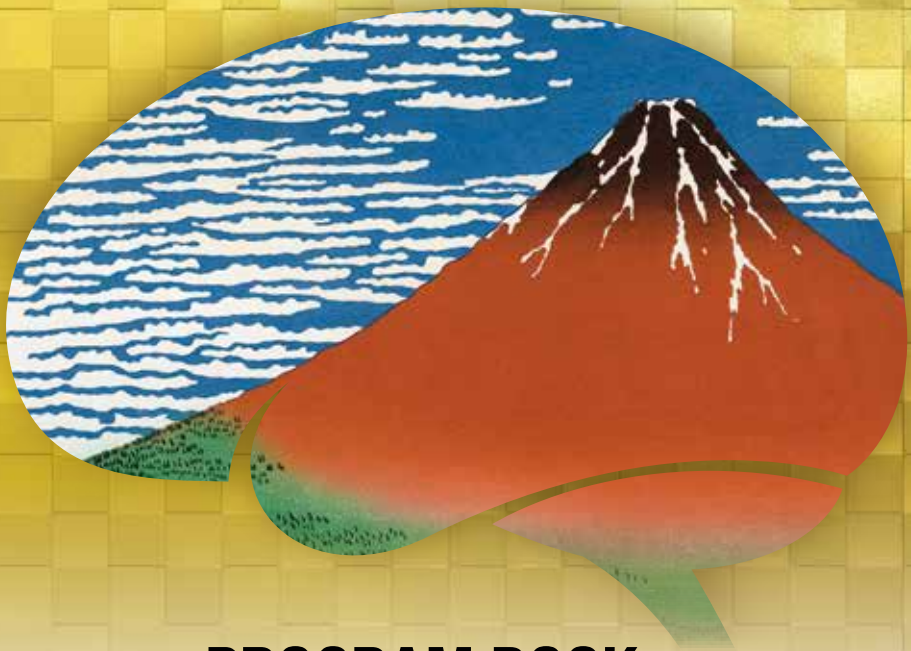
BRAIN & BRAIN PET 2019
Yokohama Japan

The 29th International Symposium on Cerebral Blood Flow, Metabolism and Function
The 14th International Conference on Quantification of Brain Function with PET

July 4 – 7, 2019 Yokohama, Japan



PROGRAM BOOK

BRAIN & BRAIN PET 2019 Yokohama Japan

http://brain2019.jp

ISCBFM International Society for Cerebral Blood Flow & Metabolism

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ストラータバリウス　アジャストメントキット	医療機器届出番号：13B1X00261N00001
ステルスステーションＳ８	医療機器承認番号：23000BZX00285000

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ISCBFM WELCOME LETTER

On behalf of the President, Local Organizing Committee and Program Committee of the International Society for Cerebral Blood Flow and Metabolism (ISCBFM), we wish you a warm welcome to BRAIN & BRAIN PET 2019, the 29th International Symposium on Cerebral Blood Flow, Metabolism and Function in conjunction with the 14th International Conference on Quantification of Brain Function with PET to be held in Yokohama, Japan from July 4-7, 2019. Following the tradition of previous biannual meetings, BRAIN & BRAIN PET 2019 will cover numerous aspects within the area of neuroscience research, particularly those related to brain function and metabolism, cerebral blood flow, the function of the neurovascular unit and the blood-brain barrier, brain imaging, brain repair, and cerebrovascular pathology. Our goal is to present the state-of-the art and novel discoveries of these fields in the conference.

Yokohama, the second largest city in Japan, is located next to Tokyo along the coastline of the Pacific Ocean, and is the first harbor city introduced to the world as the entrance to Japan. Since the time its port was opened, Yokohama has been vigorously acquiring new cultures and information from countries all over the world, and deserves its title as the birthplace of Japan's modern culture. Thanks to the myriad views of the port, a unique and fascinating townscape has developed, which augments its various artistic and cultural attractions. Yokohama offers plenty of opportunities to experience Japanese culture including delicious and diverse dining experiences of the world heritage "Washoku," traditional dietary culture of Japan. In addition, it has wonderful accessibility to various famous sightseeing spots such as Tokyo, Mt Fuji, the historic town of Kamakura and hot spring resort areas in Hakone. Yokohama will provide the delegates and their families with a wealth of opportunities for discoveries and adventure, at the conference and beyond.

A stimulating program combined with a wonderful location, will hopefully make this conference an exciting event.
We very much look forward to your participation in BRAIN & BRAIN PET 2019 and to welcoming you to Yokohama.

Yours Sincerely,

Eng H. Lo
ISCBFM President

Hiroyuki Kinouchi
Local Chair

Hidehiko Okazawa
Local Chair

Martha O'Donnell
Scientific Program Committee Chair

Kazuto Masamoto
Scientific Program Committee Chair

COMMITTEES

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Massachusetts General Hospital,
Harvard Medical School, United States

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Kazuto Masamoto, Ph.D.
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Pedro Rosa-Neto, Canada
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Bruno Weber, Switzerland

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Peter Herscovitch, United States
(Past President)
Hiroyuki Kinouchi, Japan (President Elect)
Nicolas Blondeau, France (Secretary)
Jaroslaw (Jack) Aronowski, United States
(Treasurer)
Jun Chen, United States (Editor)

Society

ISCBFM Administrative Office
International Society for Cerebral Blood Flow and Metabolism (ISCBFM)
9650 Rockville Pike
Bethesda, MD 20814, United States
T: +1 301 6347001/F: +1 301 6347099
iscbfm@faseb.org

ABOUT ISCBFM

The International Society of Cerebral Blood Flow and Metabolism (ISCBFM) is organized and operates exclusively to promote the advancement of education and research in the science of cerebral blood flow, cerebral metabolism and cerebral function throughout the world. Member interests range from the molecular and genomic mechanism of ischemia through clinical investigations of cerebral blood flow and metabolism.

The ISCBFM hosts biennial meetings in various locations throughout Asia, Europe and North America. The International Symposium on Cerebral Blood Flow, Metabolism and Function (BRAIN) and the International Conference on Quantification of Brain Function with PET (BRAIN PET) are held jointly and bring together a diverse group of investigators for the exchange of scientific information on regulation of cerebral blood flow and metabolism. The International Symposium of Cerebral Blood Flow and Metabolism was first held in 1964, with subsequent meetings held approximately every two years. It wasn't until 1981, however, that the Society was formally established. At the time of the establishment of the Society, the *Journal of Cerebral Blood Flow and Metabolism* started publication and continues to be a highly respected and cited monthly publication. It is relevant to neurologists, neurochemists, psychologists, pharmacologists, physiologists, biochemists, anesthesiologists, neuroradiologists, neuropathologists, and neuroscientists.

A flagship commitment of the ISCBFM is to support young and early career neuroscientists (Early Career Investigators-ECIs). At each BRAIN & BRAIN PET meeting, ISCBFM has consistently supported Student and Scholar ECIs and organized programs to enhance networking and mentorship. At the BRAIN & BRAIN PET 2019 meeting, ISCBFM awarded travel bursaries to 103 Student and Scholar ECIs from all corners of the globe. The Society is also sponsoring an Early Career Networking Social and will be rolling out a mentorship program.

Be sure to stop by the ISCBFM booth (#8) to learn more about the Society and the benefits of membership!

ABOUT YOKOHAMA

Yokohama, the second largest city in Japan, is located next to Tokyo along the coastline of the Pacific Ocean. The city has long prospered as an international port city trading with foreign countries that opened to the world in 1859, as it had favorable facilities to host ships from abroad. Since that time, Yokohama has been vigorously acquiring new cultures and information from other countries, and it developed a reputation as the source for new information from abroad that was disseminated around Japan, hence its nickname as the birthplace of Japan's modern culture.

2019 will mark the 160th Anniversary of the opening of the port of Yokohama, and today the city, continues to boast an international population and cosmopolitan atmosphere.

Along with Yokohama's historical port, many other attractive, traditional sightseeing spots will welcome you. The largest Chinatown in Japan, the Yokohama Red Brick Warehouses and Yamashita Park are near the conference venue, PACIFICO Yokohama. Close by is the expansive Sankeien Garden of traditional Japanese garden design.

For those who like shopping, the Yokohama Landmark Tower, a 296 meter skyscraper with a shopping complex is located close to the station, along with Queens Mall complex. At the Yokohama Red Brick Warehouse, you can enjoy shopping and dining of every kind, and various amusement facilities which offer entertainment both day and night.

Yokohama offers a wide range of diverse cuisines, and dining is an unforgettable experience. There is a wide selection of healthy "WASHOKU" Japanese cuisine that you will enjoy trying. In addition, you will discover world-class international cuisine, including Chinese, Italian, French and Indian restaurants. Thanks to its location, Yokohama is also known for delicious fresh seafood.

Wherever you go in Yokohama, you can experience the distinctive atmosphere and history of this harbor town. A number of antique and historic pieces of architecture can be found here, which display many western style symbols of Yokohama culture.

AWARDS

The Lifetime Achievement Award

Edith Hamel, Ph.D.
McGill University
Canada

The Neils Lassen Award

The Neils Lassen Award is presented by the International Society of Cerebral Blood Flow and Metabolism to recognize an outstanding scientific contribution made by a young scientist. The recipient is selected by the program committee based on an abstract submitted for presentation at the biennial meeting of the society.

Neils Lassen Award Finalists 2019

Domenic Cerri, United States
Marilena Rega, United Kingdom
Rachel M. Rahn, United States
Stefan Roth, Germany

Early Career Investigator Travel Bursary Recipients

Lucero G. Aceves-Serrano, Canada
Deepshikha Acharya, United States
Sanem A Aykan, Turkey
Atef Badji, Canada
Matilde Balbi, Canada
Paolo Bazzigaluppi, Canada
Daniel J. Beard, United Kingdom
Andréa L. Benedet, Canada
Daniele Bertoglio, Belgium
Domenic Cerri, United States
Tzu-Hao H. Chao, United States
Kevin T. Chen, United States
Tifenn Clément, France
Eszter Császár, Hungary
Csaba Cserép, Hungary
Bart de Laat, United States
Xiaotian T. Fang, United States
Michelle E. Favre, United States
Rebeka Fekete, Hungary
Paul Fischer, Germany
Bart A.A. Franx, Netherlands
Jessie Fanglu Fu, Canada
Michael Germuska, United Kingdom
Dorien Glorie, Belgium
Jens Goettler, Germany
Dominika Gołubczyk, Poland
Soren Grubb, Denmark
Bibek Gyanwali, Singapore
Fiona Heeman, Netherlands
Tuuli M. Hietamies, United Kingdom
Sung-Ha Hong, United States
Aleksandra Ichkova, France
Tamás I. Józsa, United Kingdom
Stephan Kaczmarz, Germany
Min Su Kang, Canada
Muhammad H. Khan, United States
Byungchan Kim, United States
TaeHee Kim, United States
Samuel Knauss, Germany
Tiffany S. Ko, United States
Kristin Koehler-Forsberg, Denmark
Melanie T. C. Kuffner, Germany
Kota Kurisu, United States
Evelyn MR Lake, United States
Llywelyn MT Lee, United Kingdom
Joonhyuk Lee, United States
Lingzhi Li, China
Yongfang Li, China
Zongwei Li, China
Elin Lindström, Sweden
Firoza Z. Lussier, Canada
Ayla Mansur, United Kingdom
Sabina Marciano, Germany
Eslam Mehina, Canada
James Mester, Canada
Takeshi Miyamoto, Japan
Kahlilia C. Morris-Blanco, United States

AWARDS

Payam Nahavandi, United Kingdom
Rune B. Nielsen, Denmark
Adrián Noriega de la Colina, Canada
Yolanda Ohene, United Kingdom
Eugene Park, Canada
Tharick Pascoal, Canada
Muhammad Naveed Iqbal Qureshi, Canada
Aditya Rayasam, United States
Marilena Rega, United Kingdom
Lucas Rischka, Austria
Eridan Rocha Ferreira, Sweden
Stefan Roth, Germany
Ravi L Rungta, France
Pragalath Sadasivam, United States
Hasan Sari, United States
Franca Schmid, Switzerland
Lena Schmitzer, Germany
Joshua J Shrouder, Germany
Rebecca Sienel, Germany
Michel R.T. Sinke, Netherlands
Kelly Smart, United States
Milou Straathof, Netherlands
Irisz Szabo, Hungary
Yaohui Tang, China
Joseph Therriault, Canada
Cécile Tissot, Canada
Tsubasa Tomoto, United States
Matteo Tonietto, France
Takuya Toyonaga, United States
Susana Valero Freitag, Germany
June van Aalst, Belgium
Anne-Eva van der Wijk, Netherlands
Donatienne Van Weehaeghe, Belgium
Ashwin V. Venkataraman, United Kingdom
Marta Vicente-Rodriguez, United Kingdom
Lindsay Walton, United States
Vera H. Wielenga, Netherlands
Tai-Wei Wu, United States
Mengfan Xia, United States
Mingyue Xu, United States
Xuefeng Yan, United States
Yannan Yu, United States
Panting Zhou, China
Xiaoyun Zhou, Japan

INFORMATION A TO Z

Abstract

Approved abstracts will be published as an online supplement to the Journal of Cerebral Blood Flow & Metabolism on June 30, 2019 and remain permanently accessible as citable source at:
https://journals.sagepub.com/home/jcb

Act of God

It is mutually agreed that in the event of total or partial cancellation of the congress due to fire, strike, natural disaster (either threatened or actual), government regulation or incidents not caused by the organizer, which should prevent its scheduled opening or continuance, the congress may be partially postponed or terminated as a whole. In this case, participants are not entitled to reclaim refunds on no account. Participants are obliged to have civil liability insurance.

Badges

All delegates and guests will receive a name badge at the registration desk. The badge will be the official meeting document and should be worn at all times in order to gain entry into the meeting rooms and exhibition room. With a delegate's badge, participation will be granted in the scientific program. Admission to the congress will not be allowed without badge identification. Vouchers for social events that have been booked will be handed out with the name badge.

Business Center

Kinko's - 2nd floor, Exhibition Hall
Open: 9:00-18:00
Self-Service Corner - 1st floor, Conference Center
Open: 9:00-18:00

Certificate of Attendance

All registered attendees, whether they register in advance or on-site, will receive a certificate of attendance on-site.

Coffee Breaks

Refreshments will be available to participants at the following hours and dates:
Location: 301-304, 3rd floor, Conference Center

Thursday, July 4th	10:30-11:00/15:30-16:00
Friday, July 5th	10:00-11:00/15:00-16:00
Saturday, July 6th	9:30-10:30/14:30-15:30
Sunday, July 7th	10:00-11:00/15:00-16:00

Climate

Early July is characterized by varying weather with both humid and rainy days. The temperature in Yokohama during July ranges from 22 to 28 degrees centigrade, and 72 to 82 degrees in Fahrenheit.

Cloakroom and Storage

A cloakroom and luggage deposit room will be available on the 2nd floor. The venue and the organizers are not responsible for any items lost or left behind.

Opening Hours

Thursday, July 4th	8:00-18:00
Friday, July 5th	7:30-19:00
Saturday, July 6th	7:30-18:30
Sunday, July 7th	7:30-18:00

Clothing

Clothing is informal for all occasions.

Congress Language

The official language for the congress will be English. Simultaneous translation will not be provided.

Congress Venue
Conference Center, PACIFICO YOKOHAMA
1-1-1 Minato Mirai, Nishi-ku, Yokohama
220-0012, Japan
T: +81-45-221-2155

Currency
The official currency in Japan is the Yen (¥).

Electricity
In Japan electricity is supplied at 100-110V, 50Hz. For some devices from abroad converters will be needed.

Industry Exhibition
The industry exhibition is represented by manufacturers of medical and surgical equipment, instrumental analytics as well as scientific publishers. The presentation stands of the Journal of Cerebral Blood Flow & Metabolism and of the ISCBFM are integrated in the exhibition.

The industry exhibition is located on the 3rd floor and will be open from July 5th to July 7th, 2019 according to the session timetable.

Industry Exhibition Opening Hours

Friday, July 5th	9:00-18:00
Saturday, July 6th	9:00-18:00
Sunday, July 7th	9:00-17:00

Internet Connection
Free Wi-Fi will be available in the whole conference area of the Conference Center.
SSID: FREE-PACIFICO
PW: N/A

Liability Disclaimer
The organizers cannot be held liable for any hindrance or disruption of congress proceedings arising from political, social or economic events or any other unforeseen incidents beyond their control. The organizers will accept no liability for any personal injuries sustained or for loss or damage to property belonging to congress participants, either during or as a result of the congress or events. Registration of a participant entails acceptance of these conditions.

Lunch and Sponsored Seminars
Before the sponsored seminars start, each session provides lunch boxes in front of the seminar room.
Please pick up the lunch box where you attend the seminar. Please understand that the number of lunch boxes is limited, and will be provided on a first-come, first-served basis.

Note: For those who are not attending the sponsored seminars, lunch will also be available at 301-304 on the 3rd floor. Please understand that there is only limited quantity and will be provided on a first-come, first-served basis.

No-smoking Policy
Smoking is strictly prohibited during all meetings and sessions and in the exhibition room at all times.

Posters
Scientific posters will be displayed as wall print posters in a dedicated space within the exhibition and poster area. Every poster is mounted for only one day except for ECI Travel Bursary award posters. For any questions please ask the poster desk. For

INFORMATION A TO Z

more details, please refer to page 72 for poster session schedules.

Photography, Audio, Video and Mobile Phone Policy

Audio, photo and video recording by any device (e.g. cameras, laptops, PDAs, mobile phones, watches) is strictly prohibited during all oral and poster sessions, unless prior permission is obtained from the congress organizer. Use of mobile phones is strictly prohibited during scientific sessions. Mobile phones must be set to silent mode while attending sessions.

Program Change

The organizer reserves the right to make changes if necessary. No full or partial refunds are made to the attendees in the event of cancellations or other changes in the program.

Registration

Registration is valid only if the complete fee and charges for other services have been paid in full. Registration on-site is possible during the entire congress within registration desk opening hours. Only credit cards and cash payment will be accepted for on-site registration. Valid proof of status must be presented on-site when registering at lower rates.

Registration Fees

On-site fees

ISCBFM Members Country list A*	JPY 90,000
ISCBFM Members Country list B*	JPY 75,000
Non-members country list A	JPY 100,000
Non-members country list B	JPY 85,000
Students**	JPY 60,000
BRAIN PET Session only	JPY 55,000
Accompanying persons (family members only)	JPY 40,000

*Country list A and B is available at the congress website.

-Educational Courses-

BRAIN Educational Courses	JPY 13,000
BRAIN PET Education Courses	JPY 13,000

**Refers to non-tenured junior scientists. The registration application must be accompanied by a letter from the Student's Head of Department confirming this status.

Registration Desk

The registration desk is situated in the main entrance hall on the 2nd floor at the Conference Center.

Opening Hours

Thursday, July 4th	8:00-16:30
Friday, July 5th	7:00-18:00
Saturday, July 6th	7:00-17:30
Sunday, July 7th	7:30-16:00

Speakers' Preview Desk

For those who have oral presentations, please check in your presentation data at the Speakers' Preview Desk at least 45 minutes prior to your presentation. For more detail, please refer to "Instructions for Oral Presentation" on page 13.
Location: Foyer, 5th floor of the Conference Center

Opening Hours

Thursday, July 4th	8:00-16:30
Friday, July 5th	7:00-18:00
Saturday, July 6th	7:00-17:30
Sunday, July 7th	7:30-16:00

Time Zone

Yokohama is located in the Japanese Standard Time (UTC-7) zone.

Tipping

Tipping is not customary in Japan, and is not generally done in any situation. Service charges are already included in the bill at hotels, restaurants, beauty salons, taxis, etc.

Travel Desk

Information for sightseeing, transportation and restaurant information, etc. is available.
Location: the main entrance hall on the 2nd floor at the Conference Center

INFORMATION FOR CHAIRS & SPEAKERS OF ORAL SESSIONS

For Chairs

- Please take your seat in the “next chair seat” at least 10 minutes before the beginning of your session and kindly adhere to the time allotted for the session and each presentation.
- During the Q&A period, please ask people with questions and/or comments to come forward and wait in front of the microphone, in advance.

For Speakers

- Please visit the Speakers' Preview Desk at least 45 minutes prior to your presentation, in order to preview and submit your presentation with sufficient time.
- Screen ratio is 16 : 9 (Widescreen) in all session rooms.
- Presentation files created with Microsoft Power Point (single screen only) are only available.
- If your presentation file was created using Macintosh, please use your own laptop with a VGA connector or a HDMI connector.
- If you intend to use your own laptop, please bring the power adapter.
- Please turn off energy-saving functions, such as power setting and screen saver (as well as hot corners in Macintosh).
- Please note that presenter view function cannot be used and avoid using the “Presentation Tools” function in PowerPoint (or Keynote in Macintosh), for the purpose of keeping the program running smoothly.
- Take your seat in the “speaker’s standby seat” during the presentation directly before yours.
- Keep your presentation within the time limit that has been suggested to the speakers.

Connecting a laptop using VGA cable

Connecting a laptop using HDMI cable

Important notes for presentation data:

- Save your presentation on USB memory or on CD-R. Do not use CD-RW.
- Presentation files in Windows PowerPoint 2010, 2013 or 2016 are acceptable.
- Use common font such as Arial, Times New Roman, Verdana etc. (special fonts might be changed to a default font.)
- The name of your presentation file should be “your presentation code + your name.” (e.g.: BS01-1 John Smith, BPS02-1 John Smith).
- There is no limit on the size of your presentation file. However, if the size of your presentation file exceeds 500MB, we recommend to use your own PC.
- You can use audio or video in your presentation. If you use video which is encoded with a specific codec in your presentation, we recommend you bring your own PC.
  We also recommend any video data to be in WMV or MP4 format which can be played on Windows Media Player 12.
- All data files should be in one folder, including any reference files such as video files.

Speakers’ Preview Desk:

- Please register your presentation data at the Speakers’ Preview Desk listed below.
- Location: 5th Floor Foyer, Conference Center

Opening Hours

Thursday, July 4th	8:00-16:30
Friday, July 5th	7:00-18:00
Saturday, July 6th	7:00-17:30
Sunday, July 7th	7:30-16:00

Duration for each oral presentation

Presidential Lecture	60 minutes (including Q & A)
Plenary Lecture	60 minutes (including Q & A)
Symposia	As announced by the session organizer
Educational Courses	As announced by the session organizer
Niels Lassen Award Session	15 minutes (10 minutes for presentation and 5 minutes for Q & A)
Oral presentation	15 minutes (including Q & A)

INFORMATION FOR CHAIRS & PRESENTERS OF POSTER SESSIONS

・Room: 301-304, 3rd floor, Conference Center

For Poster Chairs:

・Please register at the check-in desk located at the entrance of the poster session room by 10 minutes before initiation of your session.

For Poster Presenters:

・Please setup your poster on the panel where your poster number is indicated.
・Setup and takedown times are scheduled as below. Please note that any posters remaining after the takedown time will be disposed of.
・The Poster session chairs will facilitate the presentations (2 minutes each) and discussions (1 minute each) during the session.
・Please arrive at your poster panel no later than 10 minutes before the scheduled Presentation time.
・Poster authors are kindly asked to be present at their poster boards during both the poster presentation and viewing sessions.
・For any questions, please come to the poster desk at the entrance of the poster room.

Schedules for General Poster Sessions
(PB: BRAIN, PP: BRAIN PET, PL: Late breaking abstracts)

	Friday, July 5th	Saturday, July 6th	Sunday, July 7th
Setup	8:00-9:00	8:00-9:00	8:00-9:00
Poster No.	PB01-B01 - X12 PP01-M01 - R07 PL01-S01 - S07	PB02-B01 - S10 PP02-J01 - N07	PB03-A01 - V09 PL03-W01 - W33
Poster Presentation session	10:00-11:00 (Poster presentation* starts from 10:10)	9:30-10:30 (Poster presentation* starts from 9:40)	10:00-11:00 (Poster presentation* starts from 10:10)
Poster Viewing session	15:00-16:00	14:30-15:30	15:00-16:00
Takedown	16:00-17:00	16:00-17:00	16:00-17:00

*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).

Schedules for ECI Poster Sessions
(PA: ECI travel bursary awardee's poster session)

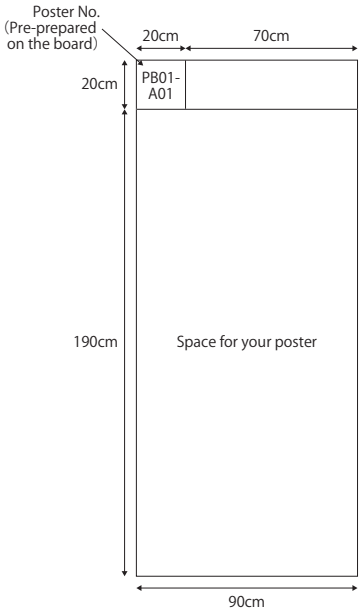
	ECI session I (Friday, July 5th)	ECI session II (Saturday, July 6th)
Setup	Friday, July 5th, 8:00-9:00	
Poster No.	PA00-A01 - A07 PA00-A15 - A21 PA00-A29 - A35 PA00-A43 - A49	PA00-A08 - A14 PA00-A22 - A28 PA00-A36 - A42
Poster Presentation Session	10:00-11:00 (Poster presentation* starts from 10:10)	9:30-10:30 (Poster presentation* starts from 9:40)
Poster Viewing Session	15:00-16:00	14:30-15:30
Takedown	Saturday, July 6th, 16:00-17:00	

*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).

- All ECI Travel Bursary Awardees' posters will be displayed for the first two days (July 5th-6th).
- Please note that any posters remaining after 17:00 on July 6th will be disposed of.

Preparations of Posters:

- The size of panel is 190 cm × 90 cm. The poster presentation number will be preliminarily provided on the board. Please refer to the sample below. The presenter may prepare the title of your poster separately to go in the space next to the Poster number (20 cm × 70 cm) or include it on your poster.



ACCESS MAP

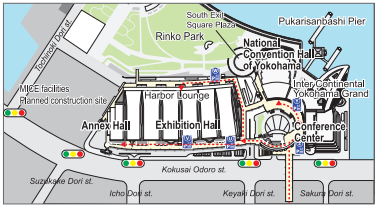
PACIFICO Yokohama Access & Area Map

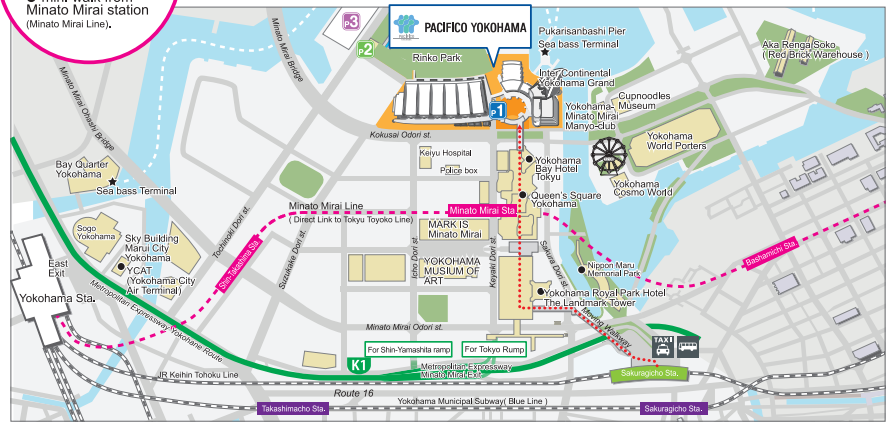
1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan Information: TEL +81-45-221-2155

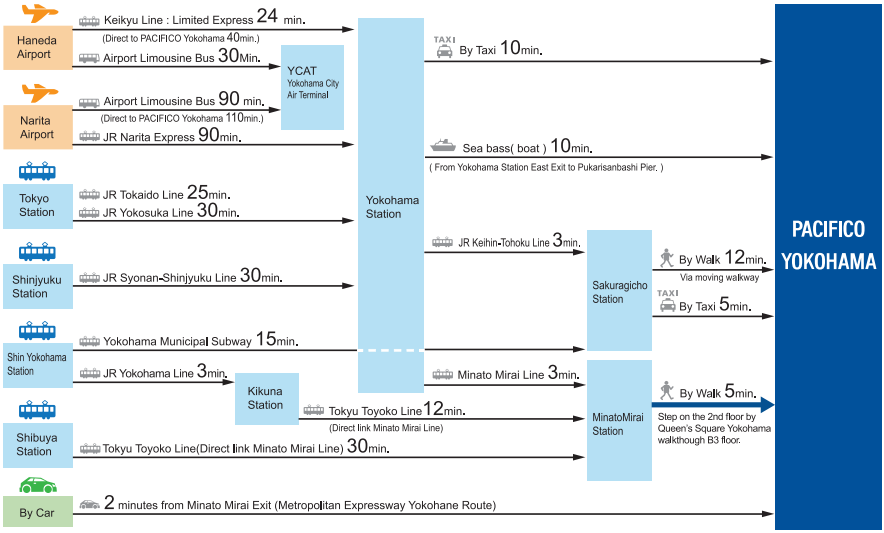
Easy access from all over the world.

30 min. from Tokyo by train.
5 min. walk from Minato Mirai station (Minato Mirai Line).

30 min. from Tokyo International Airport (Haneda).
100 min. from Narita International Airport.
20 min. from JR Shin Yokohama Station.
2 min. from Minato Mirai Exit (Metropolitan Expressway Yokohane Route) .







P1 Minato Mirai Public Parking Lot ¥270/30min. 7:00 to 24:00 *You can take your car out anytime 24hr.

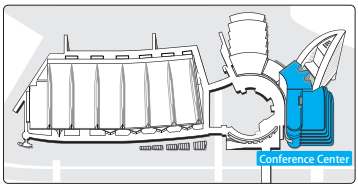
P2 Rinko Park Parking Lot ¥250/30min. 8:00 to 21:00

P3 Bus / Large Vehicle Parking Lot ¥500/30min. 24 hours open *Enter and exit between 7:00 and 22:00. Advanced reservations required

Notes:
- Actual travel times required depend on the facilities you are going to visit. An early arrival is recommended.
- Transfer times are not included.
- Actual travel times required also depend on the road conditions and which terminal you will use.

Jan.1, 2017

Conference Center



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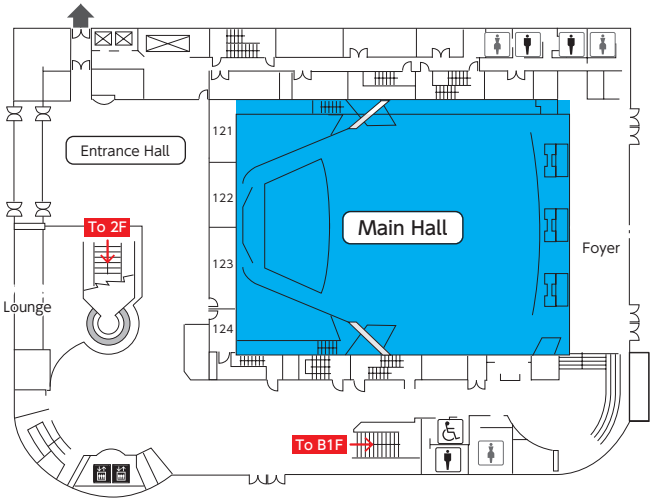

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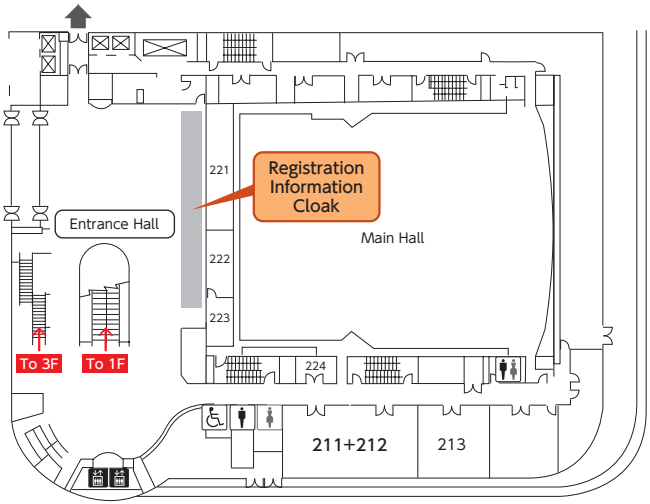
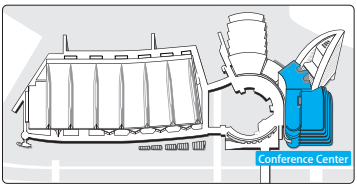
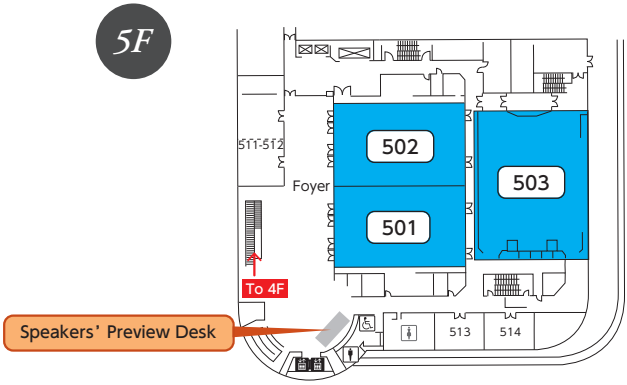


FLOOR GUIDE

Conference Center





ISCBFM MEETINGS

The following ISCBFM meetings will be held:

Thursday, July 4th **12:30-16:00**

ISCBFM Board Meeting
313+314, 3rd floor, Conference Center
By invitation only

Friday, July 5th **12:30-13:30**

ISCBFM General Assembly
503, 5th floor, Conference Center
ISCBFM members only

Friday, July 5th **19:15-21:00**

JCBFM Editorial Board Dinner & Meeting
Bay Bridge Cafeteria, 6th floor, Conference Center
By invitation only

Sunday, July 7th **18:00-19:30**

ISCBFM Board Meeting
313+314, 3rd floor, Conference Center
By invitation only

SOCIAL EVENTS

Welcome Reception

Date & Time: Thursday, July 4th, 17:30-19:00
Room: 301-304, 3rd floor, Conference Center, PACIFICO YOKOHAMA
(Included in Registration fee.)

Early Career Networking Evening

Date & Time: Friday, July 5th, 19:30-22:00
Venue: Hard Rock CAFE
1st floor, Queens Tower A, 2-3-1 Minato Mirai, Nishi-ku, Yokohama, Japan
Approximately 10-15 minutes on foot from the congress venue
Fee applies

ISCBFM Banquet

Date & Time: Saturday, July 6th, 19:30-21:30
Venue: Queens Grand Ballroom, B2 floor, The Yokohama Bay Hotel Tokyu
2-3-7 Minato Mirai, Nishi-ku, Yokohama 220-8543, Japan
Approximately 5 minutes on foot from the congress venue
Fee applies

OFFICIAL BRAIN & BRAIN PET 2019 SATELLITES

We are pleased to announce that in addition to BRAIN & BRAIN PET 2019 there will be several high quality satellite meetings:

iCSD 2019-International Conference on Spreading Depolarization

Conference Chair: Michiyasu Suzuki
Yamaguchi University Graduate School of Medicine, Japan
Date: July 1st-3rd, 2019
Location: "VIA MARE", Hamagin Hall, Yokohama, Japan
3-1-1, Minato Mirai, Nishi-ku, Yokohama Kanagawa, 220-8611 Japan

PET Pharmacokinetics Course at BRAIN & BRAIN PET 2019

Organizers: Hidehiko Okazawa
University of Fukui, Biomedical Imaging Research Center, Japan
Date: July 1st-3rd, 2019
Location: Congress Center, Hamamatsu Act City, Hamamatsu, Japan
111-1 Itaya-machi Naka-ku, Hamamatsu-shi, Shizuoka, 430-7790 Japan

Progress in Tau Imaging Satellite Meeting

Organizers: McGill University / University of Fukui
Date: July 3rd, 2019
Location: Congress Center, Hamamatsu Act City, Hamamatsu, Japan
111-1 Itaya-machi Naka-ku, Hamamatsu-shi, Shizuoka, 430-7790 Japan

Advances in Multi-Scale Imaging of Cerebral Blood Flow and Metabolism in relation to Brain Activity

Organizer: IBS Center for Neuroscience Imaging Research, N Center, Sungkyunkwan University
Date: July 9th-10th, 2019
Location: Sungkyunkwan University Campus, Suwon, Korea
Seobu-ro 2066, Jangan-gu, Suwon, Korea

MEMO

SESSION TYPES

Highlight Session	LAA, PRL, NLA, PL
BRAIN Symposium	SY
BRAIN PET Symposium	BPSY
BRAIN Courses	BC
BRAIN PET Courses	BP
BRAIN Oral	BS
BRAIN PET Oral	BPS
Poster Session	PS
Social Event	Welcome Reception Early Career Networking Evening ISCBFM Banquet
Sponsored Seminar	SS

PROGRAM AT A GLANCE | DAY 0 | JULY 4TH

Educational Courses

	503	501	502	301-304
8:00				
9:00	**BC01** Brain Course: Latest advances in stroke models (Part 1)	**BC02** Brain Course: Latest developments in understanding neurovascular coupling (Part 1)	**BP01** Brain PET Course: Brain PET: Glucose utilization in neuronal and tumor cells - novel perspectives for [18F]FDG PET (Part 1)	
10:00				
	Coffee Break			
11:00	**BC01** Brain Course: Latest advances in stroke models (Part 2)	**BC02** Brain Course: Latest developments in understanding neurovascular coupling (Part 2)	**BP01** Brain PET Course: Glucose utilization in neuronal and tumor cells - novel perspectives for [18F]FDG PET (Part 2)	
12:00				
13:00	Lunch Break			
14:00	**BC03** Brain Course: Preclinical rehabilitation models (Part 1)	**BC04** Brain Course: How to get started as an independent investigator (ECI) (Part 1)	**BP02** Brain PET Course: The use of amyloid and tau tracers in Alzheimer research (Part 1)	
15:00				
	Coffee Break			
16:00	**BC03** Brain Course: Preclinical rehabilitation models (Part 2)	**BC04** Brain Course: How to get started as an independent investigator (ECI) (Part 2)	**BP02** Brain PET Course: The use of amyloid and tau tracers in Alzheimer research (Part 2)	
17:00				
18:00				Welcome Reception 17:30-19:00 (Exhibition & Poster Area)
19:00				

PROGRAM AT A GLANCE | DAY 1 | JULY 5TH

	Main Hall	503	501	502	301-304
8:00	**LAA** Opening and Introduction and Lifetime Archivement Award				
9:00	**PRL** The role of capillary pericytes in regulating cerebral blood flow in health, ischaemia and Alzheimer's disease				
10:00		Coffee Break, exhibition & poster presentation			**PS01** Poster presentation session
11:00		**SY01** Symposium: Hot Techniques in Neuroimaging of Cerebrovascular Disease	**BS01** Brain Oral: Translational Studies in Stroke	**BPSY01** Brain PET Symposium: Mapping Neuronal and Synaptic Changes using Specific PET Probes: Animal and Clinical Applications	
12:00					
13:00		**ISCBFM** General Assembly	Lunch Break, exhibition & poster viewing		
14:00		**SY02** Symposium: A Window into the Brain: Innovative Approaches for Estimating Brain Metabolism in Animals and Humans	**BS02** Brain Oral: Advanced Imaging: PET & MRI	**BPS01** Brain PET Oral: Neurotransmission & Psychiatry	
15:00		Coffee Break, exhibition & poster viewing			**PS02** Poster viewing session
16:00		**SY03** Symposium: Immune-Neurovascular Interactions in the Injured Developing Brain	**BS03** Brain Oral: Neurovascular Coupling: Mechanisms	**BPS02** Brain PET Oral: Novel imaging agents and preclinical imaging: I	
17:00					
18:00		**SY04** Symposium: The Role of the Microbiome in Acute and Chronic Brain Disease	**BS04** Brain Oral: Hemorrhagic stroke	**BPS03** Brain PET Oral: Novel imaging agents and preclinical imaging: II	
19:00	19:30-21:30 **Early Career Networking Evening** @Hard Rock Cafe				

PROGRAM AT A GLANCE | DAY 2 | JULY 6TH

	503	501	502	301-304
8:00	**SY05**	**BS05**	**BPS04**	
	Symposium: Interrogation of Pericyte Function in CNS Physiology & Pathophysiology	Brain Oral: Dementia and Cognition Impairment	Brain PET Oral: Brain Imaging Methodology: I	
9:00				
	Coffee Break, exhibition & poster presentation			**PS03**
10:00				Poster presentation session
	SY06			
11:00	Symposium: Honoring Richard Traystman: Advances in Investigation of CBF and Metabolism			
12:00				
	SS1	**SS2**	**SS3**	
	Sponsored Seminar 1 GE Healthcare Japan Corporation	Sponsored Seminar 2 DAIICHI SANKYO COMPANY, LIMITED.	Sponsored Seminar 3 Bristol-Myers Squibb / Pfizer Japan Inc.	
13:00	**SY07**	**BS06**	**BPS05**	
	Symposium: Digital Metabolic Map of the Human Brain from BigBrain Stereological Cellular Atlas	Brain Oral: Advances in Basic through Clinical Stroke	Brain PET Oral: Brain Imaging Methodology: II	
14:00				
	Coffee Break, exhibition & poster viewing			**PS04**
15:00				Poster viewing session
	SY08	**BS07**	**BPS06**	
16:00	Symposium: Brain Metabolism and Aging: Opportunities and Controversies	Brain Oral: Brain Injuries: Traumatic, Ischemic, & Hypoxic	Brain PET Oral: Quantitative brain imaging using integrated PET/MRI	
17:00	**SY09**	**BS08**	**BPS07**	
	Symposium: Latest Aspects of Immunology in Stroke	Brain Oral: Cerebrovascular Regulation: Experimental and Clinical	Brain PET Oral: Imaging in Neurological Diseases	
18:00				
19:00				
	19:30-21:30 **ISCBFM Banquet** @The Yokohama Bay Hotel Tokyu			

PROGRAM AT A GLANCE | DAY 3 | JULY 7TH

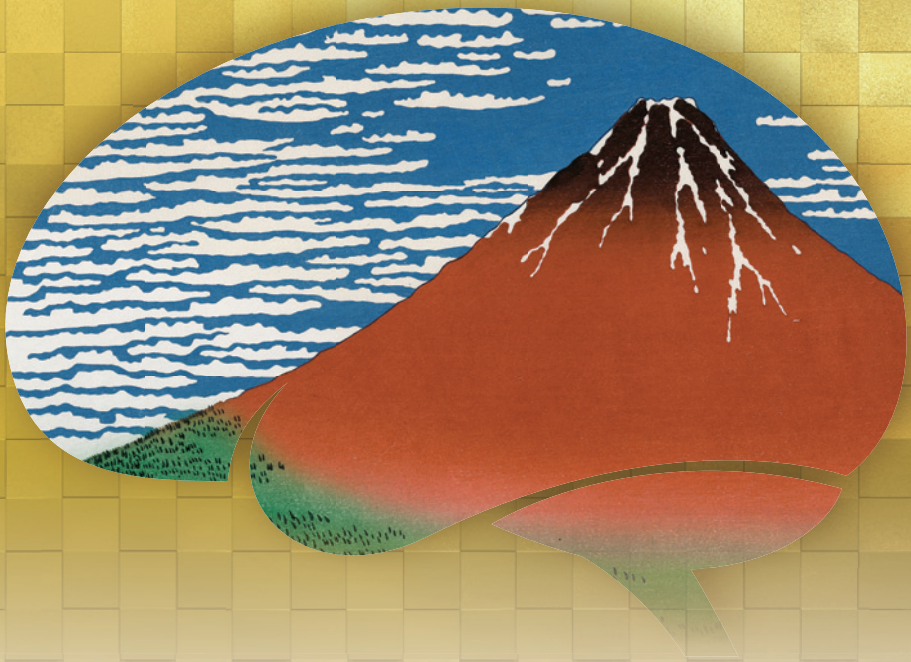
	503	501	502	301-304
8:00		**NLA** Niels Lassen Award Session		
9:00		**PL** Repair of axons and circuits after spinal cord injury		
10:00	Coffee Break, exhibition & poster presentation			**PS05** Poster presentation session
11:00	**BS09** Brain Oral: Neurovascular Coupling: Clinical and Pathophysiological aspects	**JSY** JCBFM Symposium	**BS10** Brain Oral: Blood-Brain Barrier & the Neurovascular Unit	
12:00				
13:00	**SS4** Sponsored Seminar 4 Medicaline Co., Ltd.	**SS5** Sponsored Seminar 5 EISAI	**SS6** Sponsored Seminar 6 Otsuka Pharmaceutical Co., Ltd.	
14:00	**SY10** Symposium: Blood-Brain Barrier Repair in CNS Disease: New Mechanistic Insights, Novel Therapeutic Strategies	**BS11** Brain Oral: Novel Preclinical Imaging Applications	**BS12** Brain Oral: Neuroinflammation	
15:00	Coffee Break, exhibition & poster viewing			**PS06** Poster viewing session
16:00	**SY11** Symposium: Brain and Immunity in Health and Disease	**BS13** Brain Oral: Neuroprotection revisited- novel mechanisms and applications	**BS14** Brain Oral: Cerebral Ischemia: Reperfusion	
17:00				
18:00				
19:00				

MEMO

BRAIN & BRAIN PET 2019
Yokohama Japan

The 29th International Symposium on Cerebral Blood Flow, Metabolism and Function
The 14th International Conference on Quantification of Brain Function with PET

July 4 – 7, 2019 Yokohama, Japan



Thursday, July 4th

BRAIN & BRAIN PET 2019 Yokohama Japan

http://brain2019.jp

ISCBFM International Society for Cerebral Blood Flow & Metabolism

Educational Course

09:00-12:30	BC01	5F, 503
		Latest advances in stroke models
	Chair(s)	S. Cho (United States) S. Allan (United Kingdom)
09:00-09:05		Introduction
09:05-09:47	BC01-1	Optical access to brain circuit in awake mice for stroke induction and assessment **T. Murphy** (Canada)
09:47-10:29	BC01-2	Stroke recovery model in mice with MCAO: longitudinal behavior analyses across post-stroke stages **M. Balkaya** (United States)
11:00-11:42	BC01-3	Control of cerebral ischemia with magnetic nanoparticles: Magnetic bead occlusion model **WP. Ge** (United States)
11:42-12:24	BC01-4	Chronic hypoperfusion model for white matter injury and cognitive dysfunction **K. Horsburgh** (Scotland, United Kingdom)
12:24-12:29		Summary/Closing

09:00-12:30	BC02	5F, 501
		Latest developments in understanding neurovascular coupling
	Chair(s)	J. Filosa (United States) E. Hamel (Canada)
09:00-09:15		Introduction
09:15-09:45	BC02-1	Neurogenic control of neurovascular coupling **B. Cauli** (France)
09:45-10:15	BC02-2	Tonic and augmenting control of cerebral blood flow by astrocytes **G. Gordon** (Canada)
10:15-10:30		Discussion of the first two talks

11:00-11:30	BC02-3	Role of vascular mural cells in NVC **C. Hall** (United Kingdom)
11:30-12:00	BC02-4	The role of the vascular endothelium in neurovascular coupling - a unifying mechanism? **E.M.C. Hillman** (United States)
12:00-12:10		Discussion of the last two talks
12:10-12:30		Discussion

09:00-12:30	BP01	5F, 502
		Glucose utilization in neuronal and tumor cells - novel perspectives for [18F]FDG PET
	Chair(s)	M. Palner (Denmark) K. Yamada (Japan)
09:00-09:30	BP01-1	Introduction: background and different novel usages of 18F-FDG PET **M. Palner** (Denmark)
09:30-10:00	BP01-2	Direct neuronal glucose uptake using 2DG-IR imaging **I. Lundgaard** (Sweden)
10:00-10:30	BP01-3	Energy metabolism underlying specific neuronal network activity states **O. Kann** (Germany)
11:00-11:30	BP01-4	Imaging malignant potential by fluorescent glucose uptake **K. Yamada** (Japan)
11:30-12:00	BP01-5	Metabolic functional connectivity: a new application for FDG-PET **H. Endepols** (Germany)
12:00-12:30		Discussion

14:00-17:30	BC03	5F, 503
		Preclinical rehabilitation models
	Chair(s)	A. Rosell (Spain) A. Stowe (United States)
14:00-14:10		Introduction

14:10-14:45	BC03-1	Clinical perspective of stroke rehabilitation and recovery **K. Hayward** (Australia)
14:45-15:20	BC03-2	Post stroke physical exercise **M. Perez-Pinzon** (United States)
16:00-16:35	BC03-3	Enriched environment and functional recovery **K. Ruscher** (Sweden)
16:35-17:10	BC03-4	Contralesional homotopic plasticity with constraint induced movement therapy **A. Kerr** (United States)
17:10-17:30		Ask the Clinician **S. Hirano** (Japan) **K. Hayward** (Australia)

14:00-17:30	BC04	5F, 501
		How to get started as an independent investigator (ECI)
	Chair(s)	S. Knauss (Germany) Y. Wang (China)
14:00-14:30	BC04-1	Establishing a lab for the first time - The transition Panel discussion **H. Girouard** (Canada)
14:30-15:00	BC04-2	Establishing a lab for the first time - Managing your resources Panel discussion **C. Stary** (United States)
15:00-15:30	BC04-3	When I started my first lab/Establishing successful collaborations? Panel discussion **F. Hyder** (United States)
16:00-16:30	BC04-4	Establishing the lab for the first time Panel discussion **T.G. Arumugum** (Singapore)
16:30-17:30		Panel discussion **E. Lo** (United States) **F. Hyder** (United States) **C. Stary** (United States) **H. Girouard** (Canada) **T.G. Arumugum** (Singapore) **T. Davis** (United States)

14:00-17:30	BP02	5F, 502
		The use of amyloid and tau tracers in Alzheimer research
	Chair(s)	I. Kanno (Japan) A. Lammertsma (Netherlands)
14:00-14:45	BP02-1	Tau tracers, what do they measure, how can they be used and what are the confounders **V. Villemagne** (Australia)
14:45-15:30	BP02-2	FDG, amyloid, tau: when to use which tracer **H. Shimada** (Japan)
16:00-16:45	BP02-3	How to quantify amyloid and tau PET studies **A. Lammertsma** (Netherlands)
16:45-17:30	BP02-4	Why do we need large clinical trials and how should they be designed - the AMYPAD example **I. Lopes Alves** (Netherlands)

17:30-19:00		3F, 301-304
		Welcome Reception

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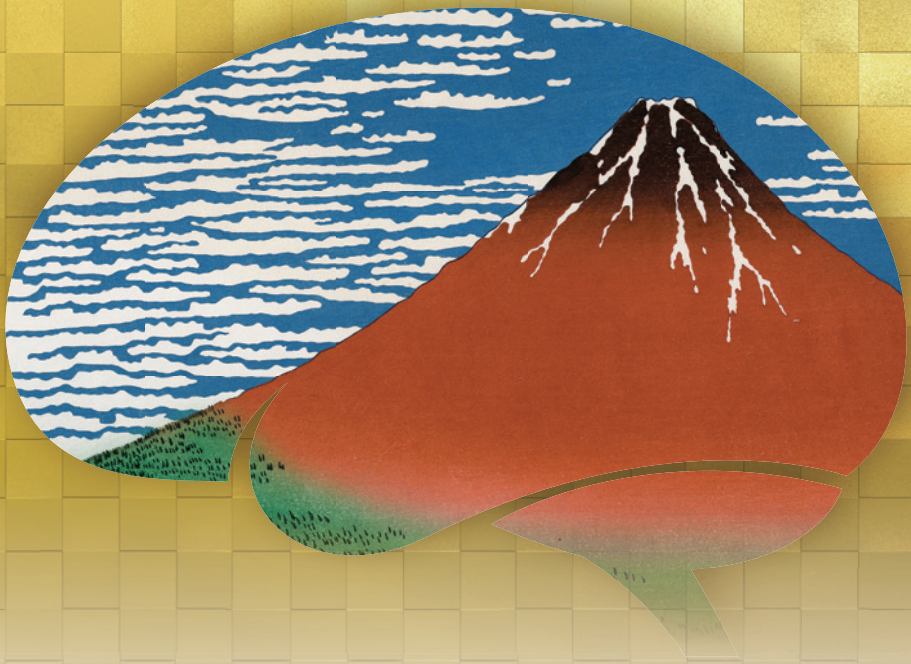


Friday, July 5th

BRAIN & BRAIN PET 2019 Yokohama Japan

http://brain2019.jp

ISCBFM International Society for Cerebral Blood Flow & Metabolism

SCIENTIFIC PROGRAM | FRIDAY, JULY 5TH 2019

08:00-09:00	LAA	1F, Main Hall
08:00-08:20		**Opening and Introduction** **E. Lo** (United States) **H. Kinouchi** (Japan) **H. Okazawa** (Japan)
08:20-08:40		**Lifetime Achievement Award**
	Chair(s)	M.E. O'Donnell (United States) K. Masamoto (Japan)
08:40-09:00		Recipient of the Lifetime Achievement Award **E. Hamel** (Canada)

09:00-10:00	PRL	1F, Main Hall
		Presidential Lecture
	Chair(s)	E. Lo (United States)
		The role of capillary pericytes in regulating cerebral blood flow in health, ischaemia and Alzheimer's disease **D. Attwell** (United Kingdom)

11:00-12:30	SY01	5F, 503
		Hot Techniques in Neuroimaging of Cerebrovascular Disease
	Chair(s)	S. Wegener (Switzerland) T. Farr (United Kingdom)
11:00-11:18	SY01-1	Cellular imaging of the neurovascular unit **K. Masamoto** (Japan)
11:18-11:36	SY01-2	Laser speckle and 2photon imaging in the thrombin stroke model **M. El Amki** (Switzerland)
11:36-11:54	SY01-3	Structural mouse brain connectome imaging in vascular dementia **T. Farr** (United Kingdom)
11:54-12:12	SY01-4	Structural and functional connectivity imaging in the rodent brain **R. Dijkhuizen** (Netherlands)

12:12-12:30	SY01-5	Deep Learning for stroke data analysis **L. Herzog** (Switzerland)
12:30-13:30		5F, 503 **ISCBFM General Assembly**
11:00-12:30	BS01	5F, 501 **Translational Studies in Stroke**
	Chair(s)	J. Boltze (United Kingdom) M. Balkaya (United States)
11:00-11:15	BS01-1	CD36 deficiency reduce scar formation and improve functional outcome in chronic stroke **M. Balkaya**, ID. Kim, S. Cho (United States)
11:15-11:30	BS01-2	DNA polymerase-beta-dependent DNA repair pathway contributes to neuronal survival and white matter protection against cerebral ischemia **M. Xu**, R. Anne Stetler, L. Zhang, Y. Shi, S. Hassan, J. Zhao, M.V.L. Bennett, J. Chen (United States)
11:30-11:45	BS01-3	Older female mice lacking triggering recepter expressed on myeloid cells-2 have worse post-stroke neurological function and enhanced pro-inflammatory responses **K. Kurisu**, R. Kacimi, Z. Zheng, C. Hsieh, M.A. Yenari (United States)
11:45-12:00	BS01-4	Optogenetic induction of peri-infarct spreading depolarizations in the ET-1 rat model of focal cortical ischemia **P. Bazzigaluppi**, A. Dorr, J. Mester, M. Koletar, B. Stefanovic (Canada)
12:00-12:15	BS01-5	Brain functional connectivity changes in acute ischemic stroke measured with bedside diffuse optical tomography **B.A. Burke**, A.T. Eggebrecht, K.M. Bergonzi, A. Sherafati, T.M. Burns-Yocum, A.K. Fishell, G. Kumar, R. Dhar, JM. Lee, J.P. Culver (United States)

12:15-12:30	BS01-6	Clinical validation of Penumbra and ischemic core prediction from deep learning algorithm using baseline multimodal MRI in acute ischemic stroke patients: A multi-center study **Y. Yu**, Y. Xie, T. Thamm, E. Gong, C. Huang, S. Christensen, M.G. Lansberg, G.W. Albers, G. Zaharchuk (United States)

11:00-12:30	BPSY01	5F, 502
		Mapping Neuronal and Synaptic Changes using Specific PET Probes: Animal and Clinical Applications
	Chair(s)	J.C. Baron (United Kingdom/France) R. Carson (United States)
11:00-11:05		Introduction
11:05-11:25	BPSY01-1	PET studies using mitochondrial complex-1 tracers in brain damage **H. Tsukada** (Japan)
11:25-11:45	BPSY01-2	Mapping the Metabotropic Glutamate Receptor-5 (MgluR5) using PET **C. DeLorenzo** (United States)
11:45-12:05	BPSY01-3	Mapping selective neuronal damage after ischemic stroke and relationships with microglial activation **J.C. Baron** (United Kingdom/France)
12:05-12:25	BPSY01-4	Imaging synaptic density in the living brain **T. Toyonaga** (United States)
12:25-12:30		Discussion

13:30-15:00	SY02	5F, 503
		A Window into the Brain: Innovative Approaches for Estimating Brain Metabolism in Animals and Humans
	Chair(s)	S. Marinesco (France) AK. Bouzier Sore (France)
13:30-13:36		Introduction

13:36-13:57	SY02-1	Seeing is believing: visualizing brain glucose utilization with deoxyglucose: from in vitro to in vivo **L. Pellerin** (Switzerland)
13:57-14:18	SY02-2	Brain cell energy metabolism visualized with genetically-encoded fluorescent probes **L.F. Barros** (Chile)
14:18-14:39	SY02-3	Following brain metabolism changes in vivo using NMR spectroscopy and MRI during brain activation: importance of lactate **AK. Bouzier Sore** (France)
14:39-15:00	SY02-4	Dysfunctions in brain metabolism after traumatic brain injury evidenced by microelectrode biosensors **C. Allioux** (France)

13:30-15:00	BS02	5F, 501
		Advanced Imaging: PET & MRI
	Chair(s)	S. Kaczmarz (Germany) F. Boada (United States)
13:30-13:45	BS02-1	Static and dynamic structure-function relationships across anatomical connectivity strengths in the rodent and human brain **M. Straathof**, M.R.T. Sinke, W.M. Otte, R.M. Dijkhuizen (Netherlands)
13:45-14:00	BS02-2	[^{18}F]MK-6240 for imaging tau in patients with Alzheimer's disease: Longitudinal evaluation in Alzheimer's disease and cognitively normal adults at 6 and 12 months **C.A. Salinas**, A. Purohit, J. Beaver, L. Martarello (United States)
14:00-14:15	BS02-3	Reward anticipation processing in major depressive disorder and prediction of treatment response - an fMRI study **I.M. Brandt**, K. Köhler-Forsberg, M.B. Jorgensen, A. Poulsen, G.M. Knudsen, V.G. Frokjaer, P.M. Fisher (Denmark)
14:15-14:30	BS02-4	Human line-scanning fMRI: Initial results of ultra-high temporal and spatial resolution hemodynamic imaging **JC.W. Siero**, I. Siero, S. Choi, X. Yu (Netherlands, Germany)

14:30-14:45	BS02-5	Brain temperature and metabolites- an in-vivo mr spectroscopy assessment of energy states, metabolism, neuronal maturation, and neurotransmission in infants undergoing therapeutic hypothermia for hypoxic-ischemic encephalopathy **TW. Wu**, J. Wisnowski, B. Tamrazi, R. Chapman, S. Bluml (United States)
14:45-15:00	BS02-6	MR-based protocol for metabolically-based evaluation of tissue viability during recanalization therapy: initial experience **F.E. Boada**, Y. Qian, S. Baete, E. Raz, M. Shapiro, P.K. Nelson, K. Ishida (United States)

13:30-15:00	BPS01	5F, 502
		Neurotransmission & Psychiatry
	Chair(s)	J. Booij (Netherlands) J.C. Price (United States)
13:30-13:45	BPS01-1	Lower nicotinic and muscarinic receptor occupancy in regions with high acetylcholine concentration: towards an index of regional acetylcholine balance in the human brain **K. Smart**, M. Naganawa, S.R. Baldassarri, J. Anderson, K.P. Cosgrove, Y. Huang, I. Esterlis, R.E. Carson, A.T. Hillmer (United States)
13:45-14:00	BPS01-2	PET imaging of [^{11}C]BIIB104, an AMPA positive modulator, in the living NHP brain **M. Kaliszczak**, S. Nag, S. Dandapani, R. Arakawa, A. Forsberg, K. Varnäs, J. Beaver, C. Shaffer, C. Halldin, L. Martarello (United States, Sweden)
14:00-14:15	BPS01-3	Task-sensitivity of functional [^{18}F]FDG-PET in comparison to functional MRI and arterial spin labeling **L. Rischka**, G.M. Godbersen, V. Pichler, P. Michenthaler, T. Vanicek, W. Wadsak, M. Hacker, S. Kasper, R. Lanzenberger, A. Hahn (Austria)
14:15-14:30	BPS01-4	Patients with major depressive disorder have lower cerebral serotonin 4 receptor PET binding than healthy controls **K. Koehler-Forsberg**, V. H. Dam, A. Joergensen, E. Landman, S. V. Larsen, A. Poulsen, CT. Ip, M. B. Joergensen, V. G. Froekjaer, G. M. Knudsen (Denmark)

14:30-14:45	BPS01-5	Regional correlation between glucose metabolism and synaptic density in healthy subjects **J. van Aalst**, J. Ceccarini, P. Dupont, M. Koole, K. Van Laere (Belgium)
14:45-15:00	BPS01-6	Cerebral adenosine receptor availability after sleep deprivation is associated with specific dynamic connectivity states determined by resting state fMRI **D. Elmenhorst**, C. Li, EM. Elmenhorst, T. Kroll, D. Aeschbach, A. Bauer (Germany, United States)

16:00-17:30	SY03	5F, 503
		Immune-Neurovascular Interactions in the Injured Developing Brain
	Chair(s)	Z. Vexler (United States)
16:00-16:05		Introduction
16:05-16:25	SY03-1	Neuronal rescue and protection by modulating immune system and blood-brain barrier in immature brain **T. Ikeda** (Japan)
16:25-16:45	SY03-2	Neonatal infection and TLR-type dependent effects on hypoxia-ischemia (H-I) and blood-brain barrier (BBB) **C. Mallard** (Sweden)
16:45-17:05	SY03-3	Brain maturation dependent patterns of neuroinflammation and vascular leakage in stroke **Z. Vexler** (United States)
17:05-17:25	SY03-4	Vascular modifications following injury in the developing brain **A. Obenaus** (United States)
17:25-17:30		Discussion

16:00-17:30	BS03	5F, 501
		Neurovascular Coupling: Mechanisms
	Chair(s)	E.M.C. Hillman (United States) S. Grubb (Denmark)
16:00-16:15	BS03-1	Spatial-temporal dynamics of functional hyperemia: mural cell calcium and vascular responses from the synapse to the pia **R.L. Rungta**, E. Chaigneau, B. Osmanski, S. Charpak (France)
16:15-16:30	BS03-2	Precapillary sphincters exist in the brain and regulate blood flow to the capillary bed **S. Grubb**, C. Cai, L. Khennouf, B. Hald, R. Murmu, S. Zambach, M. Lauritzen (Denmark)
16:30-16:45	BS03-3	The contribution of specific inhibitory cortical interneurons to neurovascular coupling **L. Lee**, L. Boorman, E. Glendenning, C. Christmas, P.S. Sharp, E. Bracci, J. Berwick, C. Howarth (United Kingdom)
16:45-17:00	BS03-4	Cerebral hemodynamics are differentially regulated by excitatory and inhibitory circuits **J. Lee**, A.R. Bice, Z.P. Rosenthal, JM. Lee, A.Q. Bauer (United States)
17:00-17:15	BS03-5	Simultaneous multispectral fiber-photometry and functional MRI reveals heterogeneous neurovascular coupling in cerebral cortex and striatum **WT. Zhang**, TH. Chao, SH. Lee, B.M. Katz, TW. Wang, E.A. Oyarzabal, G. Cui, YY.I. Shih (United States)
17:15-17:30	BS03-6	Simultaneous mesoscopic Ca^{2+} imaging and fMRI: Neuroimaging spanning spatiotemporal scales **E. Lake**, X. Ge, X. Shen, F. Hyder, J.A. Cardin, M.J. Higley, D. Scheinost, X. Papademetris, M.C. Crair, R. Constable (United States)

16:00-17:30	BPS02	5F, 502
		Novel imaging agents and preclinical imaging: I
	Chair(s)	Y. Huang (United States) Y. Kiyono (Japan)
16:00-16:15	BPS02-1	Evaluation of the first ^{18}F-labeled PET radiotracer ^{18}F-LY2459989 for imaging kappa opioid receptor in humans **N.B. Nabulsi**, M. Naganawa, S. Li, S. Henry, D. Matuskey, K. Lim, P. Emery, J. Ropchan, R.E. Carson, Y. Huang (United States)
16:15-16:30	BPS02-2	Kinetic analysis and test-retest variability of [^{18}F] LSN3316612, a novel PET radioligand for imaging O-GlcNAcase in human brain **JS. Liow**, JH. Lee, S. Paul, S. Lu, S. Shcherbinin, H. Nuthall, P. Zanotti-Fregonara, S. Zoghbi, V. Pike, R. Innis (United States)
16:30-16:45	BPS02-3	Evaluation of a radiofluorinated benzazepine-1,7-diol analogue for imaging the GluN2B subunits of the *N*-Methyl-D-Aspartate receptor H. Ahmed, A. Haider, I. Iten, R. Wallimann, S. Häne, A.M. Herde, R. Schibli, L. Mu, B. Wünsch, **S.M. Ametamey** (Switzerland, Germany)
16:45-17:00	BPS02-4	Development and initial in vivo evaluation in monkey brain of [^{11}C]T-1650, a novel PET ligand for phosphodiesterase-4 subtype D **Y. Wakabayashi**, S. Telu, M. Fujita, C. Morse, S.S. Zoghbi, R.L. Gladding, R. Nugent, M.E. Gurney, V.W. Pike, R.B. Innis (United States, Japan)
17:00-17:15	BPS02-5	^{18}F-SDM-8 is an excellent PET radiotracer for imaging the synaptic vesicle glycoprotein 2A: First experience in humans **Y. Huang**, M. Naganawa, S. Li, N. Nabulsi, S. Henry, MQ. Zheng, R. Pracitto, D. Matuskey, M. Kapinos, R.E. Carson (United States)
17:15-17:30	BPS02-6	Evaluation of [^{11}C](*R*)-NR2B-Me, a novel PET RADIOligand for imaging The NR2B subunit of the NMDAR complex in rat and monkey brain **X. Yan**, L. Cai, JS. Liow, C. Morse, M. Frankland, R. Gladding, R. Dick, S. Zoghbi, V. Pike, R. Innis (United States)

17:30-19:00	SY04	5F, 503
		The Role of the Microbiome in Acute and Chronic Brain Disease
	Chair(s)	F. Sohrabji (United States)
17:30-17:32		Introduction
17:32-17:54	SY04-1	Estrogen protection against EAE modulates the microbiota and mucosal-associated regulatory cells **H. Offner** (United States)
17:54-18:16	SY04-2	Microbiota alterations and intestinal inflammation post-spinal cord injury in rat model **S. Daunert** (United States)
18:16-18:38	SY04-3	Microbiota-immune cell interaction: Critical role of gut metabolites in neuroinflammation **C. Benakis** (Germany)
18:38-19:00	SY04-4	Reproductive senescence and brain injury remodel the gut microbiome and modulate the effects of estrogen treatment in female rats **F. Sohrabji** (United States)

17:30-19:00	BS04	5F, 501
		Hemorrhagic stroke
	Chair(s)	H. Yoshioka (Japan) P. Fischer (United States/Germany)
17:30-17:45	BS04-1	Using zebrafish larval models of intracerebral haemorrhage to study brain injury, locomotor and neuroinflammatory outcomes **P. Kasher**, S. Crilly, A. Parry-Jones, S. Allan (United Kingdom)
17:45-18:00	BS04-2	Spreading depolarizations limit hematoma expansion in a model of intracortical hemorrhage: a novel protective role **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)

18:00-18:15	BS04-3	Red blood cell-derived microparticles treatment attenuates intracerebral hemorrhage-induced behavioral deficits in rats **K.R. Dave**, A.K. Rehni, H. Navarro Quero, S. Cho, E. Jy, D. Desai, S. Koch, Y.S. Ahn, M.A. Perez-Pinzon, W. Jy (United States)
18:15-18:30	BS04-4	Pro-inflammatory response promoted by *Porphyromonas gingivalis* lipopolysaccharide enhances the rupture of experimental intracranial aneurysms **T. Miyamoto**, K.T. Kitazato, Y. Tada, K. Shimada, M. Korai, T. Yamaguchi, Y. Kanematsu, S. Nagahiro, Y. Takagi (Japan)
18:30-18:45	BS04-5	Correlates of spreading depolarization, spreading depression and negative ultraslow potential in human epidural versus subdural electrocorticography **J.P. Dreier**, S. Major, C.L. Lemale, V. Kola, C. Reiffurth, K. Schoknecht, N. Hecht, J.A. Hartings, J. Woitzik (Germany, United States)
18:45-19:00	BS04-6	The effect of subarachnoid hemorrhage on resting state functional connectivity and behavior in mice **D. Chung**, G. Jin, S. Kura, F. Oka, S. Aykan, D. Boas, S. Sakadžić, M. Yaseen, M. Whalen, C. Ayata (United States, Japan)

17:30-19:00	BPS03	5F, 502
		Novel imaging agents and preclinical imaging: II
	Chair(s)	M. Higuchi (Japan) M. Vicente-Rodriguez (United Kingdom)
17:30-17:45	BPS03-1	Head-to-head comparison of two colony stimulating factor-1 receptor PET ligands, [^{11}C]GW2580 and [^{11}C]CPPC, for imaging of acute and chronic neuroinflammatory changes in mice **X. Zhou**, C. Seki, M. Ono, M. Fujinaga, MR. Zhang, T. Saito, T. Saido, T. Suhara, B. Ji, M. Higuchi (Japan)
17:45-18:00	BPS03-2	Evaluation of the demyelination PET radiotracer [^{18}F]3F4AP in rhesus macaque **N.J. Guehl**, K.M. Ramos-Torres, M. Dhaynaut, SH. Moon, M.Q. Wilks, G. El Fakhri, P. Brugarolas, M.D. Normandin (United States, France)

18:00-18:15	BPS03-3	The new PET tracer ^{18}F-SDM-8 effectively detects reduced SV2a binding in a rodent model of Alzheimer's disease **P. Sadasivam**, L. Smith, J. Spurrier, S. Lee, M. Lindemann, T. Toyonaga, R. Pracitto, R.E. Carson, S. Strittmatter, Z. Cai (United States)
18:15-18:30	BPS03-4	PET imaging of colony stimulating factor 1 receptor in rat brains **A. Ogata**, Y. Kimura, T. Yamada, M. Ichise, H. Ikenuma, J. Abe, H. Koyama, M. Suzuki, T. Kato, K. Ito (Japan)
18:30-18:45	BPS03-5	PET-CT shows distinct brain uptake and retention for a nanobody and PAMAM dendrimer after intra-arterial delivery **W. Lesniak**, C. Chu, A. Jablonska, B. Behnam Azad, M. Pomper, P. Walczak, M. Janowski (United States, Poland)
18:45-19:00	BPS03-6	Characterization of two mGluR4 radiotracers [^{18}F]KALB001 and [^{11}C]KALB012 in non-human primates **N.J. Guehl**, M.D. Normandin, D.W. Wooten, R. Neelamegam, T.M. Shoup, J. Wang, Z. Zhang, K. Grogg, G. El Fakhri, AL. Brownell (United States)

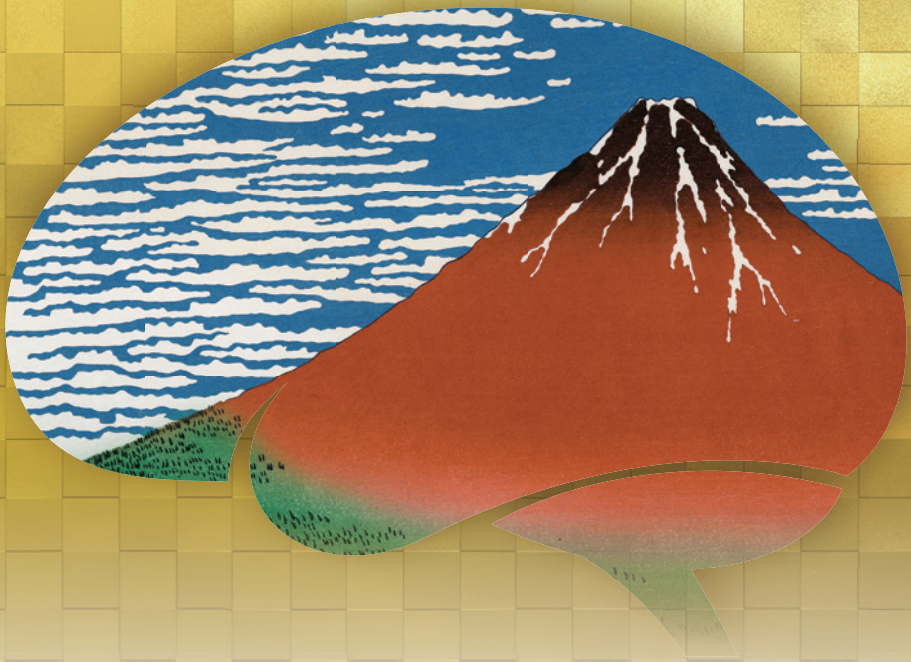
19:30 Hard Rock Cafe Yokohama

Early Career Networking Evening

BRAIN & BRAIN PET 2019
Yokohama Japan

The 29th International Symposium on Cerebral Blood Flow, Metabolism and Function
The 14th International Conference on Quantification of Brain Function with PET

July 4 – 7, 2019 Yokohama, Japan



Saturday, July 6th

BRAIN & BRAIN PET 2019 Yokohama Japan

http://brain2019.jp

ISCBFM International Society for Cerebral Blood Flow & Metabolism

08:00-09:30	SY05	5F, 503
		Interrogation of Pericyte Function in CNS Physiology & Pathophysiology
	Chair(s)	T.P. Davis (United States) E. Lo (United States) A. Shih (United States)
08:00-08:05		Introduction
08:05-08:22	SY05-1	A role for pericytes in cerebrovascular regeneration after stroke **LP. Bernier** (Canada)
08:22-08:39	SY05-2	Interrogating mural cell identity and function in vivo **R. Hill** (United States)
08:39-08:56	SY05-3	Pericyte-deficiency in cerebral blood flow regulation **K. Kisler** (United States)
08:56-09:13	SY05-4	Pericytes regulate cerebral microvascular blood flow in health and disease **A. Mishra** (United States)
09:13-09:30	SY05-5	Do pericytes proliferate and differentiate into microglia-like cells after ischemic stroke? **Y. Yao** (United States)

08:00-09:30	BS05	5F, 501
		Dementia and Cognition Impairment
	Chair(s)	Y. Luo (China) A.F. Logsdon (United States)
08:00-08:15	BS05-1	ApoE-dependent pharmacogenetic response to rapamycin for Alzheimer's disease prevention M. Xia, AL. Lin, **B. Ganganna**, F. Hyder (United States)
08:15-08:30	BS05-2	The relationship between cognitive function, cortical blood flow and sub-cortical white-matter health in the elderly **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)

08:30-08:45	BS05-3	Carotid arterial stiffness and cerebral blood flow pulsatility in patients with amnestic mild cognitive impairment **T. Tomoto**, J. Sugawara, C. Chiles, B. Curtis, T. Tarumi, E.P. Pasha, R. Zhang (United States, Japan)
08:45-09:00	BS05-4	White matter hyperintensities impact on regional brain volumes and white matter microstructure: a general population study (HUNT MRI) **A.K. Haberg**, L. Eikenes, T.R. Vangberg (Norway)
09:00-09:15	BS05-5	Genetic deletion of Krüppel-like transcription factor 11 aggravates the pathogenesis of vascular cognitive impairment and dementia C. Zhou, P. Sun, X. Zhang, **KJ. Yin** (United States)
09:15-09:30	BS05-6	Neuropsychiatric symptoms relate to tau but not amyloid in Alzheimer's disease spectrum **C. Tissot**, T.A. Pascoal, J. Therriault, M. Chamoun, F. Lussier, M. Savard, S. Mathotaarachchi, A. Lessa Benedet, P. Rosa-Neto, S. Gauthier (Canada)

08:00-09:30	BPS04	5F, 502
		Brain Imaging Methodology: I
	Chair(s)	H. Iida (Finland) H. Sari (United States)
08:00-08:15	BPS04-1	Tau^{IQ} - a quantitative algorithm for Tau PET imaging in clinical trials **A. Whittington**, J. Seibyl, J. Hesterman, R.N. Gunn (United Kingdom)
08:15-08:30	BPS04-2	Joint pattern analysis applied to PET DAT and VMAT2 imaging reveals new insights into Parkinson's disease induced presynaptic alterations **J.F. Fu**, I. Klyuzhin, J. McKenzie, N. Neilson, E. Shahinfard, K. Dinelle, M.J. McKeown, A. Stoessl, V. Sossi (Canada)
08:30-08:45	BPS04-3	Likelihood estimation of drug occupancy - generalization to multiple occupancy measurements A. Ilhan, F. Zanderigo, R.T. Ogden, G. Knudsen, C. Svarer, **M. Schain** (Denmark, United States)

08:45-09:00	BPS04-4	Resting-state networks revealed based on synaptic density PET **X.T. Fang**, T. Toyonaga, A.T. Hillmer, P.D. Worhunsky, R.E. Carson (United States)
09:00-09:15	BPS04-5	Image reconstruction methods affect computer-aided assessment of patient pathologies of flutemetamol and FDG brain PET examinations in patients with neurodegenerative diseases **E. Lindström**, J. Oddstig, T. Danfors, L. Lindsjö, O. Hansson, M. Lubberink (Sweden)
09:15-09:30	BPS04-6	Towards a gold standard for validation of quantification methods for PET neuroreceptor imaging **T. Funck**, N. Palomero-Gallagher, M. Omidyeganeh, C. Lepage, PJ. Toussaint, N. Khalili, K. Zilles, A.C. Evans, A. Thiel (Canada, Germany)

10:30-12:00	SY06	5F, 503
		Honoring Richard Traystman: Advances in Investigation of CBF and Metabolism
	Chair(s)	E. Lo (United States) R.C. Koehler (United States) P. Herson (United States)
10:30-10:40		Honoring the Legacy of Richard J. Traystman
10:40-11:00	SY06-1	Advances in Neuroimaging with PET **P. Herscovitch** (United States)
11:00-11:20	SY06-2	Advances in CBFM Regulation **B. Stefanovic** (Canada)
11:20-11:40	SY06-3	Advances in Neuroprotection **J. Boltze** (United Kingdom)
11:40-12:00	SY06-4	Advances in CNS-peripheral Crosstalk **K. Abe** (Japan)

12:10-13:00	SS1	5F, 503
		Sponsored Seminar 1: PET/MRI TOMORROW TODAY
	Chair(s)	H. Okazawa (Japan)
12:10-12:35	SS1-1	PET-MRI in neurodegenerative diseases **M. Lubberink** (Sweden)
12:35-13:00	SS1-2	Quantitative brain PET/MRI imaging and its clinical application **H. Okazawa** (Japan)
		Sponsored by GE Healthcare Japan Corporation

12:10-13:00	SS2	5F, 501
		Sponsored Seminar 2
	Chair(s)	K. Abe (Japan)
12:10-12:35	SS2-1	Promising stroke prevention in anticoagulation for elderly patients with AF **T. Urabe** (Japan)
12:35-13:00	SS2-2	Effectiveness of anticoagulants for preventing further cerebral microbleeds in acute ischemic stroke patients with non-valvular atrial fibrillation and at least one microbleed: CMB-NOW multisite pilot trial **S. Takizawa** (Japan)
		Sponsored by DAIICHI SANKYO COMPANY, LIMITED.

12:10-13:00	SS3	5F, 502
		Sponsored Seminar 3
	Chair(s)	N. Saito (Japan)
12:10-12:35	SS3-1	Advanced neuroimaging of small vessel disease —Association with outcome of patients with oral anticoagulants— **Y. Yakushiji** (Japan)
12:35-13:00	SS3-2	Brain protection against ischemic injury —Collateral circulation as a potential therapeutic target— **K. Kitagawa** (Japan)
		Sponsored by Bristol-Myers Squibb/Pfizer Japan Inc.

13:00-14:30	SY07	5F, 503
		Digital Metabolic Map of the Human Brain from BigBrain Stereological Cellular Atlas
	Chair(s)	Y. Yu (China)
13:00-13:30	SY07-1	BigBrain: Future directions in cytoarchitectural mapping **A. Evans** (Canada)
13:30-13:55	SY07-2	State-dependent variations of glucose metabolism in the human brain **P. Herman** (United States)
13:55-14:20	SY07-3	Human brain energy map of signaling and non-signaling processes computed on the basis of cellular staining **Y. Yu** (China)
14:20-14:30		Discussion

13:00-14:30	BS06	5F, 501
		Advances in Basic through Clinical Stroke
	Chair(s)	G. Bix (United States) P. Li (China)
13:00-13:15	BS06-1	Activity dependent neuroprotection in the acute phase after stroke **M. Balbi**, D. Xiao, LP. Bernier, M. Vanni, J. Boyd, J. LeDue, B. MacVicar, T.H. Murphy (Canada)
13:15-13:30	BS06-2	ATN-161 reduces inflammation and blood-brain barrier dysfunction following *in vitro* stroke conditions in association with conservation of claudin-5 expression **D.N. Edwards**, J.F. Fraser, G.J. Bix (United States)
13:30-13:45	BS06-3	Optogenetic functional activation expands infarct volume independent of periinfarct spreading depolarizations in focal cerebral ischemia **K. Sugimoto**, D.Y. Chung, P. Fischer, T. Takizawa, T. Qin, M.A. Yaseen, S. Sakadžić, C. Ayata (United States, Japan)
13:45-14:00	BS06-4	Dendritic remodeling of the spinal motor neurons in the denervated gray matter after stroke in mice **X. Gan**, M. Chopp, J. Fang, L. He, Z. Liu (China, United States)

14:00-14:15	BS06-5	Pre-clinical investigation of a novel thrombolytic and anti-inflammatory therapy for the treatment of acute ischaemic stroke **K. South**, E. Lemarchand, S.M. Allan (United Kingdom)
14:15-14:30	BS06-6	A multi-center investigation of the association of acute stroke severity and long-term outcome with acute stroke lesion topography **O. Wu**, S. Winzeck, AK. Giese, B.L. Hancock, M.J.R.J. Bouts, K. Donahue, M.D. Schirmer, R.E. Irie, S.J.T. Mocking, E.C. McIntosh, M.R. Etherton, P. Frid, J. Wasselius, J.W. Cole, H. Xu, L. Holmegaard, J. Jiménez-Conde, R. Lemmens, E. Lorentzen, P.F. McArdle, J.F. Meschia, J. Roquer, T. Rundek, R.L. Sacco, R. Schmidt, P. Sharma, A. Slowik, T. Stanne, V. Thijs, A. Vagal, D. Woo, S. Bevan, S.J. Kittner, B.D. Mitchell, J. Rosand, B.B. Worrall, C. Jern, A.G. Lindgren, J. Maguire, N.S. Rost (United States, United Kingdom, Sweden, Spain, Belgium, Austria, Poland, Australia)

13:00-14:30	BPS05	5F, 502
		Brain Imaging Methodology: II
	Chair(s)	M. Lubberink (Sweden) J.F. Fu (Canada)
13:00-13:15	BPS05-1	Simulating the effect of cerebral blood flow changes on quantification of [^{18}F]flutemetamol and [^{18}F]florbetaben studies **F. Heeman**, M. Yaqub, I. Lopes Alves, K. Heurling, J. Gispert, S. Bullich, C. Foley, R. Boellaard, A.A. Lammertsma, the AMYPAD Consortium (Netherlands, Sweden, Spain, Germany, United Kingdom)
13:15-13:30	BPS05-2	The white matter reference region used in amyloid PET is susceptible to flow and input function fluctuation: a consideration of kinetics **M. Kameyama**, K. Ishibashi, J. Toyohara, K. Ishii (Japan)
13:30-13:45	BPS05-3	Alzheimer's disease pattern derived from pharmacokinetic modeling of ^{11}C-Pittsburgh compound B PET scans **D.E. Peretti**, D. Vállez García, R.J. Renken, F.E. Reesink, J. Doorduin, B.M. de Jong, P.P. De Deyn, R.A.J.O. Dierckx, R. Boellaard (Netherlands, Belgium)

13:45-14:00	BPS05-4	Characterization of [18F]BCPP-EF, [11C]SA-4503 and [11C] UCB-J for the quantification of mitochondrial and synaptic function in the healthy human brain **A. Mansur**, E.A. Rabiner, R.A. Comley, Y. Lewis, L.T. Middleton, M. Huiban, J. Passchier, H. Tsukada, R.N. Gunn (United Kingdom, Japan)
14:00-14:15	BPS05-5	Non-invasive quantification of tau accumulation in dementia using simultaneous ^{18}F-PI-2620 PET/MRI **A.P. Fan**, K.T. Chen, C. Azevedo, J.B. Castillo, A. Nadiadwala, T. Toueg, S. Sha, G.A. Davidzon, F.T. Chin, G. Zaharchuk, E.C. Mormino (United States)
14:15-14:30	BPS05-6	Impact of image processing on [^{11}C]PIB amyloid quantification **G.D. Kolinger**, D. Vállez García, F.E. Reesink, R.A.J.O. Dierckz, P.P. De Deyn, R. Boellaard (Netherlands)

15:30-17:00	SY08	5F, 503
		Brain Metabolism and Aging: Opportunities and Controversies
	Chair(s)	M.S. Goyal (United States)
15:32-15:54	SY08-1	In vivo imaging of mitochondrial and glycolytic activities in aging and dementia **Y. Ouchi** (Japan)
15:54-16:16	SY08-2	Classic blood flow and oxygen metabolic characterization of human cerebral small vessel disease **JM. Lee** (United States)
16:16-16:38	SY08-3	Alzheimer's disease and diabetes: the metabolic interplay of two disparate diseases **S. Macauley-Rambach** (United States)
16:38-17:00	SY08-4	A machine learning perspective on metabolic brain aging **M.S. Goyal** (United States)

15:30-17:00	BS07	5F, 501
		Brain Injuries: Traumatic, Ischemic, & Hypoxic
	Chair(s)	M.E. O'Donnell (United States) E. Rocha Ferreira (Sweden)
15:30-15:45	BS07-1	Neurovascular dysfunction develops post-mild traumatic brain injury in a pediatric animal model **A. Ichkova**, B. Rodriguez-Grande, ML. Fournier, J. Aussudre, E. Zub, P. Sicard, N. Marchi, J. Badaut (France, United States)
15:45-16:00	BS07-2	Morphological and molecular changes of astrocytes following a juvenile mild traumatic brain injury **T. Clément**, A. Delahaye, J. Lee, J. Van Steenwinckel, A. Ichkova, M. Ogier, F. Canini, A. Obenaus, P. Gressens, B. Jérôme (France, United States)
16:00-16:15	BS07-3	M2 microglia-derived exosome promotes white matter repair and long term functional recovery after cerebral ischemia in mice **Y. Li**, L. Luo, Z. Zhang, Y. Wang, Y. Tang, GY. Yang (China)
16:15-16:30	BS07-4	Investigation into susceptibility of brain endothelial cells to secondary hypoxia challenge in two models of traumatic brain injury **E. Park**, T. Barretto, T. Telliyan, G. Ferrier, J. Tavakkoli, A.J. Baker (Canada)
16:30-16:45	BS07-5	Caloric restriction confers long-term protection against grey and white matter injury after transient focal ischemia W. Zhang, J. Zhang, X. Gao, Y. Zhao, D. Chen, N. Xu, H. Pu, R. Stetler, **Y. Gao** (China, United States)
16:45-17:00	BS07-6	Changes in sensorimotor function after traumatic brain injury are related to alterations in white matter integrity as shown with MRI in rats **M.R.T. Sinke**, W.M. Otte, A.E. Meerwaldt, B.A.A. Franx, A. van der Toorn, C.L. van Heijningen, C.E. Smeele, E.L.A. Blezer, R.M. Dijkhuizen (Netherlands)

15:30-17:00	BPS06	5F, 502
		Quantitative brain imaging using integrated PET/MRI
	Chair(s)	H. Okazawa (Japan) A.P. Fan (United States)
15:30-15:45		Overview of Quantitative PET/MRI by Audrey P. Fan
15:45-16:00	BPS06-1	Increased tau aggregration in young traumatic brain injury and post-concussion syndrome patients **M. Lubberink**, A. Wall, F. Vedung, M. Fahlström, J. Weis, S. Haller, EM. Larsson, G. Antoni, N. Marklund (Sweden)
16:00-16:15	BPS06-2	Investigating the optimal method to generalize an ultra-low-dose amyloid PET/MRI deep learning network across scanner models **K.T. Chen**, M. Schürer, J. Ouyang, E. Gong, S. Tiepolt, O. Sabri, G. Zaharchuk, H. Barthel (United States, Germany)
16:15-16:30	BPS06-3	H_2O^{15}-PETand BOLD fMRI during galvanic vestibular stimulation - not entirely the same thing **F. Willoch**, T. Stephan, S. Becker-Bense, M. Brendel, I. Yakushev, S. Ziegler, M. Herz, M. Schwaiger, M. Dieterich, P. Bartenstein (Norway, Germany)
16:30-16:45	BPS06-4	Validation of resting-state connectivity in the dopaminergic system using a simultaneously acquired [^{11}C]raclopride PET/BOLD fMRI protocol **L. Kuebler**, T. Ionescu, M. Amend, S. Buss, R. Stumm, A. Maurer, B.J. Pichler, K. Herfert (Germany)
16:45-17:00	BPS06-5	Simultaneous PET-MR-EEG to detect dopamine release during absence seizures **C.J. McGinnity**, S. Yaakub, S. Jeljeli, J. Stirling, J. Debatisse, G. Charles-Edwards, E. De Vita, M. Koutroumanidis, A. Hammers (United Kingdom, France)

17:00-18:30	SY09	5F, 503
		Latest Aspects of Immunology in Stroke
	Chair(s)	K. Niizuma (Japan) J. Chen (United States)
17:00-17:05		Introduction

17:05-17:20	SY09-1	Microglial/macrophage responses after stroke **J. Chen** (United States)
17:20-17:35	SY09-2	IL23 producing conventional dendritic cells control the detrimental IL17 response in stroke **M. Gelderblom** (Germany)
17:35-17:50	SY09-3	Damage associated molecular patterns in ischemic stroke **T. Shichita** (Japan)
17:50-18:05	SY09-4	Neuroinflammation during the chronic recovery phase after stroke **A. Liesz** (Germany)
18:10-18:30		Discussion

17:00-18:30	BS08	5F, 501
		Cerebrovascular Regulation: Experimental and Clinical
	Chair(s)	K. Hayakawa (Japan) J. Goettler (Germany)
17:00-17:15	BS08-1	Membrane lipid-K_{IR}2.x channel interactions enable hemodynamic sensing in cerebral arteries M. Sancho, S. Fabris, B.O. Hald, S.L. Sandow, T.L. Poepping, **D.G. Welsh** (Canada, Denmark, Australia)
17:15-17:30	BS08-2	Vascular and metabolic dysfunctions in APP/PS1 mouse model of Alzheimer's disease **B. Iordanova**, M. Fukuda, W. Klunk, A.L. Vazquez (United States)
17:30-17:45	BS08-3	Regulation of cerebral blood flow and neurovascular coupling by microglia **E. Csaszar**, N. Lenart, C. Cserep, Z. Kornyei, R. Fekete, B. Posfai, A. Schwarcz, A. Denes (Hungary)
17:45-18:00	BS08-4	Derivation of an intracranial pressure index by the waveform analysis of cerebral blood flow measured non-invasively using fast diffuse correlation spectroscopy J.B. Fischer, A. Ghouse, S. Tagliabue, F. Maruccia, R. Zucca, U.M. Weigel, J. Sahuquillo, M.A. Poca, **T. Durduran** (Spain)

18:00-18:15	BS08-5	Haemodynamic impairments in asymptomatic unilateral carotid artery stenosis are most pronounced within individual watershed areas **S. Kaczmarz**, J. Goettler, J. Petr, M.B. Hansen, J. Kufer, A. Hock, K. Mouridsen, F. Hyder, P. Christine (Germany, United States, Denmark)
18:15-18:30	BS08-6	Uncoupling of cerebral blood flow and oxidative metabolism in patients with asymptomatic high-grade carotid artery stenosis assessed by multi-modal MRI **J. Goettler**, S. Kaczmarz, C. Zimmer, C. Sorg, C. Preibisch, F. Hyder (Germany, United States)

17:00-18:30	BPS07	5F, 502
		Imaging in Neurological Diseases
	Chair(s)	P. Rosa-Neto (Canada) T. Toyonaga (United States)
17:00-17:15	BPS07-1	Amyloid-dependent and amyloid-independent effects of tau in Alzheimer's disease **J. Therriault**, T. Pascoal, P. Rosa-Neto (Canada)
17:15-17:30	BPS07-2	Failure of remyelination in periventricular white matter lesions in Multiple Sclerosis **M. Tonietto**, E. Poirion, C. Papeix, M. Bottlaender, B. Bodini, B. Stankoff (France)
17:30-17:45	BPS07-3	On regional variations of SUVR values and off-target binding of tau-imaging tracers in cognitively normal older subjects: Indirect comparisons of [^{18}F]AV1451 to [^{18}F]RO-948 **H. Kuwabara**, M. Bilgel, E. Borroni, A. Nandi, M. Honer, G. Klein, K. Kitzmiller, J. Roberts, S.M. Resnick, D.F. Wong (United States, Switzerland)
17:45-18:00	BPS07-4	[^{11}C]JNJ717 P2X7 receptor PET as a novel neuroinflammation target: ex vivo and in vivo comparison with [^{18}F]DPA714 in human ALS **D. Van Weehaeghe**, E. Van Schoor, M. Koole, J. De Vocht, S. Ceelen, L. Declercq, D.R. Thal, P. Van Damme, G. Bormans, K. Van Laere (Belgium)

18:00-18:15 BPS07-5 Evaluation of mitochondrial and synaptic function in Alzheimer's disease (AD): a [^{18}F]BCPP-EF, [^{11}C]SA4503 and [^{11}C]UCB-J PET study
A.V. Venkataraman, A. Mansur, Y. Lewis, E. Kocagoncu, A. Lingford-Hughes, M. Huiban, J. Passchier, J.B. Rowe, H. Tsukada, D. Brooks, R.N. Gunn, P.M. Matthews, EA. Rabiner, MINDMAPS Consortium (United Kingdom, Japan, Australia)

18:15-18:30 BPS07-6 Plasma neurofilament light chain is associated with [^{18}F]flortaucipir PET in alzheimer's disease and with [18F]florbetapir PET in cognitivelly normal elderly
A. L. Benedet, A. Leuzy, T. A. Pascoal, S. Mathotaarachchi, M. Savard, M. Schöll, N. J. Ashton, H. Zetterberg, P. Rosa-Neto, K. Blennow (Canada, Sweden)

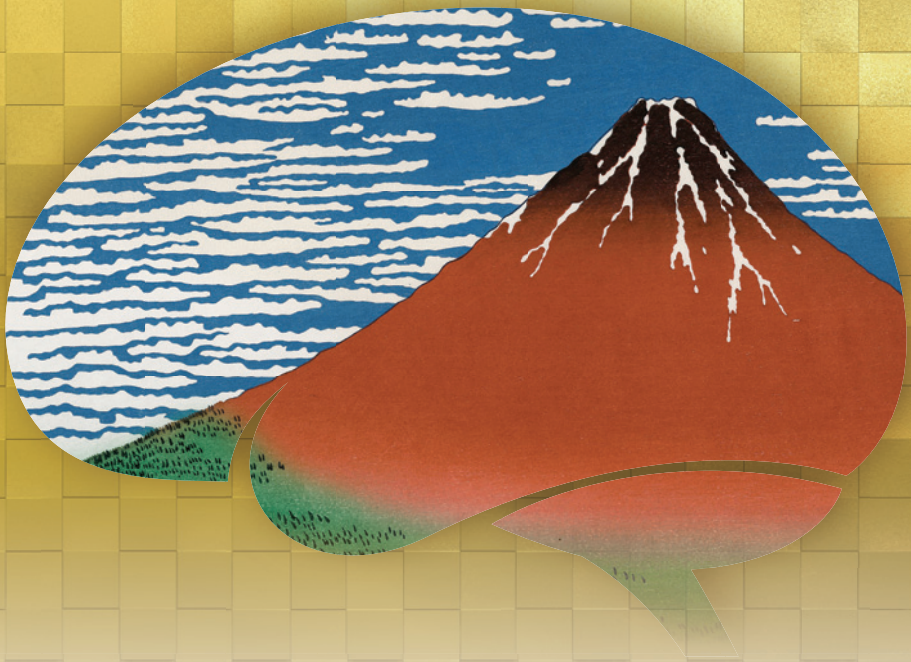
19:30 The Yokohama Bay Hotel Tokyu

ISCBFM Banquet

BRAIN & BRAIN PET 2019
Yokohama Japan

The 29th International Symposium on Cerebral Blood Flow, Metabolism and Function
The 14th International Conference on Quantification of Brain Function with PET

July 4 – 7, 2019 Yokohama, Japan



Sunday, July 7th

BRAIN & BRAIN PET 2019 Yokohama Japan

http://brain2019.jp

ISCBFM International Society for Cerebral Blood Flow & Metabolism

08:00-09:00	NLA	5F, 501, 502
		Niels Lassen Award Session
	Chair(s)	E. Lo (United States) H. Kinouchi (Japan)
08:00-08:15	NLA-1	Mechanisms underlying negative fMRI responses in the striatum **D. Cerri**, D. Albaugh, B. Katz, S. Lee, L. Walton, W. Zhang, A. Etkin, G. Cui, G. Stuber, YY. Shih (United States)
08:15-08:30	NLA-2	Systemic Inflammasome activation links post-stroke monocyte activation and T cell death **S. Roth**, V. Singh, J. Yang, T. Li, S. Zhang, O. Groß, A. Liesz (Germany, China)
08:30-08:45	NLA-3	Longitudinal imaging of calcium functional connectivity across development in the mouse cortex **R.M. Rahn**, A.R. Bice, L.M. Brier, J.D. Dougherty, J.P. Culver (United States)
08:45-09:00	NLA-4	Correlation between APT-CEST and ^{18}F-Choline PET in glioma at 3T **M. Rega**, F. Torrealdea, J. Hearle, M. Zaiss, F. Fraioli, A. Shankar, A. Bainbridge, J. Dickson, H. Hyare (United Kingdom, Germany)

09:00-10:00	PL	5F, 501, 502
		Plenary Lecture
	Chair(s)	H. Kinouchi (Japan) H. Okazawa (Japan)
		Repair of axons and circuits after spinal cord injury **Y. Zou** (United States)

11:00-12:30	BS09	5F, 503
		Neurovascular Coupling: Clinical and Pathophysiological aspects
	Chair(s)	Z. Ungvari (United States) M. Koide (United States)
11:00-11:15	BS09-1	Effects of intracranial pressure on neurovascular coupling **D. Acharya**, D. Issar, J. Yang, A. Ruesch, S. Schmitt, M.A. Smith, J.M. Kainerstorfer (United States)
11:15-11:30	BS09-2	Crippled capillary-to-arteriole electrical signaling impairs functional hyperemia in a mouse model of chronic hypertension **M. Koide**, F. Dabertrand, T.A. Longden, O.F. Harraz, N.R. Tykocki, G.C. Wellman, M.T. Nelson (United States, United Kingdom)
11:30-11:45	BS09-3	Reduced tissue plasminogen activator underlies neurovascular dysfunction induced by amyloid-β peptides **J. Zhou**, P. Zhou, J. Anrather, C. Iadecola, L. Park (United States)
11:45-12:00	BS09-4	Nicotinamide mononucleotide supplementation rescues cerebromicrovascular endothelial function and neurovascular coupling responses, improving cognitive function in aged mice: role of sirtuin-mediated attenuation of mitochondrial oxidative stress **Z. Ungvari**, S. Tarantini, MN. Valcarcel-Ares, P. Toth, A. Yabluchanskiy, Z. Tucsek, P. Hertelendy, E. Farkas, A. Csiszar (United States, Hungary)
12:00-12:15	BS09-5	Derive hemodynamic response function from resting-state activity using multispectral fiber photometry **TH.H. Chao**, W. Zhang, B. Katz, E. Oyarzabal, S. Lee, D.H. Cerri, YY.I. Shih (United States)
12:15-12:30	BS09-6	Arterial spin labeling underestimates cerebral blood flow in regions with fast arrival times: a simultaneous [^{15}O] PET/MRI study with acetazolamide challenge **Y. Ishii**, T. Thamn, J. Guo, M.M. Khalighi, M. Wardak, J.H. Park, G.K. Steinberg, F.T. Chin, G. Zaharchuk, A.P. Fan (United States, Japan, Germany)

11:00-12:00	JSY	5F, 501
		JCBFM Symposium
	Chair(s)	R. Dijkhuizen (Netherlands)
11:00-11:05		Introduction **J. Chen** (United States)
11:05-11:17	JSY-1	The continuum of spreading depolarizations in acute cortical lesion development: Examining Leão's legacy **J.P. Dreier** (Germany)
11:17-11:29	JSY-2	Glymphatic clearance controls state-dependent changes in brain lactate concentration **I. Lundgaard** (Sweden)
11:29-11:41	JSY-3	Epiplexus cells in brain hemorrhages and hydrocephalus **G. Xi** (United States)
11:41-11:53	JSY-4	Differential vulnerability in the neurovascular unit: implications for designing 'neuro' protection **P.D. Lyden** (United States)
11:53-12:00		Discussion

11:00-12:30	BS10	5F, 502
		Blood-Brain Barrier & the Neurovascular Unit
	Chair(s)	L. Belayev (United States) A. Urayama (United States)
11:00-11:15	BS10-1	MicroRNA-98 preserves the blood brain barrier (BBB) in cerebral ischemia/reperfusion **S. Rom**, D. Bernstein, V. Zuluaga-Ramirez, S. Gajghate, N. Reichenbach, Y. Persidsky (United States)
11:15-11:30	BS10-2	Brain microvascular complications occur in high-fat fed hyperglycemic and not euglycemic mice: role of the gut microbiome **T.S. Salameh**, W.G. Mortell, W.A. Banks (United States)
11:30-11:45	BS10-3	CD36 on perivascular macrophages mediates neurovascular dysfunction, cerebral amyloid angiopathy, and cognitive deficits in mice overexpressing Alzheimer's amyloid-β peptides **K. Uekawa**, L. Park, J. Seo, Y. Hattori, P. Zhou, J. Anrather, C. Iadecola (United States)

11:45-12:00	BS10-4	Prion-like propagation of soluble tau aggregates to brain microvascular endothelial cells promotes cellular senescence and blocks eNOS activation **S.A. Hussong**, C.E. Van Skike, A.B. Olson, S.F. Hernandez, A.Q. Banh, S.A. McAllen, R. Kayed, V. Galvan (United States)
12:00-12:15	BS10-5	Organic anion transporting polypeptide (OATP)-mediated transport at the blood-brain barrier is required for atorvastatin-induced neuroprotection in experimental ischemic stroke **T.P. Davis**, W. Abdullahi, J.J. Lochhead, P.T. Ronaldson (United States)
12:15-12:30	BS10-6	Two-photon fluorescence imaging: a platform to investigate cell-penetrating peptides and liposome-based nanocarriers for drug delivery across the heterogeneous BBB in vivo **K. Kucharz**, K. Kristensen, M. Kristensen, M. Lund, T. Andresen, B. Brodin, M. Lauritzen (Denmark)

12:40-13:30	SS4	5F, 503
		Sponsored Seminar 4
	Chair(s)	M. Fujimura (Japan)
12:40-13:05	SS4-1	Optical Imaging and Modulation of Cerebral Microcirculation **K. Masamoto** (Japan)
13:05-13:30	SS4-2	Neurosurgical Phlebology—Prevention of Postoperative Venous Infarction **H. Nakase** (Japan)

Sponsored by Medicaline Co., Ltd.

12:40-13:30	SS5	5F, 501
		Sponsored Seminar 5
	Chair(s)	T. Tominaga (Japan)
12:40-13:05	SS5-1	Roles of CT and MRI in acute ischemic stroke—penumbral tissue clock imaging— **S. Takahashi** (Japan)
13:05-13:30	SS5-2	Perampanel, the novel non-competitive selective AMPA-R antagonist: Protective potential for refractory seizures and brain insults **A. Kato** (Japan)

Sponsored by EISAI

12:40-13:30	SS6	5F, 502
		Sponsored Seminar 6
	Chair(s)	I. Date (Japan)
12:40-13:30	SS6-1	Mechanism and management of stroke-associated comorbidities, dementia and epilepsy **M. Ihara** (Japan)

Sponsored by Otsuka Pharmaceutical Co., Ltd.

13:30-15:00	SY10	5F, 503
		Blood-Brain Barrier Repair in CNS Disease: **New Mechanistic Insights, Novel Therapeutic Strategies**
	Chair(s)	B. Bauer (United States)
13:30-13:45	SY10-1	The holey holy barrier: blood-brain barrier dysfunction in epilepsy, TBI, stroke, and Alzheimer's disease **B. Bauer** (United States)
13:45-14:10	SY10-2	Nitric oxide synthase is a potential target for treating the neurological sequelae of repetitive blast injury **A.F. Logsdon** (United States)
14:10-14:35	SY10-3	Two PDGF receptors in CNS differentially regulate BBB function in stroke and glioma **M. Sasahara** (Japan)

14:35-15:00	SY10-4	Restoring cerebral perivascular environment to attenuate amyloid deposition in Alzheimer's disease and cerebral amyloid angiopathy **A. Urayama** (United States)

13:30-15:00	BS11	5F, 501
		Novel Preclinical Imaging Applications
	Chair(s)	D. Coman (United States) E. Lake (United States)
13:30-13:45	BS11-1	Mesoscopic and microscopic imaging of sensory responses in the same animal **D. Boido**, R.L. Rungta, BF. Osmanski, M. Roche, T. Tsurugizawa, D. Le Bihan, L. Ciobanu, S. Charpak (France)
13:45-14:00	BS11-2	Significantly reduced *in vivo* transmembrane sodium gradient in cancer **M.H. Khan**, J.J. Walsh, D. Coman, S.K. Mishra, F. Hyder (United States)
14:00-14:15	BS11-3	Brain tissue oxygenation is modulated by voluntary exercise in AD awake mice X. Lu, M. Moeini, B. Li, O. de Montgolfier, Y. Lu, E. Thorin, **F. Lesage** (Canada, Islamic Republic of Iran, United States)
14:15-14:30	BS11-4	Simultaneous fMRI and fast-scan cyclic voltammetry: in vitro dopamine sensing and in vivo oxygen detection at multiple spatial scales **L. Walton**, M. Verber, R.M. Wightman, YY. Shih (United States)
14:30-14:45	BS11-5	Visualising the pulsing brain; a feasibility study combining MRI with transcranial tissue doppler (TCTD) ultrasound measurements **M.E. Alharbi**, C. Banahan, J. Ince, J. Minhas, S. George, M. Oura, M. Horsfield, K. Ramnarine, E. Chung, M. Mark (United Kingdom, Japan, United States)
14:45-15:00	BS11-6	Tau protein accumulation and neurodegeneration in tauopathy model mice detected by PET and MRS **Y. Takado**, H. Takuwa, T. Urushihata, M. Takahashi, M. Ono, J. Maeda, M. Shimojo, N. Nitta, S. Shibata, I. Aoki, N. Sahara, T. Suhara, M. Higuchi (Japan)

13:30-15:00	BS12	5F, 502
		Neuroinflammation
	Chair(s)	Y. Tang (China) Y. Gao (China)
13:30-13:45	BS12-1	Paracrine IL-6 as a driving force of post-stroke regeneration **M.T.C. Kuffner**, C.J. Hoffmann, J. Lips, M. Kirchner, S.P. Koch, M. Foddis, S. Müller, M. Endres, U. Dirnagl, C. Harms (Germany)
13:45-14:00	BS12-2	M2 microglial derived exosome improves functional recovery via reducing glial scar formation after ischemic stroke in mice **Z. Li**, Y. Song, T. He, W. Li, R. Wen, Y. Tang, GY. Yang, Z. Zhang (China)
14:00-14:15	BS12-3	Microglia-leukocyte crosstalk during neurotropic viral infection in the brain **R. Fekete**, T. Szlepák, V. Szirt, D. Levard, M. Rubio, E. Pinteaux, Á. Dénes (Hungary, France, United Kingdom)
14:15-14:30	BS12-4	Neuroinflammation-induced lymphangiogenesis near the cribriform plate contributes to drainage of CNS-derived antigens and immune cells **M. Hsu** (United States)
14:30-14:45	BS12-5	Cannabinoid receptor 2 agonists protected blood barrier, decreased neuroinflammation and altered immune responses in HIV infection in humanized mouse model and model of encephalitis **Y. Persidsky**, V. Zuluaga-Ramirez, S. Gajgahate, A. Seliga, U. Grether, P. Pacher, M. van der Stelt, U. Sriram, S. Rom (United States, Switzerland, Netherlands)
14:45-15:00	BS12-6	Investigating neuroinflammation in small vessel disease with [11C]PBR28 PET imaging and post-mortem tissue validation **M. Veronese**, P. Wright, N. Mazibuko, F.E. Turkheimer, E.E. Rabiner, C.G. Ballard, S.C.R. Williams, R. Williams, F. Roncaroli, M.J. O'Sullivan (United Kingdom, Australia)

16:00-17:30	SY11	5F, 503
		Brain and Immunity in Health and Disease
	Chair(s)	Z. Fabry (United States)
16:00-16:30	SY11-1	Neutrophils and neuroinflammation **E.T. Benveniste** (United States)
16:30-17:00	SY11-2	Gut and brain axis (Microbiome, stroke immunity) **C. Iadecola** (United States)
17:00-17:30	SY11-3	Immune effects on neuronal function **M. Schwartz** (Israel)

16:00-17:30	BS13	5F, 501
		Neuroprotection revisited- novel mechanisms and applications
	Chair(s)	K. Abe (Japan) K.C. Morris-Blanco (United States)
16:00-16:15	BS13-1	Gut dysbiosis promotes lipopolysaccharide-induced neuroinflammation after stroke **N. Kurita**, K. Yamashiro, R. Tanaka, Y. Ueno, N. Miyamoto, S. Nakajima, T. Urabe, Y. Yamashiro, N. Hattori (Japan)
16:15-16:30	BS13-2	DNA hydroxymethylation protects the brain after stroke via global regulation of neuroprotective genes **K.C. Morris-Blanco**, T. Kim, M.S. Lopez, B. Chelluboina, M. Bertogliat, R. Vemuganti (United States)
16:30-16:45	BS13-3	Neuroprotective effects of microglia via $P2Y_1$ receptors against ischemic neuronal injury **Y. Fukuomoto**, S. Koizumi, H. Yoshioka, T. Yagi, K. Kanemaru, H. Kinouchi (Japan)
16:45-17:00	BS13-4	Repurpose of exendin-4 for the treatment of preterm neonatal brain injury **E. Rocha Ferreira**, A. Jonsdotter, M. Jinnai, L. Poupon, AL. Leverin, Y. Carlsson, A.A. Rahim, H. Hagberg (Sweden, United Kingdom)

17:00-17:15	BS13-5	Neuroprotection with polynitroxylated PEGylated hemoglobin as a macromolecular superoxide dismutase/catalase mimetic drug for resuscitation after traumatic brain injury combined with hemorrhage shock **S. Seno**, J. Wang, S. Cao, M. Saraswati, J. Simoni, L. Ma, B. Soltys, C.J.C. Hsia, C.L. Robertson, R.C. Koehler (United States, Japan)
17:15-17:30	BS13-6	Blocking pro-inflammatory platelet-activating factor-receptors and activating cell-survival pathways: a novel therapeutic strategy in experimental ischemic stroke **L. Belayev**, L. Khoutorova, A. Obenaus, N.A. Petasis, N.G. Bazan (United States)

16:00-17:30	BS14	5F, 502
		Cerebral Ischemia: Reperfusion
	Chair(s)	M. Yenari (United States) L. Schmitzer (Germany)
16:00-16:15	BS14-1	Using contrast-enhanced ultrasound to measure blood flow kinetics in the ischaemic brain **B.A. Sutherland**, D. Premilovac, C.J. Ramsay, M.A. Keske, D.W. Howells (Australia)
16:15-16:30	BS14-2	Reversible mitochondrial stabilisation with mitochondrial-targeted S-nitrosothiol (MitoSNO) acutely at reperfusion as a possible neuroprotective therapy in transient ischaemic stroke **T.M. Hietamies**, A. Logan, R.C. Hartley, C. McCabe, T.J. Quinn, J.D. McClure, M.P. Murphy, L.M. Work (United Kingdom)
16:30-16:45	BS14-3	Phosphorylation of heat shock protein 27 leads to activation of pentose phosphate pathway and protection from cerebral ischemia-reperfusion injury **K. Matsuo**, K. Hosoda, Y. Yamamoto, J. Tanaka, T. Imahori, T. Nakai, Y. Irino, M. Shinohara, E. Kohmura (Japan)
16:45-17:00	BS14-4	Watershed areas in patients with asymptomatic unilateral internal carotid-artery stenosis: stable spatial extent after revascularization therapy **L. Schmitzer**, S. Kaczmarz, N. Sollmann, C. Zimmer, C. Preibisch, J. Goettler (Germany, United States)

17:00-17:15	BS14-5	Towards in silico experiments on ischaemic stroke in humans **T.I. Józsa**, S.J. Payne (United Kingdom)
17:15-17:30	BS14-6	The predictive value of THRIVE score for outcomes of patients with acute basilar artery occlusion treated by thrombectomy **B. Chen**, L. Yang, H. Yu (China)

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)

PA00		TOPIC	PAGE
Early Career Investigator Awardee	A01-07 A15-21 A29-35 A43-49	Early Career Investigator Awardee I	77

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.

PB01		TOPIC	PAGE
Brain Poster Session	B01-17	Cerebral Hemorrhage	80
	C01-07	Subarachnoid Hemorrhage (SAH)/Vasospasm	82
	D01-10	Developing Brain I: Methodology	83
	E01-11	Developing Brain II: Neonatal Stroke	84
	F01-06	Developing Brain III: Other Models & Clinical	85
	G01-07	Energy Metabolism I: Oxygen/Glucose & Mitochondria	86
	H01-07	Energy Metabolism II: MRS & MRI Techniques	86
	J01-12	Imaging Clinical I: BOLD/Resting State fMRI	87

POSTER SESSIONS | OVERVIEW

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)

PA00		TOPIC	PAGE
Early Career	A08-14	Early Career Investigator Awardee II	104
Investigator	A22-28		
Awardee	A36-42		

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.

PB02		TOPIC	PAGE
	B01-19	Stem Cells and Cell Therapy	106
	C01-07	Cerebrovascular Regulation I: Clinical	108
	D01-11	Cerebrovascular Regulation II: Pre-Clinical	109
	E01-10	Cerebrovascular Regulation III: Computational Model	110
	F01-12	CNS Trauma	111
Brain Poster	G01-16	Aging and Dementia I: Amyloid/AD	113
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	O01-12	Vascular Contribution to Cognitive Impairment/VaD I	115
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POSTER SESSIONS | OVERVIEW

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)

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. Sienel, 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)

PA00-A16 Pharmacological targeting of von Willebrand factor (VWF) strings provides improved stroke outcomes in aged mice
SH. Hong, V. Christian, M. Matinez-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 Dl-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 ^{18}F-FDG and ^{18}F-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, HY. 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)

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 CaMKIIα expression and intracerebral hemorrhage-induced secondary brain injury via blocking the binding of microRNA-124 to CaMKIIα 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 ^{123}I-iomazenil SPECT imagingpredicts 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 TGFβ1
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. Remzső, 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, JC. Martinou (Switzerland)

PB01-D04 Development of a neonatal neuromonitor for concurrent measurements of cytochrome c oxidase and $CMRO_2$
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 ^{15}O-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)

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. Remzső, J. Németh, V. Tóth-Szűki, V. Varga, F. Domoki (Hungary)

PB01-E04 Combination of therapeutic hypothermia and H_2 treatment in a piglet model of neonatal hypoxic-ischemic encephalopathy
V. Tóth-Szűki, V. Kovács, G. Remzső, 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 AMPAkines
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. Larpthaveesarp, 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, ZJ. Yang (United States)

PB01-E11 Mild neonatal hypoxia-ischemia in rats induces long-term behavior and cerebellaranormalities
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. Sanganahalli, M. Parent, J. Chitturi, V. Santhakumar, F. Hyder, S.S. Kannurpatti (United States)

PB01-F05 Mesenchymal storomal cell delivery through cardiopulmonary bypass for neuroprotection in a juvenile porcine model
K. Sarkislali, 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)

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 mapcomputed 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 ^{1}H-[^{13}C] MRS at 14.1T under [3-^{13}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)

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 $CMRO_2$ 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 ($CMRO_2$)
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 ^{15}O-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)

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. Kotsughi, 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 ^{123}I-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)

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. Yei, 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 neurovasccular 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 intracrebral 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-Cadavid, 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)

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-assiciated 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 [^{89}Zr]-Deferoxamine-EPO can target erythropoietin receptors in human and rat stroke tissue
K.J. Patzwaldt, 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 [^{18}F]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 [^{18}F]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)

PP01-M06 A PET study with [^{18}F]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 ^{11}C-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. Schirrmacher (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 ^{11}C-PBR28 and ^{11}C-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 ^{11}C-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 todifferent 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-Vafaee (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. Hirosawa, 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. Frokjaer (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. Frokjaer (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 α4β2 nicotinic acetylcholine receptor (nAChR) availability in response to rewarding food-cues using simultaneous PET-MRI and the α4β2 nAChR ligand (-)-[^{18}F]flubatine
S. Hesse, M. Rullmann, GA. 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 [11C]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 cassification 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, JD. 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)

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 [^{11}C] 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 [^{11}C]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 [^{11}C]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 ^{11}C-PS13 for imaging cyclooxygenase-1 in brain and peripheral organs
J. Lee, MJ. 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 resrve: 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, MO. 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)

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. Stoessl, V. Sossi (Canada)

PA00-A39 Longitudinal quantification of mGluR1 using [^{11}C]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 [^{18}F]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 perpectives
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, KJ. Jeong, CY. Jeon, HG. Yeo, S.U. Kim, H.J. Lee, K.S. Yi, SH. Cha (Republic of Korea)

PB02-B12 Oligodendrocyte precursor cell transplantation promotes oligodendrogenesis and synaptogensis via CXCL12/CXCR4 and netrin-1/DCC axises 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)

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)

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. Şencan, 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)

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 Aβ1-40
M. Yu, D. Zang, Y. Xu, J. Meng, S. Qian (China)

PB02-G02 Xingnaojing injection improves $A\beta_{1-42}$-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. Kayed, 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)

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 cardiorespratory 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 ^{11}C-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 ^{11}C-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. Shenk, 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. Sakadžic, L. Østergaard (Denmark, United States)

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 amnestic 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)

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 impariment 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 contributionto 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)

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 synpatic plasticity impairments and cognitive dysfunction following global cerebral ischemcia
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-repefusion 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 nimodpine 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 [^{18}F]PM-PBB3
T. Kimura, C. Seki, K. Sampei, J. Maeda, M. Ono, T. Suhara, MR. Zhang, N. Sahara, M. Higuchi (Japan)

PP02-J02 Establishment of a simplified method to quantify [^{18}F]PM-PBB3 ([^{18}F]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 [^{18}F]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 ^{11}C-PBR28 and ^{18}F-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 CB_1 receptor availability in humans measured with [^{11}C]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. Chevrefils, 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)

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 $CMRO_2$
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 [^{18}F]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 ^{1}H-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. Macaisa, 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 ^{99m}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-fluorodeoxglucose 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)

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 [^{11}C]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 [^{18}F]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 $H_2{}^{15}O$-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. Brasic, 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 [^{11}C] 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 [^{18}F]Florbetapir images acquired over a short duration
K. Wagatsuma, M. Sakata, K. Ishibashi, K. Miwa, K. Ishii (Japan)

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 [^{18}F]Flortaucipir and [^{18}F]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 [^{11}C]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 [^{11}C]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 ^{18}F-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
YC. 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 Elovanoids 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)

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. Elefteriades, F. Hyder, D. Coman (United States)

PB03-C02 Activation of GPR55induces 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 I^{123}-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 Flk1-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 oligodendroscyte 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)

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 $cPLA_2$ in thenovel 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 a-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-[^{123}I] 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 withacute ischemic stroke: influence of reperfusion therapy and molecularmechanisms 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. Tsymbalyuk, N. Tsymbalyuk, 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 PDGFRβ-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 neoronal 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 α2 subunit-deficient mice
M. Unekawa, Y. Tomita, Y. Izawa, C. Tang, K. Masamato, 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, EM. Park (Republic of Korea, United States)

PB03-M03 Focal ischemia alters the abundance of the epitranscriptomic mark m^6A 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)

PB03-N04 Protein arginine methyltransferases in cerebral ischemia
A. do Couto e Silva, H.E. Possoit, 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 mitochondorial ATP-dependent potassium channels in the mouse hipppocampus
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. Possoit, C.Y.C. Wu, H. Lin (United States)

PB03-N10 Combined treatment of rehabilitation and novel glycosominoglycan treatment abolishes forelimb impiarments 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. Branyan, 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 transducution 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 hippicampus 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)

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 photoacustics 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 ^{19}F-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 condtions on evoked funtional 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 ADI1-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)

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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)

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E.N.T.P. Bakker, D.M.P. Naessens, J. de Vos, E. VanBavel (Netherlands)

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C. Benakis, R. Sadler, J. Vienhues, T. Magnus, M. Gelderblom, A. Liesz (Germany)

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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)

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K. Nakamura, S. Sakai, T. Shichita (Japan)

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K. Park, M. Balkaya, J. Yang, MS. Woo, S. Cho (United States)

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H. Zhao, G. Li, R. Wang, Z. Tao, P. Liu, S. Zhang, Z. Han, F. Yan, F. Li, Y. Luo (China)

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J. Chen, M. Zhang, Y. Xu (China)

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L. Fan, Y. Xu (China)

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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)

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 ε4 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. Østergaaard, 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, EJ. 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 diapedsis into the ischemic brain
K.M. Poinsatte, 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 PDGFRα 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 PDGFα 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)

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. Larpthaveesarp, 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)

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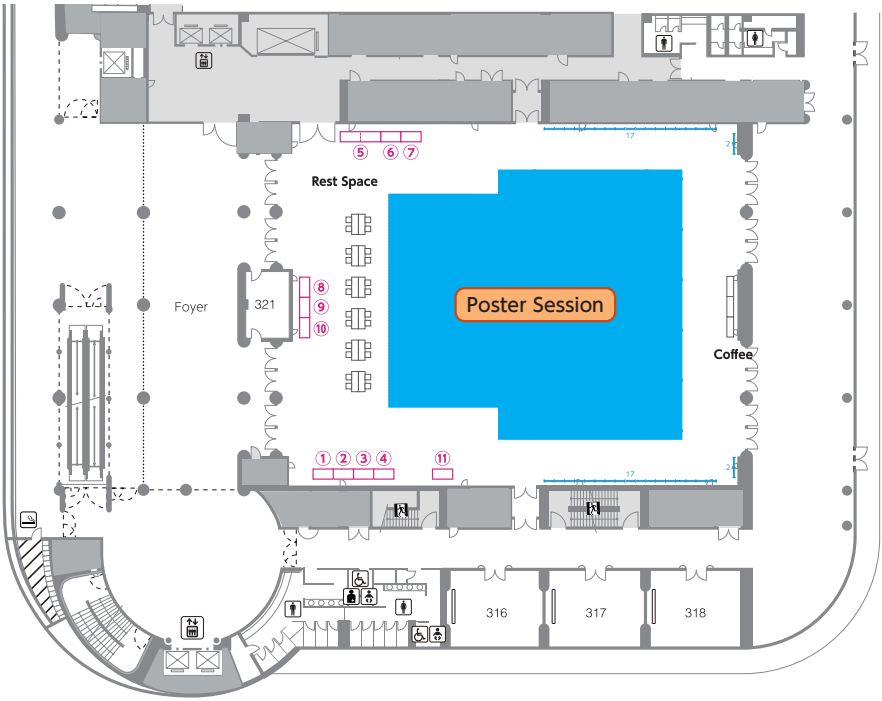

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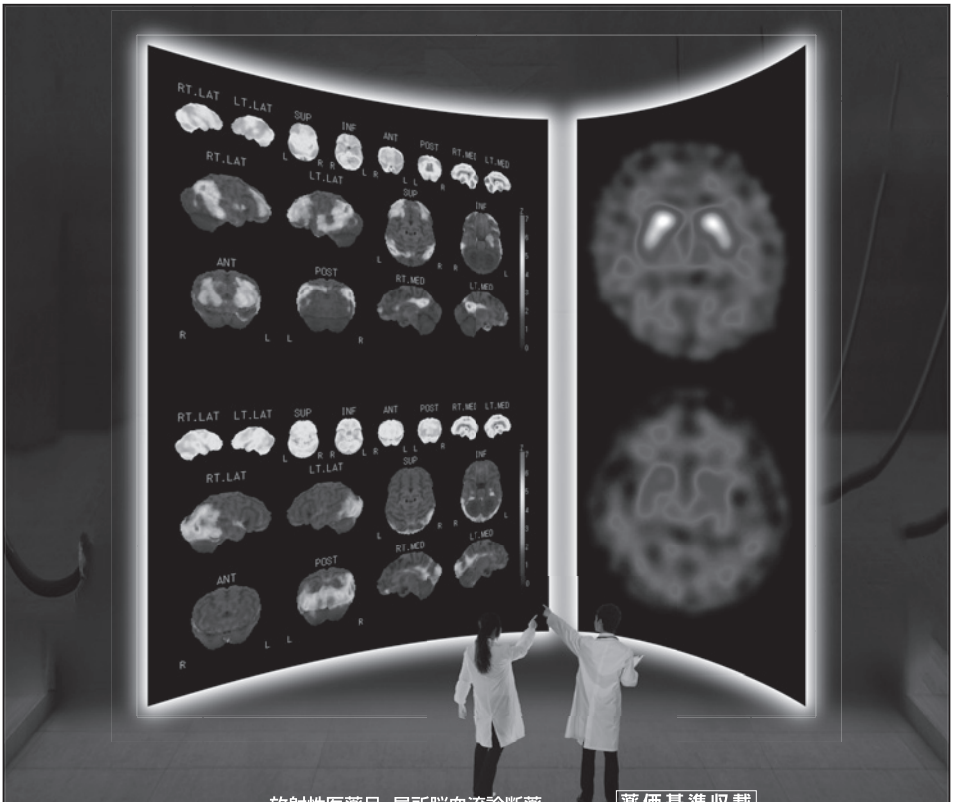

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