01-V09 Inflammatory biomarkers at the infarct during large vessel occlusion in human stroke patients
K.R. Pennypacker, S.R. Martha, L.A. Collier, S.M. Davis, A. Alhajeri, S. Grupke, J.F. Fraser (United States)
- PB01-V10 Pro-BNP: a simple and useful predictor of stroke risk after transient ischemic attack
E. Rodríguez Castro, P. Hervella, I. López-Dequidt, S. Arias-Rivas, M. Santamaría-Cadauid, T. Sobrino, F. Campos, J. Castillo, M. Rodríguez-Yáñez, R. Iglesias-Rey (Spain)
- PB01-V11 Cortical venous reddening is a predictor for remote cerebral infarction after STA-MCA bypass surgery in atherosclerotic occlusive cerebrovascular disease patients
K. Uekawa, K. Hayashi, T. Kawano, Y. Ohmori, T. Amadatsu, Y. Takemoto, A. Mukasa (Japan)
- PB01-V12 Brain volume as a determinant of functional outcome after acute ischemic stroke
M.D. Schirmer, K.L. Donahue, M.J. Nardin, A.V. Dalca, AK. Giese, M.R. Etherton, S.J.T. Mocking, E.C. McIntosh, J.W. Cole, L. Holmegaard, K. Jood, J. Jimenez-Conde, S.J. Kittner, R. Lemmens, J.F. Meschia, J. Rosand, J. Roquer, T. Rundek, R.L. Sacco, R. Schmidt, P. Sharma, A. Slowik, T.M. Stanne, A. Vagal, J. Wasselius, D. Woo, S. Bevan, L. Heitsch, CL. Phuah, D. Strbian, T. Tatlisumak, C.R. Levi, J. Attia, P.F. McArdle, B.B. Worrall, O. Wu, C. Jern, A. Lindgren, J. Maguire, V. Thijs, N.S. Rost (United States, Germany, Sweden, Spain, Belgium, Austria, UK, Poland, Finland, Australia)

PB01 Stroke Clinical II: Revascularization/Monitoring

Chair(s) B.A. Burke (United States)

- PB01-W01 Cerebral blood flow during balloon occlusion test of the internal carotid artery
T. Torigai, M. Mase, H. Katano, Y. Nishikawa (Japan)
- PB01-W02 Monitoring cerebral blood flow and critical closing pressure in stroke patients
K. Wu, P. Farzam, F. Sheriff, P.Y. Farzam, A.D. Monk, M.A. Aziz-Sultan, N. Patel, F. Orihuela-Espina, H. Vaitkevicius, M.A. Franceschini (United States, Mexico)
- PB01-W03 High glucose and low ASPECTS are associated with intracranial hemorrhage after endovascular reperfusion therapy for acute ischemic stroke in the stent retriever era
H. Matsumura, A. Marushima, M. Hayakawa, M. Sato, Y. Ito, E. Ishikawa, Y. Matsumaru, A. Matsumura (Japan)
- PB01-W04 Recanalization of the aneurysm originating from the posterior communicating artery after coil embolization: Incidence and Risk Factors
D. Lim, S. Jin, S. Ha, W. Kim (Republic of Korea)
- PB01-W05 Diffusion tensor imaging study of early gait training using hybrid assistive limb in patients with acute stroke
D. Ando, C. Yokota, T. Sato, F. Yasuno, A. Yamamoto, M. Koga, M. Ihara, T. Nakajima, K. Minematsu, K. Koshino (Japan)
- PB01-W06 Evaluation of cognitive function using neural network analysis before and after revascularization surgery for internal carotid artery stenosis
M. Kohta, A. Fujita, K. Hosoda, E. Kohmura (Japan)
- PB01-W07 Etiology of cortical microinfarcts can be determined by diagnostic scores either for cerebral amyloid angiopathy or microembolism using 3T MRI
H. Ishikawa, Y. Ii, A. Shindo, A. Ito, K. Matsuura, A. Niwa, H. Matsuyama, M. Umino, M. Maeda, H. Tomimoto (Japan)
- PB01-W08 Foreign bodies are present in thrombi mechanically extracted from patients suffering acute ischemic stroke and who underwent endovascular treatment
H.M. Hund, A. Taha, S.A. Ramlal, D. Hansen, A.S.A. Autar, A. van de Lugt, D. Dippel, G.J. Lycklama à Nijeholt, A.C.G.M. van Es, H.M.M. van Beusekom (Netherlands)

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PB01 Stroke Clinical III: MMD & Other Diseases/Treatments

Chair(s) M. Fujimura (Japan)

- PB01-X01 Comprehensive analysis of *RNF213* variants in patients with moyamoya disease (MMD) and intracranial artery stenosis (ICS) by target sequencing
H. Hongo, S. Miyawaki, H. Imai, M. Shimizu, Y. Teranishi, A. Okano, S. Dofuku, H. Ono, H. Nakatomi, N. Saito (Japan)
- PB01-X02 Impaired endothelial progenitor cell differentiation based on IL-10 secretory insufficiency from peripheral blood cells in Moyamoya disease
T. Nakayama, E. Nagata, H. Masuda, S. Netsu, R. Imazeki, T. Sorimachi, T. Osada, M. Matsumae, T. Asahara, S. Takizawa (Japan)
- PB01-X03 Incidence, clinical presentation and risk factor of watershed shift phenomenon after superficial temporal artery-middle cerebral artery anastomosis for adult moyamoya disease
R. Tashiro, M. Fujimura, M. Kameyama, S. Mugikura, H. Endo, Y. Tomata, Y. Takeuchi, T. Endo, K. Niizuma, T. Tominaga (Japan)
- PB01-X04 Bilateral hypoperfusion of the cerebellum following pontine infarction
M. Sasajima, T. Kinoshita, F. Kinoshita, Y. Shinohara, M. Hashimoto (Japan)
- PB01-X05 Ischemic stroke due to varicella zoster virus vasculopathy: clinical, laboratory, and imaging features
T. Hoshino, S. Toi, K. Toda, Y. Uchiyama, H. Yoshizawa, M. Iijima, Y. Shimizu, K. Kitagawa (Japan)
- PB01-X06 Concurrent medullary infarction with ruptured vertebral artery
Y. Motoyama, Y. Takamura, HS. Park, S. Yamada, I. Nakagawa, F. Nishimura, YS. Park, H. Nakase (Japan)
- PB01-X07 In-stent restenosis after vertebral artery ostium stenting: A five-year follow-up cohort study
J. Li (China)
- PB01-X08 Importance of mucin tumor markers and successful treatment with DOACs in cancer-associated thrombosis patients with stroke
S. Nogawa, Y. Chin, R. Kawamura, T. Nakayama, K. Tokuoka, Y. Kitagawa (Japan)
- PB01-X09 Pre-stroke modified Rankin Scale is useful in patient selection for mechanical thrombectomy regardless of age
T. Goda, N. Oyama, T. Kitano, T. Iwamoto, J. Uemura, S. Yamashita, H. Takai, S. Matsubara, M. Uno, Y. Yagita (Japan)

- PB01-X10 Brain tissue pulsations in acute haemorrhagic and ischaemic stroke: case studies
J. Ince, C. Banahan, S. Venturini, P. Turner, M. Alharbi, M. Oura, M. Moehring, K. Beach, T.G. Robinson, E.M.L. Chung (United Kingdom, Japan, United States)
- PB01-X11 Clinical evaluation of intravenous rt-PA therapy for acute ischemic stroke in patients beyond the age of 90
Y. Manabe, S. Fujiwara, Y. Omote, H. Narai (Japan)
- PB01-X12 Early seizure and clinical outcomes after acute ischemic stroke: the Fukuoka Stroke Registry
T. Matsuki, R. Matsuo, T. Ago, T. Matsushita, Y. Fukushima, K. Fukuda, Y. Wakisaka, M. Kamouchi, T. Kitazono (Japan)

PP01 **Novel Radiotracers**

Chair(s) K.T. Chen (United States)

- PP01-M01 A novel ligand “deschloroclozapine” selectively visualizes and activates chemogenetic receptors in non-human primates
Y. Nagai, N. Miyakawa, H. Takuwa, Y. Hori, K. Oyama, B. Ji, M. Takahashi, XP. Haung, S.T. Slocum, Y. Xiong, T. Hirabayashi, A. Fujimoto, K. Mimura, J.G. English, J. Liu, K. Inoue, K. Kumata, C. Seki, M. Ono, M. Shimojo, MR. Zhang, Y. Tomita, T. Suhara, M. Takada, M. Higuchi, J. Jin, B.L. Roth, T. Minamimoto (Japan, United States)
- PP01-M02 [⁸⁹Zr]-Deferoxamine-EPO can target erythropoietin receptors in human and rat stroke tissue
K.J. Patzwaladt, F. Russo, L. Kuebler, D. Seyfried, A. Maurer, M. Neumann, S. Poli, C. la Fougère, B.J. Pichler, S. Castaneda Vega (Germany)
- PP01-M03 Evaluation of [¹⁸F]FL2-b for detecting TDP-43 aggregates in amyotrophic lateral sclerosis
S.S. Tanzey, A.F. Brooks, X. Shao, T. Desmond, P.J.H. Scott (United States)
- PP01-M04 Evaluation of radiobromine-labeled (SS)-BPBM for imaging of the brain norepinephrine transporter
Y. Kiyono, T. Mori, T. Asai, H. Okazawa (Japan)
- PP01-M05 Extended pharmacokinetic evaluation of [¹⁸F]MK6240 for quantification of tau neurofibrillary tangles in human subjects
N.J. Guehl, D.W. Wooten, D.L. Yokell, SH. Moon, M. Dhaynaut, C. Gharagouzloo, K.A. Johnson, G. El Fakhri, M.D. Normandin (United States, France)

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- PP01-M06 A PET study with [¹⁸F]MNI-792 to determine cholesterol 24S-hydroxylase occupancy of TAK-935 in healthy subjects
J. Tauscher, P.E. Cole, T. Brown, M. Tsai, S. Wang, D. Jennings, K. Marek, A.R. Mahableshwarker, D.S. Russell, G. Tamagnan (United States)
- PP01-M07 Formulation of ¹¹C-labeled (*R*, *S*)-isoproterenol and pharmacokinetic studies in rats
H. Ikenuma, A. Ogata, Y. Kimura, H. Koyama, J. Abe, T. Yamada, M. Ichise, T. Kato, M. Suzuki, K. Ito (Japan)
- PP01-M08 Radioligands for tropomyosin receptor kinase (TRK) positron emission tomography
A. Thiel, V. Bernard-Gauthier, J.J. Bailey, L. Kaiser, P. Bartenstein, P. Scott, R. Schirmmacher (Canada, Germany, United States)
- PP01-M09 *In vitro* evaluation of small molecule compounds as potential PET tracers targeting α -synuclein
S. Buss, L. Kuebler, A. Maurer, F. Schmidt, A. Leonov, S. Ryazanov, A. Giese, C. Griesinger, B.J. Pichler, K. Herfert (Germany)
- PP01-M10 Head-to-head comparison of ¹¹C-PBR28 and ¹¹C-ER176 for quantification of the translocator protein in the human brain
P. Zanotti Fregonara, B. Pascual, M. Veronese, M. Yu, D. Beers, S. Appel, J. Masdeu (United States, United Kingdom)

PP01

Preclinical Imaging

Chair(s) X. Yan (United States)

- PP01-N01 Visualization of MAGL in ischemia rat brain using PET probe ¹¹C-SAR127303
A. Hatori, Y. Zhang, W. Mori, Y. Kurihara, H. Wakisaka, MR. Zhang (Japan)
- PP01-N02 *In vivo* Imaging of adenosine A1 receptors in neuroinflammatory response after experimental stroke
A. Martín, A. Joya, S. Plaza-García, V. Gómez-Vallejo, D. Padro, P. Ramos-Cabrer, U. Cossío, K.R. Pulagam, J. Llop (Spain)
- PP01-N03 Evaluation of TSPO PET ligand binding characteristics to different cell types in neuroinflammation
M. Vicente-Rodriguez, D. Cash, C. Simmons, K. Randall, A. Peris-Yague, N. Consortium, F. Turkheimer, C.A. Parker (United Kingdom)

- PP01-N04 Evaluation of [^{11}C]PK11195 and [^{18}F]DPA714 TSPO PET in a rat model of neuroinflammation
M. Vicente-Rodriguez, N. Singh, D. Cash, M. Veronese, C. Simmons, A. Haji-Dheere, J. Bordoloi, K. Sanders, R. Awais, E. Arstad, NIMA Consortium, F. Turkheimer, C.A. Parker (United Kingdom)
- PP01-N05 Inflammation assessment after a clinical course of theta burst stimulation in non-human primates: a PBR28 study
L.G. Aceves-Serrano, J.L. Neva, S. Feldman, L.A. Boyd, D.J. Doudet (Canada)
- PP01-N06 Evaluation of the neuroprotective effect of the CSF-1R inhibitor in 6-OHDA rat model using ^{18}F -FPCIT PET imaging
S. Oh, KH. Jung, JA. Park, K. Lee, Y. Lee, J. Choi (Republic of Korea)
- PP01-N07 Treatment effect of VEGF and VEGF inhibition in ischemic mice brains
J. Kim, N. Kim, G. Kim, H.S. Kim, JJ. Min, KH. Choi (Republic of Korea)
- PP01-N08 The effect of nicotine on brain glucose metabolism in healthy rats: a pilot study to investigate the modulatory effect of nicotine on cognition
M. Naghavi-Behzad, R. Piri, S. Hvidsten, C. Baun, A. Gjedde, M. Seyedi-Vafae (Denmark)

PP01 **Neurotransmitter System Evaluation I**

Chair(s) M. Kaliszczak (United States)

- PP01-O01 tDCS induced modulation of dopamine and GABA systems: a PET/MRS study
T. Bunai, T. Hirose, M. Kikuchi, M. Fukai, M. Yokokura, S. Ito, Y. Takata, T. Terada, Y. Ouchi (Japan)
- PP01-O02 Serotonin 4 receptor binding is positively associated with brain response to reward
A. Poulsen, V.N.H. Dam, E.B. Landman, K. Köhler-Forsberg, S.V. Larsen, B. Ozenne, P.M. Fisher, G.M. Knudsen, V.G. Frøkjær (Denmark)
- PP01-O03 Healthy women who use oral contraceptives show lower brain serotonin 4 receptor binding relative to non-users
S.V. Larsen, K.L. Kohler-Forsberg, V.H. Dam, A.S. Poulsen, B. Ozenne, C. Svarer, P.S. Jensen, G.M. Knudsen, V.G. Frøkjær (Denmark)
- PP01-O04 Serotonin 4 receptor binding and oxytocin-promoted affective and social cognition in the healthy female brain
V.H. Dam, D.S. Stenbaek, S.T. Pedersen, K. Kohler-Forsberg, E. Landman, B. Ozenne, G.M. Knudsen, V.G. Frøkjær (Denmark)

- PP01-O05 Validation and noninvasive kinetic modeling of [^{11}C]UCB-J PET imaging of synaptic density in mice
D. Bertoglio, J. Verhaeghe, K. Cybulska, L. Wyffels, S. Stroobants, C. Dominguez, L. Liu, M. Skinbjerg, I. Munoz-Sanjuan, S. Staelens (Belgium, United States)
- PP01-O06 Dopamine-opioid interactions in the human reward system
D. Jongen, N. Weltens, P. Dupont, H. Ly, K. Van Laere, E. Vrieze, J. Ceccarini, L. Van Oudenhove (Belgium)
- PP01-O07 Age-dependency of synaptic density in healthy human brain: a ^{11}C -ucb-j PET-MR study
L. Michiels, J. Ceccarini, H. Vanhaute, M. Koole, L. Emsell, M. Vandenbulcke, R. Lemmens, K. Van Laere (Belgium)

PP01

Neurotransmitter System Evaluation II

Chair(s) D. Elmenhorst (Germany)

- PP01-P01 Striatal dopamine transporter availability and D2 receptor density correlate to relative blood flow measured with [^{11}C]PE2I, [^{18}F]FE-PE2I and [^{11}C]raclopride PET
M. Jonasson, P. Fazio, A. Frick, L. Appel, G.L. Laurell, T. Danfors, M. Fredrikson, T. Furmark, A. Varrone, M. Lubberink (Sweden)
- PP01-P02 Lp-ntPET endogenous neurotransmitter release model: a novel estimation method in a bayesian context
Z. Irace, I. Merida, N. Costes (France)
- PP01-P03 Significant decreases in [^{11}C]ABP688 binding after a mismatch negativity paradigm
C.R. Brambilla, A. Matusch, J. Mauler, R. Rajkumar, E.R. Kops, F. Boers, H. Herzog, N.J. Shah, C.W. Lerche, I. Neuner (Germany)
- PP01-P04 Differences between ABP688 binding in the human brain and cerebellum: interpretation and limitations
E. Kobayashi, P. Rosa-Neto, L. Minuzi, E. Zimmer, A. Aliaga (Canada)
- PP01-P05 Adenosine A1 Receptor Imaging with [^{11}C]MPDX PET in mesial temporal lobe epilepsy patients
M. Inaji, S. Hayashi, T. Nariai, M. Sakata, K. Ishii, T. Maehara (Japan)

- PP01-P06 First in-human assessment of $\alpha 4\beta 2$ nicotinic acetylcholine receptor (nAChR) availability in response to rewarding food-cues using simultaneous PET-MRI and the $\alpha 4\beta 2$ nAChR ligand (-)-[^{18}F]flubatine
S. Hesse, M. Rullmann, G.A. Becker, J. Luthardt, E. Schweickert de Palma, **T. Guennewig**, F. Zientek, P.M. Meyer, M. Patt, O. Sabri (Germany)
- PP01-P07 Evaluation of the P-gp- and Bcrp-mediated brain penetration of [^{18}F]FPEB in rodent brain
KH. Jung, S. Oh, K. Kang, S. Han, K. Nam, J. Choi (Republic of Korea)

PP01 **Psychiatric Disorders and Addictions I**

Chair(s) X.T. Fang (United States)

- PP01-Q01 Reduced serotonin release in patients with major depression: a PET study with [^{11}C]Cimbi-36 and d-amphetamine challenge
D. Erritzoe, B.R. Godlewska, G. Rizzo, G.E. Searle, Y. Lewis, J. Passchier, A. Ashok, O. Howes, R.N. Gunn, D.J. Nutt, P. Cowen, G. Knudsen, E.A. Rabiner (United Kingdom, Denmark)
- PP01-Q02 A genetic polymorphism of *HTR1B* and serotonin transporter binding measured by PET enable accurate machine learning classification of MDD and HC
A. Kautzky, G.M. James, C. Philippe, G. Gryglewski, T. Traub-Weidinger, M. Mitterhauser, W. Wadsak, M. Hacker, S. Kasper, R. Lanzenberger (Austria)
- PP01-Q03 Imaging the dopamine system with [^{11}C]PHNO PET in recently abstinent tobacco smokers compared to nonsmokers
K.C. Calakos, A.T. Hillmer, J. Anderson, D. Matuskey, Y. Huang, K.P. Cosgrove (United States)
- PP01-Q04 Dopamine $D_{2/3}$ receptor availability in obese and normal weight cocaine use disorder individuals as measured by [^{11}C](+)PHNO PET
D. Matuskey, G.A. Angarita, P. Worhunksy, E.E. Gaiser, J.D. Gallezot, N. Nabulsi, Y. Huang, M.N. Potenza, R.E. Carson, R.T. Malison (United States)
- PP01-Q05 Antipsychotic discontinuation in first-episode psychosis: a prospective study with [^{18}F]DOPA and [^{11}C]raclopride PET
E. Kim, S. Kim (Republic of Korea)
- PP01-Q06 Fear conditioning induces dopamine release in the human striatum
F. Ahs, A. Frick, A. Eriksson, J. Björkstrand, M. Lubberink, M. Fredrikson (Sweden)

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PP01-Q07 Association of dopamine D1-type receptors in prefrontal cortex with cognitive impulsivity: Impact of methamphetamine use
K. Okita, M. Mandelkern, A. Dean, E. Nurmi, L. Seaman,
 E. London (Japan, United States)

PP01 Psychiatric Disorders and Addictions II

Chair(s) H. Kuwabara (United States)

- PP01-R01 Imaging corticotrophin releasing factor (CRF) and nociceptin receptor (NOP) interactions with [¹¹C]NOP-1a and PET
M.R. Flanigan, S. Tollefson, R. Jordan, C. Stoughton, M.L. Himes, B. Lopresti, N.S. Mason, R. Narendran (United States)
- PP01-R02 Changes in cerebral glucose metabolism and neuroinflammation in young females with functional somatic syndrome: a PET study
T. Matsudaira, T. Terada, T. Obi, M. Yokokura, Y. Takahashi, Y. Ouchi (Japan)
- PP01-R03 Effects of chronic alcohol self-administration on striatal phosphodiesterase 10A availability
Y.E. Klingl, B. de Laat, G. Schroyen, M. Crabbé, M. Ooms, G. Bormans, K. Van Laere, J. Ceccarini (Belgium)
- PP01-R04 Hypometabolism and metabolic connectivity in internet gaming disorder and alcohol use disorder
H. Kim, J. Lee, A. Choi, D. Kim, JS. Choi, Y. Kim (Republic of Korea)
- PP01-R05 Brain aromatase imaging and human personality
K. Takahashi, T. Hosoya, K. Onoe, H. Doi, Y. Wada, Y. Watanabe (Japan)
- PP01-R06 Increased microglial activation in Attention-deficit/hyperactivity disorder: a [¹¹C]PK11195 PET study
M. Yokokura, K. Takebayashi, A. Takao, T. Tatsuhiro, T. Bunai, Y. Kato, E. Yoshikawa, M. Futatsubashi, H. Yamasue, Y. Ouchi (Japan)
- PP01-R07 Endogenous opioid release capacity in adult ADHD patients: a pilot study with PET and [¹¹C]carfentanil
A. Colasanti, J. Myers, B. Helfer, S. Lukito, P. Asherson, D. Nutt, A. Lingford-Hughes, S. Turton, E.A. Rabiner, K. Rubia (United Kingdom)

PL01 **Late Breaking Abstract**

Chair(s) H. Ito (Japan)

- PL01-S01 Optimization of reconstruction parameters for brain PET by silicon photomultiplier-based PET/CT scanner
K. Matsubara, K. Sato, M. Ibaraki, Y. Shinohara, T. Kinoshita (Japan)
- PL01-S02 Evaluation of [¹¹C]T2310 distribution, kinetics and selectivity for phosphodiesterase-4 subtype D in non-human primate brain
C.M. Sandiego, C. Plisson, M. Onega, K. Zasadny, E.A. Rabiner, R.N. Gunn, R. Nugent, M. Gurney (United States, United Kingdom)
- PL01-S03 First-in-human evaluation of ¹¹C-PS13 for imaging cyclooxygenase-1 in brain and peripheral organs
J. Lee, M.J. Kim, F.J. Anaya, P. Singh, J. Hong, M.Y. Cortes-Salva, S.S. Shrestha, M. Fujita, V.W. Pike, R.B. Innis (United States, Republic of Korea)
- PL01-S04 Predicting cerebrovascular reserve: a brain stress test without drugs
D.Y.T. Chen, Y. Ishii, A.P. Fan, G. Zaharchuk (United States, Taiwan, Japan)
- PL01-S05 [¹¹C]PBR28 inflammatory PET imaging in frontotemporal dementia
M.T.M. Clarke, I. Woollacott, R. Shafei, K. Moore, C. Greaves, L. Russell, M. Neason, M. Bocchetta, D. Cash, J. Rohrer (United Kingdom)
- PL01-S06 Parietal involvement in the semantic variant of primary progressive aphasia with Alzheimer's disease cerebrospinal fluid profile
G. Bera, R. Migliaccio, T. Michelin, F. Lamari, S. Ferrieux, M. Nogues, A. Kas, M.O. Habert, B. Dubois, M. Teichman (France)
- PL01-S07 The structure of the serotonin system: a PET imaging study
V. Beliveau, B. Ozenne, S. Strother, D.N. Greve, C. Svarer, G.M. Knudsen, M. Ganz (Denmark, Canada, United States)

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PA00 Early Career Investigator Awardee II

Chair(s) LP. Bernier (Canada)

PA00-A08 Patterns of intrinsic neural and hemodynamic activity recover uniquely following stroke
B. Kim, Z. Rosenthal, J.P. Culver, JM. Lee, A.Q. Bauer (United States)

PA00-A09 Remote cortical reorganization after experimental ischemic stroke
S. Valero Freitag, F.B. Seker, F. Hellal, N. Plesnila (Germany)

PA00-A10 Antagonism of the prostaglandin F2a-FP receptor signaling pathway inhibits the evolution of injurious spreading depolarization in cerebral ischemia
I. Szabo, D.P. Varga, V.E. Varga, A.R. Balint, F. Bari, E. Farkas (Hungary)

PA00-A11 Circular RNA profiling of neutrophil transcriptome provides insights into asymptomatic moyamoya disease
L. Li, Q. Ma (China)

PA00-A12 Dose finding in preclinical research using adaptive designs
S. Knauss, U. Grittner, U. Dirnagl, M. Endres, K. Neumann (Germany)

PA00-A13 Augmentation index is a predictor of cerebral blood flow across global grey matter in the elderly
A. Noriega de la Colina, A. Badji, D. Sabra, A. Karakuzu, S. Joubert, L. Bherer, M. Lamarre-Cliche, C. Gauthier, J. Cohen-Adad, H. Girouard (Canada)

PA00-A14 Effects of cerebral small vessels disease on brain perfusion in a memory clinic population
B. Gyanwali, H.J.M.M. Mutsaerts, N. Venketasubramanian, C. Chen, S. Hilal (Singapore, Netherlands)

Early Career Investigator Awardee II (cont.)

Chair(s) P. Herman (United States)

PA00-A22 Brain-wide ventricular-cerebral transport (vector) imaged by non-invasive dynamic MRI
P. Nahavandi, I.F. Harrison, M.Z. Thin, J.J. Connell, T.L. Kalber, P.S. Patrick, Y. Ohene, O. Ismail, J.A. Wells, M.F. Lythgoe (United Kingdom)

PA00-A23 In vivo neurovascular response to focused photoactivation of channelrhodopsin-2
J. Mester, P. Bazzigaluppi, I. Weisspapir, A. Dorr, T.L. Beckett, M.M. Koletar, J.G. Sled, B. Stefanovic (Canada)

- PA00-A24 Focal corpus callosum lesion disrupts resting state functional connectivity in mice: effects of Rho-kinase inhibitor Fasudil
S.A. Aykan, H. Xie, D.Y. Chung, S. Kura, A. Yaseen, D. Boas, S. Sakadžić, C. Ayata (Turkey, United States)
- PA00-A25 Middle cerebral artery occlusion induces remote white matter changes in the pontine reticulospinal tract in rats
V.H. Wielenga, G.A.F. van Tilborg, A. van der Toorn, M.P.A. van Meer, R.M. Dijkhuizen (Netherlands)
- PA00-A26 White matter fiber orientation effects of mq-BOLD derived oxygen extraction fraction
S. Kaczmarz, J. Goettler, A. Hock, C. Zimmer, F. Hyder, C. Preibisch (Germany, United States)
- PA00-A27 Mapping functional capillary-weighted blood volume in the human brain using ultra-high field MRI
M. Germuska, J. Whittaker, M. Venzi, R.G. Wise (United Kingdom)
- PA00-A28 Impaired perfusion and capillary distribution of blood in mild cognitive impairment: Relation to oxygenation and amyloid load
R.B. Nielsen, P. Parbo, R. Ismail, R. Dalby, A. Tietze, H. Brændgaard, H. Gottrup, D.J. Brooks, L. Østergaard, S.F. Eskildsen (Denmark, Germany, United Kingdom)

Early Career Investigator Awardee II (cont.)

Chair(s) X. Zhou (Japan)

- PA00-A36 Pharmacological modulation of TSPO in a ME7 mouse model of prion disease
M. Vicente-Rodriguez, R. Mancuso, D. Cash, C. Simmons, N. Consortium, D. Gómez-Nicola, V.H. Perry, F. Turkheimer, D.N.C. Jones, C.A. Parker (United Kingdom)
- PA00-A37 Effects of a clinical course of excitatory and inhibitory theta burst stimulation on the dopaminergic system
L.G. Aceves-Serrano, J.L. Neva, K.E. Brown, L.A. Boyd, D.J. Doudet (Canada)
- PA00-A38 Joint multimodal analysis revealed complementary spatial patterns of dopaminergic and serotonergic interactions related to levodopa response in Parkinson's disease
J.F. Fu, M. Matarazzo, I. Klyuzhin, B. Reber, KC. Cheng, J. McKenzie, N. Neilson, M.J. McKeown, A. Stoessel, V. Sossi (Canada)

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PA00-A39 Longitudinal quantification of mGluR1 using [¹¹C]ITDM PET imaging in the q175 dn mouse model of Huntington's disease
D. Bertoglio, J. Verhaeghe, Š. Korat, L. Wyffels, S. Stroobants, C. Dominguez, L. Liu, M. Skinbjerg, I. Munoz-Sanjuan, S. Staelens (Belgium, United States)

PA00-A40 Mild behavioral impairment is associated with β -amyloid and tau across the Alzheimer's disease spectrum
F.Z. Lussier, T.A. Pascoal, J. Therriault, M. Chamoun, C. Tissot, M. Savard, S. Mathotaarachchi, Z. Ismail, P. Rosa-Neto, S. Gauthier (Canada)

PA00-A41 Functional connectivity investigation in alzheimer's disease using PET and fMRI imaging
M. Qureshi, P. Rosa-Neto, T. Pascoal, S. Mathotaarachchi, M. Savard, J. Therriault, A.L. Benedet, M. Kang, M. Chamoun, S. Gauthier (Canada)

PA00-A42 Longitudinal assessment of the novel tau tracer [¹⁸F]MK-6240
T. Pascoal, M. Chamoun, P. Kang, S. Mathotaarachchi, J. Therriault, A. Benedet, M. Savard, JP. Soucy, S. Gauthier, P. Rosa-Neto (Canada)

PB02

Stem Cells and Cell Therapy

Chair(s) K. Kurisu (United States)

PB02-B01 Injury-induced multipotent stem cells: basic characteristics and future perspective
T. Takagi, M. Beppu, K. Tatebayashi, Y. Kuramoto, A. Nakano_Doi, R. Sakuma, T. Nakagomi, T. Matsuyama, S. Yoshimura (Japan)

PB02-B02 Neurogenesis of muscle-derived stem cells to neural-like cells by retinoic acid
M. Kim, E. Kim (Republic of Korea)

PB02-B03 Intracerebral ventricularly (ICV) administration of human neural stem cells ameliorate brain injury after cardiac arrest
X. Jia, X. Yang, Z. Wang (United States)

PB02-B04 *In vivo* analysis of mRNA-ITGA4-engineered mesenchymal stem cell docking to inflamed endothelium after their intra-arterial transplantation in animals with focal brain injury
A. Andrzejewska, S. Dabrowska, A. Nowakowski, M. Janowski, B. Lukomska (Poland, United States)

- PB02-B05 Regenerative potential of canine glial restricted progenitors transplanted in a mouse model of demyelinating diseases
P. Rogujski, L. Stanaszek, M. Majchrzak, M. Fiedorowicz, J. Sanford, B. Lukomska, P. Walczak, M. Janowski (Poland, United States)
- PB02-B06 Application of human glial restricted progenitors for treatment of amyotrophic lateral sclerosis in SOD1/RAG2 mice—limitations and perspectives
L. Stanaszek, P. Rogujski, M. Majchrzak, M. Fiedorowicz, B. Lukomska, P. Walczak, M. Janowski (Poland, United States)
- PB02-B07 MRI-guided intra-arterial and intrathecal delivery for global targeting of glial progenitors in canine ALS-like degenerative myelopathy
I. Malysz-Cymborska, D. Golubczyk, L. Kalkowski, M. Janowski, M. Zawadzki, J. Glodek, P. Holak, K. Milewska, K. Olbrych, P. Walczak (Poland, United States)
- PB02-B08 Viability and migration ability *in vitro* of human polymorphonuclear leukocytes loaded with synthetic microcapsules
E.N. Atochina-Vasserman, M.Y. Nikitina, T.A. Nevzorova, A.G. Daminova, Y.V. Tarakanchikova, D.N. Atochin, R.I. Litvinov, A.J. Gow, G.B. Sukhorukov, D. Weissman (United States, Russian Federation, United Kingdom)

Stem Cells and Cell Therapy (cont.)

Chair(s) T. Shichita (Japan)

- PB02-B09 Neuroprotective effects of human dental pulp stem cells after acute cerebral ischemia
C. Nito, S. Suda, K. Sowa, M. Nakajima, Y. Sakamoto, S. Takahashi, Y. Nishiyama, Y.N. Kasahara, T. Okada, K. Kimura (Japan)
- PB02-B10 Human bone marrow mesenchymal stem cells or extracellular vesicles transplanted intra-arterially modulate immune response evoked by focal brain injury in rat recipients
S. Dabrowska, A. Andrzejewska, D. Strzemecki, M. Muraca, M. Janowski, B. Lukomska (Poland, Italy, United States)
- PB02-B11 Long-term survival and differentiation of human neural stem cells in the ischemic stroke brain of rhesus monkey without immunosuppression
SR. Lee, Y.B. Jin, Y. Lee, K.J. Jeong, C.Y. Jeon, H.G. Yeo, S.U. Kim, H.J. Lee, K.S. Yi, S.H. Cha (Republic of Korea)
- PB02-B12 Oligodendrocyte precursor cell transplantation promotes oligodendrogenesis and synaptogenesis via CXCL12/CXCR4 and netrin-1/DCC axes in mice after cerebral ischemia
W. Li, T. He, R. Shi, Y. Song, F. Yuan, Z. Li, L. Wang, Z. Zhang, Y. Tang, GY. Yang (China)

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- PB02-B13 Oligodendrocyte precursor cell transplantation protects blood-brain barrier integrity via Wnt/beta-catenin signaling after cerebral ischemia in mice
L. Wang, M. Qu, F. Yuan, Y. Wang, P. Zhou, J. Pan, Y. Tang, Y. Wang, Z. Zhang, GY. Yang (China)
- PB02-B14 Endothelial progenitor cell transplantation alleviated ischemic brain injury via reducing astrocyte-derived C3
Y. Ma, L. Jiang, L. Wang, Y. Li, Y. Liu, Y. Wang, Z. Zhang, GY. Yang (China)
- PB02-B15 Regeneration-associated cell transplantation leads to tissue recovery in acute ischemic stroke mice
T. Nakayama, E. Nagata, H. Masuda, T. Asahara, S. Takizawa (Japan)
- PB02-B16 Clot derived contaminants in transplanted cells enhance inflammation at peri-stroke area after bone marrow mononuclear cell transplantation in murine stroke model
A. Taura, Y. Ogawa, Y. Okinaka, Y. Takeuchi, J. Boltze, S. Gul, C. Claussen, A. Taguchi (Japan, Germany)
- PB02-B17 A novel regenerative associate cells transplantation may be applied in patients with acute ischemic stroke
S. Netsu, N. Fujii, S. Kohara, H. Yuzawa, T. Nakayama, A. Mizuma, H. Masuda, T. Asahara, E. Nagata, S. Takizawa (Japan)
- PB02-B18 Preliminary data of phase I clinical trial of intracerebral transplantation using bone marrow stromal cell (BMSC) against acute ischemic stroke (RAINBOW study)
M. Kawabori, H. Shichinohe, S. Kuroda, K. Houkin (Japan)
- PB02-B19 The international cooperative Phase II trial of modified stem cells (SB623) transplantation therapy for traumatic brain injury—Participation in a double-blind, controlled study (NCT02416492)—
H. Imai, Y. Karasawa, H. Hasegawa, M. Shin, S. Miyawaki, N. Saito (Japan)

PB02

Cerebrovascular Regulation I: Clinical

Chair(s) F. Schmid (Switzerland)

- PB02-C01 The influence of acute and chronic dietary sodium on cerebrovascular reactivity
K.U. Migdal, A.T. Robinson, J.C. Watso, M.C. Babcock, J.M. Serrador, W.B. Farquhar (United States)

- PB02-C02 Blood pressure profiles obscure pulsatility and resistance indices when detecting cerebrovascular regulation differences between brain stem and cortex circulations during sit to stand
J. Liu, M.J. Falvo, K. Brewer, **J.M. Serrador** (United States, Ireland)
- PB02-C03 Characterization of effects of head of bed position changes on the pulsatility of blood flow measured by fast diffuse correlation spectroscopy
J.B. Fischer, G. Giacalone, D. Fernández Cuenca, A. Ghouse, W.B. Baker, **T. Durduran**, U.M. Weigel (Spain, Italy, United States)
- PB02-C04 Correlation between cortical oxyhemoglobin and physiological changes after moderate-intensity exercise
A. Tsubaki, S. Morishita, Y. Tokunaga, K. Hotta, S. Kojima, W. Qin, H. Onishi (Japan)
- PB02-C05 The gender difference of cortical oxygenation in prefrontal cortex and motor-related area during cardiopulmonary exercise test
S. Kojima, S. Morishita, K. Hotta, W. Qin, A. Tsubaki (Japan)
- PB02-C06 Sympathoexcitation during the cold pressor test does not result in cerebral vasoconstriction in young, healthy individuals
M.E. Favre, J.M. Serrador (United States)
- PB02-C07 Veterans with gulf war illness and small fiber neuropathy demonstrate worse cerebral blood flow regulation
J.M. Serrador, K. Brewer, O. Osinubi, M. Klein, A. Oaklander (United States, Ireland)

PB02 **Cerebrovascular Regulation II: Pre-Clinical**

Chair(s) K. Kucharz (Denmark)

- PB02-D01 Vascular reactivity modulation of isolated rat carotid arteries by novel c-Jun N-terminal kinase inhibitor IQ-1S
V. Rydchenko, Y.J. Anfinogenova, S.V. Gusakova, A.I. Khlebnikov, I.A. Schepetkin, **D.N. Atochin** (Russian Federation, United States)
- PB02-D02 Inhibition of retinal and cerebral microvascular glycogen utilization promotes capillary constrictions in mice
M. Yemisci, G. Uruk, S. Yilmaz-Ozcan, B. Donmez-Demir, H. Karatas-Kursun, E. Eren-Kocak, T. Dalkara (Turkey)
- PB02-D03 Pericytes maintain basal capillary tone and blood flow resistance in the brain
A. Shih, D. Hartmann, AA. Berthiaume (United States)

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- PB02-D04 How activity-induced elevations of potassium affect calcium signals in pericytes
C. Gluck, K.D. Ferrari, A. Keller, J. Stobart, B. Weber (Switzerland, Canada)
- PB02-D05 Isoflurane anesthesia rapidly blocks calcium activity in mouse brain vascular endothelial cells in vivo
A. Rodriguez-Contreras, L. Shi (United States)
- PB02-D06 Measurement of tissue PO₂ in awake mouse cortex by using two-photon microscopy imaging
I. Sencan, k. Kılıç, B. Li, B. Fu, J.E. Porter, T. Esipova, M. Desjardins, M.A. Yaseen, D.A. Boas, S.A. Vinogradov, A. Devor, S. Sakadžić (United States)
- PB02-D07 The variability of cerebrovascular reactivity under different anaesthetics: relevance to preclinical fMRI
C. Simmons, M. Mesquita, E. Kim, MM. Petrinovic, D. Cash (United Kingdom)
- PB02-D08 Activation of smooth muscle TRPV1 channels in non-brain arteries contributes to cerebral blood flow maintenance during acute decreases in blood pressure
M. Koide, D.M. Collier, H.R. Ferris, J.E. Brayden, M.T. Nelson, G.C. Wellman (United States, United Kingdom)
- PB02-D09 No effect of the angiotensin receptor blocker candesartan on cerebrovascular autoregulation in rats during very high and low sodium intake
O.B. Paulson, S.T. Sigurdsson, P. Bie, A.H. Nielsen, S. Strandgaard (Denmark)
- PB02-D10 Breakthrough threshold of intracranial pressure regulation
A. Noghero, T. Zhang, Y. Yang, D.E. Bragin, E. Nemoto (United States)
- PB02-D11 The long-term effects of systemic inflammation on hemodynamic response in the mouse cortex
J. Lee, H. Park, M. Suh (Republic of Korea)

PB02

Cerebrovascular Regulation III: Computational Model

Chair(s) T.I. Józsa (United Kingdom)

- PB02-E01 A physiologically accurate model of cerebral autoregulation
 S. Milanovic, **S.J. Payne** (United Kingdom)
- PB02-E02 The influence of cerebral blood flow autoregulation on the development of carotid siphon stenosis: Study of multi-scale coupling model
 Y. Guo, **C. Zhang**, J. Yang, S. Xie, D. Li (China)
- PB02-E03 The role of preoperative modeling during installing a vascular bypass graft
D. Parshin, I. Kuianova, A. Dubovoy (Russian Federation)

- PB02-E04 Conceptualizing the conducted response as an electrical pliant process: Implications to cell signaling in the vessel wall
B.O. Hald, D.G. Welsh (Denmark, Canada)
- PB02-E05 The conducted vasomotor response underlying cerebral blood vessel communication is a malleable process
B.O. Hald, D.G. Welsh (Denmark)
- PB02-E06 Simulating vasodilations and -constrictions to regulate blood flow during activation
R. Epp, F. Schmid, B. Weber, P. Jenny (Switzerland)
- PB02-E07 Modeling nitric oxide (NO) diffusion in the brain reproduces the post-stimulus undershoot in the hemodynamic response function (HRF) and vasomotion
W. Haselden, R. Teja, P. Drew (United States)
- PB02-E08 A coupled multi-compartment model of blood and oxygen transport in the human cerebral cortex
W.K. El-Bouri, Y. Bing, S.J. Payne (United Kingdom)
- PB02-E09 A new model for molecule exchange in the brain microvascular system: consequences of capillary occlusions in alzheimers disease
M. Berg, O. Bracko, Y. Davit, M. Quintard, N. Nishimura, C.B. Schaffer, S. Lorthois (France, United States)
- PB02-E10 Modelling the effects of stages of hypoxia ischemia on plasticity of whisker barrel cortex
B.S. Kumar, A. Khot, S.V. Chakravarthy, P. S (India, United States)

PB02 **CNS Trauma**

Chair(s) E. Park (Canada)

- PB02-F01 Use of *in vivo* bioorthogonal chemical reporter technology to study brain sialoglycan changes after injury
J. Badaut, Z.S. Chinoy, J. Aussudre, M. Tirard, ML. Fournier, F. Friscourt (France, United States)
- PB02-F02 Investigating the mechanisms of neurovascular dysfunction after modelled traumatic brain injury and the neuroprotective potential of human umbilical cord perivascular cells on the injured brain
T.A. Barretto, T. Telliyan, E. Park, E. Liu, D. Gallagher, C. Librach, A. Baker (Canada)

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- PB02-F03 Microglia specific histone deacetylases 2 deficiency promotes inflammation and aggravates long-term functional deficits after traumatic brain injury
Y. Zhao, Y. Huang, F. Lv (China)
- PB02-F04 Wnt/beta-catenin signaling modulates the response of the cerebral vasculature after traumatic brain injury
A. Obenaus, A. Salehi, A. Jullienne, M. Hamer, W.J. Pearce, J. Tang, J.H. Zhang (United States)
- PB02-F05 A novel class of lipid mediators, elovanoids, improve behavior and preserve brain tissue after traumatic brain injury in rats
L. Belayev, A. Obenaus, N.A. Petasis, L. Khoutorova, N.G. Bazan (United States)
- PB02-F06 Identification of peripheral biomarkers following brain injury in mice
S. Ippati, D. De Blasio, M. Sironi, M. Oggioni, D. Mercurio, M. De Simoni (Italy)
- PB02-F07 Microcirculatory biomarkers of secondary cerebral ischemia at traumatic brain injury
A. Trofimov, A. Dubrovin, S. Korolev, A. Abashkin, D. Bragin (Russian Federation, United States)
- PB02-F08 Serum IL-6: A novel biomarker for outcome prediction in isolated severe traumatic brain injury
R. Saini (India)
- PB02-F09 Microthrombosis and oxidative stress reduction by novel resuscitation fluid for traumatic brain injury with hemorrhagic shock
D. Bragin, O. Bragina, L. Berliba, M. Kameneva, E. Nemoto (United States)
- PB02-F10 Leakage sign for acute subdural hematoma
M. Yoshitomi, K. Orito, M. Yamamoto, Y. Takeuchi, M. Morioka (Japan)
- PB02-F11 Bedside non-invasive assessment of the hemodynamic consequences of hyperventilation treatment in traumatic brain injury
S. Tagliabue, M. Kacprzac, F. Maruccia, M. Riveiro Vilaboa, A. Rey-Perez, J.B. Fischer, M. Poca, J. Sahuquillo, T. Durduran (Spain, Poland)
- PB02-F12 Multimodal assessment to understand posterior cingulate gyrus connectivity in the chronic phase after severe traumatic brain injury caused by traffic accidents
Y. Ikegame, Y. Asano, H. Takei, T. Kawasaki, J. Shinoda (Japan)

PB02 Aging and Dementia I: Amyloid/AD

Chair(s) S.A. Hussong (United States)

- PB02-G01 Protective effect of ISO-1 on advanced glycation end products aggravating of PC 12 cell injury induced by A β 1-40
M. Yu, D. Zang, Y. Xu, J. Meng, S. Qian (China)
- PB02-G02 Xingnaojing injection improves A β ₁₋₄₂-induced memory deficit in mice by altering of excitatory amino acid toxicity and synaptic plasticity
Y. Liu, X. Cao, Y. Xu (China)
- PB02-G03 *In vivo* dynamics of amyloid β in glymphatic system observed with multiphoton microscopy
I. Hasegawa, R. Sawada, T. Abe, Y. Itoh (Japan)
- PB02-G04 Non-invasive volumetric mapping of amyloid pathology across the whole mouse brain by photoacoustic tomography
R. Ni, D. Kirchenbaum, F. Voigt, A. Villios, C. Ran, F. Helmchen, P. Arosio, A. Aguzzi, J. Klohs (Switzerland, United States)
- PB02-G05 Functional MRI reveals mitigation of cerebrovascular dysfunction by bradykinin receptor 1 and 2 antagonism in a mouse model of cerebral amyloidosis
R. Ni, D. Kindler, R. Waag, M. Rouault, M. Rudin, G. Camici, L. Liberale, L. Kulic, J. Klohs (Switzerland, Italy)
- PB02-G06 High-resolution post-mortem MRI reveals progressive cerebromorphological changes in the APP23 mousemodel of Alzheimer's disease
T.J.M. Roelofs, A. van der Toorn, C. Bormann, M. Hernández-Guillamon, M. Fatar, R.M. Dijkhuizen (Netherlands, Germany, Spain)

Aging and Dementia I: Amyloid/AD (cont.)

Chair(s) B. Iordanova (United States)

- PB02-G07 A role of gut dysbiosis in non-coding RNA-histone acetylation regulatory profile associates with cognitive impairment in Alzheimer's disease
J. Behera, K.E. Kelly, N. Tyagi (United States)
- PB02-G08 Tau-induced astrocyte senescence as a driver of neuroinflammation and neuronal dysfunction in Alzheimer's disease
A.B. Olson, S.A. Hussong, R. Kaye, V. Galvan (United States)
- PB02-G09 Novel marker of disease progression in a transgenic rat model of Alzheimer's disease
P. Bazzigaluppi, C. Morrone, J. McLaurin, B. Stefanovic (Canada)

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- PB02-G10 Cortical-region-dependent dynamic alterations of neuronal activity and vascular response in Alzheimer's disease model mice
YG. Choe, H. Lee, M. Kang, Y. Jeong (Republic of Korea)
- PB02-G11 Effect of exercise on capillary red blood cell dynamics in transgenic ad mice
X. Lu, M. Moeini, B. Li, Y. Lu, R. Damseh, P. Pouliot, E. Thorin, F. Lesage (Canada, Islamic Republic of Iran, United States)
- PB02-G12 Hemorheologic enhancement of cerebral perfusion by drag-reducing polymers for the treatment of the Alzheimer's disease
O. Bragina, L. Sillerud, M. Kameneva, E. Nemoto, D. Bragin (United States)
- PB02-G13 Neuroprotective and anti-radical potential of butanolic extract of *Myristica fragrans* against scopolamine-induced cognitive deficit in the experimental model of Alzheimer's disease
D. Singh (India)
- PB02-G14 Pharmacological stimulation of soluble guanylate cyclase improves memory function and reduces plaque load in a mouse model of Alzheimer's disease
B.F. Seker, D. Brockschnieder, N. Plesnila (Germany)
- PB02-G15 The neural substrate of memory, attention, and executive function; A study of early stage AD using MRI and SPECT
H. Yoshizawa, M. Seki, K. Abe, K. Kitagawa (Japan)
- PB02-G16 Theragnostic approach for early diagnosis of Alzheimer's disease: PANA Project
M. Rodríguez-Pérez, B. Pelaz, P. Aguiar, P. Hervella, L. Vázquez-Vázquez, F. Campos, Á. Almeida, P. del Pino, J. Castillo, T. Sobrino (Spain)

PB02

Aging and Dementia II: Other Dementia/Aging

Chair(s) K. Uekawa (United States)

- PB02-H01 Arterial stiffness, cerebral blood flow and white matter integrity in the elderly: an arterial spin labelling and neurite orientation dispersion and density study
A. Badji, A. Noriega de la Colina, D. Sabra, A. Karakuzu, L. Bherer, M. Lamarre-cliche, N. Stikov, C. Gauthier, J. Cohen-Adad, H. Girouard (Canada)
- PB02-H02 Cerebral perfusion in middle-aged masters athletes: associations with age and cardiorespiratory fitness
T. Tarumi, T. Tomoto, E. Pasha, C. Wang, R. Zhang (Japan, United States)
- PB02-H03 Baseline aerobic fitness and cortical volume atrophy across 5 years in older adults from the general population
J. Pani, C.W.S. Pintzka, D. Stensvold, U. Wisløff, A.K. Håberg (Norway)

- PB02-H04 The effect of physical fitness on hippocampal volume and cognition in older adults from the Generation100 study
D.R. Sokołowski, C.W.S. Pintzka, T.I. Hansen, D. Stensvold, U. Wisløff, A.K. Håberg (Norway)
- PB02-H05 Alterations in brain phospholipidome of dementia with lewy bodies and their associations with neuropathological parameters
J. Chong, A. Gassiot, M.R. Wenk, P.T. Francis, D. Aarsland, J. Attems, C.P. Chen, D.R. Herr, M.K.P. Lai (Singapore, United Kingdom, Sweden)
- PB02-H06 Post-mortem assessment of apoptotic factors in Lewy body dementia
M.K.P. Lai, J.R. Chong, P.T. Francis, D. Aarsland, C.P. Chen (Singapore, United Kingdom)
- PB02-H07 The optimal cut-off points on ¹¹C-PIB-PET-MR based on visual assessments of amyloid positivity in Singapore
T. Tanaka, C. Chen, F. Saridin, S. Hilal, S. Villaraza, B. Gyanwali, D. Khor, M.C. Stephenson, E.G. Robins, A. Reilhac (Singapore, Japan)
- PB02-H08 Optimisation of ¹¹C-PiB scan data analysis leads to increased correlations between image derived biomarker and cognitive function scores
A. Reilhac, T. Tanaka, F. Saridin, B. Gyanwali, M.C. Stephenson, YH. Nai, A.A. Weekes, J.J. Totman, E. Robins, C. Chen (Singapore)
- PB02-H09 Role of semi-quantitative assessment using FP-CIT SPECT in the differential diagnosis of degenerative dementia
T. Sasajima, S. Sugawara, T. Shibata, T. Shimomura (Japan)

PB02 Vascular Contribution to Cognitive Impairment/VaD I

Chair(s) D.G. Welsh (Canada)

- PB02-O01 Elucidating the diagnostic, therapeutic and mechanistic implications of stroke in Alzheimer's disease
K. Lohkamp, J. Shen, N.M. Timmer, V. Verweij, R.C. Egitimci, L. Bakker, A. Veltien, A. Heerschap, A.J. Kiliaan, M. Wiesmann (Netherlands)
- PB02-O02 The effect of carbonic anhydrase inhibitors in brain microcirculation of the Tg-SwDI model of Alzheimer's disease
E. Gutiérrez-Jiménez, S.K. Fruekilde, P.M. Rasmussen, I.K. Mikkelsen, N.K. Iversen, L. Bordoni, S. Fossati, J. Ramos-Cejudo, S. Sakadžić, L. Østergaard (Denmark, United States)

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PB02-O03 Altered cerebrovascular integrity and cellular metabolites in a co-morbid mouse model of VCID

A.L. Trout, J.M. Roberts, J.F. Fraser, G.J. Bix (United States)

PB02-O04 mTOR-driven alterations in the brain microvascular proteome of mice modeling Alzheimer's disease

A. Banh, C. Pomilio, S. Hussong, V. Galvan (United States)

PB02-O05 mTOR promotes BBB breakdown and dysregulation of tight junction proteins in an Alzheimer's disease model

S.F. Hernandez, C.E. VanSkike, N. Derosa, V. Galvan (United States)

PB02-O06 mTOR-driven neurovascular uncoupling precedes cognitive deficits in a mouse model of Alzheimer's disease

C.E. Van Skike, S.F. Hernandez, S.A. Hussong, A.B. Olson, V. Galvan (United States)

PB02-O07 Cerebral vasomotor reactivity in patients with amnesic mild cognitive impairment

T. Tomoto, T. Tarumi, J. Chen, E.P. Pasha, R. Zhang (United States, Japan)

PB02-O08 The presence of cerebral microbleeds is associated with cognitive impairment in Parkinson's disease

R. Tanaka, K. Yamashiro, K. Daida, T. Ogawa, G. Oyama, K. Nishioka, A. Umemura, Y. Shimo, S. Fujimoto, N. Hattori (Japan)

PB02-O09 MR findings and long-term cognitive change in patients with atrial fibrillation (AF) after ablation

N. Kato, K. Muraga, A. Shindo, S. Fujita, Y. Kagawa, E. Fujii, M. Maeda, H. Sakuma, M. Ito, H. Tomimoto (Japan)

PB02-O10 Changes in dynamics of cerebrovascular reactivity responses to breath-hold in APOE e4 carriers across the adult lifespan

P.M. Rasmussen, R. Aamand, E. Weitzberg, M. Christiansen, L. Østergaard, T.E. Lund (Denmark, Sweden)

PB02-O11 Apolipoprotein E4 worsens cerebrovascular and cognitive dysfunction induced by cerebral hypoperfusion via perivascular macrophages

Y. Hattori, J. Seo, K. Uekawa, L. Park, C. Iadecola (United States, Japan)

PB02-O12 Local and global microvascular disturbances in the brains of APOE-ε4 carriers: Vascular and cognitive responses to nitrate supplementation

R. Aamand, P. Rasmussen, E. Weitzberg, M. Christiansen, T.E. Lund, L. Ostergaard (Denmark, Sweden)

PB02 Vascular Contribution to Cognitive Impairment/VaD II

Chair(s) SH. Hong (United States)

- PB02-P01 Cortical photothrombotic stroke induces cognitive deficits and is associated with an increased levels of neurotoxic proteins accumulation
S. Sanchez Bezanilla, M. Nilsson, F. Walker, L. Ong (Australia)
- PB02-P02 Longitudinal investigation of spatiotemporal dynamics of blood cell stagnation in cerebral capillaries using optical coherence tomography angiography during subcortical vascular dementia development
JH. Yoon, P. Shin, J. Ju, G.S. Kim, WY. Oh, Y. Jeong (Republic of Korea)
- PB02-P03 Role of inflammasome activation in a chronic cerebral hypoperfusion model of vascular dementia
L. Poh (Singapore)
- PB02-P04 Acceleration of NLRP3 inflammasome by chronic cerebral hypoperfusion in Alzheimer's disease model mouse
J. Shang, K. Abe (Japan)
- PB02-P05 Chronic cerebral hypoperfusion accelerates Alzheimer's disease pathology with the change of mitochondrial fission and fusion dynamics in a novel mouse model
T. Feng, T. Yamashita, J. Shang, K. Abe (Japan)
- PB02-P06 The effect of intermittent fasting on the brain vasculature in vascular dementia using a mouse model of chronic cerebral hypoperfusion
V. Rajeev, T. Arumugam (Singapore)
- PB02-P07 Tauopathy in a rat model for the post-stroke dementia combining chronic cerebral hypoperfusion and acute ischemic stroke
H. Kim, D. Back, BR. Choi (Republic of Korea)
- PB02-P08 The role of age and neuroinflammation in the mechanism of cognitive and neurobehavioral deficits in sickle cell disease
R.A. Hardy, N. Abi Rached, J. Jones, D.R. Archer, H.I. Hyacinth (United States)
- PB02-P09 BDNF improves cognitive function after stroke in aged mice
A.N. Clarkson, J. Houlton (New Zealand)
- PB02-P10 The altered reconfiguration pattern of brain modular architecture regulates cognitive function in cerebral small vessel disease
H. Chen (China)

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PB02 Stroke Experimental I: Post-Stroke Injury/Recovery

Chair(s) M. Balbi (Canada)

- PB02-Q01 Stroke comorbidities impair the dynamic recruitment of cortical collateral perfusion
I. Biose, G. Bix, I. Macrae, C. McCabe (United Kingdom, United States)
- PB02-Q02 Dynamic capillary stalls in ischemic penumbra: persistent traffic jams become therapeutic candidates
S. Erdener, J. Tang, K. Kılıç, D. Postnov, IC. Chen, J.T. Giblin, S. Sakadzic, C.B. Schaffer, D.A. Boas (United States, Turkey)
- PB02-Q03 The role of systemic inflammation on cortical blood flow during the acute phase after experimental stroke
O. Saleh (United Kingdom)
- PB02-Q04 Longitudinal *in vivo* imaging reveals structural and functional resiliency of dis-inhibitory cortical interneurons after stroke
M. Motaharinia, K. Gerrow, E. White, N. Liang, C.E. Brown (Canada)
- PB02-Q05 Functional impairment after stroke is exacerbated by vitamin D deficiency but is mitigated by supplementation
H. Kim, M.A. Evans, S.R. Zhang, G.R. Drummond, T.V. Arumugam, A.N. Clarkson, G.R. Zosky, T.M. De Silva,
C.G. Sobey (Australia, Singapore, New Zealand)
- PB02-Q06 Reactive oxygen species generation, neuronal degeneration and neurologic dysfunction after ischemic stroke in mice
Y. Matano, R. Kawazu, K. Takayama, R. Ohi, Y. Suzuki, K. Umemura, N. Nagai (Japan)
- PB02-Q07 Post-stroke remote limb conditioning attenuates transneuronal degeneration in substantia nigra and improves functional recovery in chronic stroke
K. Park, **M. Balkaya**, J. Yang, Y. Guo, F. Shakil, J.W. Cave, Z. Wu, S. Cho (United States)
- PB02-Q08 Post-stroke physical exercise reduces ischemic brain damage and improves cognition in reproductively senescent female rats
S. Saravanan, C.C. Furones, W. Zhao, K.R. Dave, M.A. Perez-Pinzon, A.P. Raval (United States)
- PB02-Q09 Functional MRI of reduced perilesional interhemispheric functional connectivity is not associated with changes in vascular reactivity after experimental stroke
A.E. Meerwaldt, G.A.F. van Tilborg, C. van Heijningen, A. van der Toorn, R.M. Dijkhuizen (Netherlands)

- PB02-Q10 Developing a method to assess functional recovery following stroke in a large animal model: a biomechanical and neurological outcome approach
A.J. Sorby-Adams, L.E. Elms, I.M. Bilecki, O.C. Marian, A.V. Leonard, R. Crowther, C. Jones, R.J. Turner (Australia)
- PB02-Q11 Detection of ischemic changes in the rat cortex after common carotid artery occlusion using intravoxel incoherent motion diffusion-weighted magnetic resonance imaging at 11.7T
S. Fujiwara, Y. Mori, D. de la Mora, K. Yoshida, K. Ogasawara, Y. Yoshioka (Japan, Denmark)
- PB02-Q12 Leptomeningeal anastomosis and early ischemic lesions on diffusion-weighted imaging in murine focal cerebral ischemia
M. Saito, K. Ishizuka, T. Hoshino, K. Kitagawa (Japan)

PB02 Stroke Experimental II: Pathophysiology

Chair(s) M. Balkaya (United States)

- PB02-R01 Autophagosome dynamics is disrupted by dysregulation of Sec22b and Ykt6 expression in neurons during Cerebral ischemia-reperfusion injury
H. Li (China)
- PB02-R02 Differential effect of ischemia and thrombin mediated toxicity on cerebral vascular unit
P. Rajput, S. Kothari, P. Lyden (United States)
- PB02-R03 Stress aggravates cerebral ischemia/reperfusion injury: role of mitochondrial quality control
W. Zhou (China)
- PB02-R04 HIV infection contribution to pathology and outcome of ischemic stroke
M. Toborek, L. Bertrand (United States)
- PB02-R05 Inflammatory cascade induces intracranial fusiform and dolichoectatic aneurysm formation
H. Nakatomi, K. Naemura, Y. Teranishi, Y. Wada, H. Kurihara, N. Saito (Japan)
- PB02-R06 Reduction of intracerebral hemorrhage by rivaroxaban after tPA thrombolysis is associated with downregulation of PAR-1 and PAR-2
T. Yamashita, R. Morihara, J. Shang, Y. Nakano, K. Sato, N. Hishikawa, Y. Ohta, K. Abe (Japan)

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PB02-R07 β arrestin-2 in PAR-1 Biased Signaling has a crucial role in endothelial function via PDGF- β in stroke
H. Kanki, T. Sasaki, S. Matsumura, S. Yokawa, M. Shimamura, T. Furuno, T. Suzuki, H. Mochizuki (Japan)

PB02-R08 The role of astrocytic NAMPT in brain protection and reactive astrogliosis after ischemic stroke
S. Ding (United States)

PB02-R09 Endothelial NOX4 oxidase exacerbates motor dysfunction after ischemic stroke
M. De Silva, H. Kim, G.R. Drummond, C.G. Sobey (Australia)

PB02-R10 Mechanism of synaptic plasticity impairments and cognitive dysfunction following global cerebral ischemia
P. Herson, I. Cruz-Torres, R.M. Dietz, J.E. Orfila, E. Tiemeier, G. Deng, N. Chalmers, N. Quillinan (United States)

PB02-R11 Preserved integrity of microtubule associated protein 2 in DWI-FLAIR mismatch area in acute murine cerebral ischemia
K. Ishizuka (Japan)

PB02-R12 Which pathologic staining method can visualize the hyperacute infarction lesion identified by diffusion MRI? : A comparative study
K. Yi, CH. Choi, SH. Cha, HG. Yeo, SR. Lee, H. Lee, Y. Lee, B. Kwak, K.A. Kwak, J. Cho (Republic of Korea)

PB02

Stroke Experimental III: Pharmacology & Therapeutics

Chair(s) H. Hara (Japan)

PB02-S01 Multi-targets mechanism of MiR-122 to improve stroke outcomes
D. Liu, G.C. Jickling, H. Hull, X. Zhan, B. Stamova, B.P. Ander, F.R. Sharp (United States)

PB02-S02 Therapeutic effects of a novel RANKL-based peptide, MHP1-AcN, in stroke models in mice
M. Shimamura, T. Kawano, H. Mochizuki, H. Nakagami (Japan)

PB02-S03 Anti-oxidant nanomedicine as neurovascular unit protection therapy for cerebral-ischemia-reperfusion injury
A. Mujagic, A. Marushima, Y. Nagasaki, H. Hosoo, A. Hirayama, S. Puentes, H. Tsurushima, K. Suzuki, H. Matsui, E. Ishikawa, Y. Matsumaru, A. Matsumura (Japan)

- PB02-S04 Acidosis-responsive nanoparticles release nimodipine in cerebral ischaemia and restrain cortical spreading depolarization in rats
O.M. Toth, D. Hantosi, V.E. Varga, I. Szabo, A. Menyhart, L. Janovak, I. Dekany, **E. Farkas**, F. Bari (Hungary)
- PB02-S05 Encapsulation of recombinant tissue plasminogen activator (t-PA) in sono-sensitive structures
C. Correa-Paz, M.F. Navarro Poupard, E. Polo, M. Rodríguez-Pérez, T. Sobrino, D. Vivien, J. Castillo, P. del Pino, B. Pelaz, F. Campos (Spain, France)
- PB02-S06 Effect of erythropoietin on inflammatory response and ischemic brain damage after carotid artery clamp in rat
MS. Hosseini, MB. Abolghasem Fakhri, S. Hashemzadeh, M. Farhoudi, J. Mahmoudi, R. Piri, S. Mohammadi, M. Omrani-Hashemi (Islamic Republic of Iran, Denmark)
- PB02-S07 Modulating the counter regulatory renin angiotensin system axis in the stroke prone spontaneously hypertensive rat in ischaemic stroke
A. McFall, L. Zentilin, J.D. McClure, M. Giacca, S.A. Nicklin, L.M. Work (United Kingdom, Italy)
- PB02-S08 Role of posttreatment with renal denervation against experimental acute stroke in rats
Y. Takemoto, Y. Hasegawa, K. Hayashi, A. Mukasa, S. Kim-Mitsuyama (Japan)
- PB02-S09 The extra virgine olive oil phenol hydroxytyrosol as acute therapeutic strategy after ischemic stroke
A.J. Kiliaan, J. Shenk, J. Calahorra, V.H. Wielenga, E. Siles, M.Á. Peinado, M. Wiesmann (Netherlands, Sweden, Spain)
- PB02-S10 Whole body vibration therapy after ischemia reduces brain damage in reproductively senescent female rats
A.P. Raval, W. Moreno, J. Sanchez, O.E. Furones-Alonso, W.D. Dietrich, H.M. Bramlett (United States)

PP02 **Dementia and Neurological Disorders**

Chair(s) K. Koehler-Forsberg (Denmark)

- PP02-J01 PET imaging of tau deposition in tauopathy model mice with [¹⁸F]PM-PBB3
T. Kimura, C. Seki, K. Sampei, J. Maeda, M. Ono, T. Suhara, MR. Zhang, N. Sahara, M. Higuchi (Japan)

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- PP02-J02 Establishment of a simplified method to quantify [¹⁸F]PM-PBB3 ([¹⁸F]APN-1607) binding in the brains of living human subjects
C. Seki, K. Tagai, H. Shimada, K. Takahata, M. Kubota, Y. Takado, H. Shinotoh, Y. Kimura, M. Ichise, M. Okada, T. Kikuchi, MR. Zhang, M. Higuchi (Japan)
- PP02-J03 [¹⁸F]MK-6240 PET identifies neurofibrillary tangle pathology in prodromal Alzheimer's disease patients from a phase 3 (APECS) trial
T.G. Lohith, C. Sur, T. Taylor, N. Dupre, C. Furtek, Y. Wang, J. Kost, D. Scott, K. Adamczuk, E. Hostetler, J. Evelhoch, T. Voss, M. Egan (United States)
- PP02-J04 ¹¹C-PBR28 and ¹⁸F-AV-1451 PET findings in semantic variant frontotemporal dementia
B. Pascual, P. Zanotti-Fregonara, Q. Funk, E. Rockers, M. Yu, G.C. Roman, P.E. Schulz, J.C. Masdeu (United States)
- PP02-J05 Regional changes in the type 1 cannabinoid receptor are associated with cognitive dysfunction in Parkinson's disease
J. Ceccarini, C. Casteels, R. Ahmad, M. Crabbé, L. van de Vliet, H. Vanhaute, M. Vandenbulcke, W. Vandenberghe, K. Van Laere (Belgium)
- PP02-J06 Effect of age, gender and BMI on in-vivo CB₁ receptor availability in humans measured with [¹¹C]OMAR PET
R. Radhakrishnan, P. Worhunsky, MQ. Zheng, S. Najafzadeh, JD. Gallezot, B. Planeta, S. Henry, N. Nabulsi, M. Ranganathan, P.D. Skosnik, D. Cyril D'Souza, M.N. Potenza, R.E. Carson, Y. Huang,
D. Matuskey (United States)
- PP02-J07 Metabolism of astrocyte in the patients of multiple sclerosis investigated by 1-C-11 acetate PET
H. Kato, T. Okuno, Y. Nakatsuji, J. Hatazawa (Japan)
- PP02-J08 Modulation of metabolic network activity with deep brain stimulation in Parkinson's disease
J. Ge, C. Zuo, Y. Guan, W. Lin (China)
- PP02-J09 Diagnostic implications of neuronal network diaschisis in patients with Parkinson's disease
A. Majdi, C. Constantinescu, K. Pedersen, L. Wermuth, A. Gjedde, E. Segtnan (Islamic Republic of Iran, Denmark)
- PP02-J10 Lipopolysaccharide increases translocator protein availability and impairs memory function in healthy volunteers
E.A. Woodcock, R.H. Pietrzak, A.T. Hillmer, P. Maruff, R.E. Carson, K.P. Cosgrove (United States, Australia)

Dementia and Neurological Disorders (cont.)

Chair(s) M. Tonietto (France)

- PP02-J11 Graph analysis of ^{18}F -AV1451 PET data in elderly normal subjects
P. Dupont, S. Gabel, J. Schaeverbeke, G. Bormans, K. Serdons, K. Van Laere, R. Vandenberghe (Belgium)
- PP02-J12 Sensitivity of mGluR5 PET in diagnosing Alzheimer's disease severity
J. Choi, M. Lee, HJ. Lee, Y. Jeong, S. Oh, K. Kang, S. Han, K. Nam, K. Lee, Y. Ryu (Republic of Korea)
- PP02-J13 Discrepancy in cerebrovascular and cerebrometabolic phenotype between two mouse models of Alzheimer's disease
H. Ahn, N.M. Tataryn, J.P. Dyke, E. Aronowitz, E.H. Norris, S. Strickland (United States)
- PP02-J14 Correlation between neuronal function measured by FDG PET and synaptic density measured by ^{11}C -UCB-J PET in Alzheimer's disease
MK. Chen, A.P. Mecca, T. Toyonaga, J. Mondal, M. Naganawa, JD. Gallezot, N.B. Nabulsi, Y. Huang, C. van Dyck, R.E. Carson (United States)
- PP02-J15 Brain PET-retina reflectance correlation for the presence of amyloid deposits in normal and Alzheimer's disease human subjects
JP. Soucy, C. Chevretils, JP. Sylvestre, S. Bealieu, T.A. Pascoal, A. Robillard, C. Chayer, P. Rosa-Neto, Z. Nasreddine, S. Gauthier (Canada)
- PP02-J16 Novel tau-PET tracer ^{18}F -s16 combined with amyloid deposition and hypometabolism in tauopathies disease
Y. Wang, S. Yao, M. Cui, L. Cai, N. Zhang, Y. Li, H. Yang, X. Xing, S. Gao (China)
- PP02-J17 In vivo alterations in tau deposition and neuroinflammation in Alzheimer spectrum disorders
T. Terada, M. Yokokura, T. Obi, T. Bunai, H. Shimada, T. Suhara, M. Higuchi, Y. Ouchi (Japan)
- PP02-J18 Comparison of the amyloid brain PET/MR to that of simultaneous PET/CT
K. Chun, E. Kong (Republic of Korea)

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PP02 Metabolism and Blood Flow

Chair(s) K. Smart (United States)

PP02-K01 Initial assessment of a reference-based non-invasive hybrid PET/MRI method for imaging CMRO₂

L. Narciso, T. Ssali, U. Anazodo, H. Iida, K. St Lawrence (Canada, Finland, Japan)

PP02-K02 A non-invasive hybrid PET/MR approach to quantify CBF: translating to clinical studies

T. Ssali, L. Narciso, J. Hicks, U. Anazodo, E. Finger, M.S. Kovacs, M. Guenther, F. Prato, K. St Lawrence (Canada, Germany)

PP02-K03 Comparison of perfusion MRI parameters to best identify PET penumbra and final infarct: a PET/MRI simultaneous study in a stroke model

J. Debatisse, O. Eker, O. Wateau, N. Costes, I. Mérida, M. Verset, A. Oudotte, AC. Lukaszewicz, JB. Langlois, C. Léon, L. Augeul, C. Tourvielle, S. Lancelot, D. Le Bars, T. Troalen, H. Contamin, TH. Cho, E. Canet-Soulas (France)

PP02-K04 Long-term high-sugar diet increases reward-related neural responses to an acute glucose challenge as revealed by simultaneous [¹⁸F]FDG PET/fMRI

T.M. Ionescu, M. Amend, K. Adamatzky, J. Born, M. Hallschmid, Y. Ritze, B.J. Pichler (Germany)

PP02-K05 No effects of a working memory training on functional and metabolic brain networks—a simultaneous PET/MRI study

I. Ripp, M. Emch, W. Qiong, J. Cabello, K. Koch, I. Yakushev (Germany)

PP02-K06 Regional alterations in relative FDG uptake during an apparent steady state

I. Ripp, J. Cabello, M. Emch, K. Koch, I. Yakushev (Germany)

PP02-K07 Exploration of oxygen to glucose index (OGI) as diagnostic basis for neurological diseases with a combined PET/MR system

Q. Qin, M. Zhang, P. Huang, W. Liu, H. Meng, B. Li, B. Sun, M. Lin, M. Xu, Z. Wang, R.C. Stevens, G.J. Thompson (China)

Metabolism and Blood Flow (cont.)

Chair(s) F. Willoch (Norway)

PP02-K08 Reduced hypoxic tissue and cognitive improvement after revascularization surgery for chronic cerebral ischemia

Y. Shimada, M. Kobayashi, K. Yoshida, K. Terasaki, S. Fujiwara, Y. Kubo, T. Beppu, K. Ogasawara (Japan)

- PP02-K09 Feasibility of apparent brain temperature map by ^1H -MRS to detect hemodynamic abnormality in patients with unilateral chronic major cerebral artery steno-occlusive disease
T. Namba, K. Ogasawara, Y. Yoshioka, M. Sasaki, I. Uwano, D. Ishigaki, K. Masakazu, K. Yoshida, S. Fujiwara, K. Terasaki (Japan)
- PP02-K10 Preserved cerebral oxygen metabolism against astrocytic dysfunction: a combination study of ^{15}O -gas PET with ^{14}C -acetate autoradiography
T. Watabe, C. Macaïsa, Y. Liu, V. Romanov, Y. Kanai, G. Horitsugi, H. Kato, E. Shimosegawa, J. Hatazawa (Japan)
- PP02-K11 Insights into the improvement of neurocognitive dysfunction after indirect bypass surgery in adult Moyamoya disease; ^{15}O -gas positron emission tomography study
S. Hara, T. Kudo, S. Hayashi, M. Inaji, T. Maehara, K. Ishii, T. Nariai (Japan)
- PP02-K12 Generation of OEF-like image using H_2^{15}O PET scan data applying machine learning
N. Kudomi, Y. Maeda, Y. Yamamoto, T. Hatakeyama, Y. Nishiyama (Japan)
- PP02-K13 The feature of $^{99\text{m}}\text{Tc}$ -ethyl cysteinate dimer dynamic SPECT for the screening of cerebral circulation in ischemic cerebrovascular disease based on the comparison with ^{15}O -PET
Y. Kokubo, H. Itagaki, K. Saso, Y. Yamada, Y. Sonoda (Japan)
- PP02-K14 Mismatching effects of antihistamines on regional brain glucose metabolism and blood flow in human brain: A combined study with [^{18}F]FDG PET and NIRS
M. Tashiro, N. Suzuki, E. Chen, A. Kikuchi, A. Inami, F.B.M. Nasir, M. Miyake, S. Watanuki, K. Yanai, H. Watabe (Japan)
- PP02-K15 Differentiating primacy CNS lymphoma from glioblastoma—Diagnostic value of combination using ^{18}F -fluorodeoxyglucose positron emission tomography and arterial spin labeling
T. Ono, M. Takahashi, M. Oda, H. Shimizu (Japan)
- PP02-K16 Alterations in cerebral blood flow evoked by dynamic exercise in post-stroke patients implies a mechanism for cerebral autoregulation: a PET study
M. Hiura, T. Nariai, M. Sakata, A. Muta, K. Ishibashi, K. Wagatsuma, T. Tago, J. Toyohara, K. Ishii, Y. Katayama (Japan)
- PP02-K17 The combined effects of capillary transit time heterogeneity and hematocrit on brain oxygenation
H. Angleys, L. Østergaard (Denmark)

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PP02 Novel Modeling and Methods

Chair(s) JS. Liow (United States)

- PP02-L01 Genetically encoded reporter for bimodal optical and PET imaging in the mammalian brain
M. Shimojo, M. Ono, H. Takuwa, K. Mimura, Y. Nagai, M. Fujinaga, T. Kikuchi, M. Okada, C. Seki, M. Tokunaga, J. Maeda, Y. Takado, M. Takahashi, T. Minamihisamatsu, MR. Zhang, Y. Tomita, N. Suzuki, A. Maximov, T. Suhara, T. Minamimoto, N. Sahara, M. Higuchi (Japan, United States)
- PP02-L02 Prediction of rat brain PET image with [¹¹C]Raclopride based on biomathematical modelling approach
M. Shidahara, S. Momosaki, H. Watabe, N. Takai, T. Rokugawa, K. Abe (Japan)
- PP02-L03 High-throughput rat brain PET imaging and automatic spatial normalization of the dopamine D2/3 receptor ligand [¹⁸F]fallypride
D. Lange, I.M. Tejada, M. Xiong, B. Hillebrand, M. Noergaard, S. Baerentzen, V. Shalgunov, M.M. Herth, C. Svarer, M. Palner (Germany, Denmark)
- PP02-L04 Evaluation of two signal multiplexing readouts for a brain PET
Q. Yang, Z. Kuang, X. Wang, Z. Sang, Y. Yang, J. Du (China)
- PP02-L05 A method to create images of occupancy and nondisplaceable binding: a voxel-level extension of the Lassen plot
B. de Laat, E. Morris (United States)
- PP02-L06 Sert binding used as a regressor in modeling the acute pharmacological response to ssris in the human brain using hybrid PET/MR imaging
L. Silberbauer, G. Gryglewski, M. Kloebel, L. Rischka, N. Berroterán-Infante, T. Balber, A. Hahn, M. Hacker, S. Kasper, R. Lanzenberger (Austria)
- PP02-L07 Clustering-based data reduction algorithm with simplified reference tissue model to generate parametric images in amyloid imaging
T. Yamada, Y. Kimura, M. Sakata, T. Nagaoka, M. Nemoto, K. Hanaoka, H. Kaida, K. Ishii (Japan)

PP02 Data Acquisition and Analysis

Chair(s) H. Tsukada (Japan)

- PP02-M01 Comparison of MR attenuation correction methods using CT-atlas vs. zero-TE on quantitative H₂¹⁵O-PET/MRI
H. Okazawa, T. Tsujikawa, Y. Higashino, T. Mori, A. Makino, Y. Kiyono (Japan)

- PP02-M02 The impact of clinical atlas-based MR attenuation correction on the diagnosis of FDG-PET/MR for Alzheimer's diseases—simulation study combining multi-center data and ADNI-data
T. Sekine, A. Buck, G. Delso, B. Kemp, E. ter Voert, M. Huellner, P. Veit-Haibach, S. Kaushik, F. Wiesinger, G. Warnock (Japan, Switzerland, United States, Canada)
- PP02-M03 Gap filling and rebinning algorithms for 3D PET data
J. Gao, Z. Kuang, Y. Yang, Z. Hu (China)
- PP02-M04 SPM statistical analysis in focus side diagnosis of temporal lobe epilepsy with PET
S. Hayashi, M. Inaji, T. Nariai, K. Wagatsuma, M. Sakata, K. Ishii, T. Maehara (Japan)
- PP02-M05 Super-resolution PET/CT image based on dictionary learning and random forests
Z. Hu, Y. Wang, Y. Yang, D. Liang, X. Liu, H. Zheng (China)
- PP02-M06 Dictionary learning and patch-based regularization image reconstruction for positron emission tomography
Z. Hu, W. Zhang, J. Gao, Y. Yang, D. Liang, X. Liu, H. Zheng (China)
- PP02-M07 Improving analysis of neuroimaging applications of PET/CT scanners with CT-driven information
H. Kuwabara, A. Nandi, Z. Brinson, J. Elmore, A. Mathur, M. Mohamed, W. Ye, J. Basic, H. Valentine, D.F. Wong (United States)

Data Acquisition and Analysis (cont.)

Chair(s) C. DeLorenzo (United States)

- PP02-M08 The impact of different preprocessing strategies in PET neuroimaging: A [¹¹C] DASB-PET study
M. Nørgaard, M. Ganz, C. Svarer, V.G. Frokjaer, D.N. Greve, S.C. Strother, G.M. Knudsen (Denmark, United States, Canada)
- PP02-M09 Edge artifacts attributable to point spread function correction included in regularized reconstruction for brain PET imaging
M. Sakata, K. Wagatsuma, A. Hirayama, H. Kawakami, J. Toyohara, K. Ishii (Japan)
- PP02-M10 Quantitative validation of standardized uptake value ratio derived from [¹⁸F]Florbetapir images acquired over a short duration
K. Wagatsuma, M. Sakata, K. Ishibashi, K. Miwa, K. Ishii (Japan)

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PP02-M11 The primary visual cortex is a potential pseudo-reference region for in vivo imaging of activated microglia in frontotemporal dementia using 18F-FEPPA PET
U.C. Anazodo, J. Hicks, L. Liu, F.S. Prato, P. Rusjan, E. Finger (Canada)

PP02-M12 Brain PET-MR attenuation correction with deep learning
S.N. Yaakub, C.J. McGinnity, K. Beck, I. Mérida, E. Dunston, M. Muffoletto, A. Qureshi, S. Bhattacharya, J. MacKewn, A. Hammers (United Kingdom, France)

PP02-M13 Non-invasive simplified metrics as a surrogate for validation of reference regions for [¹⁸F]Flortaucipir and [¹⁸F]Florbetapir brain PET studies
S.S.V. Golla, B.M. de vries, T. Timmers, E.E. Wolters, R. Ossenkoppele, S. Verfaillie, R.C. Schuit, A.D. Windhorst, B.N.M. van Berckel, R. Boellaard (Netherlands)

PP02-M14 Controlling the false positive rate for lp-ntPET: a correction to goodness of fit metrics for “effective” number of parameters
H. Liu, E.D. Morris (United States)

PP02 **Imaging: Methodology**

Chair(s) C.J. McGinnity (United Kingdom)

PP02-N01 Progress in spatial resolution for imaging the human brain
R. Lecomte, É. Gaudin, M. Toussaint, C. Thibaudeau, L. Arpin, JD. Leroux, J. Bouchard, A. Samson, R. Fontaine, L.&G. Teams (Canada)

PP02-N02 Imaging HDACs *in vivo*: cross-validation of the [¹¹C]martinostat radiotracer in the pig brain
L.L. Donovan, J. Magnussen, A. Dyssegaard, S. Lehel, J.M. Hooker, G.M. Knudsen, H.D. Hansen (Denmark, United States)

PP02-N03 Human biodistribution and radiation dosimetry of the 5-HT_{2A} receptor agonist Cimbi-36 labeled with carbon-11 in two positions
A. Johansen, S. Holm, B. Dall, S.H. Keller, J.L. Kristensen, G.M. Knudsen, H.D. Hansen (Denmark)

PP02-N04 Transient modulation of cerebral blood flow does not alter [¹¹C]PBR28 radiotracer binding
C.Y. Sander, A. Torrado-Carvajal, S. Bovo, J.M. Hooker, M. Loggia (United States, Italy)



- PP02-N05 Imaging microglia activation in humans, with TSPO PET, after Interferon-alpha administration
M.A. Nettis, C.M. Pariante, F. Turkheimer, V. Mondelli,
M. Veronese (United Kingdom)
- PP02-N06 Biodistribution, dosimetry and brain kinetics of [11C]-JNJ-63779586, a bace inhibitor and sensitive P-gp and BCRP substrate
N. Mertens, M. Schmidt, G. Bormans, K. Van Laere, E. Mannaert,
M. Koole (Belgium)
- PP02-N07 Detection of multiple embolic infarctions caused by endocarditis using ¹⁸F-FDG PET/CT
K. Choi, J. Kim (Republic of Korea)

PB03

Neuroprotection I: Stroke

Chair(s) M. Xu (United States)

- PB03-A01 A novel, injectable carbon nanoparticle demonstrates electron shuttling capabilities: a potential therapeutic “nanozyme” for mitochondrial protection in ischemic injury
P.J. Derry, E.A. McHugh, A.V. Liopo, J.M. Tour, T.A. Kent (United States)
- PB03-A02 Temporal therapeutic window for calcium release-activated calcium channel inhibition against experimental stroke
A. Mizuma, R. Kacimi, K. Kurisu, K. Stauderman, M.J. Dunn, S. Hebbar, M.A. Yenari (United States, Japan)
- PB03-A03 Female mice benefit from calcium release-activated calcium channel inhibition following focal cerebral ischemia
A. Mizuma, R. Kacimi, K. Stauderman, M.J. Dunn, S. Hebbar, M.A. Yenari (United States, Japan)
- PB03-A04 Neuroprotective effects of SMTP-44D in mice stroke model in relation to neurovascular unit and trophic coupling
X. Shi, Y. Ohta, J. Shang, R. Morihara, Y. Nakano, X. Liu, T. Yamashita, E. Suzuki, K. Hasumi, K. Abe (Japan)
- PB03-A05 Farnesiod X receptor knockout protects brain against ischemia-reperfusion injury through reducing neuronal apoptosis in mice
H. Shan, M. Zang, X. Shi, H. Shen, Q. Zhang, J. Pu, Z. Zhang, GY. Yang, Y. Tang, Y. Wang (China)
- PB03-A06 L-glutamine protects mouse brain from ischemic injury via up-regulating of heat shock protein 70
L. Luo, Y. Li, H. Shan, GY. Yang, Y. Tang, Y. Wang (China)
- PB03-A07 Troxerutin exerts neuroprotection at middle cerebral artery occlusion/reperfusion model in rats
Y. Duan, Y. Ding, D. Wu, X. Ji (China, United States)
- PB03-A09 Neuroprotective effects of a novel carnosine-hydrazide derivative on hippocampal CA1 damage after transient cerebral ischemia
M. Morioka, K. Noguchi, K. Orito, M. Fujita, T. Ali, M. Ohtsuka (Japan)
- PB03-A10 Drp-1, a potential therapeutic target for brain ischaemic stroke
W. Zuo (China)

- PB03-A11 Contribution of astrocytes related to neuroprotection against delayed neuronal cell death in hippocampus
Y. Fukushi, C. Sun, Y. Wang, S. Yamamoto (Japan, China)
- PB03-A12 By the demonstration of its anti-ischemic potential, the spermidine analog GC7 identifies a new targetable pathway against stroke
N. Blondeau, M. Bourourou, E. Gouix, N. Melis, C. Heurteaux, M. Tauc (France)

PB03 Neuroprotection II: Stroke

Chair(s) K. South (United Kingdom)

- PB03-B01 RBM3 acts a molecular marker of hypothermia associated with good outcome in ischemic stroke
F. Campos, P. Hervella, P. Avila, I. Lopez-Loureiro, M. Rodriguez-Perez, E. Rodriguez-Castro, R. Iglesias-Rey, T. Sobrino, J. Serena, J. Castillo (Spain)
- PB03-B02 Nicotine mediates neuroprotection in normal weight and obesity ischemic rats: involvement of AMPK, endoplasmic reticulum stress and autophagy pathways
T. Sobrino, T. López-González, E. Rodríguez-Castro, M. Pérez-Mato, R. Iglesias-Rey, F. Campos, M. López, J. Castillo (Spain)
- PB03-B03 Nicotine alters brain energy metabolism and exacerbates ischemic injury in female rats
F. Diaz, A.P. Raval (United States)
- PB03-B04 The PERK branch of the unfolded protein response confers neuroprotection in ischemic stroke through modulation of protein synthesis and autophagy
Y.C. Wang, Y. Shen, W. Paschen, H. Sheng (United States)
- PB03-B05 New peptide PAR1-agonist demonstrates neuroprotective effect on ischemia injury
L. Gorbacheva, M. Galkov, E. Kiseleva, M. Gulyaev (Russian Federation)
- PB03-B06 Neuropeptide Y-mediated neuroprotection in cerebral ischemia
C.Y.C. Wu, C.T. Citadin, H.E. Possoit, R.H.C. Lee, H. Lin (United States)
- PB03-B07 Stearic acid methyl ester affords neuroprotection and improves functional outcomes after cardiac arrest
PY. Chen, C.Y. Wu, H.E. Possoit, C.T. Citadin, R. Azizbayeva, CH. Liu, R.H. Lee, J.T. Neumann, H. Lin (United States, Taiwan)
- PB03-B08 Elovonoids are a novel class of homeostatic lipid mediators that induce neuroprotection in experimental ischemic stroke
N.G. Bazan, A. Obenaus, L. Khoutorova, N.A. Petasis (United States)

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- PB03-B09 Peripheral administration of IL-13 modulates inflammation and protect against ischemic stroke
H. Dhungana, N. Kolosowska, M. Keuters, G. Goldsteins, T. Malm, J. Koistinaho (Finland)
- PB03-B10 Role of phagocytosis in murine stroke: first experience with registered reports and group sequential designs in preclinical cerebrovascular research
C. Harms, J. Emmrich, J. Neher, P. Boehm-Sturm, M. Endres, U. Dirnagl (Germany)
- PB03-B11 Neuroprotective effects of combination therapy of regional cold perfusion and hemoglobin-based oxygen carrier administration on rat transient cerebral ischemia
Y. Ito, T. Abumiya, T. Komatsu, R. Hunaki, M. Gekka, T. Sugiyama, K. Kurisu, M. Kawabori, N. Nakayama, K. Houkin (Japan)
- PB03-B12 Unravelling the (sub)cellular mechanisms of low frequency electromagnetic stimulation as ischemic stroke therapy
H. Kemps, Y. Dillen, L.P. Font, B. Brône, R. Lemmens, A. Bronckaers (Belgium, Cuba)

PB03

Neuroprotection III: Other Diseases

Chair(s) S. Seno (United States)

- PB03-C01 Thermal mapping during brain cooling for therapeutic hypothermia
J.J. Walsh, Y. Huang, J.W. Simmons, J.A. Goodrich, B. McHugh, D.L. Rothman, J.A. Eleftheriades, F. Hyder, D. Coman (United States)
- PB03-C02 Activation of GPR55 induces neuroprotection of hippocampal neurogenesis and immune responses of neural stem cells following chronic systemic inflammation
Y. Persidsky, J. Hill, V. Zuluaga-Ramirez, S. Gajghate, M. Winfield, S. Rom, U. Sriram (United States)
- PB03-C03 Neuroprotective potential of curcumin against copper-induced astroglial, neuronal and behavioral impairments in rats
A. Abbaoui, H. Gamrani (Morocco)
- PB03-C04 Identification of novel neuroprotective drug combinations for the treatment of ischemic stroke through a systems biology-based drug repositioning approach
A. Simats, L. Ramiro, L. Artigas, R. Valls, T. Sardon, A. Rosell, T. García-Berrocoso, J. Montaner (Spain)

PB03-C05 Exercise increases circulating levels of the neuroprotective LG3 peptide
T.J. Parker, D.A. Broszczak, J.A. Broszczak, J. Peake, T. Green,
 G. Bix (Australia, United States)

PB03 Neurorepair

Chair(s) K.C. Morris-Blanco (United States)

PB03-D01 Characterizing the role of B cell-derived brain-derived neurotrophic factor (BDNF) following ischemic injury
V.O. Torres, T.K. Matsui, X. Kong, K.R. Zuurbier, A. Cajigas-Hernandez,
 S. Nandam, M.P. Goldberg, E. Mori, A.M. Stowe (United States, Japan)

PB03-D02 Brain pericytes after ischemic stroke: a possible role as multipotent stem cells to differentiate into functional neurons
T. Nakagomi, A. Nakano-Doi, T. Takagi, M. Beppu, H. Nishie, R. Sakuma,
 Y. Maeda, Y. Minato, N. Nakagomi, T. Matsuyama (Japan)

PB03-D03 Astrocyte-derived exosomes treated with a semaphorin 3A inhibitor enhance stroke recovery via prostaglandin D2 synthase
Y. Ueno, K. Hira, R. Tanaka, N. Miyamoto, K. Yamashiro, T. Inaba, T. Urabe,
 H. Okano, N. Hattori (Japan)

PB03-D04 Transcranial focused ultrasound stimulation regulates brain plasticity in mice after middle cerebral artery occlusion
J. Wang, G. Li, M. Mamtilahun, L. Deng, L. Jiang, W. Qiu, H. Zheng, Q. Xie,
 GY. Yang (China)

PB03-D05 M2 microglia derived exosome improves neurobehavioral recovery through promoting neurogenesis in a mouse model of middle cerebral artery occlusion
Y. Song, Z. Li, W. Li, Y. Wang, Z. Zhang, Y. Tang, GY. Yang (China)

PB03-D06 Rehabilitation after cerebral ischemia enhances neurogenesis and cortical angiogenesis with a role for angiogenin in SVZ-neural precursor cells pools and endothelial progenitor cell function
A. Rosell, M. Gabriel-Salazar, A. Grayston, C. Costa, T. Lei, E. Medina,
 M. Comabella, J. Montaner (Spain)

PB03-D07 Spatio-temporal evolution of neural oscillations power in the recovering cortex after stroke
J. Chuquet, M. Hazime, M. Alasoadura, P. Quilichini, J. Leprince,
 D. Vaudry (France)

PB03 **White Matter Injuries I: SVD**

Chair(s) M. Veronese (United Kingdom)

PB03-E01 Microvascular shunts in the pathogenesis of cerebral ischemia of cerebral small vessel disease to leukoaraiosis, MS, SLe, MCI, VaD, AD white matter hyperintensities

E.M. Nemoto, D.E. Bragin, M.V. Kameneva (United States)

PB03-E02 Inflammation, demyelination, and their role in cerebral small vessel disease. a postmortem combined (ultra-)high-field MRI, polarized light imaging, and immunohistochemistry approach

M. Wiesmann, G. Solé Guardia, E. Janssen, A. Veltien, J. Mollink, P.J.W.C. Dederen, A. Heerschap, A.J. Kiliaan, FE. de Leeuw (Netherlands)

PB03-E03 Accumulation of white matter hyperintensities is correlated with decreased structural brain network efficiency in patients with cerebral small vessel disease

R. Liu, R. Qin, Y. Gu, B. Zhang, Y. Xu (China)

PB03-E04 White matter hyperintensities are associated with impaired oxygenation and worse capillary function than surrounding white matter in aging and late-onset depression

R.B. Dalby, S.F. Eskildsen, P. Videbech, J. Frandsen, R. Rosenberg, L. Sørensen, L. Ostergaard (Denmark)

PB03-E05 Time-domain near-infrared spectroscopy in subjects with cerebral small vessel disease

G. Giacalone, M. Zanoletti, R. Re, D. Contini, L. Spinelli, A. Torricelli, L. Roveri (Italy)

PB03-E06 Quantitative regional cerebral flow measured using ^{123}I -IMP SPECT and neuropsychological profile in patients with cerebral small vessel disease

M. Seki, H. Yoshizawa, M. Kubota, T. Hoshino, Y. Shirai, S. Toi, K. Abe, K. Kitagawa (Japan)

PB03 **White Matter Injuries II: Others**

Chair(s) A.K. Haberg (Norway)

PB03-F01 The dynamics of revascularization after white matter infarction monitored in Flt1-tdsRed and Fik1-GFP mice

H. Shimauchi-Ohtaki, M. Kurachi, M. Naruse, K. Shibasaki, S. Sugio, K. Matsumoto, M. Ema, Y. Yoshimoto, Y. Ishizaki (Japan)

- PB03-F02 Leukocyte RNA expression is associated with cerebral white matter hyperintensity progression over time
G. Jickling, B. Ander, X. Zhan, B. Stamova, H. Hull, C. DeCarli, F. Sharp (Canada, United States)
- PB03-F03 Microglia exacerbate white matter injury via complement C3/C3aR pathway after hypoperfusion
LY. Zhang, J. Pan, Y. Song, M. Mamtilahun, Y. Zhu, A. Venkatesh, K. Jin, Y. Wang, Z. Zhang, GY. Yang (China, United States, United Kingdom)
- PB03-F04 White matter damage and microglial alterations after concussive brain injury
H. Takase, R. Ohtomo, J. Chung, X. Wang, E.H. Lo, M.J. Whalen, K. Arai, J. Lok (United States, Japan)
- PB03-F05 The effects of astrocyte and oligodendrocyte lineage cell interaction on white matter injury under chronic cerebral hypoperfusion
N. Miyamoto, S. Magami, Y. Ueno, K. Hira, R. Tanaka, K. Yamashiro, H. Oishi, T. Urabe (Japan)
- PB03-F06 Epigenetic control in differentiation of oligodendrocyte progenitor cells and modulation of neuroinflammation by sodium valproate treatment in mice after white matter injury
GH. Wang, LZ. Ding, ZI. Jiang, QQ. Luo, CY. Gao, LH. Shen (China)
- PB03-F07 Cardiac rehabilitation is a potential potent neuromodulator of disrupted white matter macrostructure in adults with coronary artery disease
U.C. Anazodo, M. Dacey, S. Poirier, N. Suskin, C. McIntyre, K.S. St. Lawrence, J.K. Shoemaker (Canada)
- PB03-F08 Treadmill exercise suppresses cognitive decline and increases white matter oligodendrocyte precursor cells in a mouse model of prolonged cerebral hypoperfusion
R. Ohtomo, G. Ohtomo, H. Takase, G. Hamanaka, A. Iwata, J. Lok, E.H. Lo, K. Arai (United States, Japan)
- PB03-F09 Biphasic roles of pentraxin 3 in cerebrovascular responses after white matter stroke
A. Shindo, R. Ohtomo, H. Takase, G. Hamanaka, T. Maki, N. Egawa, J. Lok, H. Tomimoto, E.H. Lo, K. Arai (United States, Japan)
- PB03-F10 Functional efficiency may mediate the association between white matter hyperintensities and cognitive impairment
H. Chen (China)
- PB03-F11 Effect of hypertension on white matter microstructure and its correlation with cognitive function
J. Zou, X. Chen, Y. Xu (China)

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PB03-F12 The effect of physical fitness (VO_2) on white matter hyperintensity volume and cognition in older adults from the generation100 study

A. Arild, T. Hansen, D. Stensvold, U. Wisløff, A.K. Haberg (Norway)

PB03-F13 Does working memory training impact white matter in aging? a longitudinal diffusion tensor imaging study

M. Emch, Q. Wu, I. Ripp, A. Menegaux, I. Yakushev, K. Koch (Germany)

PB03

Clinical Studies

Chair(s) K. Matsuo (Japan)

PB03-G01 Plaque characteristics of patients with symptomatic mild carotid artery stenosis

H. Takai, Y. Tao, K. Kinoshita, S. Hirai, K. Hara, S. Matsubara, J. Uemura, Y. Yagita, H. Nishimura, M. Uno (Japan)

PB03-G02 Novel examination method using carotid ultrasonography for intracranial vertebrobasilar artery stenosis validation

K. Matsuzono, K. Furuya, Y. Anan, K. Miura, T. Ozawa, T. Mashiko, H. Shimazaki, R. Koide, R. Tanaka, S. Fujimoto (Japan)

PB03-G03 Bursting the bubble: cerebral air emboli during cardiac surgery are not significantly associated with new MRI brain lesions, cerebral microbleeds or cognitive decline

C.E. Hannon, C. Banahan, N. Patel, J. Janus, J.P. Hague, D. Marshall, M.A. Horsfield, E.M.L. Chung (United Kingdom)

PB03-G04 Influence of cerebral aneurysms on the redistribution of cerebral blood flow: clinical measurements

D. Parshin, A. Chupakhin, K. Orlov, **A. Khe**, A. Cherevko (Russian Federation)

PB03-G05 Regional temperature, cerebral blood flow and metabolism responses to cortical spreading depolarization in human brain

F. Oka, H. Ishihara, T. Inoue, K. Sugimoto, T. Yamakawa, M. Ninagawa, E. Suehiro, S. Nomura, M. Suzuki (Japan)

PB03-G06 VCAM-1 targeted alpha-particle therapy for early brain metastases

A. Corroyer-Dulmont, S. Valable, N. Falzone, AM. Frelin, O. Tietz, J. Toutain, M. Sarmiento Soto, N.R. Sibon, K.A. Vallis, B. Myriam (France, United Kingdom)

PB03-G07 Involvement of phosphorylated cPLA₂ in the novel action mechanism of temozolomide

S. Tsuji, Y. Ohno, T. Yamada, S. Nakamura, M. Saio, T. Iwama, M. Shimazawa, H. Hara (Japan)

PB03-G08 Riluzole acts synergistically with temozolomide against MGMT-positive glioblastoma
T. Yamada, S. Tsuji, S. Nakamura, M. Shimazawa, T. Iwama, H. Hara (Japan)

PB03-G09 Endovascular stenting of the superior sagittal sinus stenosis by meningioma invasion presenting intracranial hypertension; a case report
Y. Takahashi, Y. Suda, A. Saito, M. Oda, H. Shimizu (Japan)

Clinical Studies (cont.)

Chair(s) KJ. Yin (United States)

PB03-G10 Modified whole-brain network organization in focal epilepsy: A systematic review, meta-analysis and meta-regression
G. Slinger, W.M. Otte, K.P. Braun, E.G. van Diessen (Netherlands)

PB03-G11 Functional brain network topology of deaf and hearing in relation to sign language experience
M.R.T. Sinke, J.W. Buitenhuis, F. van der Maas, J. Nwiboko, R.M. Dijkhuizen, E. van Diessen, W.M. Otte (Netherlands, Guinea-Bissau, Nigeria)

PB03-G12 Cerebrovascular reactivity decrease sharper in young patients with obstructive sleep apnea
N. Li, Y. Liu (China)

PB03-G13 Changes in cerebral and muscular hemodynamics induced by central sleep apnea events under normal sleep and under continuous positive airway pressure titration
Z. Zhang, M. Qi, G. Hügli, R. Khatami (Switzerland)

PB03-G14 Cerebral blood flow in adolescents with post concussive symptoms is related to recovery time
M.E. Favre, P.P. Breen, G.J. Browne, A. Fyffe, J. Magalhaes, J.M. Serrador (United States, Australia)

PB03-G15 Potential serum biomarkers for the prediction of escitalopram efficacy on depression
M. Yu (China)

PB03-G16 Clinical evaluation of a prototype 'brain tv' (tissue velocimetry) ultrasound system for emergency assessment of suspected acquired brain injury
M.E. Alharbi, C. Banahan, J. Ince, J. Minhas, P. Turner, M. Oura, T. Coats, T. Robinson, E. Chung (United Kingdom, Japan)

PB03-G17 Novel c-Jun N-terminal kinase inhibitor IQ-1S modulates human platelet aggregation
 O.N. Ogurkova, Y.J. Anfinogenova, A.I. Khlebnikov, I.A. Schepetkin, T.E. Suslova, **D.N. Atochin** (Russian Federation, United States)

PB03-G18 A mild orthostatic challenge shows cerebrovascular autoregulation impairment on the ipsilesional hemisphere of ischemic stroke patients
C. Gregori-Pla, R.C. Mesquita, C.G. Favilla, D.R. Busch, I. Blanco, L. Kobayashi Frisk, P. Camps-Renom, M.T. Mullen, J. Martí-Fàbregas, L. Prats-Sánchez, A. Martínez-Domeño, R. Delgado-Mederos, J.A. Detre, A.G. Yodh, T. Durduran (Spain, Brazil, United States)

PB03-G19 Neuroprotective effects of IQ-1S in the model of global cerebral ischemia/reperfusion
D.N. Atochin, G.A. Chernysheva, V.I. Smolyakova, O.I. Aliev, A.N. Osipenko, A.I. Khlebnikov, Y.J. Anfinogenova, I.A. Schepetkin, M.B. Plotnikov (United States, Russian Federation)

PB03 **Neurological Diseases**

Chair(s) K. Kitagawa (Japan)

PB03-H01 Generation and characterization of the human iPSC line from blood cells of a CADASIL patient carrying a NOTCH3 mutation
H. Fernández-Susavila, C. Mora, S. Arias-Rivas, A. Dopico-López, A. Bugallo-Casal, T. Sobrino, P. Dell'Era, J. Castillo, F. Campos (Spain, Italy)

PB03-H02 Hepcidin decreases rotenone induced α -synuclein accumulation via autophagy in SH-SY5Y cells
QQ. Luo, JN. Hu, GH. Wang, L. Zhu (China)

PB03-H03 Pathological study and genetic analysis of myotonic dystrophy Type I
R. Wang, F. Niu, L. Chang, Z. Liu, Y. Xu (China)

PB03-H04 Olfactory type g-protein alfa subunit related changes in the striatum underlie the genesis of L-DOPA-induced dyskinesia
R. Morigaki, S. Okita, H. Mure, Y. Takagi, S. Goto (Japan)

PB03-H05 FABP3 ligands inhibiting α -synuclein oligomerization in Neuro2A cells
A. Cheng, Y. Shinoda, K. Matsuo, K. Fukunaga (Japan)

PB03-H06 Beneficial and protective role of Ashwagandha (roots of Withania somnifera) against 3-nitropropionic acid-induced oxidative stress in a rat model of Huntington's disease
N. Kumar, R. Khanna (India)

PB03-H07 Possible remyelination by inflammatory-induced endogenous neural stem cells of spinal cord in a mouse model of experimental autoimmune encephalomyelitis
Y. Maeda, N. Nakagomi, A. Nakano-Doi, H. Ishikawa, Y. Tatsumi, H. Yoshikawa, T. Matsuyama, F. Gomi, T. Nakagomi (Japan)

- PB03-H08 Progranulin is involved in α -synuclein pathology through autolysosome formation
T. Ohba, S. Nakamura, M. Shimazawa, H. Hara (Japan)
- PB03-H09 Therapeutic benefits of edaravone for enhanced oxidative stress in mice model of amyotrophic lateral sclerosis
Y. Ohta, E. Nomura, J. Shang, T. Feng, X. Liu, X. Shi, N. Hishikawa, M. Takemoto, T. Yamashita, K. Abe (Japan)
- PB03-H10 Arterial spin labeling MR imaging for the detection of cerebellar hypoperfusion in patients with spinocerebellar degeneration
M. Ikawa, H. Kimura, K. Sugimoto, T. Tsujikawa, T. Hamano, M. Yoneda, H. Okazawa, Y. Nakamoto (Japan)

PB03 Cerebral Ischemia I: Reperfusion

Chair(s) B. Gyanwali (Singapore)

- PB03-J01 Effect of yokukansan on nitric oxide production and hydroxyl radical metabolism during cerebral ischemia and reperfusion in mice
Y. Ito, C. Kitabayashi, H. Kawasaki, A. Tanaka, R. Nishioka, K. Ishizawa, M. Hirayama, K. Takahashi, T. Yamamoto, N. Araki (Japan)
- PB03-J02 Beneficial effect of chlorpromazine and promethazine (C+P) on hyperglycolysis and activation of NADPH- Nicotinamide adenine dinucleotide phosphate (NADPH) oxidase (NOX) in ischemic stroke
X. Geng, L. Guan (China, United States)
- PB03-J03 The importance and limitation of reperfusion in crafting a neuroprotection strategy after ischemic injury
X. Geng, L. Guan, C. Stone, Y. Ding (China, United States)
- PB03-J04 The impact of collaterals on reperfusion after stroke
N.F. Binder, M. El Amki, M.T. Wyss, B. Weber, S. Wegener (Switzerland)
- PB03-J05 Effect of reperfusion on the associations between selected outcome measures following middle cerebral artery occlusion in mice
H. Kim, **S.R. Zhang**, X. Li, T.G. Phan, G.R. Drummond, C.G. Sobey (Australia)
- PB03-J06 Transdural revascularization by cranial burr hole and systemic erythropoietin pretreatment in mild and severe ischemic rat model
G. Park, E. Choi, H. Shin, D. Kim, M. Choi, J. Hong (Republic of Korea)
- PB03-J07 Postoperative luxury perfusion on arterial spin labeling MRI indicates reperfusion injury and hemorrhagic complication after endovascular mechanical thrombectomy
E. Sadakata, N. Horie, K. Suyama, Y. Morofuji, Y. Tateishi, T. Izumo, M. Morikawa, A. Tsujino, T. Matsuo (Japan)

- PB03-J08 Intrinsic cerebral hemodynamic changes in the acute stage after combined revascularization surgery for adult moyamoya disease: *N-isopropyl-p-[¹²³I] iodoamphetamine single-photon emission computed tomography study*
M. Fujimura, T. Tominaga (Japan)
- PB03-J09 Prediction of postoperative hyperperfusion after surgical revascularization for moyamoya disease and carotid stenosis—A SPECT study
D. Kashiwazaki, S. Yamamoto, H. Saito, N. Akioka, N. Kuwayama, K. Noguchi, S. Kuroda (Japan)
- PB03-J10 Characteristics of cerebral hemodynamics assessed by CT perfusion in moyamoya disease
T. Mikami, A. Sasagawa, N. Mikuni (Japan)
- PB03-J11 Intra- and extra-hospital improvement in patients with acute ischemic stroke: influence of reperfusion therapy and molecular mechanisms associated
P. Hervella, E. Rodríguez-Castro, M. Rodríguez-Yáñez, S. Arias, M. Santamaria, I. López-Dequidt, T. Sobrino, F. Campos, J. Castillo, R. Iglesias-Rey (Spain)

PB03

Cerebral Ischemia II: Animal Models

Chair(s) B.A. Sutherland (Australia)

- PB03-K01 Temporally and spatially-distinct blood flow impairment and their impact on brain structure and function: from single-vessel occlusion to hypertension
P. Blinder (Israel)
- PB03-K02 Increased stroke vulnerability of N-lineage C57BL/6 mouse substrains. refined timeline for fixation of responsible mutation(s) and evidence for sex-specific parent-of-origin effects
L. Zhao, M.K. Mulligan, T.S. Nowak, Jr. (United States)
- PB03-K03 Balanced single-vector co-delivery of VEGF/PDGF-BB improves functional collateralization in chronic cerebral ischemia
A. Marushima, M. Nieminen, I. Kremenetskaia, R. Gianni-Barrera, J. Woitzik, G. von Degenfeld, A. Banfi, P. Vajkoczy, N. Hecht (Germany, Japan, Switzerland)
- PB03-K04 Potential role of HMGB1 in astrocytic TLR4 signaling following transient focal cerebral ischemia
B.M. Famakin, O. Tsybalyuk, N. Tsybalyuk, S. Ivanova, S. Woo, V. Gerzanich, J.M. Simard (United States)

- PB03-K05 Loss of Wip1 aggravates brain injury after ischemia/reperfusion by overactivating microglia
F. Yan, L. Zhu (China)
- PB03-K06 TNF alpha is not the mediator of microglia-induced delayed neuronal death after cardiac arrest
K. Matsushita, I.P. Koerner (United States)
- PB03-K07 Positive correlation between PDGFR β -mediated tissue repair and neurorestoration in a permanent middle cerebral artery occlusion stroke model in mice
T. Shibahara, T. Ago, Y. Wakisaka, K. Nakamura, J. Kuroda, K. Yamanaka, M. Takashima (Japan)
- PB03-K08 Investigation of inflammasome expression in chronic cerebral hypoperfusion
H. Matsuyama, A. Shindo, T. Shimada, K. Yata, H. Wakita, H. Tomimoto (Japan)
- PB03-K09 Molecular switching from ubiquitin-proteasome to autophagy pathways in mice stroke model
X. Liu, T. Yamashita, J. Shang, X. Shi, R. Morihara, K. Abe (Japan)

PB03 **Cerebral Ischemia III: Animal Models**

Chair(s) P. Bazzigaluppi (Canada)

- PB03-L01 Role of brain-type fatty acid binding protein in ischemic neuronal injury and ischemia-induced neurogenesis after transient forebrain ischemia
H. Yoshioka, T. Kato, K. Kanemaru, Y. Owada, H. Kinouchi (Japan)
- PB03-L02 The role of oligodendrocyte precursor cells in angiogenesis after brain ischemia
N. Kishida, T. Maki, Y. Takagi, K. Yasuda, H. Kinoshita, T. Ayaki, T. Noro, Y. Kinoshita, Y. Ono, H. Kataoka, K. Yoshida, E. Lo, K. Arai, S. Miyamoto, R. Takahashi (Japan, United States)
- PB03-L03 Temporal profile of endogenous multilineage-differentiating stress enduring (Muse) cells in mouse middle cerebral artery (MCA) occlusion model
M. Koh, S. Kuroda (Japan)
- PB03-L04 Effects of spreading depolarization on development of cerebral infarction after middle cerebral artery occlusion in Na⁺, K⁺-ATPase α 2 subunit-deficient mice
M. Unekawa, Y. Tomita, Y. Izawa, C. Tang, K. Masamoto, I. Kanno, K. Ikeda, K. Kawakami, N. Suzuki, J. Nakahara (Japan)
- PB03-L05 Non-spreading anoxic depolarization: A novel phenomenon?
Á. Menyhárt, E. Farkas (Hungary)

- PB03-L06 Therapeutic potential of valproic acid against cerebral ischemia: Beyond epileptic disorders
S. Suda, C. Nito, Y. Sakamoto, M. Nakajima, K. Sowa, S. Takahashi, S. Yokobori, H. Yokota, T. Okada, K. Kimura (Japan)
- PB03-L07 Effects of edaravone on NO production, OH⁻ metabolism and nNOS activity during cerebral ischemia and reperfusion
H. Kawasaki, Y. Ito, C. Kitabayashi, R. Nishioka, M. Hirayama, K. Takahashi, T. Yamamoto, N. Araki (Japan)
- PB03-L08 Posterior cerebellar strokes in mice cause memory and hippocampal synaptic plasticity impairments
N. Quillinan, M. Moreno-Garcia, J. Orfila, R. Schmidt, M. Kubesh, O. Patsos, C. Schroeder, R. Dietz (United States)
- PB03-L09 Assessing functional deficits in the mild mouse dMCAO model
J. Ahmed, T.D. Farr (United Kingdom)
- PB03-L10 Crossed cerebellar diaschisis following transient middle cerebral artery occlusion in rats
N. Kidani, K. Sugiu, T. Hishikawa, T. Yasuhara, M. Hiramatsu, I. Date (Japan)
- PB03-L11 Local cooling inhibits the expression of necroptosis-related protein after transient spinal cord ischemia in rabbits
Y. Motomatsu, M. Sakurai, H. Onitsuka, K. Abe, A. Shiose (Japan)

PB03

Cerebral Ischemia IV: Cellular and Molecular

Chair(s) S. Roth (Germany)

- PB03-M01 Single cell transcriptome profiling of brain mononuclear cells after ischemic stroke in type 2 diabetic mice
J. Liu, S. Omodaka, A. Kanoke, S. Wong, G. Rabiller, D. Aran (United States, Japan)
- PB03-M02 Altered clock expression with aging and after ischemic stroke in female mice
H. Kim, J.A. Shin, J.S. Han, D.M. Han, E.M. Park (Republic of Korea, United States)
- PB03-M03 Focal ischemia alters the abundance of the epitranscriptomic mark m⁶A on mRNAs in mouse brain
R. Vemuganti, A.K. Chokkalla, S.L. Mehta, T. Kim, B. Chelluboina (United States)

- PB03-M04 Caveolin-1 role in neovascularization and astrogliosis after stroke and effects of cavtratin as a neuroprotectant
C.E. Blochet, L. Buscemi, T. Clement, J. Badaut, L. Hirt (Switzerland, France, United States)
- PB03-M05 Do death and subsequent contraction of brain pericytes contribute to “no-reflow”? A study on rat brain pericytes in primary culture
Z. Redzic, M. Heyba, L. Al-Abdullah, A. Henkel (Kuwait)
- PB03-M06 Roles of lncRNA-1810034E14Rik in modulating functions of microglial cells after ischemic stroke and the underlying mechanisms
X. Zhang, J. Jin, X. Zhu, X. Cao, Y. Xu (China)
- PB03-M07 Differential susceptibility of human neural progenitors and mature neurons to ischaemic injury
D.W. Howells, Y. Liu, A. Antonic, A.E. Michalskae, M. Dottori (Australia)
- PB03-M08 Monoacylglycerol lipase inhibitors reduce neuroinflammatory response in experimental ischemic stroke
SH. Choi, Y. Mou, A.C. Silva (United States)
- PB03-M09 Combined genetic deletion of Th2 cytokines does not affect ischemic injury in mice
 C. Perego, S. Fumagalli, K. Miteva, M. Kallikourdis, **MG. De Simoni** (Italy)
- PB03-M10 Possible association of PCSK9 expression and inflammation in acidic condition by ischemic stroke
A. Mizuma, N. Fujii, S. Kohara, H. Yuzawa, E. Nagata, S. Takizawa (Japan)

PB03

Cerebral Ischemia V: Cellular and Molecular

Chair(s) J.P. Dreier (Germany)

- PB03-N01 Anoxic depolarization induces glutamate excitotoxicity and causes cell death in rat brain slices
R. Frank, A. Menyhart, A. Meiller, V.E. Varga, F. Bari, S. Marinesco, E. Farkas (Hungary, France)
- PB03-N02 MicroRNA-210-3p protects endothelial progenitor cells against oxygen-glucose deprivation injury by targeting RGMA
L. Zeng, WJ. Lu (China)
- PB03-N03 RNF213 gene regulation in endothelial cells under hypoxia
H. Shin, G. Park, E. Choi, D. Kim, M. Choi, J. Hong (Republic of Korea)

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- PB03-N04 Protein arginine methyltransferases in cerebral ischemia
A. do Couto e Silva, H.E. Possóit, G.A. Clemons, C.T. Citadin,
 H. Lin (United States)
- PB03-N05 Cleaved b-actin may contribute to DNA fragmentation following very brief focal cerebral ischemia
X. Zhan, Z. Ye (United States)
- PB03-N06 Ischemic postconditioning silences NMDA receptor currents through the mitochondrial permeability transition pore opening in the mice hippocampal neurons
T. Furuta, I. Nakagawa, Y. Morisaki, F. Nishimura, S. Yamada, Y. Motoyama,
 Y. Park, Y. Ogawa, Y. Saito, H. Nakase (Japan)
- PB03-N07 Ischemic postconditioning prevents surge of presynaptic glutamate release by activating mitochondrial ATP-dependent potassium channels in the mouse hippocampus
S. Yokoyama, I. Nakagawa, Y. Ogawa, Y. Morisaki, Y. Motoyama, YS. Park,
 Y. Saito, H. Nakase (Japan)
- PB03-N08 Remote limb preconditioning ameliorates focal cerebral ischemic injury by regulating the expression and function of adenosine kinase
W. Jin, W. Xu (China)
- PB03-N09 Detrimental role of serum/glucocorticoid-regulated kinases 1 in cardiac arrest-induced brain injury
R.H.C. Lee, H.E. Possóit, C.Y.C. Wu, H. Lin (United States)
- PB03-N10 Combined treatment of rehabilitation and novel glycosaminoglycan treatment abolishes forelimb impairments following motor cortex stroke in mice
A.N. Clarkson, D.K. Barwick, O. Zubkova,
 S.T. Carmichael (New Zealand, United States)

PB03 Glial Mechanisms

Chair(s) W. Zhang (United States)

- PB03-O01 Differential roles of epigenetic regulators in the survival and differentiation of oligodendrocyte precursor cells
N. Egawa, A. Shindo, H. Kinoshita, A.C. Liang, K. Itoh, J. Lok, T. Maki,
 R. Takahashi, E.H. Lo, K. Arai (Japan, United States)

- PB03-O02 Effect of fingolimod on oligodendrocyte maturation under prolonged cerebral hypoperfusion
K. Yasuda, T. Maki, S. Saito, Y. Yamamoto, H. Kinoshita, N. Kishida, M. Ihara, R. Takahashi (Japan)
- PB03-O03 MicroRNA (miR)20a-3p preserves astrocyte mitochondrial function under ischemic conditions
T.E. Brnryan, R. Srinivasan, F. Sohrabji (United States)
- PB03-O04 MiR-424 prevents astrogliosis after cerebral ischemia in middle-aged mice by enhancing repressive H3K27me3 via targeting NFIA/DNMT1 pathway
R. Wang, H. Zhao, G. Li, Z. Tao, S. Zhang, F. Li, Z. Han, L. Li, P. Liu, Y. Luo (China)
- PB03-O05 Astrocyte heterogeneity after stroke: functional changes and new targets for neural repair
A.J. Gleichman, R. Kawaguchi, M.V. Sofroniew, G. Coppola, S.T. Carmichael (United States)
- PB03-O06 Keap1/Nrf2 system-dependent astroglial neuroprotection against dopamine
S. Takahashi, K. Mashima, K. Minami, Y. Izawa, T. Abe, N. Tsukada, T. Hishiki, M. Kajimura, N. Suzuki (Japan)
- PB03-O07 Effect of sevoflurane preconditioning on neural glial dynamics and neural network formation after cerebral ischemia and reperfusion in rats
Q. Yu, W. Liang (China)
- PB03-O08 Microglial responses after phagocytosis: *e. coli* bioparticles, but not cell debris or amyloid beta, induce matrix metalloproteinase-9 secretion *in vitro*
G. Hamanaka, R. Ohtomo, H. Takase, J. Lok, E.H. Lo, K. Arai (United States)
- PB03-O09 P2Y12 receptors are essential for physiological tissue distribution, 3D morphology and motility of microglia
B. Pósfai, C. Cserép, R. Fekete, N. Lénárt, A.D. Schwarcz, K. Ujvári, Á. Dénes (Hungary)
- PB03-O10 Priming of microglia with interferon- γ slows neuronal gamma-band oscillations in situ
O. Kann, TT. Ta, H.O. Dikmen, S. Schilling, B. Chausse, A. Lewen, JO. Hollnagel (Germany)

PB03 **Animal Models**

Chair(s) P. Kasher (United Kingdom)

- PB03-P01 Electrophysiology and regional cerebral blood flow during potassium-induced cortical spreading depression in a mouse model of familial hemiplegic migraine 2
T. Chunhua, M. Unekawa, M. Shibata, Y. Tomita, Y. Izawa, H. Sugimoto, K. Ikeda, K. Kawakami, N. Suzuki, J. Nakahara (Japan)
- PB03-P02 A novel ischemia-reperfusion rat model with asymmetric brain damage for post-cardiac arrest syndrome
E. Choi, G. Park, H. Shin, D. Kim, M. Choi, J. Hong (Republic of Korea)
- PB03-P03 A mouse model of focal cerebellar infarct and the effect of ROCK inhibitor fasudil
S.A. Aykan, M. Anzabi, A. Lopes, D.Y. Chung, O. Aykan, M.E. Kaya, D. Yagmur, C. Ayata (Turkey, United States)
- PB03-P04 Moyamoya-like vasculopathies observed in a novel mouse surgical model
J.M. Roberts, G.J. Bix, J.F. Fraser (United States)
- PB03-P05 Adeno-associated virus-mediated overexpression of survivin prior to transient middle cerebral artery occlusion reduced infarction volume
Y. Sehara, T. Inaba, T. Urabe, K. Shimazaki, M. Urabe, K. Kawai, H. Mizukami (Japan)
- PB03-P06 Efficient gene transduction in gerbil hippocampus using adeno-associated virus
Y. Sehara, K. Shimazaki, M. Urabe, K. Kawai, H. Mizukami (Japan)
- PB03-P07 A novel model of cerebral hyperperfusion with blood brain barrier breakdown, white matter injury, and cognitive dysfunction
K. Niizuma, A. Mansour, S. Rashad, M. Fujimura, T. Tominaga (Japan, Egypt)
- PB03-P08 An experimental model of hyperperfusion following chronic cerebral ischemia in rats: effect of estrogen deficiency and hypertension
J. Hatakeyama, H. Shimizu, K. Niizuma, T. Tominaga, Y. Furuyama (Japan)
- PB03-P09 A rat model of venous sinus occlusion; impact on cerebral blood flow
R. Hamasaki, H. Shimizu, K. Niizuma, T. Tominaga (Japan)
- PB03-P10 Blood brain barrier breakdown, neuroinflammation and widespread lipid disturbances evident with mass spectrometric imaging after cerebral venous thrombosis in rats
S. Rashad, K. Niizuma, T. Tominaga (Japan)
- PB03-P11 Intracellular S1P levels dictate fate of different regions of hippocampus following transient global cerebral ischemia
S. Rashad, K. Niizuma, T. Tominaga (Japan)

- PB03-P12 LabCIRS—a critical incident reporting system for academic research departments
S. Major, I. Przesdzing, C. Kurreck, U. Dirnagl (Germany)

PB03 **Imaging Methodology**

Chair(s) D. Boido (France)

- PB03-Q01 Whole-brain visualization and quantification of region-specific neuroplasticity and axonal connectivity using serial two-photon tomography
K.M. Poinsatte, D.M. Ramirez, A. Ajay, D.M. Betz, E.J. Plautz, X. Kong, J.P. Meeks, M.P. Goldberg (United States)
- PB03-Q02 Fluorescence resonance energy transfer (FRET) based quantitative analysis of c-jun n-terminal kinase (JNK) in oxidative stress-induced cell death
Y. Karasawa, H. Imai, H. Inoue, T. Wada, N. Saito, S. Kuroda (Japan)
- PB03-Q03 Separability of calcium slow waves and functional connectivity during wake, sleep, and anesthesia
L.M. Brier, E.C. Landsness, A.Z. Snyder, P.W. Wright, G.A. Baxter, A.Q. Bauer, JM. Lee, J.P. Culver (United States)
- PB03-Q04 Simultaneous measurement of infraslow cerebral evoked potentials and cerebral blood flow during cortical spreading depression enabled by transparent graphene electrode array and laser speckle flowmetry
T. Dragojevic, E.E. Vidal-Rosas, E. Masvidal-Codina, X. Illa, M. Dasilva, A.B. Calia, E. Prats-Alfonso, J. Martinez-Aguilar, J.M. De la Cruz, R. Garcia-Cortadella, P. Godignon, G. Rius, A. Camassa, E. Del Corro, J. Bousquet, C. Hebert, T. Durduran, R. Villa, M.V. Sanchez-Vives, J.A. Garrido, A. Guimera-Brunet (Spain)
- PB03-Q05 Functional high-density speckle contrast optical tomography (SCOT) in small animals and in human brain
T. Dragojevic, E.E. Vidal-Rosas, J.L. Hollmann, F. Zappa, C. Justicia, T. Durduran (Spain, Italy)
- PB03-Q06 Ultrasound speckle decorrelation-based velocimetry of entire rodent brain for stroke study
J. Tang, S. Erdner, K. Kilic, D. Postnov, D. Boas (United States)
- PB03-Q07 Brain tissue pulsation in healthy subjects using transcranial tissue doppler (TCTD) ultrasound
P. Turner, A. Lecchini-Visintini, C. Banahan, J. Ince, M. Alharbi, K.W. Beach, M. Oura, M.A. Moehring, E.M.L. Chung (United Kingdom, United States, Japan)

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PB03-Q08 Dynamic laser speckle imaging of cerebral blood flow
D.D. Postnov, E.S. Erdener, J. Tang, K. Kilic, D.A. Boas (United States, Denmark)

PB03-Q09 Enhanced spatiotemporal reconstruction of neural activities using simultaneous electroencephalography and near-infrared spectroscopy
J. Cao, T.J. Huppert, P. Grover, J.M. Kainerstorfer (United States)

PB03-Q10 The use of photoacoustics to measure cerebral blood volume and cerebral oxygenation
E. Santos Marcial, T. Kirchner, J. Groehl, M.A. Herrera, T. Adler, A. Hernández-Aguilera, L. Maier-Hein (Germany)

Imaging Methodology (cont.)

Chair(s) J. Goettler (Germany)

PB03-Q11 ¹⁹F-magnetic resonance spectroscopic imaging visualizes the distribution of matrix metalloproteinases in ischemic brain using in vivo
H. Igarashi, V. Huber, S. Ueki, T. Nakada (Japan)

PB03-Q12 Multi-channel MR-compatible flexible microelectrode for deep brain stimulation and electrophysiological recording
SH. Lee, HY. Lai, B.M. Katz, TH. Chao, M. Sorenson, R. Franklin, YY. Chen, YY.I. Shih (United States, China, Taiwan)

PB03-Q13 Blood vessel segmentation using MP2RAGE sequence at 7t MRI
US. Choi, H. Kawaguchi, T. Kober, I. Kida (Japan, Switzerland)

PB03-Q14 FLAIR-based estimation of the stroke onset time: a magnetic field dependent study
T. Jin (United States)

PB03-Q15 Inter-individual variation in arterial blood T1: an error source of pCASL CBF
M. Ibaraki, K. Nakamura, Y. Shinohara, K. Matsubara, T. Kinoshita (Japan)

PB03-Q16 Validation of an optical method for measuring cerebral blood flow in adults
D. Milej, L. He, A. Abdalmalak, W.B. Baker, U.C. Anazodo, S. Dolui, V.C. Kavuri, M. Diop, W. Pavlosky, R. Balu, J.A. Detre, O. Amendolia, F. Quattrone, W.A. Kofke, A.G. Yodh, **K. St Lawrence** (Canada, United States)

PB03-Q17 Construction of the fractal analysis system for DaT-SPECT
Y. Takehisa, Y. Takahashi, K. Abe (Japan)

PB03 **Imaging Pre-Clinical**

Chair(s) TH.H. Chao (United States)

- PB03-R01 Effects of basal conditions on evoked functional MRI and CBV in mouse
H.J. Shim, S.G. Kim (Republic of Korea)
- PB03-R02 Investigation of role of frontal cortex on shaping functional connectivity of cerebral cortex
H. Kim, M. Choi, M. Suh (Republic of Korea)
- PB03-R03 Longitudinal resting-state fMRI for animal studies of functional connectivity in healthy ageing
A. Crofts, M. Trotman-Lucas, J. Janus, M. Kelly, C. Gibson (United Kingdom)
- PB03-R04 Anesthesia has differential effects on optical hemodynamic measures of resting state functional connectivity in mice
D. Chung, H. Xie, S. Kura, K. Sugimoto, S. Aykan, S. Sakadžić, M. Yaseen, D. Boas, C. Ayata (United States, Japan)
- PB03-R05 A combined cerebral blood flow method with R2 prime for calibrated fMRI in different states in animal
M. Xu, B. Bo, Q. Qin, Z. Liu, Z. Liang, G.J. Thompson (China)
- PB03-R06 Blood flow and volume measurements are critical for determining true extent of brain tumour periphery
J.R. Larkin, M.A. Simard, A. de Bernardi, F. Perez-Balderas, V.A. Johanssen, N.R. Sibson (United Kingdom)
- PB03-R07 Multiparametric analysis of MRI using machine learning allows stroke identification and stroke core prediction
S. Castaneda Vega, P. Katiyar, F. Russo, K. Partzwaldt, JM. Hempel, L. Quintanilla-Fend, C. la Fougere, S. Poli, B. Pichler, J. Disselhorst (Germany)
- PB03-R08 Absolute tissue pH MRI refines ischemic penumbra mapping in an experimental model of acute ischemic stroke
P. Sun (United States)
- PB03-R09 Non-invasive detection of vascular normalisation in a rat brain metastasis model
M.A. Simard, J.R. Larkin, K.J. Ray, S.C. Smart, P.D. Allen, M.A. Chappell, N.R. Sibson (United Kingdom)

PB03 **Blood Brain Barrier**

Chair(s) A. Urayama (United States)

- PB03-S01 Real-time two-photon imaging study reveals increased blood-brain barrier permeability in chronically stressed mice
BM. Kang, S. Lee, J. Kim, J. Min, H. Kim, H. Park, S. Bae, D. Oh, M. Choi, M. Suh (Republic of Korea)
- PB03-S02 Real-time two-photon imaging of hippocampal neuro-vasculature and BBB permeability in chronic temporal lobe epilepsy model
S. Bae, BM. Kang, M. Suh (Republic of Korea)
- PB03-S03 Age-related changes at the blood-brain barrier. A comparative in vivo study in Wistar rats
F. Erdő (Hungary)
- PB03-S04 The role of equilibrative nucleoside transporter-2 on the amelioration of acute lipopolysaccharide-induced breakdown of the blood-brain barrier
KC. Wu, CY. Lee, CJ. Lin (Taiwan)
- PB03-S05 Evidence that enolase-phosphatase 1 increases BBB disruption by interfering AD11-MT1-MMP interaction and activation of MT1-MMP/MMP-2 axis in early ischemic damage
Y. Zhang (China)
- PB03-S06 CSF1R⁺ mono/macrophages and blood brain barrier disruption after stroke
Z. Zhu (China)
- PB03-S07 Surgery trauma associated macrophage migration inhibitor factor (MIF) aggravates blood brain barrier disruption following perioperative stroke
Y. Li (China)
- PB03-S08 Novel PTP1B inhibitor protects blood-brain barrier function through the Akt/FoxO 1 signaling pathway in brain ischemia
K. Fukunaga, M. Sun, Y. Shinoda (Japan)
- PB03-S09 Protective effect of targeted inhibition of TMEM16A on the blood-brain barrier integrity after ischemic stroke
X. Cao, P. Liu, X. Tang, Y. Liu, Y. Xu (China)
- PB03-S10 Cognitive impairment seen in diabetes type 1 and 2 models paralleled blood brain barrier compromise and neuroinflammation and is reversed by poly (ADP-ribose) polymerase-1 inhibition
Y. Persidsky, X. Jin, V. Zuluaga-Ramirez, S. Gajghate, A. Seliga, M. Winfield, N. Heldt, S. Rom (United States)

PB03 Choroid Plexus/Meningeal Barriers/CSF

Chair(s) S. Rom (United States)

- PB03-T01 *In vivo* systemic reactions, including the morphological change of paravascular space, during water intoxication
T. Ishikawa, M. Unekawa, Y. Tomita, J. Nakahara, M. Yasui (Japan)
- PB03-T02 Aquaporin-4 facilitator TGN-073 facilitates CNS fluid movement
S. Ueki, H. Igarashi, V.J. Huber, I.L. Kwee, T. Nakada (Japan, United States)
- PB03-T03 Recruitment of the meningeal lymphatics by the blood-brain barrier
 O. Semyachkina-Glushkovskaya, **M. Klimova**, A. Khorovodov, A. Esmat, **A. Terskov**, A. Mamedova, A. Ilana, J. Kurths (Russian Federation)
- PB03-T04 Endogenous proteins reveal fluid flow patterns in the brain
E.N.T.P. Bakker, D.M.P. Naessens, J. de Vos, E. VanBavel (Netherlands)
- PB03-T05 Elucidating brain water management in hypertension: a preclinical MRI study
D.M.P. Naessens, B.F. Coolen, J. de Vos, E. VanBavel, G.J. Strijkers, E.N.T.P. Bakker (Netherlands)
- PB03-T06 3D diffusion-weighted MRI of perivascular fluid movement: Towards non-invasive mapping of glymphatic function
P.G. Evans, B. Siow, I.F. Harrison, Y. Ohene, P. Nahavandi, O. Ismail, D.L. Thomas, M.F. Lythgoe, J.A. Wells (United Kingdom)
- PB03-T07 Intracranial fluids dynamics alterations and cortical thickness
A. Vallet, S. Lorthois, N. Chauveau, N. Del Campo, L. Balardy, P. Peran, A. Lokossou, O. Baledent, P. Payoux, E. Schmidt (France)
- PB03-T08 Water turnover in brain, ventricles and subarachoid spaces in normal volunteers: dynamic PET study using H₂¹⁵O
M. Mase, E. Hayashi, S. Hibino, Y. Ito, A. Iida, T. Miyati, E. Mori (Japan)

PB03 Neuroinflammation I: Post-Ischemia/Stroke

Chair(s) T.P. Davis (United States)

- PB03-U01 Microbiota-immune cell interaction: critical role of tryptophan metabolites in stroke
C. Benakis, R. Sadler, J. Vienhues, T. Magnus, M. Gelderblom, A. Liesz (Germany)

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- PB03-U02 The role of Interleukin 10 in a murine model of stroke
M. Piepke, M. Gelderblom (Germany)
- PB03-U03 Regulatory roles of IRF4/5 signaling in post-stroke inflammation and stroke outcomes
F. Liu (United States)
- PB03-U04 Lipid metabolism in the resolution phase of cerebral post-ischemic inflammation
A. Nakamura, J. Tsuyama, T. Shichita (Japan)
- PB03-U05 DJ-1 is a novel damage-associated molecular pattern in ischemic stroke
K. Nakamura, S. Sakai, T. Shichita (Japan)
- PB03-U06 Myeloid specific deficiency of CD36 promotes the transition of infiltrating monocytes into microglia-like CD45^{low} population in the stroked brain
K. Park, M. Balkaya, J. Yang, MS. Woo, S. Cho (United States)
- PB03-U07 AntagoMiR-494 reduced neutrophil infiltration and alleviated acute ischemic brain injury in experimental stroke
H. Zhao, G. Li, R. Wang, Z. Tao, P. Liu, S. Zhang, Z. Han, F. Yan, F. Li, Y. Luo (China)
- PB03-U08 EZH2 suppression alleviates ischemic brain injury through blocking activation of pro-inflammatory microglia
J. Chen, M. Zhang, Y. Xu (China)
- PB03-U09 FasL mutation attenuates cytotoxicity of CD8⁺ T cells to neurons by a novel pathway in ischemic stroke
L. Fan, Y. Xu (China)
- PB03-U10 The association between mucosal-associated invariant T (MAIT) cells and acute ischemic stroke
S. Nakajima, R. Tanaka, K. Yamashiro, A. Chiba, D. Noto, N. Miyamoto, Y. Ueno, T. Urabe, S. Miyake, N. Hattori (Japan)
- PB03-U11 ATP induces neutrophil extracellular traps formation in the postischemic brain
S. Kim, J. Lee, H. Lee, H. Lee, D. Davaanyam (Republic of Korea)
- PB03-U12 Post-stroke administration of melatonin improves long-term outcomes after focal cerebral ischemia/reperfusion (FI/R) *via* interleukin-4 (IL-4) dependent M2 microglial polarization
J. Suenaga, X. Hu, L. Mao, H. Pu, S. Hassan, Y. Shi, Y. Gao, R.K. Leak, T. Yamamoto, J. Chen (Japan, United States)
- PB03-U13 Anti-inflammatory effect of serum bilirubin in acute stroke patients
T. Nakase, J. Moroi, T. Ishikawa, H. Shimizu (Japan)

PB03 Neuroinflammation II: Other Diseases

Chair(s) T.S. Salameh (United States)

- PB03-V01 PAR1-agonists as regulators of neuroinflammation *in vitro*
I. Babkina, S. Strukova, M. Sidorova, L. Gorbacheva (Russian Federation)
- PB03-V02 The role of brain regulatory T cells during the chronic phase after CNS injury
M. Ito, A. Yoshimura (Japan)
- PB03-V03 Berberine attenuates macrophages infiltration in intracranial aneurysms through FAK/Grp78/UPR Axis
S. Li, K. Quan, Y. Shi, Y. Liu, Z. Fan, W. Zhu (China)
- PB03-V04 Intermittent fasting: a potential modifier of DNA methylation in neuroinflammation in a chronic hypoperfusion model
S. Selvaraji, T. Arumugam (Singapore)
- PB03-V05 Cortical spreading depression induces expression of BDNF and pro-BDNF proteins, which may impact neuroinflammation
M. Yemisci, B. Senel, S. Yilmaz-Ozcan, B. Donmez-Demir, H. Karatas-Kursun, E. Eren-Kocak, T. Dalkara (Turkey)
- PB03-V06 Detecting neuroinflammation in breast cancer patients treated with chemotherapy with simultaneous [18F]-DPA-714 PET-MR imaging
G. Schroyen, D. van Weehaeghe, A. Smeets, M. Vandenbulcke, K. Van Laere, S. Sunaert, S. Deprez (Belgium)
- PB03-V07 Hypertensive stimuli promote brain inflammation in a pressure-dependent manner
M. De Silva, Q. Dinh, S. Chrissobolis, G.R. Drummond, A. Vinh, C.G. Sobey (Australia, United States)
- PB03-V08 Reduced ambient temperature enhances inflammation-induced encephalopathy in endotoxemic mice—Role of phosphoinositide 3-kinase gamma
R. Bauer, GP. Lang, B. Ndongson-Dongmo, C. Marx, T. Lajqi, R. Wetzker (Germany, Norway)
- PB03-V09 Modelling inflammatory brain-heart interaction in duchenne muscular dystrophy
J.M. Tang, A.J. McClennan, J. Hadway, H. Smailovic, M.J. Fox, L.M. Hoffman, U.C. Anazodo (Canada)

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PL03 Late Breaking Abstract

Chair(s) Y. Yu (United States)

- PL03-W01 Development of a numerical model of whole-scale cerebral circulation
S. Ishida, H. Kitade, S. Ii, N. Takeishi, Y. Watanabe, Y. Imai, S. Wada (Japan)
- PL03-W02 Metabolic basis of neuronal vulnerability to ischemia; an in vivo untargeted metabolomics approach
S. Rashad, K. Niizuma, T. Tominaga (Japan)
- PL03-W03 Design of a mediator-free non-enzymatic electrochemical biosensor for glutamate detection
L. Bachas, E. Zeynaloo, YP. Yang, A. Manfredi, M. Careri, S. Deo, S. Daunert (United States, Italy)
- PL03-W04 Investigating the effect of apolipoprotein $\epsilon 4$ on neurovascular function using two-photon microscopy
O. Bonnar, K. Shaw, D. Grijseels, L. Bell, C.N. Hall (United Kingdom)
- PL03-W05 Spatiotemporal dynamic mapping of fluorescent red blood cell and plasma flow in the anesthetized rat cortex
T. Kusaka, Y. Kurihara, T. Sugashi, K. Masamoto (Japan)
- PL03-W06 Large-scale analysis of capillary responses using 3D imaging data sets of two-photon microscopy
H. Suzuki, T. Sugashi, H. Takuwa, I. Kanno, K. Masamoto (Japan)
- PL03-W07 Temporal dynamics of arteriolar diameter and capillary perfusion during cortical spreading depolarization: *an optical coherence tomography study*
M. Anzabi, B. Li, H. Wang, S. Kura, S. Sakadžić, D. Boas, L. Østergaard, C. Ayata (Denmark, United States)

Late Breaking Abstract (cont.)

Chair(s) K. Kisler (United States)

- PL03-W08 Generation of a mouse line for mural cell optogenetics
M. Oishi, Y. Abe, C. Steinhäuser, K.F. Tanaka (Japan, Germany)
- PL03-W09 Investigation of long-term potentiation- and depression-induced tau phosphorylation in rats with starch based sugar
Y. Tasci (Turkey)
- PL03-W10 Convincing biomarker for idiopathic chronic fatigue
JS. Lee (Republic of Korea)

PL03-W11 Effective oxygen diffusivity is lateralized within the anterior circulation territory in asymptomatic unilateral carotid artery stenosis
J. Kufer, J. Goettler, C. Zimmer, F. Hyder, C. Preibisch,
 S. Kaczmarz (Germany, United States)

PL03-W12 Deep learning-based penumbra estimation using DWI and ASL for acute ischemic stroke patients
Y. Xie, Y. Yu, T. Thamm, E. Gong, J. Ouyang, C. Huang, S. Christensen,
 G. Albers, G. Zaharchuk (United States)

PL03-W13 Real-time ultrasound/photoacoustic imaging system and its *in vitro* / *in vivo* applications
LD. Liao (Taiwan)

PL03-W14 Whole brain functional ultrasound imaging (fUSi) for detection and tracking of spreading depolarization during stroke in anesthetized rats
A. Urban, C. Brunner, N. Lagumersindez, M. Grillet, G. Montaldo,
 M. Endres (Belgium, Germany)

Late Breaking Abstract (cont.)

Chair(s) Y. Tang (China)

PL03-W15 Design of nanodrugs for delivery to the brain
S. Deo, S. Hamdan, B. Surnar, L. Magurno, D. Jayweera, S. Dhar,
 S. Daunert (United States)

PL03-W16 Real time nitric oxide changes during spreading depolarization, ischemia and reperfusion
B. Balanca, E.J. Kang, C. Lemale, A. Meiller, S. Marinesco,
 J.P. Dreier (France, Germany)

PL03-W17 Sequential transcriptome changes in penumbra after ischemic stroke
IA. Choi, JH. Kim, DH. Choi, J. Lee (Republic of Korea)

PL03-W18 Visualization and quantification of CD8⁺ T cell diapedesis into the ischemic brain
K.M. Poinsette, V.O. Torres, A. Ajay, E.J. Plautz, X. Kong, J.P. Meeks,
 M.P. Goldberg, D.M. Ramirez, A.M. Stowe (United States)

PL03-W19 The role of PDGFR α in the oligodendrogenesis and myelin formation in forebrain
T. Hamashima, Y. Ishii, S. Yamamoto, N.Q. Linh, N. Okuno, Y. Sang,
 T. Matushima, Y. Kurashige, M. Sasahara (Japan)

PL03-W20 PDGF α controls dynamic remodelling of Oligodendrocyte progenitor cells in adult brain
N.Q. Linh, D.T. Chung, T. Hamashima, N. Okuno, S. Yang, Y. Ishii,
 S. Yamamoto, M. Sasahara (Japan, Viet Nam)

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- PL03-W21 Diverse effects of PDGF signals in glioma growth
Y. Sang, T. Hamashima, S. Yamamoto, N. Okuno, Q.L. Nguyen, Y. Ishii,
 M. Sasahara (Japan)

Late Breaking Abstract (cont.)

Chair(s) T. Kim (United States)

- PL03-W22 Pharmacological induction of Nrf-2 protects neurons against ischemic injury by characterizing the microglia/macrophage polarization
L. Mao, Y. Wang, B. Sun (China)

- PL03-W23 *Staphylococcus epidermidis* sensitizes hypoxic-ischemic brain injury in a sex-dependent manner
G. Gravina, J. Lai, P. Svedin, M. Ardalan, O. Levy (Sweden, United States)

- PL03-W24 Evaluating tight-junction proteins as a biomarker for brain vascular injury in neonates
A. Andersson, E. Rocha-Ferreira, H. Hagberg, C. Mallard, C.J. Ek (Sweden)

- PL03-W25 Movement of CD4+ T cell from periphery and colocalized complement component C3 in the brain following cerebral ischemia in mice
SD. Kim, Y. Kim, M. Kim, M. Kim, MS. Jeon, Y.S. Song (Republic of Korea)

- PL03-W26 Phytoestrogens derived from *prunus cerasoides* protect brain via enhancing neuroglobin after tMCAO in aged female mice
SD. Kim, DS. Lim, B. Zhang, Y. Kim, M. Kim, M. Chang,
 Y.S. Song (Republic of Korea)

- PL03-W27 Necroptotic mechanisms of cell death and their modulation with erythropoietin treatment in neonatal stroke
P. Pathipati, A. Larphaveesarp, S.K. Blaine, D.M. Ferriero,
 F. Gonzalez (United States)

- PL03-W28 Interaction of mesenchymal stem cell (MSC)-derived exosomes with microglia isolated after acute neonatal stroke
P. Pathipati, M. LeCuyer, J. Faustino, J. Strivelli, D.G. Phinney,
 Z. Vexler (United States)

Late Breaking Abstract (cont.)

Chair(s) L. Li (China)

- PL03-W29 Loss of regulatory of G-protein signaling 5 leads neurovascular protection in stroke
I. Özen, M. Roth, G. Paul Visse (Sweden)

- PL03-W30 Neurological protection effect of peroxiredoxin1 in the hemorrhagic brain injury
H.P. Dulal (Nepal)



- PL03-W31 Intermittent fasting alleviates cognitive impairments and preserves hippocampal neuronal density in a mouse model of subcortical vascular dementia
F.R. Andika, JH. Yoon, Z. Wang, G.S. Kim, Y. Jeong (Republic of Korea)
- PL03-W32 Galectin-3, a novel endogenous TREM2 ligand, detrimentally regulates inflammatory response in alzheimer's disease
A. Boza-Serrano, R. Ruiz, S. Jimenez, V. Navarro, R. Sanchez Varo, J. Garcia Revilla, J.L. Venero, J. Vitorica, A. Gutierrez, T. Deierborg (Sweden, Spain)
- PL03-W33 The effect of ballet dancing on cerebral function evaluated by functional MRI
C. Sato, K. Nakata, T. Horiguchi, S. Suga, T. Asomura, S. Ikeda (Japan)