

Contents of Volume 64

Contents of No. 1

Kristek F, Drobna M, Cacanyiova S: Different effects of 7-nitroindazole and L-NAME administered both individually and together on the cardiovascular system of the rat	1
Červenka L, Bíbová J, Husková Z, Vaňourková Z, Kramer HJ, Herget J, Jíchová Š, Sadowski J, Hampl V: Combined suppression of the intrarenal and circulating vasoconstrictor renin-ACE-ANG II axis and augmentation of the vasodilator ACE2-ANG 1-7-Mas axis attenuates the systemic hypertension in Ren-2 transgenic rats exposed to chronic hypoxia	11
Hampl V, Herget J, Bíbová J, Baňasová A, Husková Z, Vaňourková Z, Jíchová Š, Kujal P, Vernerová Z, Sadowski J, Červenka L: Intrapulmonary activation of the angiotensin-converting enzyme type 2/angiotensin 1-7/G-protein-coupled Mas receptor axis attenuates pulmonary hypertension in Ren-2 transgenic rats exposed to chronic hypoxia	25
Albarwani S, Al-Siyabi S, Al-Husseini I, Al-Ismail A, Al-Lawati I, Al-Bahrani I, Tanira MO: Lisinopril alters contribution of nitric oxide and K_{Ca} channels to vasodilatation in small mesenteric arteries of spontaneously hypertensive rats	39
Trnovská J, Šilhavý J, Zídek V, Šimáková M, Mlejnek P, Landa V, Eigner S, Eigner Henke K, Škop V, Oliyarnyk O, Kazdová L, Mráček T, Houštěk J, Pravenec M: Gender-related effects on substrate utilization and metabolic adaptation in hairless spontaneously hypertensive rat	51
Hadzi-Petrushev N, Stojkovski V, Mitrov D, Mladenov M: D-galactose induced changes in enzymatic antioxidant status in rats of different ages	61
Zeng X, Wu J, Wu Q, Zhang J: L-malate enhances the gene expression of carried proteins and antioxidant enzymes in liver of aged rats	71
Gabrielová E, Křen V, Jabůrek M, Modrianský M: Silymarin component 2,3-dehydrosilybin attenuates cardiomyocyte damage following hypoxia/reoxygenation by limiting oxidative stress	79
Wiecek M, Maciejczyk M, Szymura J, Szygula Z: Changes in oxidative stress and acid-base balance in men and women following maximal-intensity physical exercise	93
Zhang X, Li Y, Zhang X, Duan Z, Zhu J: Regulation of transepithelial ion transport in the rat late distal colon by the sympathetic nervous system	103
Soukup T, Diallo M: Proportions of myosin heavy chain mRNAs, protein isoforms and fiber types in the slow and fast skeletal muscles are maintained after alterations of thyroid status in rats	111
Klíma K, Vaněček V, Kohout A, Jiroušek O, Foltán R, Štulík J, Machoň V, Pavlíková G, Jendelová P, Syková E, Šedý J: Stem cells regenerative properties on new rat spinal fusion model	119
Maegele M, Braun M, Wafaisade A, Schäfer N, Lippert-Gruener M, Kreipke C, Rafols J, Schäfer U, Angelov D N, Stuermer EK: Long-term effects of enriched environment on neurofunctional outcome and CNS lesion volume after traumatic brain injury in rats	129
Ali BH, Al Za'abi M, Al Shukaili A, Nemmar A: High-mobility group box-1 protein in adenine-induced chronic renal failure and the influence of gum arabic thereon (short communication)	147

Contents of No. 2

Govender MM, Nadar A: A subpressor dose of angiotensin II elevates blood pressure in a normotensive rat model by oxidative stress	153
Lu Y, Wu YS, Chen DS, Wang MM, Wang WZ, Yuan WJ: Microinjection of salusin- β into the nucleus tractus solitarius inhibits cardiovascular function by suppressing presynaptic neurons in rostral ventrolateral medulla in rats	161
Chu CP, Cui BR, Kannan H, Qiu DL: Alterations in the baroreceptor-heart rate reflex in conscious inbred polydipsic (STR/N) mice	173

Colombo R, Marchi A, Borghi B, Fossali T, Tobaldini E, Guzzetti S, Raimondi F: Influence of gravitational sympathetic stimulation on the Surgical Plethysmographic Index	183
Holzerová K, Hlaváčková M, Žurmanová J, Borchert G, Neckář J, Kolář F, Novák F, Nováková O: Involvement of PKC ϵ in cardioprotection induced by adaptation to chronic continuous hypoxia	191
Horn P, Ostadal P, Ostadal B: Rowing increases stroke volume and cardiac output to a greater extent than cycling	203
de Araujo GG, Gobatto CA, Marcos-Pereira M, dos Reis IGM, Verlengia R: Interval versus continuous training with identical workload: physiological and aerobic capacity adaptations	209
Musil F, Blaha V, Ticha A, Hyspler R, Haluzík M, Lesná J, Smáhelová A, Sobotka L: Effects of body weight reduction on plasma leptin and adiponectin/leptin ratio in obese patients with type 1 diabetes mellitus	221
Franeková J, Kettner J, Kubíček Z, Jabor A: The importance of age and statin therapy in the interpretation of Lp-PLA ₂ in ACS patients, and relation to CRP	229
Skowronska A, Młotkowska P, Eliszewski M, Nielsen S, Skowronski MT: Expression of aquaporin 1, 5 and 9 in the ovarian follicles of cycling and early pregnant pigs	237
Prukova D, Iléninová Z, Antosova B, Kasparek P, Gregor M, Sedlacek R: Transgenic reporter mice with promoter region of murine LRAT specifically marks lens and meiosis spermatocytes	247
Hofer M, Pospíšil M, Dušek L, Hoferová Z, Komůrková D: Hematopoiesis in 5-fluorouracil-treated adenosine A ₃ receptor knock-out mice	255
Riljak V, Marešová D, Pokorný J, Jandová K: Subconvulsive dose of kainic acid transiently increases the locomotor activity of adult Wistar rats (short communication)	263
Lobellová V, Brichtová E, Petrásek T, Valeš K, Stuchlík A: Higher doses of (+)MK-801 (dizocilpine) induced mortality and procedural but not cognitive deficits in delayed testing in the active place avoidance with reversal on the Carousel (short communication)	269

Contents of No. 3

Jankovičová J, Simon M, Antalíková J, Cupperová P, Michalková K: Role of tetraspanin CD9 molecule in fertilization of mammals (review)	279
Silhavý J, Zídek V, Landa V, Šimáková M, Mlejnek P, Oliyarnyk O, Malínská H, Kazdová L, Mancini M, Pravenec M: Rosuvastatin ameliorates inflammation, renal fat accumulation, and kidney injury in transgenic spontaneously hypertensive rats expressing human C-reactive protein	295
Vokurková M, Rauchová H, Řezáčová L, Vaněčková I, Zicha J: ROS production is increased in the kidney but not in the brain of Dahl rats with salt hypertension elicited in adulthood	303
Shakeir AA, Barakat N, Hussein AM, Awadalla A, Harraz AM, Khater S, Hemmaid K, Kamal AI: Activation of Nrf2 by ischemic preconditioning and sulforaphane in renal ischemia/reperfusion injury: a comparative experimental study	313
Liu W, Wang X, Mei Z, Gong J, Gao X, Zhao Y, Ma J, Xie F, Qian L: Chronic stress promotes the progression of pressure overload-induced cardiac dysfunction through inducing more apoptosis and fibrosis	325
Rucka D, Marek J, Rucklova Z, Lubanda J-C, Havranek S, Skvaril J, Varejka P, Chochola M, Karetova D, Korinek J, Linhart A: Arterial stiffening contributes to impairment of cerebrovascular reactivity in patients with coronary artery disease without carotid stenosis	335
Bílek R, Čeřovská J, Zamrazil V: The relationship between iodine intake and serum thyroglobulin in the general population	345
Li G, Liu J-Y, Zhang H-X, Li Q, Zhang S-W: Exercise training attenuates sympathetic activation and oxidative stress in diet-induced obesity	355
Gabalec F, Drastikova M, Cesák T, Netuka D, Masopust V, Machac J, Marek J, Cap J, Beranek M: Dopamine 2 and somatostatin 1-5 receptors coexpression in clinically non-functioning pituitary adenomas	369
Kolesarova A, Sirotnik AV, Mellen M, Roychoudhury S: Possible intracellular regulators of female sexual maturation	379

Li Y, Li LS, Zhang XL, Zhang Y, Xu JD, Zhu JX: An enhanced cAMP pathway is responsible for the colonic hypersecretory response to 5-HT in acute stress rats	387
Wang ZY, Huang X, Liu DH, Lu HL, Kim YC, Xu WX: Involvement of actin microfilament in regulation of pacemaking activity increased by hypotonic stress in cultured ICCs of murine intestine	397
Wagnerová D, Herynek V, Dezortová M, Marusič P, Kršek P, Zámečník J, Jíru F, Škoch A, Hájek M: The relationships between quantitative MR parameters in hippocampus in healthy subjects and patients with temporal lobe epilepsy	407
Steffl M, Bohannon RW, Petr M, Kohlikova E, Holmerova I: Relation between cigarette smoking and sarcopenia: meta-analysis	419
Zavan B, do Amarante-Paffaro AM, Paffaro VA Jr: α -actin down regulation and perforin loss in uterine natural killer cells from LPS-treated pregnant mice (rapid communication)	427
Lennon-Edwards S, Schellhardt TA, Kuczmarski JM: Antioxidant defense is increased in aged hearts following omega-3 supplementation in the absence of changes in inflammation (short communication)	433

Contents of No. 4

Zofkova I: Bone tissue as a systemic endocrine regulator (review)	439
Brunová A, Bencze M, Behuliak M, Zicha J: Acute and chronic role of nitric oxide, renin-angiotensin system and sympathetic nervous system in the modulation of calcium sensitization in Wistar rats	447
Chaswal M, Das S, Prasad J, Katyal A, Fahim M: Chemical sympathectomy restores baroreceptor-heart rate reflex and heart rate variability in rats with chronic nitric oxide deficiency	459
Dudzinska W, Lubkowska A, Dolegowska B, Suska M, Janiak M: Uridine – an indicator of post-exercise uric acid concentration and blood pressure	467
Drobná M, Misak A, Holland T, Kristek F, Grman M, Tomasova L, Berenyiova A, Cacanyiova S, Ondrias K: Captopril partially decreases the effect of H ₂ S on rat blood pressure and inhibits H ₂ S-induced nitric oxide release from S-nitrosoglutathione	479
Poulikakos D, Banerjee D, Malik M: Repolarisation descriptors and heart rate variability in hemodialysed patients	487
Moubarak M, Magaud C, Saliba Y, Chatelier A, Bois P, Faivre J-F, Farès N: Effects of atrial natriuretic peptide on rat ventricular fibroblasts during differentiation into myofibroblasts	495
Chuang I-C, Huang M-S, Huang L-J, Chou S-H, Tsai T-N, Chen Y-C, Yang R-C: Prophylactic inhalation of L-alanyl-L-glutamine enhances heat shock protein 72 and attenuates endotoxin-induced lung injury in rats	505
de Araujo GG, Gobatto CA, de Barros Manchado-Gobatto F, Teixeira LFM, dos Reis IGM, Caperuto LC, Papoti M, Bordin S, Cavagliere CR, Verlengia R: MCT1 and MCT4 kinetic of mRNA expression in different tissues after aerobic exercise at maximal lactate steady state workload	513
Wu P-F, Luo S-C, Chang L-C: Heat-shock-induced glucose transporter 4 in the slow-twitch muscle of rats	523
Hána V Jr, Ježková J, Kosák M, Kršek M, Marek J, Netuka D, Hill M, Hána V: Prediction of adrenocortical insufficiency after pituitary adenoma surgery using postoperative basal cortisol levels	531
Hoffmanová I, Sánchez D, Hábová V, Anděl M, Tučková L, Tlaskalová-Hogenová H: Serological markers of enterocyte damage and apoptosis in patients with celiac disease, autoimmune diabetes mellitus and diabetes mellitus type 2	537
Muñoz-Valverde D, Rodríguez-Rodríguez P, Gutierrez-Arzapalo PY, López de Pablo AL, Carmen González M, López-Giménez R, Somoza B, Arribas SM: Effect of fetal undernutrition and postnatal overfeeding on rat adipose tissue and organ growth at early stages of postnatal development	547
Krejčí E, Kodet O, Szabo P, Borský J, Smetana K Jr, Grim M, Dvořánková B: <i>In vitro</i> differences of neonatal and later postnatal keratinocytes and dermal fibroblasts	561
Pap K, Berta Á, Szőke G, Dunay M, Németh T, Hornok K, Marosfői L, Réthelyi M, Kozsurek M, Puskár Z: Nerve stretch injury induced pain pattern and changes in sensory ganglia in a clinically relevant model of limb-lengthening in rabbits	571

Packova D, Carbonell-Barrachina AA, Kolesarova A: Ellagitannins – compounds from pomegranate as possible effector in steroidogenesis of rabbit ovaries (rapid communication)	583
Soltesova Prnova M, Ballekova J, Gajdosikova A, Gajdosik A, Stefek M: A novel carboxymethylated mercaptotriazinoinole inhibitor of aldose reductase interferes with the polyol pathway in streptozotocin-induced diabetic rats (rapid communication)	587

Contents of No. 5

Kopecký J, Zicha J: Recent development of biomedical research at the Institute of Physiology of the Czech Academy of Sciences in Prague	595
Kuneš J, Vančeková I, Mikulášková B, Behuliak M, Maletínská L, Zicha J: Epigenetics and a new look on metabolic syndrome (review)	611
Zofkova I, Nemcikova P, Kuklik M: Polymorphisms associated with low bone mass and high risk of atraumatic fracture (review)	621
Zálesák M, Blažíček P, Gablovský I, Ledvényiová V, Barteková M, Ziegelhöffer A, Ravingerová T: Impaired PI3K/Akt signaling as a potential cause of failure to precondition rat hearts under conditions of simulated hyperglycemia	633
Wilhelm J, Ivica J, Veselská Z, Uhlík J, Vajner L: Changes in the composition of fatty acids and lipofuscin-like pigments during development of rat heart	643
Li Z-Z, Jiang H, Chen D, Liu Q, Geng J, Guo J-Q, Sun R-H, Zhu G-Q, Shan Q-J: Renal sympathetic denervation improves cardiac dysfunction in rats with chronic pressure overload	653
Xue H, Zhou S, Xiao L, Guo Q, Liu S, Wu Y: Hydrogen sulfide improves the endothelial dysfunction in renovascular hypertensive rats	663
Jones CU, Sangthong B, Pachirat O, Jones DA: Slow breathing training reduces resting blood pressure and the pressure responses to exercise	673
Mizera R, Hodyc D, Herget J: ROS scavenger decreases basal perfusion pressure, vasoconstriction and NO synthase activity in pulmonary circulation during pulmonary microembolism	683
Koblihová E, Lukšan O, Mrázová I, Ryska M, Červenka L: Hepatocyte transplantation attenuates the course of acute liver failure induced by thioacetamide in Lewis rats	689
Oświęcimska J, Suwała A, Świętochowska E, Ostrowska Z, Gorczyca P, Ziora-Jakutowicz K, Machura E, Szczepańska M, Kukla M, Stojewska M, Ziora D, Ziora K: Serum omentin levels in adolescent girls with anorexia nervosa and obesity	701
Park J, Wada S, Ushida T, Akimoto T: The microRNA-23a has limited roles in bone formation and homeostasis <i>in vivo</i>	711
Xie ZL, Ye PS, Zhang SK, Zhang YS, Shen XZ: Endogenous LPS alters liver GH/IGF system gene expression and plasma lipoprotein lipase in goats	721
Bender B, Baranyi M, Kerekes A, Bodrogi L, Brands R, Uhrin P, Bösze Z: Recombinant human tissue non-specific alkaline phosphatase successfully counteracts lipopolysaccharide induced sepsis in mice	731
Kielczykowska M, Kocot J, Lewandowska A, Żelazowska R, Musik I: The protective influence of selenium on oxidant disturbances in brain of rats exposed to lithium	739
Škovierová H, Mahmood S, Blahovcová E, Hatok J, Lehotský J, Murín R: Effect of homocysteine on survival of human glial cells	747
Dashniani MG, Burjanadze MA, Naneishvili TL, Chkhikvishvili NC, Beselia GV, Kruashvili LB, Pochkhidze NO, Chighladze MR: Exploratory behavior and recognition memory in medial septal electrolytic, neuro- and immunotoxic lesioned rats	755
Franek M, Legartová S, Suchánková J, Milite C, Castellano S, Sbardella G, Kozubek S, Bártová E: CARM1 modulators affect epigenome of stem cells and change morphology of nucleoli	769
Alánová P, Kolář F, Oštádal B, Neckář J: Role of NO/cGMP signaling pathway in cardiac ischemic tolerance of chronically hypoxic rats (short communication)	783

Contents of No. 6

Doul J, Charvátová Z, Ošťádalová I, Kohutiar M, Maxová H, Ošťádal B: Neonatal rat hearts cannot be protected by ischemic postconditioning	789
Radosinska J, Kurahara LH, Hiraishi K, Viczenczova C, Egan Benova T, Szeiffova Bacova B, Dosenko V, Navarova J, Obsitnik B, Imanaga I, Soukup T, Tribulova N: Modulation of cardiac connexin-43 by omega-3 fatty acid ethyl-ester supplementation demonstrated in spontaneously diabetic rats	795
Maione D, Cicero AFG, Bacchelli S, Cosentino ER, Degli Esposti D, Manners DN, Rinaldi ER, Rosticci M, Senaldi R, Ambrosioni E, Borghi C: The VO ₂ -on kinetics in constant load exercise sub-anaerobic threshold reflects endothelial function and dysfunction in muscle microcirculation	807
Svačinová J, Javorka M, Nováková Z, Závodná E, Czippelová B, Honzíková N: Development of causal interactions between systolic blood pressure and inter-beat intervals in adolescents	821
Mokrakek A, Canadyova J, Simunkova Z, Fiala R, Hmirak M, Sulda M, Burkert J, Tintera J, Kobylka P, Spatenka J: One-year results from cryopreserved mitral allograft transplantation into the tricuspid position in a sheep experimental model	831
Peregrin JH, Janoušek R, Kautznerová D, Oliverius M, Sticová E, Přádný M, Michálek J: A comparison of portal vein embolization with poly(2-hydroxyethylmethacrylate) and a histoacryl/lipiodol mixture in patients scheduled for extended right hepatectomy	841
Vokurková M, Rauchová H, Řezáčová L, Vaněčková I, Zicha J: NADPH oxidase activity and reactive oxygen species production in brain and kidney of adult male hypertensive Ren-2 transgenic rats	849
Červenka L, Melenovský V, Husková Z, Sporková A, Bürgelová M, Škaroupková P, Hwang SH, Hammock BD, Imig JD, Sadowski J: Inhibition of soluble epoxide hydrolase does not improve the course of congestive heart failure and the development of renal dysfunction in rats with volume overload induced by aorto-caval fistula	857
Knaś M, Wołosik K, Zalewska A, Mikucka-Niczyporuk A, Kasacka I, Niczyporuk M: The skin remodeling in type 1 diabetes and insulin resistance animal models	875
Stanikova D, Surova M, Ticha L, Petrasova M, Virgova D, Huckova M, Skopkova M, Lobotkova D, Valentinova L, Mokan M, Stanik J, Klimes I, Gasperikova D: Melanocortin-4 receptor gene mutations in obese Slovak children	883
Mladenov M, Gokik M, Hadzi-Petrushev N, Gjorgoski I, Jankulovski N: The relationship between antioxidant enzymes and lipid peroxidation in senescent rat erythrocytes	891
Morimoto Y, Kondo Y, Kataoka H, Honda Y, Kozu R, Sakamoto J, Nakano J, Origuchi T, Yoshimura T, Okita M: Heat treatment inhibits skeletal muscle atrophy of glucocorticoid-induced myopathy in rats	897
Wens I, Dalgas U, Verboven K, Kosten L, Stevens A, Hens N, Eijnde BO: Impact of high intensity exercise on muscle morphology in EAE rats	907
Menshanov PN, Lanshakov DA, Dygalo NN: proBDNF is a major product of <i>bndf</i> gene expressed in the perinatal rat cortex	925
Lee J, Himori K, Tatebayashi D, Abe M, Yamada T: Response of heat shock protein 72 to repeated bouts of hyperthermia in rat skeletal muscle (rapid communication)	935
Bébarová M, Matejovič P, Šimurdová M, Šimurda J: Acetaldehyde at clinically relevant concentrations inhibits inward rectifier potassium current I_{K1} in rat ventricular myocytes (short communication)	939
Piťha J, Králová Lesná I, Stávek P, Mahrová A, Racek J, Sekerková A, Teplan V, Štollová M: Effect of exercise on markers of vascular health in renal transplant recipients (short communication)	945
Perečinský S, Kron I, Engler I, Murínová L, Donič V, Varga M, Marossy A, Legáth I: Is ionized oxygen negatively or positively charged more effective for carboxyhemoglobin reduction compare to medical oxygen at atmospheric pressure? (short communication)	951