

- P001 Methamphetamine-Induced Blood-Brain Barrier Dysfunction: Role of Aquaporin 4**
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- P002 Differentiation of Human Pluripotent Stem Cells to Develop a Human 3D *In Vitro* Blood Brain Barrier Model**
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- P003 Effects of Beta-Hydroxybutyrate on Brain Vascular Permeability in Rats with Traumatic Brain Injury**
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- P004 Neuronal Activation and Blood-Brain Barrier Permeability: Phenomenology and Mechanisms**
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- P005 Vascular Basement Membrane Protein Perlecan Domain V Enhances Neurogenesis via $\alpha 2$ Integrin**
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- P006 Activation of Mitogen-Activated Protein Kinase Signaling in Response to *Neisseria meningitidis* Infection in a Human Model of the Blood-Cerebrospinal Fluid Barrier**
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- P007 Blood-Brain Barrier Leakage Is Mediated by Transcellular Transport in an Animal Model of Temporal Lobe Epilepsy**
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- P008 Methylphenidate Promotes Caveolae-Dependent Transcytosis in Human Brain Endothelial Cell**
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- P009 Accumulation of the Sleeping Sickness Drug, Pentamidine, in Human (hCMEC/D3) and Mouse (bEND.3) *In Vitro* Blood-Brain Barrier Models**
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- P010 Development and Validation of UPLC-MS/MS Quantification Methods for the Establishment of a Reliable Human *In Vitro* Blood-Brain Barrier Model**
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- P011 A Novel Model for Cerebral Venous Thrombosis Reveals Prominent Blood-Brain Barrier Breakdown, Impaired Neurovascular Coupling and Cellular Damage**
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- P012 Validation of LC-MS/MS Methods for Assessment of Two Bioactive Compounds Derived from *Isatis tinctoria* by *In Vitro* Blood-Brain Barrier Models**
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- P013 *In Vitro* Models of Neuroblastoma Brain Metastasis**
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- P014 Boosting Autoimmunity Activates the Brain's Choroid Plexus for Leukocyte Trafficking and Alleviates Disease Pathology in a Mouse Model of ALS**
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- P015 Designing the Bionanointerface for Transcytosis and Barrier Crossing**
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- P016 Intracerebroventricular Nitric Oxide Represses NF-κB Activation of the Brain's Choroid Plexus for Leukocyte Trafficking**
Alexander Kertser¹, Kuti Baruch¹, Michal Schwartz¹, ¹Weizmann Institute of Science, Rehovot, Israel
- P017 Stress Induced Changes in the Neurovascular Unit: A Morphological Study in Rats**
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- P018 Endothelial-Mesenchymal Transition of Brain Endothelial Cells – Relevance for Metastatic Extravasation?**
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P019 Gene Expression Changes of the Slc7a Transporters at the Blood-Brain Barrier in Acute Pancreatitis

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P020 Opening the Intercellular Junctions of Brain Endothelial with Peptides

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P021 Role of Mesenchymal Cell Migration in the Formation of Melanoma Brain Metastases

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P022 Signal Transduction Pathways and Proteases Involved in the Transmigration of Tumour Cells through the Blood-Brain Barrier

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P023 CB2 Receptor Activation Inhibits Melanoma Cell Transmigration through the Blood-Brain Barrier

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P024 Immune Stress Affects the mRNA Expression of VEGF Receptors in the Ovine Choroid Plexus

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P025 Nanoparticle Uptake through the Blood-Brain Barrier: Investigation of Key Steps and Signals

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P026 Cerebrovascular Damage Induced by Low Dose X-ray Irradiation of Whole Brain in Mice Is Reversible

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P027 The Influence of Blood Nerve Barrier Dysfunction on the Peripheral Nerve

Electrophysiological Properties

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- P028 Damage of the Blood-Brain Barrier of Transgenic Rat Models for Tauopathies**
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- P029 Expression of the ALS-Causing Variant hSOD1^{G93A} Leads to an Impaired Integrity and Altered Regulation of Claudin-5 Expression in an *In Vitro* BSCB Model**
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- P030 Disrupted Wall Shear Stress Alters Autocrine Signaling of Brain Microvascular Endothelial Cells at the Blood-Brain Barrier**
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- P031 Amino-Functionalised Multi-Walled Carbon Nanotubes (MWNTs-NH₃⁺) : Uptake and Transcytosis across the Blood-Brain Barrier *In Vitro***
Houmam Kafa¹, Noelia Rubio¹, Julie Tzu-Wen Wang¹, Kerrie Venner², Elzbieta Pach³, Belen Ballesteros³, N. Joan Abbott¹, Khuloud Al-Jamal¹, ¹*King's College London, London, UK*, ²*University College London, London, UK*, ³*The Catalan Institute of Nanoscience and Nanotechnology, Barcelona, Spain*
- P032 Occludin Decreases HIV-1 Replication in Pericytes in a SIRT-1 Mediated Manner by Preventing Nuclear Translocation of CtBP1**
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- P033 Investigation into the Molecular Mechanisms Underlying Idiopathic Intracranial Hypertension**
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- P034 Autophagic Processing at the Blood Brain Barrier**
Chris Greene¹, Natalie Hudson¹, James Keaney¹, Matthew Campbell¹, ¹*Smurfit Institute of Genetics, Trinity College Dublin, Dublin, Ireland*
- P035 Carbonyl Stress Induced Dysfunction in Human Brain Endothelial Cells: Effect of Protective Molecules**
Andrea E. Tóth¹, Fruzsina R. Walter¹, Szilvia Veszélka¹, Lorand Kiss¹, Béla Ózsvári², László G. Puskás², András Tóth¹, Gábor Rákhely¹, Pierre-Olivier Couraud^{3,4}, Sinya Dohgu⁵, Yasafumi Kataoka⁵, Mária A. Deli¹, ¹*Institute of Biophysics, BRC HAS, Szeged, Hungary*, ²*Avidin Ltd., Szeged, Hungary*, ³*Inserm U1016, Institut Cochin, Paris, France*, ⁴*Université Paris Descartes, Sorbonne Paris Cité, Paris, France*, ⁵*Department of Pharmaceutical Care and Health Sciences, Fukuoka University, Fukuoka, Japan*
- P036 Blood Brain-Barrier Dysfunction Following Repeated Seizures Is Associated with Impaired Neurovascular Coupling and Cellular Damage**
Lyn Kamintsky¹, Ofer Prager¹, Yoash Chassidim¹, Alon Friedman¹, ¹*Ben-Gurion University of the Negev, Beer-Sheva, Israel*
- P037 OPCs Response to Brain Damage Modifies the Cell Balance and Composition of NVU**
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P038 Protective Proteins in the Neurovascular Unit Are Regulated by a Dietary Isothiocyanate in Rats

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P039 A Tight Blood-Brain Barrier Model Displays Brain-to-Blood Efflux of Substrates for the ABC-Transporters, P-gp, BCRP and MRP-1

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P040 A GLP-1 Analog Prevents Retinal Vascular Permeability following Ischemia-Reperfusion Injury: Possible Role of Inflammation

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P041 Modulation of the Inner Blood Retinal Barrier Enhances Systemic Delivery of the hsp90 Inhibitor 17-DMAG Reducing Retinal Degeneration in Rodent Models of Retinitis Pigmentosa

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P042 Differential Endothelial ICAM-1 Signalling Events in Response to Lymphocyte Adhesion

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P043 The Effect of Endurance Training on Blood-Brain Barrier Proteins in the Rat Spinal Cord

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P044 Efflux and Influx Transporters Are Involved in the Handling of Verapamil at the Mouse Blood-Retinal Barrier

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P045 Effect of Naloxone-Provoked Opioid Withdrawal on P-gp and Bcrp Expression and Activity at the Rat Blood-Brain Barrier

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P046 Regulation of VE-cadherin Dynamics by Paxillin in Brain Microvascular Endothelial Cells

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P047 Acetyl-L-Carnitine Prevents METH-Induced Disruption of Tight Junction: A Role for MMP-9

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- P048 Modification of BMVEC Proteins by 2-CIHDA - A Contributor to BBB Dysfunction?**
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- P049 In Vivo Brain Penetration of Glucose Conjugated Iron-Chelator via Endogenous Blood-Brain Barrier Transport Systems**
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- P050 Clostridium perfringens Enterotoxin Revisited: A Tool for Disclosing Claudin-Binding Proteins?**
Tarek Saleh¹, Michael Schuemann¹, Eberhard Krause¹, Miriam Eichner¹, Anna Piontek¹, Ingolf E. Blasig¹, Jörg Piontek², Reiner F. Haseloff¹, ¹*Leibniz Institute of Molecular Pharmacology, 13125 Berlin, Germany,* ²*Charité Universitätsmedizin, Berlin, Germany*
- P051 Effect of Protein Interactions on Endocytosis of Fluorescently Labelled Claudin-5 in MDCK-II Cells**
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- P052 The Role of the MicroRNA-30 Family in the Regulation of the Blood-Brain Barrier during Inflammation. Implications for Multiple Sclerosis**
Claudio Derada Troletti¹, Wouter W. Kamphuis¹, Bert van het Hof¹, Ignacio Andres Romero², Miguel Alejandro Lopez-Ramirez³, Arie Reijerkerk⁴, Mark R. Mizee¹, Helga E. de Vries¹, ¹*Blood-Brain Barrier Research Group, Molecular Cell Biology and Immunology, Neuroscience Campus Amsterdam, VU University Medical Center, Amsterdam, The Netherlands,* ²*Department of Life, Health, and Chemical Sciences, Biomedical Research Network, The Open University, Milton Keynes, UK,* ³*Yale Cardiovascular Research Center, Section of Cardiovascular Medicine, Yale University School of Medicine, New Haven, USA,* ⁴*to-BBB Technologies B.V., Leiden, The Netherlands*
- P053 Developing a Delivery System for Therapeutic Biomolecules into the Brain**
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- P054 Redox-Sensitive Oligomerization of Occludin**
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- P055 Vascular Remodeling in Alzheimer Disease with Microbleeds**
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- P056 Youthful Systemic Milieu Ameliorates Alzheimer's Disease Pathology**
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- P057 Development of a New PAMPA Method for the Prediction of Blood-Brain Barrier Permeation Using an *In-House* Brain Lipid Extract**
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- P058 VEGF and TNF Act Synergistically to Induce Retinal Edema in an Atypical PKC Dependent Manner**
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- P059 Macrophage Inflammatory Protein-1 β (MIP1 β) and the Brain Endothelial Cell Inflammatory Response**
Ding Luo¹, John Greenwood¹, ¹*UCL Institute of Ophthalmology, London, UK*
- P060 Regional Heterogeneity in the Endothelial Glycocalyx and Basement Membrane of the Retinal Vasculature**
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- P061 Antenatal Inflammation Leads to Attenuated Blood-Brain Barrier Permeability after Stroke in Young Adult Mice**
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- P062 Targeting BBB Hyperpermeability via VEGFR2 Phosphorylation Sites**
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- P063 Transcriptional Profile of HIV-Induced Nuclear Translocation of Amyloid Beta in Brain Endothelial Cells**
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- P064 Vasoinhibins Regulate the Inner and Outer Blood-Retinal Barrier and Limit Retinal Oxidative Stress**
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- P065 The Development of a Drug Delivery System Using Brain Endothelial-Specific Non-Antibody Binding Domains as Blood Brain Barrier Transport Carriers**
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