

## Application sub-categories:

- Tumour / Cancer
- Cerebral / Stroke / MCAO
- Vital Organs / Shock
- Plastic Surgery / Wound Healing
- Physiology / Ischemia
- Methodology / Validation

## Tumour / Cancer

**Isbil-Buyukcoskun N, Cam B, Suyen GG and Ozluk K** (2018). Effects of intracerebroventricularly injected glucagon-like peptide-2 on ethanol-induced gastric mucosal damage in rats. *Endocr Res*. 43(4), 220-227

**Shepherd J, Fisher M, Welford A, McDonald DM, Kanthou C and Tozer GM** (2017). The protective role of sphingosine-1-phosphate against the action of the vascular disrupting agent combretastatin A-4 3-O-phosphate. *Oncotarget* 8(56), 95648-95661

**Williams LJ, Mukherjee D, Fisher M, Reyes-Aldasoro CC, Akerman S, Kanthou C and Tozer GM** (2014). An in vivo role for Rho kinase activation in the tumour vascular disrupting activity of combretastatin A-4 3-O-phosphate. *Br J Pharmacol* 171(21):4902-13

**Sen A, Capitano ML, Sperry JA, Schueckler JT, Thomas S, Singh AK, Evans SS, Hylander BL and Repasky EA** (2011). Mild elevation of body temperature reduces tumor interstitial fluid pressure and hypoxia and enhances efficacy of radiotherapy in murine tumor models. *Cancer Res* 71(11), 3872-80

**Sersa G, Jarm T, Kotnik T, Coer A, Podkrajsek M, Sentjurc M, Miklavcic D, Kadivec M, Kranjc S, Secerov A and Cemazar M** (2008). Vascular disrupting action of electroporation and electrochemotherapy with bleomycin in murine sarcoma. *Br J Cancer* 98, 388-98

**Cemazar M, Wilson I, Prise VE, Bell KM, Hill SA and Tozer GM** (2005). The endothelin B (ETB) receptor agonist IRL 1620 is highly vasoconstrictive in two syngeneic rat tumour lines: potential for selective tumour blood flow modification. *British Journal of Cancer* 9, 98-106

**Nikfarjam M, Muralidharan V, Malcontenti-Wilson C and Christophi C** (2005). Progressive microvascular injury in liver and colorectal liver metastases following laser induced focal hyperthermia therapy. *Lasers Surg Med* 37, 64-73

**Daruwalla J, Nikfarjam M, Malcontenti-Wilson C, Muralidharan V and Christophi C** (2005). Effect of thalidomide on colorectal cancer liver metastases in CBA mice. *J Surg Oncol* 91, 134-40

**Cárdenas-Navia LI, Daohai Yu D, Braun RD, Brizel DM, Secomb TW and Dewhirst MW** (2004). Tumor-dependent kinetics of partial pressure of oxygen fluctuations during air and oxygen breathing. *Cancer Research* 64, 6010-6017

**Sibtain A, Hill SA, Goodchild K, Shan N, Saunders M and Hoskin PJ** (2002). The modification of human tumour blood flow using pentoxifylline, nicotinamide and carbogen. *Radiotherapy and Oncology* 62, 69

**Thews O, Hummel M, Kelleher DK, Lecher B and Vaupel P** (2002). Nifedipine improves blood flow and oxygen supply, but not steady-state oxygenation of tumours in perfusion pressure-controlled isolated limb perfusion. *British Journal of Cancer* 87, 1462-1469

**Thews O, Kelleher DK and Vaupel P** (2002). Dynamics of tumor oxygenation and red blood cell flux in response to inspiratory hyperoxia combined with different levels of inspiratory hypercapnia. *Radiotherapy and Oncology* 62(1), 77-85

**Thews O, Kelleher DK and Vaupel P** (2001). No improvement in perfusion and oxygenation of experimental tumors upon application of vasodilator drugs. *Int J Oncol* 19, 1243-1247

**Braun RD, Lanzan JL and Dewhirst MW** (1999). Fourier analysis of fluctuations of oxygen tension and blood flow in R3230Ac tumors and muscle in rats. *Am J Physiol* 277, H551-568

**Powell MEB, Hill SA, Saunders MI, Hoskin PJ and Chaplin DJ** (1997). Human tumour blood flow is enhanced by nicotinamide and carbogen breathing. *Cancer Research* 57, 5261-5264

**Hahn JS, Braun RD, Dewhirst MW, Shan S, Snyder SA, Taube JM, Ong ET, Rosner GL, Dodge RK, Bonaventura J, Bonaventura C, DeAngelo J and Meyer RE** (1997). Stroma-free human hemoglobin A decreases R3230Ac rat mammary adenocarcinoma blood flow and oxygen partial pressure. *Radiation Research* 147, 185-194

**Pigott KH, Hill SA, Chaplin DJ and Saunders MI** (1996). Microregional fluctuations in perfusion within human tumours detected using laser Doppler flowmetry. *Radiotherapy and Oncology* 40, 45-50

**Powell MEB, Hill SA, Saunders MI, Hoskin PJ and Chaplin DJ** (1996). Effect of carbogen breathing on tumour microregional blood flow in humans. *Radiotherapy and Oncology* 41(3), 225-231

**Hill SA and Chaplin DJ** (1996). Detection of microregional fluctuations in erythrocyte flow using laser Doppler microprobes. *Oxygen Transport to Tissue XVII*, 48, 367-371

## Cerebral / Stroke / MCAO

**Choi DH, Hong KJ, Kim KH, Shin SD, Song KJ, Kim Y, Joo YH, Park JH, Ro YS, Kang HJ** (2023). Effect of first epinephrine administration time on cerebral perfusion pressure and cortical cerebral blood flow in a porcine cardiac arrest model. *Resuscitation*. 2023 Sep 15:109969. doi: 10.1016/j.resuscitation.2023.109969. Epub ahead of print. PMID: 37716402

**Lee DH, Lee EC, Park SW, Le JY, Kim KP, and Oh JS** (2023). Prospero Homeobox 1 and Doublecortin Correlate with Neural Damage after Ischemic Stroke. *J Korean Neurosurg Soc*. 2023 Oct 23. doi: 10.3340/jkns.2023.0154. Epub ahead of print. PMID: 37867430.

**Hsu CK, Chang SJ, Lim LY, Chang HH, and Shei-Dei Yang S** (2023). Methyl Palmitate Modulated NMDA-Induced Cerebral Hyperemia in Hypertensive Rats. *J Vasc Res*. 2023;60(3):137-147. doi: 10.1159/000529916. Epub 2023 Jun 7. PMID: 37285812.

**Wang CH, Chang WT, Huang CH, Tsai MS, Liu SH and Chen WJ** (2020). Cerebral Blood Flow-Guided Manipulation of Arterial Blood Pressure Attenuates Hippocampal Apoptosis After Asphyxia-Induced Cardiac Arrest in Rats. *J Am Heart Assoc* 9(13):e016513

**Zong X, Dong Y, Li Y, Yang L, Li Y, Yang B, Tucker L, Zhao N, Brann DW, Yan X, Hu S and Zhang Q** (2019). Beneficial Effects of Theta-Burst Transcranial Magnetic Stimulation on Stroke Injury via Improving Neuronal Microenvironment and Mitochondrial Integrity. *Transl Stroke Res* 11(3), 450-467

**Viriyawan V, Oldfield M and Rodriguez y Baena F** (2018). Laser Doppler sensing for blood vessel detection with a biologically inspired steerable needle. *Bioinspir Biomim*. 13(2):026009

**McBride DW, Wu G, Nowrangi D, Flores JJ, Hui L, Krafft PR and Zhang JH** (2018). Delayed Recanalization Promotes Functional Recovery in Rats Following Permanent Middle Cerebral Artery Occlusion. *Transl Stroke Res* 9(2), 185-198

**Lin W, Hsuan YC, Lin MT, Kuo TW, Lin CH, Su YC, Niu KC, Chang CP and Lin HJ** (2017). Human Umbilical Cord Mesenchymal Stem Cells Preserve Adult Newborn Neurons and Reduce Neurological Injury after Cerebral Ischemia by Reducing the Number of Hypertrophic Microglia/Macrophages. *Cell Transplant*. 2017 Nov;26(11):1798-1810. doi: 10.1177/0963689717728936

**Nakamura S, Walker DW and Wong FY** (2017). Cerebral haemodynamic response to somatosensory stimulation in near-term fetal sheep. *J Physiol* 595(4), 1289-1303

**Saleh TM, Saleh MC, Connell BJ, Kucukkaya I and Abd-El-Aziz AS** (2017). A novel synthetic chemical entity (UPEI-800) is neuroprotective in vitro and in an in vivo rat model of oxidative stress. *Clin Exp Pharmacol Physiol* 44(10), 993-1000

**Saleh TM, Saleh MC, Connell BJ and Song YH** (2017). A co-drug conjugate of naringenin and lipoic acid mediates neuroprotection in a rat model of oxidative stress. *Clin Exp Pharmacol Physiol* 44(10), 1008-1016

**Nakamura S, Walker DW and Wong FY** (2017). Cerebral haemodynamic response to somatosensory stimulation in near-term fetal sheep. *J Physiol* 595(4), 1289-1303

**Schleicher N, Tomkins AJ, Kampshulte M, Hyvelin JM, Botteron C, Juenemann M, Yeniguen M, Krombach GA, Kaps M, Spratt NJ, Gerriets T and Nedelmann M** (2016). Sonothrombolysis with BR38 Microbubbles Improves Microvascular Patency in a Rat Model of Stroke. *PLoS One* 11(4):e0152898

**Arpacı H, Çomu FM, Küküç A, Kösem B, Kartal S, Şıvgın V, Turgut HC, Aydın ME, Koç DS, Arslan M** (2016). Effects of lornoxicam and intravenous ibuprofen on erythrocyte deformability and hepatic and renal blood flow in rats. *Drug Des Devel Ther* 10, 2477-81

**Huang C, Wang LC, Wang HK, Pan CH, Cheng YY, Shan YS, Chio CC and Tsai KJ** (2015). Memantine alleviates brain injury and neurobehavioral deficits after experimental subarachnoid hemorrhage. *Mol Neurobiol* 51(3), 1038-52

**Manto M, Honnorat J, Hampe CS, Guerra-Narbona R, López-Ramos JC, Delgado-García JM, Saitow F, Suzuki H, Yanagawa Y, Mizusawa H and Mitoma H** (2015). Disease-specific monoclonal antibodies targeting glutamate decarboxylase impair GABAergic neurotransmission and affect motor learning and behavioral functions. *Front Behav Neurosci* 9, 78

**Gulec Suyen G, Isbil-Buyukcoskun N, Cam B and Ozluk K** (2015). Effects of centrally injected glucagon-like peptide-2 on gastric mucosal blood flow in rats: possible mechanisms. *Peptides* 6, 62-6

**Chen CC, Chang MW, Chang CP, Chang WY, Chang SC, Lin MT and Yang CL** (2015). Improved infrared-sensing running wheel systems with an effective exercise activity indicator. *PLoS One* 10(4):e0122394

**Kawabori M, Kacimi R, Kauppinen T, Calosing C, Kim JY, Hsieh CL, Nakamura MC and Yenari MA** (2015). Triggering receptor expressed on myeloid cells 2 (TREM2) deficiency attenuates phagocytic activities of microglia and exacerbates ischemic damage in experimental stroke. *J Neurosci* 35(8), 3384-96

**Huang CY, Wang LC, Wang HK, Pan CH, Cheng YY, Shan YS, Chio CC, Tsai KJ** (2015). Memantine Alleviates Brain Injury and Neurobehavioral Deficits after Experimental Subarachnoid Hemorrhage. *Mol Neurobiol* 51(3):1038-52

**Saleh MC, Connell BJ, Rajagopal D, Khan BV, Abd-El-Aziz AS, Kucukkaya I and Saleh TM** (2014). Co-administration of resveratrol and lipoic acid, or their synthetic combination, enhances neuroprotection in a rat model of ischemia/reperfusion. *PLoS One* 9(1), e87865

**Heikkinen R, Malm T, Heikkilä J, Muona A, Tanila H, Koistinaho M and Koistinaho J** (2014). Susceptibility to focal and global brain ischemia of Alzheimer mice displaying aβ deposits: effect of immunoglobulin. *Aging Dis* 5(2), 76-87

**Little AG and Seebacher F** (2014). Thyroid hormone regulates cardiac performance during cold acclimation in zebrafish (*Danio rerio*). *J Exp Biol* 217(Pt 5), 718-25

**Connell BJ, Saleh MC, Kucukkaya I, Abd-El-Aziz AS, Khan BV and Saleh TM** (2014). UPEI-300, a conjugate of lipoic acid and edaravone, mediates neuroprotection in ischemia/reperfusion. *Neurosci Lett* 561, 151-5

**Sepramaniam S, Tan JR, Tan KS, DeSilva DA, Tavintharan S, Woon FP, Wang CW, Yong FL, Karolina DS, Kaur P, Liu FJ, Lim KY, Armugam A and Jayaseelan K** (2014). Circulating microRNAs as biomarkers of acute stroke. *Int J Mol Sci* 15(1), 1418-32

**Zehendner CM, Wedler HE and Luhmann HJ** (2013). A novel in vitro model to study pericytes in the neurovascular unit of the developing cortex. *PLoS One* 8(11), e81637

**Zhu XH, Zhang Y, Wiesner HM, Ugurbil K and Chen W** (2013). In vivo measurement of CBF using (17) O NMR signal of metabolically produced H(2) (17) O as a perfusion tracer. *Magn Reson Med* 70(2), 309-14

**Teranishi K, Scultetus A, Haque A, Stern S, Philbin N, Rice J, Johnson T, Auker C, McCarron R, Freilich D and Arnaud F** (2012). Traumatic brain injury and severe uncontrolled haemorrhage with short delay pre-hospital resuscitation in a swine model. *Injury* 43(5), 585-93

**Connell BJ, Saleh MC, Khan BV, Rajagopal D and Saleh TM** (2012). UPEI-100, a conjugate of lipoic acid and apocynin, mediates neuroprotection in a rat model of ischemia/reperfusion. *Am J Physiol Regul Integr Comp Physiol*. 302(7), R886-95

**Liew HK, Kuo JS, Wang JY and Pang CY** (2014). Granulocyte-Colony Stimulating Factor Increases Cerebral Blood Flow via a NO Surge Mediated by Akt/eNOS Pathway to Reduce Ischemic Injury. *Hindawi, The Scientific World Journal*, Article ID 657932

**Liew HK, Pang CY, Hsu CW, Wang MJ, Li TY, Peng HF, Kuo JS and Wang JY** (2012). Systemic administration of urocortin after intracerebral hemorrhage reduces neurological deficits and neuroinflammation in rats. *J Neuroinflammation*. 9, 13

**Levi H, Schoknecht K, Prager O, Chassidim Y, Weissberg I, Serlin Y and Friedman A** (2012). Stimulation of the sphenopalatine ganglion induces reperfusion and blood-brain barrier protection in the photothrombotic stroke model. *PLoS One*. 2012;7(6), e39636

**Wang LC, Huang CY, Wang HK, Wu MH and Tsai KJ** (2012). Magnesium sulfate and nimesulide have synergistic effects on rescuing brain damage after transient focal ischemia. *J Neurotrauma* 29(7), 1518-29

**Connell BJ, Khan BV, Rajagopal D, and Saleh TM** (2012). Novel Neurovascular Protective Agents: Effects of INV-155, INV-157, INV-159, and INV-161 versus Lipoic Acid and Captopril in a Rat Stroke Model. *Cardiology Research and Practice*, Volume 2012, Article ID 319230, 6 pages, doi:10.1155/2012/319230

**Marbacher S, Andereggen L, Neuschmelting V, Widmer HR, von Gunten M, Takala J, Jakob SM and Fandino J** (2012). A new rabbit model for the study of early brain injury after subarachnoid hemorrhage. *J Neurosci Methods* 208(2), 138-45

**Connell BJ and Saleh TM** (2012). Co-administration of apocynin with lipoic acid enhances neuroprotection in a rat model of ischemia/reperfusion. *Neurosci Lett* 507(1), 43-6

**Mishra AM, Ellens DJ, Schridde U, Motelow JE, Purcaro MJ, DeSalvo MN, Enev M, Sanganahalli BG, Hyder F and Blumenfeld H** (2011). Where fMRI and electrophysiology agree to disagree: corticothalamic and striatal activity patterns in the WAG/Rij rat. *J Neurosci* 31(42), 15053-64

**Liu X, Zhu XH, Zhang Y and Chen W** (2011). Neural origin of spontaneous hemodynamic fluctuations in rats under burst-suppression anesthesia condition. *Cereb Cortex* 21(2), 374-84

- Lin YC, Ko TL, Shih YH, Lin MY, Fu TW, Hsiao HS, Hsu JY and Fu YS (2011). Human umbilical mesenchymal stem cells promote recovery after ischemic stroke. *Stroke* 42(7), 2045-53
- Greco R, Meazza C, Mangione AS, Allena M, Bolla M, Amantea D, Mizoguchi H, Sandrini G, Nappi G and Tassorelli C (2011). Temporal profile of vascular changes induced by systemic nitroglycerin in the meningeal and cortical districts. *Cephalalgia* 31(2), 190-8
- Strbian D, Durukan A, Pitkonen M, Marinkovic I, Tatlisumak E, Pedrono E, Abo-Ramadan U and Tatlisumak T (2008). The blood-brain barrier is continuously open for several weeks following transient focal cerebral ischemia. *Neuroscience* 153, 175-181
- Hsiao G, Lee J-J, Chen Y-C, Lin J-H, Shen M-Y, Lin K-H, Chou D-S and Sheu J-R (2007). Neuroprotective effects of PMC, a potent  $\alpha$ -tocopherol derivative, in brain ischemia-reperfusion: reduced neutrophil activation and antioxidant actions. *Biochemical Pharmacology* 73, 682-693
- Verberne AJM and McInerney K (2006). Pancreatic vasoconstrictor responses are regulated by neurons in the rostral ventrolateral medulla. *Brain Res* 1102, 127-134
- Hsiao G, Chen Y-G, Lin J-H, Lin K-H, Chou D-S, Lin C-H and Sheu J-R (2006). Inhibitory mechanisms of tetramethylpyrazine in middle cerebral artery occlusion (MCAO)-induced focal cerebral ischemia in rats. *Pharmacology Planta Med* 72, 411-417
- Strbian D, Karjalainen-Lindsberg M-L, Tatlisumak T and Lindsberg PJ (2006). Cerebral mast cells regulate early ischemic brain swelling and neutrophil accumulation. *J Cereb Blood Flow Metab* 26, 605-12
- Nurmi A, Vartiainen N, Pihlaja R, Golstems G, Vrjanheikki J and Koistinaho J (2004). Pyrrolidine dithiocarbamate inhibits translocation of nuclear factor kappa-B in neurons and protects against brain ischaemia with a wide therapeutic time window. *J Neurochem* 91, 755-65
- Nersesyan H, Herman P, Erdogan E, Hyder F and Blumenfeld H (2004). Relative changes in cerebral blood flow and neuronal activity in local microdomains during generalized seizures. *J Cereb Blood Flow Metab* 24, 1057-1068
- Kannurpatti SS and Biswal BB (2004). Effect of anesthesia on CBF, MAP and fMRI-BOLD signal in response to apnea. *Brain Research* 1011, 141-147
- Kannurpatti SS, Biswal BB and Hudetz AG (2003). Map-induced effects in CBF and BOLD signal response to apnea in anesthetized rats. *Proc Intl Soc Mag Reson Med* 11, 1774
- Kannurpatti SS, Biswal BB and Hudetz AG (2003). Baseline physiological state and the fMRI-BOLD signal response to apnea in anesthetized rats. *NMR in Biomedicine* 16, 261-268
- Kannurpatti SS, Biswal BB and Hudetz AG (2002). Differential fMRI-BOLD signal response to apnea in humans and anesthetized rats. *Magnetic Resonance in Medicine* 47, 864-870
- Blood AB, Hunter CJ and Power GG (2002). The role of adenosine in regulation of cerebral blood flow during hypoxia in the near-term fetal sheep. *J Physiol* 543, 1015-23
- Shen H, Greene AS, Stein EA and Hudetz AG (2002). Functional cerebral hyperemia is unaffected by isovolemic hemodilution. *Anesthesiology* 96, 142-147
- Kannurpatti SS, Biswal BB and Hudetz AG (2002). Differential fMRI-BOLD signal response to apnea in humans and anesthetized rats. *Magnetic Resonance in Medicine* 47, 864-870
- Lauer KK, Shen H, Stein EA, Ho K-C, Kampine JP and Hudetz AG (2002). Focal cerebral ischemia in rats produced by intracarotid embolization with viscous silicone. *Neuro Res* 24, 181-190
- Koistinaho, M, Kettunen MI, Holtzman DM, Kauppinen RA, Higgins LS and Koistinaho J (2002). Expression of Human Apolipoprotein E downregulates amyloid precursor protein – induced ischemic susceptibility. *Stroke* 33, 1905-1910
- Koistinaho, M, Kettunen MI, Goldsteins G, Keinänen R, Salminen A, Ort M, Bures J, Liu D, Kauppinen RA, Higgins LS and Koistinaho J (2002).  $\beta$ -Amyloid precursor protein transgenic mice that harbor diffuse A $\beta$  deposits but do not form plaques show increased ischemic vulnerability: Role of inflammation. *PNAS* 99, 1610-1615
- Schmidt-Kastner R, Truettner J, Lin B, Zhao W, Saul I, Busto R and Ginsberg M D (2001). Transient changes of brain-derived neurotrophic factor (BDNF) mRNA expression in hippocampus during moderate ischemia induced by chronic bilateral common carotid artery occlusion in the rat. *Molecular Brain Research* 92, 157-166
- lan J, Hunter CJ, Murata T and Power GG (2000). Adaptation of laser-Doppler flowmetry to measure cerebral blood flow in the fetal sheep. *J Apply Physiol* 89, 1065-1071
- Alonso-Balancia M, Hudetz AG, Shen H, Harder DR and Roman RJ (1999). Contribution of 20-HETE to vasodilator actions of nitric oxide in the cerebral microcirculation. *Stroke* 30, 2727-34
- Lauer KK, Shen H, Hudetz AG, Stein EA and Kampine JP (1998). Regional cerebral blood flow autoregulation in a silicone embolus model of focal brain ischemia as assessed by multichannel laser Doppler flowmetry. *Adv Exp Med Biol* 454, 253-9
- Hudetz AG, Shen H and Kampine JP (1998). Nitric oxide from neuronal NOS plays critical role in cerebral capillary flow response to hypoxia. *Am J. Physiol* 274, H982-9
- Soriano MA, Sanz O, Ferrer I and Planas AM (1997). Cortical infarct volume is dependent on the ischemic reduction of perifocal cerebral blood flow in a three-vessel intraluminal MCA occlusion/reperfusion model in the rat. *Brain Research* 747(2), 273-278
- Hudetz AG, Biswal BB, Feher G and Kampine JP (1997). Effects of hypoxia and hypercapnia on capillary flow velocity in the rat cerebral cortex. *Microvascular Research* 54, 35-42
- ### Vital Organs / Shock
- Ospina-Tascón GA, Aldana JL, García Marín AF, et al., and Bakker J (2023). Immediate Norepinephrine in Endotoxic Shock: Effects on Regional and Microcirculatory Flow. *Crit Care Med*. 2023 Aug 1;51(8):e157-e168. doi: 10.1097/CCM.0000000000005885. Epub 2023 May 30. PMID: 37255347.
- Daneva Z, Dempsey SK, Ahmad A, Li N, Li P-IL and Ritter JK (2019). Diuretic, natriuretic, and vasodepressor activity of a lipid fraction enhanced in the model of cultured mouse medullary interstitial cells by a selective FAAH inhibitor. *JPET Fast Forward*. Published on December 7, 2018 as DOI: 10.1124/jpet.118.252320
- Post EH, Su F, Rigby Shinotsuka C, Taccone FS, Creteur J, De Backer D and Vincent JL (2018). Renal autoregulation in experimental septic shock and its response to vasopressin and norepinephrine administration. *J Appl Physiol* (1985). 2018 Sep 27. doi: 10.1152/jappphysiol.00783.2017. [Epub ahead of print]
- Hosokawa K, Su F, Taccone FS, Post EH, Creteur J and Vincent JL (2018). Effects of acute ethanol intoxication in an ovine peritonitis model. *BMC Anesthesiol* 18(1),70
- Ahmad A, Dempsey SK, Daneva Z, Li N, Poklis JL, Li PI and Ritter JK (2018). Modulation of mean arterial pressure and diuresis by renomedullary infusion of a selective inhibitor of fatty acid amide hydrolase. *Am J Physiol Renal Physiol* 315(4), F967-F976
- He X, Su F, Xie K, Taccone FS, Donadello K and Vincent JL (2017). Should Hyperoxia Be Avoided During Sepsis? An Experimental Study in Ovine Peritonitis. *Crit Care Med*. 2017 Oct;45(10):e1060-e1067. doi: 10.1097/CCM.0000000000002524
- Hosokawa K, Su F, Taccone FS, Post EH, Pereira AJ, Herpain A, Creteur J and Vincent JL (2017). Esmolol Administration to Control Tachycardia in an Ovine Model of Peritonitis. *Anesth Analg*. 2017 Dec;125(6):1952-1959.
- Ahmad A, Daneva Z, Li G, Dempsey SK, Li N, Poklis J, Lichtman A, Li PI and Ritter JK (2017). Stimulation of diuresis and natriuresis by renomedullary infusion of a dual inhibitor of fatty acid amide hydrolase and monoacylglycerol lipase. *Am J Physiol Renal Physiol* 313(5), F1068-F1076
- Ganesh T, Estrada M, Yeger H, Duffin J and Cheng HM (2017). A non-invasive magnetic resonance imaging approach for assessment of real-time microcirculation dynamics. *Sci Rep* 7(1), 7468
- Post EH, Su F, Hosokawa K, Taccone FS, Herpain A, Creteur J, De Backer D and Vincent JL (2017). The effects of acute renal denervation on kidney perfusion and metabolism in experimental septic shock. *BMC Nephrol* 18(1), 182
- Post EH, Su F, Hosokawa K, Taccone FS, Herpain A, Creteur J, Vincent JL and De Backer D (2017). Changes in kidney perfusion and renal cortex metabolism in septic shock: an experimental study. *J Surg Res* 207, 145-154
- Gulec SG, Isbil-Buyukcokkun N, Cam B and Ozluk K (2015). Effects of centrally injected glucagon-like peptide-2 on gastric mucosal blood flow in rats: possible mechanisms. *Peptides* 64, 62-6
- Dong B, Zhou H, Han C, Yao J, Xu L, Zhang M, Fu Y and Xia Q (2014). Ischemia/reperfusion-induced CHOP expression promotes apoptosis and impairs renal function recovery: the role of acidosis and GPR4. *PLoS One*, 9(10), e110944
- Brügger LE, Beldi G, Stalder M, Porta F, Candinas D, Takala J and Jakob SM (2012). Postoperative splanchnic blood flow redistribution in response to fluid challenges in the presence and absence of endotoxemia in a porcine model. *Shock* 37(1), 116-21
- Guven S, Muci E, Unsal MA, Yulug E, Alver A, Duman MK and Mentese A (2010). The effects of carbon dioxide pneumoperitoneum on ovarian blood flow, oxidative stress markers, and morphology during laparoscopy: a rabbit model. *Fertil Steril* 93(4), 1327-32
- Cai RS, Alexander MS, Marson L (2008). Activation of somatosensory afferents elicit changes in vaginal blood flow and the urethrogenital reflex via autonomic efferents. *J Urol* 180, 1167-72
- Deniz T, Agalar C, Ozdogan M, Comu F, Emirdogan M, Taskin S, Saygun O and Agalar F (2007). Oral carbohydrate solution ameliorates endotoxemia-induced splanchnic ischemia. *Dig Dis Sci* 52, 287-91
- Krejci V, Hildebrand LB and Sigurdsson GH (2006). Effects of epinephrine, norepinephrine, and phenylephrine on microcirculatory blood flow in the gastrointestinal tract in sepsis. *Critical Care Medicine* 34, 1456-146.
- Hildebrand LB, Krejci V and Sigurdsson GH (2004). Effects of dopamine, dobutamine, and dexepamine on microcirculatory blood flow in the gastrointestinal tract during sepsis and anesthesia. *Anesthesiology* 100, 1188-1197
- Calatayud S, Canet A, Bello R, Hernández C, Martí M and Barrachina MD (2003). Low endotoxemia prevents the reduction of gastric blood flow induced by NSAIDs: role of nitric oxide. *British Journal of Pharmacology* 139, 263-270
- Morales J, Moitinho E, Abalades JG, Fernández M and Bosch J (2003). Effects of the V1a vasopressin agonist F-180 on portal hypertension-related bleeding in portal hypertensive rats. *Hepatology* 38, 1378-1383
- Hildebrand LB, Krejci V, tenHoevel ME, Banic A and Sigurdsson GH (2003). Redistribution of microcirculatory blood flow within the intestinal wall during sepsis and general anesthesia. *Anesthesiology* 98, 658-69
- Krejci V, Hildebrand LB, Erni D and Sigurdsson GH (2003). Endothelin receptor antagonist bosentan improves microcirculatory blood flow in splanchnic organs in septic shock. *Critical Care Medicine* 31, 203-10
- Hillebrand U, Kobelt V, vOphoven M, Suwelack B, Matzkies F, Gerhardt J, Sindermann J and Hohage H (2002). Influence of antihypertensive drugs on renal microcirculation and renal hemodynamics in cyclosporine a-treated rats. *Transplantation Proceedings* 34, 1383-1384
- Castañeda B, Morales J, Lionetti R, Moitinho E, Andreu V, Pérez-del-Pulgar S, Pizcueta P, Rodés J and Bosch J (2001). Effects of blood volume restitution following a portal hypertensive-related bleeding in anesthetized cirrhotic rats. *Hepatology* 33(4), 821-825
- Krejci V, Hildebrand L, Banic A, Erni D, Wheatley AM and Sigurdsson GH (2000). Continuous measurements of microcirculatory blood flow in gastrointestinal organs during acute haemorrhage. *Br J Anaesth* 84, 468-475
- Cortijo J, Pons R, Dasí F, Marín N, Martínez-Losa M, Advenier C and Morcillo EJ (1997). Bronchodilator and anti-inflammatory activities of SCA40: studies in human isolated bronchus, human eosinophils, and in the guinea-pig in vivo. *Naunyn-Schmiedeberg's Archives of Pharmacology* 35, 806-814
- ### Plastic Surgery / Wound Healing
- C Bagdas D, Cam Etoz B, Inan Ozturkoglu S, Cinkilic N, Ozyigit MO, Gul Z, Isbil Buyukcokkun N, Ozluk K and Gurun MS (2014). Effects of systemic chlorogenic acid on random-pattern dorsal skin flap survival in diabetic rats. *Biol Pharm Bull* 37(3), 361-70
- Contaldo C, Harder Y, Plock J, Banic A, Jakob S and Erni D (2007). The influence of local and systemic preconditioning on oxygenation, metabolism and survival in critically ischaemic skin flaps in pigs. *Journal of Plastic, Reconstructive & Aesthetic Surgery* 60, 1182-1192
- Harder Y, Contaldo C, Klenk J, Banic A, Jakob SM and Erni D (2005). Preconditioning with monophosphoryl lipid A improves survival of critically ischemic tissue. *Anesth Analg* 100, 1786-1792
- Rodrigues LM, Pinto PC, Magro MJ and Alves MFJ (2004). Exploring the influence of skin perfusion on transepidermal water loss. *Skin Research and Technology* 10, 257-262
- Rodrigues ML, Magro MJ, Pinto CP, Mouzinho M and Almeida A (2004). Non-invasive assessment of wound-healing pathophysiology by transcutaneous indicators. *Annals of Burns and Fire Disasters* 17(3)
- Peltonen LM and Pyörilä A (2004). Local action of exogenous nitric oxide (NO) on the skin blood flow of rock pigeons (Columba livia) is affected by acclimation and skin site. *Journal of Experimental Biology* 207, 2611-2619
- Rosado C and Rodrigues LM (2003). In vivo study of the physiological impact of stratum corneum sampling methods. *International Journal of Cosmetic Science* 25, 37-44
- Schramm S, Wettstein R, Wessendorf R, Jakob SM, Banic A and Erni D (2002). Acute normovolemic hemodilution improves oxygenation in ischemic flap tissue. *Anesthesiology* 96, 478-1484
- Erni D, Wessendorf R, Wettstein R, Banic A and Schilling MK (2001). Endothelin receptor blockade improves oxygenation in contralateral TRAM flap tissue in pigs. *British Journal of Plastic Surgery* 54(5), 412-418
- Raisis AL, Young LE, Taylor PM, Walsh KP and Lekeux P (2000). Doppler ultrasonography and single-fiber laser Doppler flowmetry for measurement of hind limb blood flow in anesthetized horses. *American Journal of Veterinary Research* 61(3), 286-290
- ### Physiology / Ischemia
- Fassett MS, Braz JM, Castellanos CA, et al., and Ansel KM (2023). IL-31-dependent neurogenic inflammation restrains cutaneous type 2 immune response in allergic dermatitis. *Sci Immunol*. 2023 Oct 20;8(88):eabi6887. doi: 10.1126/sciimmunol.abi6887. Epub 2023 Oct 13. PMID: 37831760.
- Zakher E, Ganesh T and Cheng HLM (2020). A novel MRI analysis for assessment of microvascular vasomodulation in low-perfusion skeletal muscle. *Sci Rep* 10(1), 4705

- McBride DW1 Reis C, Zhang JH, Applegate R 2nd and Tang J** (2018). Remote Limb Ischemic Preconditioning Attenuates Cerebrovascular Depression During Sinusoidal Galvanic Vestibular Stimulation via  $\alpha$ 1-Adrenoceptor-Protein Kinase C $\epsilon$ -Endothelial NO Synthase Pathway in Rats. *J Am Heart Assoc*:7(7). pii: e007105
- Lai Y-H and Guo L-Y** (2015). Finite Element Analysis and Empirical Analysis of a Cost-effective Pressure Ulcer-Preventing Mattress. *Int J AUSMT* 5(4) *Lai*
- Zhang YT, Han MQ, Shen LN, Zhao JH and Feng NP** (2015). Solid Lipid Nanoparticles Formulated for Transdermal Aconitine Administration and Evaluated In Vitro and In Vivo. *J Biomed Nanotechnol* 11(2), 351-61
- Budgell BS, Sovak G, Soave D** (2014). TENS augments blood flow in somatotopically linked spinal cord segments and mitigates compressive ischemia. *Spinal Cord* 52(10), 744-8
- Jiang X, Malkovskiy AV, Tian W, Sung YK, Sun W, Hsu JL, Manickam S, Wagh D, Joubert LM, Semenza GL, Rajadas J and Nicolls MR** (2014). Promotion of airway anastomotic microvascular regeneration and alleviation of airway ischemia by deferoxamine nanoparticles. *Biomaterials* 35(2), 803-13
- Guerci P, Tran N, Menu P, Losser MR, Meistelman C and Longrois D** (2014). Impact of fluid resuscitation with hypertonic-hydroxyethyl starch versus lactated ringer on hemorheology and microcirculation in hemorrhagic shock. *Clin Hemorheol Microcirc* 56(4), 301-17
- He K, Chen X, Han C, Xu L, Zhang J, Zhang M and Xia Q** (2014). Lipopolysaccharide-induced cross-tolerance against renal ischemia-reperfusion injury is mediated by hypoxia-inducible factor-2 $\alpha$ -regulated nitric oxide production. *Kidney Int* 85(2), 276-88
- Chang HH, Lee YC, Chen MF, Kuo JS and Lee TJ** (2012). Sympathetic activation increases basilar arterial blood flow in normotensive but not hypertensive rats. *Am J Physiol Heart Circ Physiol*. 302(5), H1123-30
- El Beheiry MH, Heximer SP, Voightlaender-Bolz J, Mazer CD, Connelly KA, Wilson DF, Beattie WS, Tsui AK, Zhang H, Golam K, Hu T, Liu E, Lidington D, Bolz SS and Hare GM** (2011). Metoprolol impairs resistance artery function in mice. *J Appl Physiol* 111(4), 1125-33
- Isbil-Buyukcoskun N, Gulec G, Cam-Etoz B and Ozluk K** (2009). Peripheral GLP-1 gastroprotection against ethanol: The role of exendin, NO, CGRP, prostaglandins and blood flow. *Regul Pept* 152, 22-27
- Murnaghan M, Li G and Marsh DR** (2006). Nonsteroidal anti-inflammatory drug-induced fracture nonunion: an inhibition of angiogenesis? *J Bone Joint Surg Am* 88 Suppl 3, 140-47
- Mäkinen TM, Pääkkönen T, Palinkas LA, Rintamäki H, Leppäluoto J and Hassi J** (2004). Seasonal changes in thermal responses of urban residents to cold exposure. *Comp Biochem Physiol A Mol Integr Physiol*. 139, 29-238
- Omar AA, Mavor AID, Jones AM and Homer-Vanniasinkam S** (2004). Treatment of venous leg ulcers with Dermagraft®. *European Journal of Vascular and Endovascular Surgery*, 27, 666-672
- Giuliano F, Allard J, Compagnie S, Alexandre L, Droupy S and Bernabe J** (2001). Vaginal physiological changes in a model of sexual arousal in anesthetized rats. *Am J Physiol Regul Integr Comp Physiol* 281, R140-149
- Nazzaro P, Triggiani R, Ciancio L, Scarano AM, Merlo M, Manzari M, Cicco G, Manicone A and Pirrelli A** (1999). Microvascular changes during laboratory stimuli and structural haemodynamic indices: the role of pulse pressure. *Clinical Hemorheology and Microcirculation* 21, 225-232
- Calatayud S, Sanz M-J, Canet A, Bello R, Díaz de Rojas F and Esplugues JV** (1999). Mechanisms of gastroprotection by transdermal nitroglycerin in the rat. *British Journal of Pharmacology* 127, 1111-1118
- Darlington SE, Carrolan-Rees G, Davies WT, Griffiths H and Woodcock JP** (1998). Use of a multi-channel laser Doppler flowmeter in the objective assessment of hand-arm vibration syndrome patients. *Journal of Vascular Investigation* 4, 31-34.
- Khattab M, Hohage H, Hollah P, Rahn K-H and Schlatter E** (1998). Effects of diadenosine polyphosphates on systemic and regional hemodynamics in anesthetized rats. *Kidney & Blood Pressure Research* 21, 42-49
- Kuznetsova LV, Tomasek N, Sigurdsson GH, Banic A, Erni D and Wheatley AM** (1998). Dissociation between volume blood flow and laser-Doppler signal from rat muscle during changes in vascular tone. *Physiol Heart Circ Physiol* 274 (4), H1248-H1254
- Magerl W and Treede R-D** (1996). Heat-evoked vasodilatation in human hairy skin: axon reflexes due to low-level activity of nociceptive afferents. *Journal of Physiology* 497, 837-848

## Methodology / Validation

- Loai S, Qiang B, Laflamme MA and Cheng H-LM** (2023). Blood-pool MRI assessment of myocardial microvascular reactivity. *Front. Cardiovasc. Med.* 10:1216587. doi: 10.3389/fcvm.2023.1216587
- Ganesh T, Zakher, Estrada M and Cheng HM** (2019). Assessment of microvascular dysfunction in acute limb ischemia-reperfusion injury. *J Magn Reson Imaging* 49(4), 1174-118
- Zhang YT, Han MQ, Shen LN, Zhao JH and Feng NP** (2015). Solid Lipid Nanoparticles Formulated for Transdermal Aconitine Administration and Evaluated In Vitro and In Vivo. *J Biomed Nanotechnol* 11(2), 351-61
- Swartz HM, Williams BB, Zaki BI, Hartford AC, Jarvis LA, Chen EY, Comi RJ, Ernstoff MS, Hou H, Khan N, Swartz SG, Flood AB and Kuppasamy P** (2014). Clinical EPR: unique opportunities and some challenges. *Acad Radiol* 21(2), 197-206
- Fredriksson I, Fors C and Johansson J** (2007). "Laser Doppler Flowmetry - a Theoretical Framework", Department of Biomedical Engineering, Linköping University (2007), [www.imt.liu.se/bit/ldf/ldfmain.html](http://www.imt.liu.se/bit/ldf/ldfmain.html)
- Maniewski R, Liebert A, Kacprzak M and Zbicz A** (2004). Selected applications of near infrared optical methods in medical diagnosis. *Opto-Electron. Rev* 12(3).
- Bishai JM, Blood AB, Hunter CJ, Longo LD and Power GG** (2003). Fetal lamb cerebral blood flow (CBF), and oxygen tensions during hypoxia: a comparison of laser Doppler and microsphere measurements of CBF. *J Physiol (Lond)*. 546, 869-878
- Rees GC, Tweddel AC, Naka KK and Griffith TM** (2002). Fractal dimensions of laser Doppler flowmetry time series. *Medical Engineering & Physics* 24, 71
- Maniewski R, Leger P, Lewandowski P, Liebert A, Bendayan P, Boccalon H, Bajorski L and Möller KO** (1999). Spectral analysis of laser-Doppler perfusion signal measured during thermal test. *Technology and Health Care* 7), 163-169
- Leahy MJ, de Mul FFM, Nilsson GE and Maniewski R** (1999). Principles and practice of the laser-Doppler perfusion technique. *Technology and Health Care* 7, 143-162
- Liebert A, Leahy M and Maniewski R** (1998). Multichannel laser-Doppler probe for blood perfusion measurements with depth discrimination. *Medical and Biological Engineering and Computing* 36, 740-747
- Hill SA, Pigott KH, Saunders MI, Powell MEB, Arnold S, Obeid A, Ward G, Leahy M, Hoskin PJ and Chaplin DJ** (1996). Microregional blood flow in murine and human tumours assessed using laser Doppler microprobes. *British Journal of Cancer* 74, (Suppl, XXVII), S260-S263
- Liebert A and Maniewski R** (1996). Influence of probe optical arrangement on biological zero in laser-Doppler perfusion measurements. *This paper appears in: Engineering in Medicine and Biology Society, 1996. Bridging Disciplines for Biomedicine. Proceedings of the 18th Annual International Conference of the IEEE. Publication Date: 31 Oct-3 Nov 1996 Volume: 1, On page(s): 200-201 vol.1*