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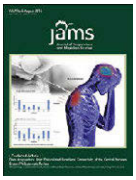

RECOMMENDED ARTICLES

In this issue of the journal, the Recommended Articles are selected from the journals citing the articles of the Journal of Acupuncture and Meridian Studies and from the Journal of Pharmacopuncture (ISSN: 1226-4849) published in English.

(1) Experimental and Molecular Pathology, 2013, Volume 94, Issue 1, Article number 23000426

Tumor-associated Primo Vascular System is Derived From Xenograft, Not Host

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Abstract
The primo vascular system (PVS), which is composed of very small primo-vessels (PV) and primo-nodes (PN), has recently emerged as a third component of circulatory system. Here, we report the presence of a tumor derived PVS in murine xenografts of human histiocytic lymphoma (U937) in close proximity to the tumor. Within this system, PNs are small (~500–600 μM in diameter) membranous sac-like structures which contain numerous small cells which can be demonstrated by DAPI staining. Hematoxylin and Eosin (H&E) staining of the peri-tumoral PVS shows the presence of loose structures lined by fibroblasts but filled with dense fibers, cells, lacunae and nerve-like structures. The origin and type of cells within the PVS was characterized by immunostaining with antibodies for CD68, CD45 and lysozyme. The results of these studies reveal that the PVS of the xenograft originates from the human U937 tumor cells. qRT-PCR analysis of mRNA isolated from PVS cells reveals a striking predominance of human, rather than mouse, sequences. Of particular interest, human stem cell specific transcription factors were overexpressed, most notably KLF4, an upstream regulator of NANOG which maintains the pluripotent and undifferentiated state of stem cells. These results suggest that the cells present within the PVS are derived from the human xenograft and suggests that the primo-vessels associated with the xenografted tumor may provide a safe haven for a select population of cancer stem cells. Further understanding of the biological properties of these cells may allow the development of new anti-cancer interventions.

(2) Neural Regeneration Research, Volume 6, Issue 28, 2011, Article number 510515

Research and Report: Neurogensis and Neural Plasticicty

Jingxing Dai, Byung-Cheon Lee, Ping An, Zhendong Su, Rongmei Qu, Ki Hoon Eom, Kwang-Sup Soh*
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Abstract
We examined a new method for visualization of the primo vascular system in the rat brain involving lateral ventricle injection of trypan blue. Results showed that the primo vascular system in the lateral ventricles and arachnoid mater of

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the brain were preferentially stained relative to blood vessels and fascia. The primo-vessels along blood vessels in the brain were clearly exhibited. In addition, the primo vascular system was evident between the fourth ventricle and the quadrigeminal cistern. Our experimental findings indicate that this new technique of lateral ventricle injection of trypan blue can visualize the primo vascular system in lateral ventricles and arachnoid mater of rats in situ.

(3) PLoS ONE, 2013, Volume 8, Issue 1, Article number e51573

The Mechanism of Effective Electroacupuncture on T Cell Response in Rats with Experimental Autoimmune Encephalomyelitis

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Abstract
Previously, we demonstrated that electroacupuncture (EA) decreased lymphocyte infiltration into the spinal cords of rats presenting with experimental autoimmune encephalomyelitis (EAE), a disease model used in the study of multiple sclerosis (MS). The aim of this study was to characterize the effects of EA on the EAE. Female Lewis rats were divided into either CFA, EAE, EA, or injection with naloxone after electroacupuncture (NAL) groups. Electroacupuncture was administered every day for 21 days. To evaluate proliferation and apoptosis, lymphocytes from rats presenting with EAE were collected and cultured with β-endorphin. Immunohistochemisty, flow cytometry and radio-immunity methods were applied to detect the expression of β-endorphin. Results presented in this report demonstrate that the beneficial anti-inflammatory effects of EA on EAE were related to β-endorphin production that balances the Thl/Th2 and Th17/Treg responses. These results suggest that β-endorphin could be an important component in the development of EA-based therapies used for the treatment of EAE.

(4) Journal of Pharmacopuncture, Vol. 17, No. 2, p34—40, 2014

Physiological Role of a Multigrain Diet in Metabolic Regulations of Lipid and Antioxidant Profiles in Hypercholesteremic Rats- Multigrain Diet in Hyperlipemia

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Abstract
Objectives: The objective of the present study was to investigate the lipid and the antioxidant regulatory potential of a multigrain diet in laboratory animals with reference to lipid profiles, tissue lipid peroxidation and antioxidant status.
Methods: Two types of diets, with or without addition of cholesterol, were used in the study — a commercial diet and a formulated multigrain diet (with Sorghum vulgare, Avena sativa, Pennisetum typhoideum, Oryza sativa, Eleusine coracana and Zea mays grains). After a 10-week period of feeding the diets to albino rats the plasma, liver and fecal lipid profiles and the hepatic and renal antioxidant status of the animals that were fed the commercial and the formulated diets (with and without cholesterol addition) were assessed.
Results: The commercial diet supplemented with cholesterol elevated the levels of plasma total lipids, total cholesterol, triglycerides, low-density lipoprotein cholesterol (LDL-C), and very low-density lipoprotein cholesterol (VLDL-C), as well as the atherogenic index (AI). The high-density lipoprotein cholesterol (HDL-C) content and the antioxidant profiles (total ascorbic acid, superoxide dismutase, catalase, glutathione peroxidase reduced glutathione) declined along with increases in lipid peroxidation. The formulated diet (with and without addition of cholesterol) was found to be more efficient than the commercial diet in controlling plasma, hepatic and fecal lipid profiles, as well as hepatic and renal lipid peroxidation and antioxidant status, than of the hypercholesteremic animals.
Conclusion: The multigrain diet used in the present study is effective in countering the hyperlipidemia and oxidative stress caused by high cholesterol intake.
Keywords: Enzymatic antioxidants, fecal lipids, lipid metabolism, multigrain, non-enzymatic antioxidants, oxidative stress

(5) Journal of Pharmacopuncture, Vol. 18, No. 3, p68—74, 2015

Taurine Regulates Mitochondrial Function During 7,12-Dimethyl Benz[a] anthracene Induced Experimental Mammary Carcinogenesis

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Abstract
Objectives: The present study was undertaken to determine the modulatory effect of taurine on the liver mitochondrial enzyme system with reference to mitochondrial lipid peroxidation (LPO), antioxidants, major tricarboxylic acid cycle enzymes, and electron transport chain enzymes during 7,12-dimethyl benz[a]anthracene (DMBA) induced breast cancer in Sprague-Dawley rats.
Methods: Animals in which breast cancer had been induced by using DMBA (25 mg/kg body weight) showed an increase in mitochondrial LPO together with decreases in enzymic antioxidants (superoxide dismutase (SOD), catalase (CAT), glutathione peroxidase (GPx), glutathione reductase (GR) and glutathione-S-transferase (GST)), non-enzymic antioxidants (reduced glutathione (GSH), vitamin C, and vitamin E), in citric acid cycle enzymes (isocitrate dehydrogenase (ICDH), alpha ketoglutarate dehydrogenase (alpha KDH), succinate dehydrogenase (SDH) and malate dehydrogenase (MDH)), and in electron transport chain (ETC) complexes.
Results: Taurine (100 mg/kg body weight) treatment decreased liver mitochondrial LPO and augmented the activities/levels of enzymic, and non-enzymic antioxidants, tricarboxylic acid cycle enzymes and ETC complexes.
Conclusion: The results of our present study demonstrated the chemotherapeutic efficacy of taurine treatment for DMBA-induced breast carcinomas.
Keywords: breast cancer, electron transport chain complexes, mitochondrial lipid peroxidation, mitochondrial antioxidant, taurine, tricarboxylic acid cycle enzymes

(6) Journal of Pharmacopuncture, Vol. 19, No. 1, p28—36, 2016

The Place of Complementary Medicine in the Treatment of Autistic Children

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Abstract
Objectives: The purpose of this study is to achieve a vision for autistic children and their parents aimed at generating interest in ideas such as "Sanitas Per Aquam" (SPA), massage and music therapy, which has begun to have widespread use and to attract attention.
Methods: This cross-sectional, descriptive study was carried out with autistic children and their parents from February to April 2015 in Muğla, Turkey. The study was began by interviewing experts in the field and by developing a suitable assessment questionnaire. In order to direct the flow of conversation between the researchers and the autisitc children and their parents, the researchers conducted semi-structured face to face interviews in a form that had been determined by using reports in the literature and the opinions of experts in the field.
Results: Forty two boys (84%) and eight girls (16%) with autism participated in our study. Children in the 0 − 7 age group spent long time in the bathroom ($p = 0.001$). Boys liked to be hugged more than girls ($p = 0.01$). Children ages 0 − 7 years liked bright lighting while those 15 years of age and older liked gloomy lighting ($p = 0.009$). Except for these statistically significant sex- and age-related differences, no other statistically significant differences were noted in the parameters of this study. Although the result was not statistically significant, more children with mild autism disorder obeyed commands like inhale or exhale ($p = 0.051$).
Conclusion: Treatment for autism spectrum disorders is not yet fully possible, so many studies are being done to alleviate some symptoms and to improve the quality of life for individuals with autism and their families. As a result of our study, whether touching the areas the children want touched and listening to their favorite music are required to stimulate the brain remain as questions in our minds.
Keywords: autism spectrum disorders, autistic children, complementary alternative medicine, disabled children, mind-body therapies, sanitas per aquam