

Contents of Volume 60

Contents of No. 1

Eržen I, Janáček J, Kubínová L: Characterization of the capillary network in skeletal muscles from 3D data (review)	1
Pytliak M, Vargová V, Mechírová V, Felšöci M: Serotonin receptors – from molecular biology to clinical applications (review)	15
Hu S-T, Liu G-S, Shen Y-F, Wang Y-L, Tang Y, Yang Y-J: Defective Ca ²⁺ handling proteins regulation during heart failure	27
Guvenc Tuna B, Ozturk N, Comelekoglu U, Yilmaz BC: Effects of organophosphate insecticides on mechanical properties of rat aorta	39
Pařenica J, Kala P, Jarkovský J, Poloczek M, Boček O, Jeřábek P, Neugebauer P, Vytiska M, Pařenicová I, Tomčíková D, Pávková Goldbergová M, Špinar J: Relationship between high aortic pulse pressure and extension of coronary atherosclerosis in males	47
Pávková Goldbergová M, Špinarová L, Špinar J, Pařenica J, Šišková L, Groch L, Máchal J, Vašků A: Difference in angiotensinogen haplotype frequencies between chronic heart failure and advanced atherosclerosis patients – new prognostic factor?	55
Howarth FC, Jacobson M, Shafiullah M, Ljubisavljevic M, Adeghate E: Heart rate, body temperature and physical activity are variously affected during insulin treatment in alloxan-induced type 1 diabetic rat	65
Šitina M, Turek Z, Pařízková R, Černý V: <i>In situ</i> assessment of the brain microcirculation in mechanically-ventilated rabbits using Sidestream dark-field (SDF) imaging	75
Kubrycht J, Maxová H, Nyč O, Vajner L, Novotná J, Hezinová A, Trnková A, Vrablová K, Vytásek R, Valoušková V: Isolation of rat lung mast cells for purposes of one-week cultivation using novel Percoll variant Percoll PLUS	83
Kubies D, Himmlová L, Riedel T, Chánová E, Balík K, Douděrová M, Bártová J, Pešáková V: The interaction of osteoblasts with bone-implant materials: 1 The effect of physicochemical surface properties of implant materials	95
Sampels S, Pickova J, Högborg A, Neil M: Fatty acid transfer from sow to piglet differs for different polyunsaturated fatty acids (PUFA)	113
Trattner S, Ruyter B, Østbye TK, Kamal-Eldin A, Moazzami A, Pan J, Gjøs T, Brännäs E, Zlabek V, Pickova J: Influence of dietary sesamin, a bioactive compound on fatty acids and expression of some lipid regulating genes in Baltic Atlantic salmon (<i>Salmo salar</i> L.) juveniles	125
Wedellová Z, Dietrich J, Šiklová-Vítková M, Kološtová K, Kováčiková M, Dušková M, Brož J, Vedral T, Štich V, Polák J: Adiponectin inhibits spontaneous and catecholamine-induced lipolysis in human adipocytes of non-obese subjects through AMPK-dependent mechanisms	139
Štefíková K, Spustová V, Krivošíková Z, Okša A, Gazdíková K, Fedelešová V, Dzúrik R: Insulin resistance and vitamin D deficiency in patients with chronic kidney disease stage 2-3	149
Peng Y-M, Shu Z-J, Xiao L, Sun L, Tang W-B, Huang Y, Liu Y-H, Li J, Ling G-H, Xu X-Q, Halmurat U, Liu F-Y: A new non-uremic rat model of long-term peritoneal dialysis	157
Sedláčková D, Kopečková J, Papežová H, Vybíral S, Kvasničková H, Hill M, Nedvídková J: Changes of plasma obestatin, ghrelin and NPY in anorexia and bulimia nervosa patients before and after a high-carbohydrate breakfast	165
Hubáček JA, Pikhart H, Peasey A, Kubínová R, Bobák M: <i>FTO</i> variant, energy intake, physical activity and basal metabolic rate in Caucasians The HAPIEE study	175
Malomouzh AI, Arkhipova SS, Nikolsky EE, Vyskočil F: Immunocytochemical demonstration of M ₁ muscarinic acetylcholine receptors at the presynaptic and postsynaptic membranes of rat diaphragm endplates (rapid communication)	185
Gonzalez-Muñoz C, Hernández J: Phosphodiesterases inhibition enhances the effect of glucagon on cardiac automaticity in the isolated right ventricle of the rat (short communication)	189
Jíra M, Závodná E, Honzíková N, Nováková Z, Vašků A, Izakovičová Hollá L, Fišer B: Association of eNOS gene polymorphisms T-786C and G894T with blood pressure variability in man (short communication)	193

Dlouhá D, Suchánek P, Lánská V, Hubáček JA: Body mass index change in females after short-time life style intervention is not dependent on the <i>FTO</i> polymorphisms (short communication)	199
Slezák P, Waczulíková I: Reproducibility and repeatability (letter to the editor)	203

Contents of No. 2

Jiří Pařízek in memoriam after twenty years (1928 – 1991)	i
Professor Luboslav Stárka and his school – a brief history of a pioneer scientist, physician and manager	iii
Bílek R, Bičíková M, Šafařík L: TRH-like peptides (review dedicated to Professor Luboslav Stárka)	207
Hampl R, Šnajderová M, Mardešić T: Antimüllerian hormone (AMH) not only a marker for prediction of ovarian reserve (review dedicated to Professor Luboslav Stárka)	217
Hill M, Pařízek A, Kancheva R, Jirásek JE: Reduced progesterone metabolites in human late pregnancy (review dedicated to Professor Luboslav Stárka)	225
Kaňová N, Bičíková M: Hyperandrogenic states in pregnancy (review dedicated to Professor Luboslav Stárka)	243
Duškova M, Pospíšilová H: The role of non-aromatizable testosterone metabolite in metabolic pathways (review dedicated to Professor Luboslav Stárka)	253
Šimůnková K, Hampl R, Hill M, Kříž L, Vrbíková J, Kvasničková H, Vondra K: Evaluation of hepatic 11 β -hydroxysteroid dehydrogenase activity by cortisone acetate test in young adults with diabetes mellitus type 1 (article dedicated to Professor Luboslav Stárka)	263
Wu Y-N, Yu H, Zhu X-H, Yuan H-J, Kang Y, Jiao J-J, Gao W-Z, Liu Y-X, Lou J-S: Noninvasive delayed limb ischemic preconditioning attenuates myocardial ischemia-reperfusion injury in rats by a mitochondrial K_{ATP} channel-dependent mechanism	271
Tatarková Z, Kuka S, Račay P, Lehotský J, Dobrota D, Mištuna D, Kaplán P: Effects of aging on activities of mitochondrial electron transport chain complexes and oxidative damage in rat heart	281
Clark C, Smith W, Lochner A, du Toit EF: The effects of gender and obesity on myocardial tolerance to ischemia	291
Al-Hiti H, Melenovský V, Syrovátka P, Kettner J, Málek I, Kautzner J: Sildenafil is more selective pulmonary vasodilator than prostaglandin E_1 in patients with pulmonary hypertension due to heart failure	303
Nunes SF, Figueiredo IV, Pereira JS, de Lemos ET, Reis F, Teixeira F, Caramona MM: Monoamine oxidase and semicarbazide-sensitive amine oxidase kinetic analysis in mesenteric arteries of patients with type 2 diabetes	309
Kučera O, Garnol T, Lotková H, Staňková P, Mazurová Y, Hroch M, Bolehovská R, Roušar T, Červinková Z: The effect of rat strain, diet composition and feeding period on the development of a nutritional model of non-alcoholic fatty liver disease in rats	317
Wu J-L, Wu Q-P, Peng Y-P, Zhang J-M: Effects of L-malate on mitochondrial oxidoreductases in liver of aged rats	329
Šefčíková Z, Bujňáková D, Raček L, Kmet' V, Mozeš Š: Developmental changes in gut microbiota and enzyme activity predict obesity risk in rats arising from reduced nests	337
Wang W-Q, Zhang H-F, Gao G-X, Bai Q-X, Li R, Wang X-M: Adiponectin inhibits hyperlipidemia-induced platelet aggregation via attenuating oxidative/nitrative stress	347
Kaffashian M, Shabani M, Goudarzi I, Behzadi G, Zali A, Janahmadi M: Profound alterations in the intrinsic excitability of cerebellar Purkinje neurons following neurotoxin 3-acetylpyridine (3-AP)-induced ataxia in rat: new insights into the role of small conductance K^+ channels	355
Lippert-Grüner M, Mägele M, Švestková O, Angerová Y, Ester-Bode T, Angelov DN: Rehabilitation intervention in animal model can improve neuromotor and cognitive functions after traumatic brain injury: pilot study	367
Hubáček JA, Pelikánová T, Lánská V, Komers R: A polymorphism in the cyclooxygenase 2 gene in type 1 diabetic patients with nephropathy (short communication)	377
Proceedings of the 14th international SHR symposium/ the 46th Scientific Meeting of the Japanese Society for Hypertension-related Disease Model Research, September 23 - 25, 2010, Montreal, Canada	1P

Contents of No. 3

Pintérová M, Kuneš J, Zicha J: Altered neural and vascular mechanisms in hypertension (review)	381
Vandrovcová M, Bačáková L: Adhesion, growth and differentiation of osteoblasts on surface-modified materials developed for bone implants (review)	403
Pařízek M, Novotná K, Bačáková L: The role of smooth muscle cells in vessel wall pathophysiology and reconstruction using bioactive synthetic polymers (review)	419
Novák P, Soukup T: Calsequestrin distribution, structure and function, its role in normal and pathological situations and the effect of thyroid hormones (review)	439
Hucl T, Gallmeier E: DNA repair: exploiting the Fanconi anemia pathway as a potential therapeutic target (review)	453
Balková P, Hlaváčková M, Milerová M, Neckář J, Kolář F, Novák F, Nováková O: N-acetylcysteine treatment prevents the up-regulation of MnSOD in chronically hypoxic rat hearts	467
Hlubocký J, Mokráček A, Nováček V, Vojáček J, Burkert J, Kochová P, Klepáček J, Pepper J, Špatenka J: Mechanical properties of mitral allografts are not reasonably influenced by cryopreservation in sheep model	475
Kobr J, Třeška V, Moláček J, Kuntscher V, Liška V, Slavík Z: Comparison of Doppler flow Tei-indexes with pulmonary artery thermodilution measurement of cardiac output in an experimental porcine model	483
Maruna P, Vokurka M, Lindner J: Plasma hepcidin correlates positively with interleukin-6 in patients undergoing pulmonary endarterectomy	493
Kolesarova A, Capcarova M, Medvedova M, Sirotkin AV, Kovacik J: <i>In vitro</i> assessment of iron effect on porcine ovarian granulosa cells: secretory activity, markers of proliferation and apoptosis	503
Schweitzer GG, Castorena CM, Hamada T, Funai K, Arias EB, Cartee GD: The B2 receptor of bradykinin is not essential for the post-exercise increase in glucose uptake by insulin-stimulated mouse skeletal muscle	511
Szkudelski T, Nogowski L, Szkudelska K: Short-term regulation of adiponectin secretion in rat adipocytes	521
Kuncová J, Chvojka J, Sýkora R, Švíglerová J, Štengl M, Nalos L, Kroužecký A, Matějovič M: Tissue concentrations of vasoactive intestinal peptide are affected by peritonitis-induced sepsis and hemofiltration in pigs	531
Vošahlíková M, Svoboda P: The influence of monovalent cations on trimeric G protein G _i 1 α activity in HEK293 cells stably expressing DOR-G _i 1 α (Cys ³⁵¹ -Ile ³⁵¹) fusion protein	541
Lekić N, Černý D, Hořínek A, Provazník Z, Martínek J, Farghali H: Differential oxidative stress responses to D-galactosamine-lipopolysaccharide hepatotoxicity based on real time PCR analysis of selected oxidant/antioxidant and apoptotic gene expressions in rat	549
Juhásová J, Juhás Š, Klíma J, Strnádel J, Holubová M, Motlík J: Osteogenic differentiation of miniature pig mesenchymal stem cells in 2D and 3D environment	559
Drapal M, Marsalek P: Stochastic model explains the role of excitation and inhibition in binaural sound localization in mammals	573
Skalský I, Filová E, Szárszoi O, Pařízek M, Lytvynets A, Malušková J, Lodererová A, Brynda E, Lisá V, Burdíková Z, Čapek M, Pirk J, Bačáková L: A periadventitial sirolimus-releasing mesh decreased intimal hyperplasia in a rabbit model	585
Proceedings of the PhD Student Workshop, Třešť (Czech Republic), March 15 - 17, 2011	9P

Contents of No. 4

Gündüz F, Koçer G, Ülker S, Meiselman HJ, Başkurt OK, Şentürk ÜK: Exercise training enhances flow-mediated dilation in spontaneously hypertensive rats	589
Falcão-Pires I, Fontes-Sousa AP, Lopes-Conceição L, Brás-Silva C, Leite-Moreira AF: Modulation of myocardial stiffness by β -adrenergic stimulation - its role in normal and failing heart	599
Tomek V, Janoušek J, Reich O, Gilík J, Gebauer RA, Škovránek J: Atrioventricular conduction time in fetuses assessed by Doppler echocardiography	611
Trefný ZM, Svačinka J, Kittnar O, Slavíček J, Trefný M, Filatova E, Tichý JA, Smrčka P, Stork M, Loučka M: Quantitative ballistocardiography (Q-BCG) for measurement of cardiovascular dynamics	617

Mráz M, Lacinová Z, Kaválková P, Haluzíková D, Trachta P, Drápalová J, Hanušová V, Haluzík M: Serum concentrations of fibroblast growth factor 19 in patients with obesity and type 2 diabetes mellitus: the influence of acute hyperinsulinemia, very-low calorie diet and PPAR- α agonist treatment	627
Lionetto MG, Giordano ME, Calisi A, Erroi E, De Nuccio F, Schettino T: Effect of the daily ingestion of a purified anthocyanin extract from grape skin on rat serum antioxidant capacity	637
Huml M, Kobr J, Siala K, Varvařovská J, Pomahačová R, Karlíková M, Sýkora J: Gut peptide hormones and pediatric type 1 diabetes mellitus	647
Nedialkova N, Stavreva G, Negrev N, Ivancheva C, Radomirov R: Functional coordination of motor activity in colonic smooth muscles in rat experimental model	659
Cmielová J, Havelek R, Jiroutová A, Kohlerová R, Seifrtová M, Muthná D, Vávrová J, Řezáčová M: DNA damage caused by ionizing radiation in embryonic diploid fibroblasts WI-38 induces both apoptosis and senescence	667
Soukup O, Krůšek J, Kaniaková M, Kumar UK, Oz M, Jun D, Fusek J, Kuča K, Tobin G: Oxime reactivators and their <i>in vivo</i> and <i>in vitro</i> effects on nicotinic receptors	679
Zhang Y, Han L, Xiao X, Hu B, Ruan H, Xiong Y: Effects of acoustic stimuli on neuronal activity in the auditory cortex of the rat	687
Fahim MA, Nemmar A, Singh S, Hassan MY: Antioxidants alleviate nicotine-induced platelet aggregation in cerebral arterioles of mice <i>in vivo</i> (short communication)	695
Schomburg ED, Dibaj P, Steffens H: Role of L-DOPA in spinal nociceptive reflex activity: higher sensitivity of A δ versus C fibre-evoked nociceptive reflexes to L-DOPA (short communication)	701
Slovinská L, Novotná I, Čížková D: Chondroitinase ABC treatment and the phenotype of neural progenitor cells isolated from injured rat spinal cord (short communication)	705
Říha H, Neckář J, Papoušek F, Netuka I, Pirk J, Kolář F, Ošťádal B: Suppression of ischemic and reperfusion ventricular arrhythmias by inhalational anesthetic-induced preconditioning in the rat heart (rapid communication)	709
Proceedings of the Czech and Slovak Physiological Societies, February 9 - 11, 2011, Bratislava, Slovakia	25P

Contents of No. 5

Pokorný J, Staněk V, Vrána M: Sudden cardiac death thirty years ago and at present. The role of autonomic disturbances in acute myocardial infarction revisited (review)	715
Liu W-Q, Chai C, Li X-Y, Yuan W-J, Wang W-Z, Lu Y: The cardiovascular effects of central hydrogen sulfide are related to K _{ATP} channels activation	729
Fan Y-H, Dong H, Pan Q, Cao Y-J, Li H, Wang H-C: Notch signaling may negatively regulate neonatal rat cardiac fibroblast-myofibroblast transformation	739
Roubík K, Páchl J, Záborský V: Normocapnic high frequency oscillatory hyperventilation increases oxygenation in pigs	749
Kotulák T, Drápalová J, Kopecký P, Lacinová Z, Kramář P, Říha H, Netuka I, Malý J, Housa D, Bláha J, Svačina Š, Haluzík M: Increased circulating and epicardial adipose tissue mRNA expression of fibroblast growth factor-21 after cardiac surgery: possible role in postoperative inflammatory response and insulin resistance	757
Kettner J, Dorazilová Z, Netuka I, Malý J, Al-Hiti H, Melenovský V, Skalský I, Říha H, Málek I, Kautzner J, Pirk J: Is severe pulmonary hypertension a contraindication for orthotopic heart transplantation? Not any more.	769
Kozlíková K, Martinka J, Murín J, Bulas J: The opposite polarity of the PQ segment compared to the P wave isointegral maps	777
Rašlová K, Dobiášová M, Hubáček JA, Bencová D, Siváková D, Danková Z, Franeková J, Jabor A, Gašparovič J, Vohnout B: Association of metabolic and genetic factors with cholesterol esterification rate in HDL plasma and atherogenic index of plasma in a 40 years old Slovak population	785
Vandrovcová M, Douglas T, Hauk D, Grössner-Schreiber B, Wiltfang J, Bačáková L, Warnke PH: Influence of collagen and chondroitin sulfate (CS) coatings on poly-(lactide-co-glycolide) (PLGA) on MG 63 osteoblast-like cells	797

Nurullin LF, Mukhitov AR, Tsentsevitsky AN, Petrova NV, Samigullin DV, Malomouzh AI, Bukharaeva EA, Vyskočil F, Nikolsky EE: Voltage-dependent P/Q-type calcium channels at the frog neuromuscular junction	815
Čarnická S, Adameová A, Nemčeková M, Matejíková J, Pancza D, Ravingerová T: Distinct effects of acute pretreatment with lipophilic and hydrophilic statins on myocardial stunning, arrhythmias and lethal injury in the rat heart subjected to ischemia/reperfusion (rapid communication)	825
Maxová H, Hezinová A, Vízek M: Disodium cromoglycate attenuates hypoxia induced enlargement of end-expiratory lung volume in rats (rapid communication)	831
Páleníčková E, Cahová M, Drahota Z, Kazdová L, Kalous M: Inhibitory effect of metformin on oxidation of NADH-dependent substrates in rat liver homogenate (short communication)	835
Demjén E, Aboši V, Tomori Z: Eye tracking using artificial neural networks for human computer interaction (short communication)	841

Contents of No. 6

Hlavačková L, Vranková S, Janega P, Pecháňová O, Babál P: The effect of indapamide on development of myocardial hypertrophy and fibrosis in L-NAME-induced hypertension in rat	845
Zhou J, Schmidt M, Johnston B, Wilfart F, Whynot S, Hung O, Murphy M, Černý V, Pavlovic D, Lehmann C: Experimental endotoxemia induces leukocyte adherence and plasma extravasation within the rat pial microcirculation	853
Wang Y, Gong X, Su Y, Cui J, Shu X: Implications of QRS duration in dogs with pacing-induced heart failure	861
Panovský R, Kukla P, Jančár R, Meluzín J, Jančík J, Kincl V, Poloková K, Mířková L, Havelková A, Látalová R, Dobšák P, Pešl M: The effect of regular physical activity on the left ventricle systolic function in patients with chronic coronary artery disease	869
Straka F, Pirk J, Pindák M, Skalský I, Vančura V, Čihák R, Marek T, Lupínek P, Schorník D, Mašín J, Zeman M, Škrobáková J, Dorazilová Z, Skibová J: Biventricular pacing in the early postoperative period after cardiac surgery	877
Vrbjar N, Mézešová L, Javorková V, Vlkovičová J, Mitašíková M, Dluhošová K, Okruhlicová L, Tribulová N: Gender specific influence of fish oil or atorvastatin on functional properties of renal Na,K-ATPase in healthy Wistar and hypertriglyceridemic rats	887
Řičný J, Soukup T: Comparison of new ELISA method with established SDS-PAGE method for determination of muscle myosin heavy chain isoforms	899
Zywert A, Szkudelska K, Szkudelski T: Effects of adenosine A ₁ receptor antagonism on insulin secretion from rat pancreatic islets	905
Hofer M, Dušek L, Hoferová Z, Stixová L, Pospíšil M: Expression of mRNA for adenosine A ₁ , A _{2a} , A _{2b} , and A ₃ receptors in HL-60 cells: dependence on cell cycle phases	913
Hock M, Soták M, Kment M, Pácha J: The early effect of dextran sodium sulfate administration on carbachol-induced short-circuit current in distal and proximal colon during colitis development	921
Jankovic SM, Jankovic SV, Stojanovic V, Stojadinovic D, Stojadinovic M, Canovic D, Stefanovic S: Contractile effects of endothelins on isolated human ureter	933
Ambati S, Duan J, Hartzell DL, Choi Y-H, Della-Fera MA, Baile CA: GIP-dependent expression of hypothalamic genes	941
Al-Bader MD, Malatiali SA, Redzic ZB: Expression of estrogen receptor α and β in rat astrocytes in primary culture: effects of hypoxia and glucose deprivation	951
Tchekalarova J, Kubová H, Mareš P: Transient changes of cortical interhemispheric responses after repeated caffeine administration in immature rats	961
Somers SJ, Lacerda L, Opie L, Lecour S: Age, genetic characteristics and number of cycles are critical factors to consider for successful protection of the murine heart with postconditioning (short communication)	971
Šedý J, Kuneš J, Zicha J: Neurogenic pulmonary edema induced by spinal cord injury in spontaneously hypertensive and Dahl salt hypertensive rats (rapid communication)	975