

6th International Conference and Exhibition on
Traditional & Alternative Medicine
September 14-16, 2016 Amsterdam, Netherlands

Posters



Traditional Medicine 2016

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

5'-desmethoxyyatein: Potential key inhibitor of proteins for cancer inhibition

Aman Tedasen, Varomyalin Tipmanee and Potchanapond Graidist
Prince of Songkla University, Thailand

5'-desmethoxyyatein, a natural lignan, has shown potent cytotoxic activity in many cancer cell lines including melanoma, leukemia, breast, colon and brain cancers. Molecular docking is a powerful computational tool to predict the binding mode and binding affinity of a ligand with the specific proteins. In this study, we aimed to investigate molecular targets of 5'-desmethoxyyatein from 80 proteins, which relate to cancer cell proliferation, cell cycle progression, apoptosis, or cell migration. Binding affinity evaluation of 5'-desmethoxyyatein to these proteins was carried out using Molecular docking method. Results showed that 5'-desmethoxyyatein may inhibit activin receptor 2 (ACTVR2), prostaglandin G/H synthase 2, human epidermal growth factor receptor 2 (HER-2), janus kinase 3 (JAK3), protein kinase C (PKC), heat shock protein 90-beta (Hsp90-beta), transforming growth factor receptor I (TGF- β receptor I), androgen receptor and NF-kappa-B-inducing kinase (NIK) proteins. This information was derived from better predicted binding affinity of 5'-desmethoxyyatein, compared to its known inhibitors. Moreover, 5'-desmethoxyyatein may hinder cell cycle progression via binding to cyclin A, polo-like kinase 1 (PLK1) and aurora A proteins with binding energy and inhibition constant lower than its known inhibitors. X-linked inhibitor of apoptosis protein (XAIP) and glycogen synthase kinase 3 (GSK-3 β) proteins, involved in apoptosis and migration in cancer cells, also may better interact with 5'-desmethoxyyatein than their inhibitors. This study suggests 5'-desmethoxyyatein would be anti-tumor agent with anti-proliferation, cell cycle arrest inducing, apoptosis induction and anti-migration activities. However, further studies such as Western blot analysis are needed.

Biography

Aman Tedasen is a PhD student at Department of Biomedical Sciences, Faculty of Medicine, Prince of Songkla University, Thailand. He received his Medical Technology training and earned his Bachelor's degree in 2012. He received a scholarship from the Royal Golden Jubilee PhD Program of Thai government. His research interest has focused on developing effective treatment strategies from herbal medicine for breast cancer.

ibnuidris1@gmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Acute effect of transcutaneous electrical acupoints stimulation on heart rate recovery after the 3-minute step test

Chai-Yi Chou^{1,2}, Hwei-Jhen Wen³ and Boon Suen Ang⁴

¹University of Wisconsin-Madison, USA

²Tzu Chi General Hospital, Taiwan

³Tzu Chi University, Taiwan

⁴Universiti Sains Malaysia, Malaysia

Introduction: Transcutaneous Electrical Acupoint Stimulation (TEAS) is a safe standardized non-invasive therapeutic technique to enhance the heart rate regulation in healthy and cardiovascular disease individuals

Purpose: The aim of this study was to assess the acute therapeutic effect of TEAS on recovery heart rate (HR) after exercise.

Methods: Forty-one recreationally active college students were recruited and randomly assigned into either TEAS group (TG) or control group (CG). All participants were required to perform two trials of 3-minute step exercise (3MST) with a break of 30 minutes between trials. For the TG, participants received 10 minutes TEAS treatment on both forearms at the two selected standard acupoints (Nei-Guan [PC6] and Lie-Que [LU7]) for cardiovascular disease before the second trial, while the CG was seated at rest. HR was measured at rest (HR_{rest}), the first (HR₁), second (HR₂) and third-minute (HR₃) of recovery after 3MST. Mixed-models repeated measures method was used to compare differences between the groups ($\alpha = 0.05$).

Results: There were no significant difference in HR_{rest1} and HR_{rest2} between the first and the second 3MST in both groups, as well as between groups.

Groups	HR _{rest1} (beats/min)	HR _{rest2} (beats/min)	3MST Fitness Index (Pre-treatment)	3MST Fitness Index (Post treatment)
TG	81 ± 7	82 ± 8	56.93 ± 8.43	58.31 ± 11.80
CG	81 ± 10	82 ± 11	58.31 ± 11.80	58.13 ± 6.09

The calculated 3MST fitness indexes were no significance different between the pre-treatment and the post treatment in both groups.

Conclusion: Although TEAS at PC6 and LU7 has demonstrated it can slowdown the heart rate in tachycardia patients. But in this study, it did not show the effect. We speculate, the timing and duration of TEAS treatment may play important role and its mechanism on enhancing cardiovascular enhancing need to further investigate.

Biography

Chai-Yi Chou earned her MD degree from China Medical University in Taiwan in 2008. She specialized in Acupuncture. After 3 years residency training in Tzu Chi Medical Center, she has experience in treating patients with various diseases, including cardiopulmonary diseases and sports, injuries rehabilitation and recovery. She has great passion and interest in Sports Medicine. She would like to utilize and apply acupuncture in Exercise Science. She is pursuing her MS degree in Exercise Science at Department of Kinesiology in University of Wisconsin-Madison.

chiayichou@gmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

The effect of acupuncture on the oocyte retrieval in IVF

Cui Shu Li, Yu Chunyan, Tee Yong Wei, Diana Chia, Ho Lee Mee and Yu Su Ling
 Singapore General Hospital, Singapore

Aim: To evaluate the efficacy of acupuncture treatment on oocyte retrieval (OR) in IVF.

Method: 28 women undergoing IVF were randomized to 2 groups. Group A of 12 women received electro-acupuncture for 20 minutes before the start of OR. Group B of 16 women underwent routine conscious sedation just before the start of OR. Outcomes assessed the pain scores of lower back and lower abdominal measured using the visual analogue scale of 0 to 10. Measurements were done at 5 stages: 30 minutes before, during OR and 30, 60 and 120 minutes after OR. All scores were categorized as low (score ≤ 3) and high (score ≥ 4). The HR, BP, and SpO₂, Respiration were assessed twice at before and after OR. Duration of procedure, post procedure monitoring and pregnancy outcome were also compared between the two groups.

Results: All acupuncture group patients with kidney in deficiency, 4 of them plus liver in deficiency, there into 2 of 4 not pregnant after OR. 44% in sedation group required top-up of additional pain relief compared to 8% in acupuncture group. The sedation group required post procedure monitoring while the acupuncture group did not require any. In additional, the pregnancy rate in the acupuncture group was significantly higher than the sedation group (83% versus 40%). Acupuncture didn't affect the normal range of the patients' BP, HR, SpO₂ and Respiration.

Conclusions: Electro-acupuncture has similar effects as sedation treatment for pain relief and increased in pregnancy rate.

Biography

Cui Shu Li has completed her MD from Traditional Chinese Medicine University, Beijing China in 1984. She has taken advanced training in Western Medicine from Xuan Wu Hospital in Beijing for two years and worked in China Academy of TCM for 12 years till 1996. She was invited by MOH of Singapore in 1996, as a Senior Principal Acupuncturist working in Singapore for 20 years in Singapore General Hospital. She has more than 30 papers published. She is Chairman of Continuing Professional Education, Academia of Chinese Medicine Singapore, and a member of TCM professional panel and examinational committee of TCM Practitioner Board of Singapore.

cui.shu.li@sgh.com.sg

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Toxicological effects of *Ambrosia maritima* in Nubian goats

Ilham M O Ahmed¹, Mohammed A S¹, Halima M O¹ and Ibtehal M A Ahmed²¹Veterinary Research Institute, Sudan²University of Khartoum, Sudan

Toxicity of indigenous plant *Ambrosia maritima* was investigated. Twenty four, 6-8 month old, 12 female and 12 male of Sudanese Nubian goats were used. Dried leaves powder of *Ambrosia maritima* was mixed with water and given orally by drench to the animals at a dose of 1000 or 2000 mg/kg/day for 126 days. Two females drenched the plant at a dose of 1000 mg/kg/day, were died at day 8 and 9 post treatment and one female drenched the plant at a dose of 2000/kg/day died at day 13. The results revealed that goats drenched the plant for 126 days, showed chronic toxicity evident by clinical symptoms, pathological and biochemical changes. The main symptoms were watery diarrhea, inappetance, respiratory distress and depression. Later these symptoms disappeared and the animals appeared healthy. The most evident pathological features were hydrothorax, hydroperitonium, hydropericardium, and enlargement of the liver. Histopathological changes were exemplified by degeneration and necrosis of the hepatic cells. Focal necrosis, congestion and haemorrhag of proximal convoluted tubules, Necrosis of intestinal vili with severe infiltration of inflammatory cells, congestion of alveolar capillaries and pancreatic hyperplasia all these changes were correlated to the activity of Asparate Aminotransferase (AST), Alkaline phosphate (ALP), the concentration of cholesterol, sodium and potassium in the serum, and with the hematological values. The effect of the plant on males was less marked compared to that on female goats. There was gradual increase in mean body-weight of both sexes.

elhamsud@hotmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Adjunctive traditional Chinese medicine therapy improves survival in patients with lung cancer

Hsuan-Shu Shen and Shu-Hui Wen
Tzu Chi University, Taiwan

Background: Traditional Chinese medicine (TCM) is widely used by patients suffered from lung cancer. Evidence shows that TCM can alleviate the complications of the lung cancer, but there is little large-scale well-designed study to evaluate the clinical effect of TCM on survival time.

Method: We conducted a retrospective cohort study by using the data provided by Health and Welfare Data Science Center to evaluate the survival time of the patients with lung cancer from 2001 to 2010. The patients were divided into TCM users (who use TCM in the first 90 days after diagnosed) and non TCM users (who do not use TCM after diagnosed). We balanced the baseline characteristic between two groups by propensity-score matching method and compare the survival curve by Kaplan-Meier curve and stratified log-rank test. Robust cox regression was used to estimate the hazard ratio (HR) with 95% confidence interval (CI).

Results: There were 2009 patients and 422 patients were TCM users and 1587 patients were non TCM users. There was no significant difference in age, gender, stage, treatment type and co-morbidities between two groups. The mean survival time is significantly longer in TCM users than in non TCM users with 715 days and 605 days respectively. Compared to non TCM users, TCM users were significantly associated with a decrease risk of death (adjusted HR=0.82, 95% CI=0.73-0.92) with multivariate adjustment. Among the late stage, there was still a significantly protective effect by using TCM with multivariate adjustment (stage III, adjusted HR=0.72, 95% CI=0.57-0.92, stage IV, adjusted HR=0.87, 95% CI=0.75-1.00).

Conclusion: Our study showed that adjunctive TCM therapy can lengthen the survival time in patients with lung cancer. The findings may be helpful to the physicians when treating the patients with lung cancer.

Biography

Hsuan-Shu Shen is an experienced Chinese Medicine Physician in Hualien Tzu Chi Hospital. He is interested in the effect of the Traditional Chinese Medicine, especially in treating cancer patients. He is the Principal Investigator of the project about the efficacy of combined using Traditional Chinese Medicine among patients with cancer and willing to make contributions for treating cancer.

hsuanshushen@gmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Comparison of the effects of carbamyl- β -methylcholine chloride administered by intravenous, intramuscular and intra-acupuncture point injections

Junhong Gao, Yumin Wang, Jingjing Cui and Xiaochun Yu
China Academy of Chinese Medical Sciences, China

Objective: To compare the effects of carbamyl- β -methylcholine chloride (CMCC) administered by intra-acupuncture point injection (IAI), intramuscular injection (IMI), and intravenous injection (IVI), and to analyze the mechanisms.

Methods: In the IAI group, CMCC was injected into the Zusanli acupoint (ST 36) immediately after 30-min stimulation by electro-acupuncture (EA) at the acupoints, and into the femoral vein and skeletal muscle in IVI and IMI groups, respectively. Intragastric pressure was detected. The plasma concentration of CMCC was measured at various times.

Results: The gastric effect of CMCC in the IVI group was enhanced and attenuated more rapidly than in the other groups. In the IAI group, this effect was significantly stronger than that in the IMI group at 2 min and 15 min, but not significantly different between the two groups at 5 min and 30 min. Plasma concentration of CMCC in the IAI group was similar to that in the IVI group at 2 min, but higher than that in the IMI group. The concentration in the IAI group was higher than that in the IV group and similar to that in the IMI group at 5, 15 and 30 min, indicating rapid increase and slower reduction of the plasma concentration of the drug in the IAI group. There was a positive correlation between the plasma concentration of CMCC and intragastric pressure in all groups.

Conclusion: The effect of IAI with CMCC was stronger than that of IMI and longer-lasting than that of IVI, which correlated with the blood concentration of CMCC.

Biography

Junhong Gao is working as Associate Professor of Institute of Acupuncture and Moxibustion, China Academy of Chinese Medical Sciences and Master's tutor. His research interest is to explore the mechanism of acupuncture and moxibustion and joint administration of acupuncture and drugs. So far totally 3 research projects are/were granted by National Natural Science Foundation of China and Natural Science Foundation of Beijing (as the principal investigator), and more than 40 articles in total were published in reputed journals.

gaojh@mail.cintcm.ac.cn

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Micromeria fruticosa (L.) Druce ssp *Serpyllifolia*: Constituents, Antimicrobial and Evaluation of Burn Healing Activity of the Extract and its Isolated Active Constituents in Topical Formulation

Naglaa Gamil Shehab¹ and Eman Abu-Gharbieh²¹Cairo University, Egypt²Dubai Pharmacy College, UAE

Micromeria fruticosa (L.) Druce ssp *serpyllifolia* is widely used in the Mediterranean regions in treatment of various inflammatory conditions and in wound healing. The purpose of this study was to investigate the constituents of the ethanolic extract of *Micromeria fruticosa* (L.), to evaluate the antimicrobial and the burn healing activities of the extract, its fractions and its isolated compounds and to formulate, characterize and evaluate natural burn-healing topical preparations containing the crude plant extract or the isolated compounds. The LD₅₀ of the ethanolic extract (up to 4 g/kg) indicated its safety. The growth inhibitory activity of the ethanolic extract, and its hexane, chloroform, and *n*-butanol fractions as well the isolated compounds was evaluated *in-vitro* against a set of micro-organisms. The isolated compounds from the chloroform and *n*-butanol fractions were belonging to flavonoids and triterpenes. The ethanolic extract as well its fractions, hexane, chloroform and butanol exhibited variable antimicrobial activities comparable to broad spectrum antibiotic gentamycin used as control. These effects could be attributed to the isolated flavonoids and triterpenes compounds. Burn healing potentiality of the ethanolic extract was also explored against the commercial product and found noticeably significant. Histopathological analysis showed sever endodermal, columnar basal cells and sebaceous gland damage in the untreated burnt animals whereas treated animals showed significant reduction in wound size and improvement in the histological finding. Besides, from the *in vivo* burn healing and histological results, the topical formulae enhanced the skin wound re-epithelialization and speed up the healing process.

Biography

Naglaa Gamil Shehab has graduated from Faculty of Pharmacy, Cairo University, Egypt and has received the PhD from Department of Pharmacognosy, Faculty of Pharmacy, Cairo University, Egypt. She has received the best Master thesis from Egypt and the best research award from Saudi Arabia. Currently, she is working as Associate Professor at Pharmacognosy Department, Faculty of Pharmacy, Cairo University, Egypt. She is member in American Society of Pharmacognosy and also reviewer for many international journals. Her interesting field is in the bioactivity of medicinal plants. She published about 25 papers in international journals.

Naglaa_shehab@hotmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Effects of *Toona sinensis* leaf extracts on cytokine levels in RAW264.7 cells treated with LPS

Szu-Ying Wu, Chia-Chun Shih, Shih-Meng Tsai and Li-Yu Tsai
 Kaohsiung Chang Gung Memorial Hospital, Taiwan

Background: Sepsis remains a major cause of mortality in intensive care. Previous studies have pointed out that sepsis is caused by excessive inflammatory responses, leading to cell and organ damage in a host. In addition, *Toona sinensis* is believed to possess anti-oxidant and anti-inflammatory properties.

Objectives: To evaluate the effects of *Toona sinensis* leaf extracts (TS) on the cytokine levels in the RAW264.7 cells treated with LPS.

Methods: RAW264.7 macrophages were treated with TS extracts (25, 50, 75 µg/mL) for 2 hours before the treatment of LPS (1 µg/ml) for 24 hours. Cytokines in the supernatants of cells were determined by Bio-Plex Pro mouse cytokine assay kit for IL-6, IL-10, and TNF-α, which IL-6 and TNF-α were proinflammatory and IL-10 was anti-inflammatory cytokines.

Results: Compared with those in the control group, the levels of IL-6, TNF-α, and IL-10 were increased in the LPS group without TS. However, the levels of IL-6 and TNF-α were significantly decreased in the LPS group with TS compared with those without TS.

Discussion: Our results indicated that the TS pretreatment could decrease the levels of IL-6 and TNF-α in the RAW264.7 cells treated with LPS. This finding was consistent with the report of Chao-Chuan Wang et al., who had proposed that the TS extracts could inhibit the level of TNF-α in microglia-mediated neuroinflammation by LPS. Additionally, HL Yang et al., demonstrated that the TS could suppress LPS-induced inflammation and migration in vascular smooth muscle cells via NF-κB activation. Thus, we suggested that the TS might decrease the levels of TNF-α and IL-6 via inhibition of NF-κB pathway in RAW264.7 cells treated with LPS.

Conclusions: In summary, TS may be a potentially effective adjuvant therapy to LPS-induced sepsis.

Biography

Szu-Ying Wu has completed his Undergraduate studies at Chang Gung University and earned his Medical degree in 2012. He is a CAM resident at Kaohsiung Chang Gung Memorial Hospital with a major in Acupuncture and Traumatology. He is the Vice Secretary-general of Taiwan Association of Chinese Medicine and Pharmacy Quality. His research topics focus on low level laser acupuncture and treatment of sleep disorders. His recent clinical interest is Sports Medicine.

rickywu0818@gmail.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

The therapeutic effect of needle embedded in PC6 (Neiguan) on myocardial ischemia in the porcine model

Peijing Rong, Jiliang Fang and Jiudong Cao
China Academy of Chinese Medical Sciences, China

Objective: To investigate the effect of needle embedded in PC6 (Neiguan) on ECG changes of myocardial ischemia in pigs.

Methods: 11 Chinese miniature pigs were randomly divided into PC6 (Neiguan) group (n=6) and ST36 (Zusanli) group (n=5). The surgery were implanted for all pigs with the protein shrink narrow ring (Ameroid Ring) in the proximal part of the left coronary anterior descending branch for 4 weeks to make the chronic myocardial ischemia pig model, respectively, then needles were embedded in PC6 or ST36 for 2 weeks. The ECG was conducted before and after 4 weeks of operation, then 2 weeks after needle imbedded.

Results: The Q voltage was lower in the needle embedded in Neiguan group than in Zusanli group after 2 weeks ($P<0.05$), and ST-T time the PC6 group was prolonged than ST36 after electroacupuncture ($P<0.05$); in ST36 group Q voltage decreased significantly after modeling, needle embedded or after electroacupuncture when compared with the previous operation (normal status) ($P<0.01$), Q voltage in PC6 group was decreased after the modeling ($P<0.05$), For PC6 group after acupuncture needle embedded the Q voltage was no significant difference before and after treatment; the heart rate in ST36 group showed no difference with that before; however, the PC6 group rate decreased when post-electroacupuncture, or needle embedded comparing to that before modeling ($P<0.05$, $P<0.01$). the heart rate of PC6 group decreased when post electroacupuncture than post- needle-embedding ($P<0.05$); The length of ST-T there was no significant difference in ST36 group before and after treatment, but was extended from the electroacupuncture to post- needle embedding in PC6 group ($P<0.05$). After the anterior descending branch of the pig was narrowed, the myocardial damage was caused, and the electrocardiogram was typical ischemic change, so the pathological Q wave appeared, and it means the model was successful created.

Conclusion: Acupuncture at "Neiguan" plays the role of prolonging ST-T segment, slowing the heart rate, reducing myocardial oxygen consumption, then improving myocardial blood supply, thereby reducing myocardial injury. It can be used to treat the myocardial ischemia.

Biography

Peijing Rong is a Professor and an Academic Leader of Acupuncture in China Academy of Chinese Medical Sciences (CACMS). She received her Bachelor's, Master's and PhD degrees from Beijing University of Chinese Medicine and Hong Kong Baptist University before she finished two-year Post-doctoral visiting study at faculty of Neurosciences in Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center. Her research interests are involved in mechanisms underlying acupuncture. She has made series studies on pain physiology and acupuncture analgesia, also conducted translational medicine study, and proposed treating on chronic pain. Currently, she is the Associate Director of the Committee of Auricular Acupuncture and the secretary general of the Academic Committee of China Association of Acupuncture and Moxibustion (CAAM) and has also served as editor/guest editor in about 10 peer reviewed journals in professional science. He has more than one hundred publications in recent 5 years.

drorongpj@163.com

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Are cold and heat patterns associated with resting energy expenditure and body composition?

Sujeong Mun, Kihyun Park, Kwang-Ho Bae, Dae-il Park, Siwoo Lee and Jong-hyang Yoo
Korea Institute of Oriental Medicine, Republic of Korea

Evaluating cold and heat patterns is a basic pattern identification component in traditional East Asian medicine. This study aims to investigate the association of cold and heat pattern with resting energy expenditure (REE) and body composition. The cold and heat pattern of 130 adults were evaluated with a self-administered questionnaire. REE and body composition were analyzed by spearman's correlation tests and regression analysis for their association with the cold and heat pattern. The cold pattern score (CPS) was higher in women and heat pattern score (HPS) was higher in men. REE showed moderate correlation with the CPS ($\rho = -0.469$, $p < 0.001$) and HPS ($\rho = 0.418$, $p < 0.001$). Fat free mass (FFM), body cell mass, the ratio of extracellular water (ECW) to intracellular water (ICW), and the proportion of ICW and ECW in FFM were moderately correlated with the CPS and weakly correlated with the HPS. A cold or heat preference and a cold or hot body sensation showed stronger correlations with metabolic measures than did other parameters in the questionnaire. The CPS and HPS explained 25.5% of the REE variance, and the HPS was independently associated with REE after adjusting for age, gender and FFM. Cold and heat patterns appear to be related to REE, and in particular, heat patterns were independently associated with REE. Future studies are needed to investigate the biological basis and diagnostic value of these findings.

Biography

Sujeong Mun is a Senior Researcher at Korea Institute of Oriental Medicine. Her recent research interest is to explore the association of patterns in traditional East Asian Medicine with biological parameters.

azrain@kiom.re.kr

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Sensitized acupoints in gastric mucosal injury in the rat model display high expression of nociceptive neuropeptides

Xiang-Hong Jing, Wei He, Ming-Juan Han, Hong Shi, Xiao-Yu Wang, Ling Hu, Yang-Shuai Su, Xiao-Chun Yu and Bing Zhu
China Academy of Chinese Medical Sciences, China

Visceral injury has been shown to induce somatic sensitization due to neuroinflammation, but little is known about the changes in these somatically sensitized locations. Using gastric mucosal injury (GMI) model, we investigated the local histochemical changes around these somatic sensitized areas (sensitized acupoints). Evans Blue (EB) dye is injected through the tail vein, and the distribution of extravasated EB dots in the skin are observed and compared with the locations of acupoints. We detected the expression of neuroinflammatory mediator (calcitonin gene-related peptide (CGRP) and substance P (SP))-labeled nerve fibers, histamine (HA)-, serotonin (5-HT)-, and tryptase-labeled cells in EB dots. The EB dots induced by acute GMI were found in the skin over the back and abdomen, innervated mostly by the T9-11 dermatome. The dots disappeared gradually during natural self-recovery of gastric mucosa from the injury. The consistent rates between EB dots and acupoints were BL20: 88.23%, BL21: 82.35%, DU6: 58.82%, BL17: 47.5%, RN12: 17.64%, RN13: 5.88% respectively. Furthermore, nociceptive neuropeptides SP and CGRP were expressed much higher in extravasated EB dots than that beside the EB dots or control, which were mostly distributed through the nerve fibers around both the vessels and the root of hair follicle. Meanwhile, mast cells gathered, degranulated and released HA and 5-HT around the vessels in areas within extravasated EB dots. We conclude that GMI results in somatic sensitization named sensitized acupoints, where an elevated SP and CGRP expressed in nerve fibers, as well as of HA and 5-HT released in mast cells.

Biography

Xiang-Hong Jing has completed her PhD in 2004 from China Academy of Chinese Medical Sciences. She is the Vice-Director of Institute of Acupuncture and Moxibustion, China Academy of Chinese Medical Sciences and Doctoral tutor. She has devoted to the research of acupuncture mechanism for more than 20 years. She has published more than 60 papers in reputed journals. So far 8 research projects including National Basic Research Programs of China are/were granted by Ministry of Science and Technology of China, National Natural Science Foundation of China and Natural Science Foundation of Beijing (as the principal investigator).

jingxh@mail.cintcm.ac.cn

Notes:

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Chemical constituents and their biological activities from *Artocarpus tonkinensis*, a traditional medicinal plant

Trinh Thi Thuy¹, Dao Duc Thien¹, Nguyen Thanh Tam¹, Pham Thi Ninh¹, Nguyen Thi Hoang Anh¹, Tran Van Sung¹, Do Thi Thao², Sabrina Adorisio³ and Domenico V. Delfino⁴¹Vietnam Academy of Science and Technology, Vietnam²Vietnam Academy of Science and Technology, Vietnam³S. Maria Terni Hospital⁴University of Perugia, Italy

Artocarpus tonkinensis A. Chev. ex Gagnep., occurs in North Vietnam and China. The decoction of its leaves have been for long time used in Vietnamese traditional medicine (VTM) for the treatment of arthritis and backache. Intraperitoneal injections of *A. tonkinensis* extract decreased both arthritis incidence and severity and delayed disease onset in rats with collagen-induced arthritis^[1]. Due to its promising pharmacological properties, we focused on the phytochemical studies of *Artocarpus tonkinensis* (AT) leaves for possible use in alternative medicine. Two auronol glucosides hovetrichoside C (maesopsin 4-O- β -D-glucoside, TAT2, 1), alphononin-O- β -D-glucoside (2) and flavonoids including artonkin-4'-O- β -D-glucopyranoside (3), kaempferol (4), astragalin (5), kaempferol 3-rutinoside (6), kaempferol 3-neohesperidoside (7) and afzelechin-(4a⁸)-catechin-3-O- β -D-glucopyranoside (8) were isolated and structurally identified from aqueous 70% ethanolic leaf extract. The main compound TAT2 has shown potent anti-proliferative and anti-inflammatory effects both *in vitro* and *in vivo*^[1]. Kaempferol, quercetin, and their glycosidic derivatives are considered potent antioxidants, anti-inflammatory ubiquitously distributed in plants. The anti-inflammatory activity of AT may be attributed to its total flavonoids 1-8. These results suggest that AT can inhibit the inflammatory response and may represent a potential therapeutic candidate for the treatment of chronic inflammatory diseases.

Biography

Trinh Thi Thuy, Ph.D., completed her Chemical doctor degree at the Institute of Chemistry (ICH), Vietnam Academy of Science and Technology (VAST). Her Ph.D. in Phytochemistry at the Institute of Plant Biochemistry in Halle/S, Germany. She is the head of Natural Products Research Laboratory at the ICH, VAST. She has published more than 20 papers in peer-reviewed international journals.

thuy@ich.vast.vn

Notes:

6th International Conference and Exhibition on
Traditional & Alternative Medicine
September 14-16, 2016 Amsterdam, Netherlands

e Posters



Traditional Medicine 2016

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Hirudotherapy in the treatment of periungual felon

Konstantin Sukhov

World Hirudotherapy Organization, Russia

The most common form of acute purulent inflammation of the tissues of the fingers is periungual felon or paronychia when inflammation begins at the edge of the nail plate due to minor skin injuries. During the development process may complete defeat periungual roller and be fiber, which is accompanied by severe pain syndrome and disability of the patient. The main conventional treatment was surgery. In my clinical practice we apply the hirudotherapy (medicinal leech therapy), which effectively eliminates the inflammatory process and allows you to avoid surgery. Here are the most typical clinical examples. The patient, 40 years, of paronyhii the first phalanx of the 4th finger of the right hand developed as a result of hangnails. At the time of treatment was the third day of the disease: the patient is concerned about increasing constant severe bursting pain in the damaged finger, last night joined the growing attacks of acute pulsating pain. Objectively: state of moderate severity, the patient is partially able-bodied. Phalanx of the 4th finger of the right hand: you can clearly see the tissue with translucent purulent contents, in the form of a strip of outer inner (medial) edge of the nail plate, surrounded by a tense, hot, swollen and congested skin. At the session of hirudotherapy, oversight occurred of two medical leeches on the second phalanx of the finger, one on the outer and inner side exposure to the full saturation (24 and 55 min). After self falling of the leeches, the bites of the superimposed hot wet cotton pads during the inspection was a day after the consoles leeches: The pain is not bothering, it is noted moderately severe arching unpleasant sensations in the region of the inner edge of the nail plate. Plot purulent inflammation eliminated, it remains moderately severe swelling and redness directly around the site of inflammation. During the inspection on the second day after the treatment with leeches - complaints patient does not show any edema and hyperemia of the skin on the former site of inflammation is not observed. Observation on the third day after treatment was inflammation eliminated and the function of the finger is fully restored. Thus, for the elimination of the inflammatory process and full recovery of the patient required one session of treatment with leeches, two leeches and two days of clinical observations.

Biography

Konstantin Sukhov is the President of World Hirudotherapy Organization and expert of Complementary Medicine for Committee Protection of Health, The State Duma of Russian Federation. He is the Member of the Coordinating Council of the Traditional Medicine, Ministry of Health of the Russia; Member of the Expanded Executive Board, European Society of Integrative Medicine (ESIM-Berlin). He is the author of more than 85 scientific works and books, dedicated to issues of general pathology; history of medicine, cardiology, pulmonology and gastroenterology on the Far North; the Vilyui encephalomyelitis; hirudotherapy; capillaroscopy and microcirculation.

konstantinvs@yandex.ru

Notes:

6th International Conference and Exhibition on
Traditional & Alternative Medicine
September 14-16, 2016 Amsterdam, Netherlands

Accepted Abstracts



Traditional Medicine 2016

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Hope as medicine, resiliency as a mindset, and creativity as a lifeline in critical care and disability

Amy Oestreicher
USA

In a creative approach to physical health, the patient, who has little control over their clinical lives, can take an active part in shaping their identity, ultimately leading to improved mental, physical and emotional health. Through creativity, hands-on activities where the patient is in control, and lessons in positive thinking, the patient can play an empowered role in their own healthcare. Through creativity, the patient is empowered to navigate their detours in life through turning obstacles into opportunities. The body and mind are intricately related, and in this alternative approach to health, the patient can access the body mind and spirit through creative practices in regimented routines, where hope and creativity are effective medicine, using preventative methods to rejuvenate the self holistically. Community, support and the fostering of trusting relationships are elemental building blocks of resiliency. Surgeons' attitudes affect their patients and the behavior of the rest of the staff. Amy emphasizes compassion and the balance of emotional wellbeing with professional conduct. Amy will address the need for expressive therapies in critical care and for those with chronic disabilities through creativity, storytelling, and lessons in resilience. This need will also be connected to a wellbeing regimen for healthcare professionals to practice in relation to those they take care of. Ways of self-healing will be introduced and alternative ways for both the health care professional and those being treated to view the "patient" and "person".

Patterns in medicinal plant knowledge and use in a Maroon village in Suriname

Charlotte van 't Klooster
Leiden University Medical Center, The Netherlands

Traditional medicine plays an important role in the primary health care practices of Maroons living in the interior of Suriname. Large numbers of medicinal plants are employed to maintain general health and cure illnesses. Little is known, however, on how knowledge of herbal medicine varies within the community and whether plant use remains important when modern health care becomes available. This paper addresses the diversity in medicinal plant knowledge and use in a remote Saramaccan Maroon community and the importance of medicinal plants vis-a-vis locally available modern healthcare. Ethnobotanical data were collected in a remote Maroon village in Suriname by means of participant observations, semi-structured interviews and plants voucher collections. The paper shows that their plant use reflects actual health concerns, but as modern medicines are available for most of these concerns, the use of herbal medicines seems to be a deep rooted cultural preference, especially when concerned with cultural illnesses and health promotion.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Non-contact healing: Combining the evidence

Charmaine Sonnex

University of Northampton, UK

Reviews of empirical work on the efficacy of noncontact healing have found that adopting various practices that incorporate an intention to heal can have some positive effect upon the recipient's wellbeing. However, such reviews focus on 'whole' human participants who might be susceptible to expectancy effects or benefit from the healing intentions of friends, family or their own religious groups. We proposed to address this by reviewing healing studies that involved biological systems other than 'whole' humans (e.g., studies of plants or cell cultures) that were less susceptible to placebo-like effects. Secondly, doubts have been cast concerning the legitimacy of some of the work included in previous reviews, so we planned to conduct an updated review that excluded that work. 49 non-whole human studies from 34 papers and 57 whole human studies across 56 papers from both bio-medical and psychological databases conformed to the inclusion/exclusion criteria. Independent measures of study quality were conducted and the results correlated with the effect sizes. Results suggested that subjects in the active condition exhibit a significant improvement in wellbeing compared to control subjects under circumstances that do not seem to be susceptible to placebo and expectancy effects. Findings with the whole human database suggested that the effect is not dependent upon the previous inclusion of suspect studies and was robust enough to accommodate some high profile failures to replicate. Both databases showed problems with heterogeneity and with study quality, recommendations are made for necessary standards for future replication attempts.

How the growing use of acupuncture for pain relief is bridging the intersection of the drug overdose crisis in the USA on one hand, and on the other, the expansion of the integrated medicine model

Frank Yurasek

Cook County Health and Hospital System, USA

On a trip to West Virginia late last Fall, President Obama underscored reports that: 120 Americans were dying daily from drug overdoses, most of them involving legal prescription drugs; statistics from 2012, showed that enough painkiller prescriptions were written to supply a bottle of them to every American. Recently, the Center for Disease Control noted that 7,000 Americans a day are treated in emergency rooms for drug overdose. In January 2015, in the peer reviewed *journal Practical Pain Management*, Dr. Forest Tennant, MD, DPH wrote an Editorial "*Acknowledging the Failure of Standard Pain Treatment*", citing the recently published "*Lange Medical Diagnosis and Treatment 2015*". Shannon Brownlee's book *Overtreated- Why Too Much Medicine is Making Us Sicker and Poorer*, is based on significant research by a Dartmouth Physician looking at how geography influences healthcare in the USA. Contemporaneously, The Bravewell Collaborative published a study in 2012 of the top 38 hospitals in the USA, who were offering integrated care utilizing massage, acupuncture, and chiropractic, in that order of utilization. In a teleconference entitled "Whose running the circus? The optimization of Integrated Medicine", a panel from The Center for Optimal Integration discussed patient-centered care that was effective, efficient (not just in outcomes, but also process), and equitable (Accessible). On a personal note, with the addition of acupuncture at the Pain Clinic of Stroger Hospital, Cook County Health and Hospital System in 2011, the second largest public hospital, treating over 700,000 outpatients a year, has been evolving a model of care that moves from a vertical, silo approach housed in separate departments of specialized care, to a longitudinal model of collaboration, with dynamic interplay between caregivers sharing a common mission along a continuum of caring.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

The synergistic effect of aged garlic extract and methotrexate in collagen-induced rheumatoid arthritis in male Albino rats

Gehan Moustafa Badr

King Faisal University, Saudi Arabia

Aged Garlic Extract (AGE) exhibit a significant anti inflammatory effect in numerous diseases. However, the anti inflammatory effects of AGE in arthritic conditions not well documented and the Methotrexate (MTX) is an anchor drug used to treat rheumatoid arthritis (RA), but responsiveness is variable in effectiveness and hepatotoxicity in healthy and collagen-induced arthritis (CIA)-rats. Therefore, the present study used adult female rats divided into 8 groups of rats: Control healthy, CIA, CIA treated with AGE and/or MTX, healthy treated with AGE and/or MTX. Arthritis induced by intradermally injection of collagen complete Freund's adjuvant (CFA) emulsion (4 mg/kg) at the base of the tail in each rat. All treatments started once the peak symptoms of arthritis appeared (20th day). AGE treatment (from day 21 to 50) 200 mg/kg/PO. CIA-rats injected by subcutaneous dose of 1.5 mg/kg per 2 days of MTX from day 21 to 43. Efficacy of AGE alone or combined with the medicine was assessed based on the ability to reduce paw oedema, histopathological changes, reduction of the liver enzyme activities and oxidative parameters, elevation of hepatic antioxidant enzymes, arthritis-induced changes in body weight, C-reactive protein (CRP), Serum Tumour Necrosis Factor (TNF) α and interleukin (IL)-17 levels. The study aimed to evaluate the anti-inflammatory effect in CIA-rats of AGE alone and its synergetic activity in combination treatment with methotrexate and its protection against methotrexate induce toxicity.

Provenance variation for seedling parameters of *Cassia fistula* L. in agro-climatic zones of northern Karnataka

Shivanna H¹, Renuka Nayak¹, Surendra P², Krishna A¹, Manjunath G O¹, Dasar G V¹ and Patil H Y³¹College of Forestry, Sirsi, India²Agricultural Research Station (Paddy), Sirsi, India³UAS, Dharwad, India

World Health Organization estimated that 80 per cent of the population of developing countries depends on traditional medicines. Among which India's contribution is 15-20 % for 2000 drugs of plant origin. Demand for medicinal plants is increasing because of having no side effects, easily available at affordable prices and sometimes the only source of health care available to the poor. *Cassia fistula* L. is an important medicinal plant valued for ornamental purposes. The present study was undertaken to evaluate the growth performance of provenances of *Cassia fistula* from five agro climatic zones of northern Karnataka viz., North-eastern transition zone, North-eastern dry zone, Northern dry zone, Northern Transitional zone and Hilly zone. Significant differences among the provenances were observed for various seedling parameters. Results revealed that the seedlings grown from the seeds collected from Hilly zone and Northern Transitional zone showed better performance. The maximum Chlorophyll content was found in Hilly zone (21.90 mg/ g fresh weight) followed by Northern Dry zone (20.50 mg/ g fresh weight). However the lowest Chlorophyll content was found in the North Eastern Transition Zone i.e. 19.10 mg/ g fresh weight. At 180 days after germination average relative water content (%) varied significantly. Significantly more relative water content was recorded in Hilly zone (90.0). The lowest relative water content was observed in Northern Dry zone (82.6). Therefore, seeds from these two provenances can be used for future afforestation programme.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Herbal decoction-based combination therapy of Chinese hepatic cell carcinoma: A retrospective clinical study

Y L Gong¹, G M Lv², L L Zhu³, R Q Wei⁴, H J Wan¹, M Hu⁵, Ch J Tao⁶, S K Wang⁷ and C F Niu¹¹Nanjing University, China²Jiangsu Jiankang Vocational College, China³Southeast University, China⁴Nanjing Medical University, China⁵Liyang 1st People's Hospital, China⁶Shanghai Eastern Hepatobiliary Surgery Hospital, China⁷Zhangjiagang 1st People's Hospital, China

Aim: The main of the study is to contribute a humble effort to promote Chinese traditional medicine, a retrospective clinical study was performed to assess the efficacy of Chinese herbal decoction-based combination treatment of hepatic cell carcinoma (HCC).

Methods: 42 hospitalized patients with histologically confirmed HCC from Jan 2012 to Dec 2014 were selected randomly, including 22 cases in the control group for conventional therapy of surgical resection and/or chemo-radiotherapy as usual; and 20 patients in the study group for combined treatment of “warm and removing” decoction (WRD) on the basis of standard care. In the meantime, evaluation of clinical characteristics and quality of life was assessed.

Results: There was a significant difference ($P < 0.05$) in the comparison of AFP (alpha feto protein)/ALT (alanine transaminase) level between control and study groups. The DCR (disease control rate) was 43% in the study group compared with 34% in the control group. Three-month PFS (Progression-Free-Survival) and TTP (Time-to-Progression) rates were 60%, 35% for WRD patients and 45%, 40% for control patients, respectively. The retrospective clinical study showed no overall survival (OS) benefit for HCC patients treated with WRD compared with control, while the QOL (quality of life) evaluation seemed to predict survival better for WRD patients than that for control patients.

Conclusions: Chinese herbs in the WRD may have the ability of increasing cellular immunity and reducing surgical or chemo-radiotherapeutic lesions. Chinese herbs of WRD might be an additional choice with its better benefits and tolerability in the combination treatment of HCC.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

A novel gold biodegradable nanoparticles reduced by *Sargassum glaucescens*: Preparation, characterization and anticancer activity

Heshu Sulaiman Rahman, Hemn Hassan Othman and Rasedee Bduallah
Universiti Putra Malaysia, Malaysia

The current study investigated the anticancer properties of gold nanoparticles (SG-stabilized AuNPs) synthesized using water extracts of the brown seaweed *Sargassum glaucescens* (SG). SG-stabilized AuNPs were characterized by ultraviolet-visible spectroscopy, transmission and scanning electron microscopy, and energy dispersive X-ray fluorescence spectrometry. The SG-stabilized AuNPs were stable and small at 3.65 ± 1.69 nm in size. The *in vitro* anticancer effect of SG-stabilized AuNPs was determined on cervical (HeLa), liver (HepG2), breast (MDA-MB-231) and leukemia (CEM-ss) cell lines using fluorescent microscopy, flow cytometry, and caspase activity determination, and MTT assay. After 72 hours treatment, SG-stabilized AuNPs was shown to be significantly ($P < 0.05$) cytotoxic to the cancer cells in dose- and time-dependent manner. The IC_{50} of SG-stabilized AuNPs on HeLa, HepG2, CEM-ss, MDA-MB-231 cell lines were 4.75 ± 1.23 , 7.14 ± 1.45 , 10.32 ± 1.5 , and 11.82 ± 0.9 μ g/mL, respectively. On the other hand, SG-stabilized AuNPs showed no cytotoxic effect towards the normal human mammary epithelial cells (MCF-10A). SG-stabilized AuNPs significantly ($P < 0.05$) arrest HeLa cell cycle at G2/M phase and significantly ($P < 0.05$) activated caspases-3 and -9 activities. The anticancer effect of SG-stabilized AuNPs is via the intrinsic apoptotic pathway. The study showed that SG-stabilized AuNPs is a good candidate to be developed into a chemotherapeutic compound for the treatment of cancers especially cervical cancer.

Anti-inflammatory studies on Chungpye-tang in asthmatic human lung tissue and IL-1 β -induced inflamed human lung epithelial cells

Hyun-Jung Baek
Kyung Hee University, Korea

Asthma is a chronic inflammatory lung disease characterized by airway hyper responsiveness (AHR), airway obstruction and airway wall remodeling responsible for significant morbidity and mortality worldwide. There are no the exact causes of asthma, lots of researchers think that genetic and environment factors may result in asthma. Chungpye-tang (CPT) has been used as traditional prescription of asthma in Korea. CPT composed 4 species of herbal medicines was performed extraction with distilled water for 3h at 100°C. In this study, we investigated the precise mechanism of the anti-inflammatory effect of CPT by western blotting analysis and whether the decoction extracts could reduce pro-inflammatory cytokines such as TNF- α , eotaxin, IL-4, IL-9 and IL-13 in IL-1 β -induced inflamed asthmatic human airway epithelial tissue by multiplex cytokines array. As results of this study, there was a trend toward decreased NF- κ B expression in asthmatic human airway epithelial tissue. IL-9 and IL-13 secretion was significantly reduced in the lung tissue treated with CPT. Overall, our results indicate that CPT has an anti-inflammatory effect through blocking the signaling pathway of NF- κ B, thereby CPT may be a potential remedial agent for allergic asthma.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Does acupuncture alter pain-related functional connectivity of the central nervous system? A systematic review

Villarreal Santiago María, Tumilty Steve, Macznik Aleksandra and Mani Ramakrishnan
University of Otago, New Zealand

Background & Aim: One of the proposed mechanisms behind acupuncture analgesia is normalising the pain-related functional connectivity (FC) of the central nervous system. Several studies have investigated the effect of acupuncture on FC changes. However, to date, there is no conclusive evidence on the ability of acupuncture intervention on pain-related FC. Therefore, the aim of the systematic review was to evaluate the evidence for the effectiveness of acupuncture on influencing the FC of the CNS in patients with musculoskeletal pain.

Methods: To identify the relevant studies, a systematic literature search was conducted in the following databases: AMED, CINAHL, EMBASE, MEDLINE, PEDro, PubMed, Scopus, and Web of Science using relevant MeSH. Two independent reviewers have conducted article screening process, methodological quality assessment of the included studies (Downs and Black questionnaire) and level of completeness and transparency in reporting acupuncture interventions with STRICTA.

Results & Conclusion: Seven studies met the inclusion criteria, out of which, 3 were RCTs and 4 were non-RCTs. Included participants (n=191) were presented with a range of clinical conditions (osteoarthritis, chronic low back pain, carpal tunnel syndrome, and fibromyalgia). Methodological quality of the studies were high in 6 studies and moderate in 1 study. Information on depth of needle insertion, needle retention time, and needle type were not reported. Due to heterogeneity in FC measures, the meta-analysis was not conducted. Positive alterations on FC of the CNS were consistently observed following long-term acupuncture intervention in patients with musculoskeletal pain. This review provides a preliminary evidence on the effectiveness of acupuncture on FC in patients with musculoskeletal pain.

The influence of Shenshu acupoints on experimental acupuncture

Luat Le
University of Medicine and Pharmacy, Vietnam

Background: Shenshu acupoints in acupuncture effect as same as internal organ soma theory. However, the influence of Shenshu acupoints on experiment is needed to know.

Objectives: To examine the influenced skin regions of Shenshu acupoints on human body.

Method: Basic study and experimental analysis was done on pain threshold at examined points of whole body's dermatomes before and after using anesthesia acupuncture at Shenshu acupoints. 31 healthy volunteers used electronic stimulus parameter with two phases of symmetric thorn pulse, 160 Hz for 20 minutes, cathode on the left acupoint and anode on the right acupoint. Data analysis was done with SPSS16.0 software.

Results: Pain threshold was increased symmetrically from dermatome T6 to dermatome S1 on two sides of dorsal body. The highest was at dermatome L2 (p=0.000), the edge ones were dermatome T6 and dermatome S1 (p<0.05). The diastolic blood pressure was increased significantly (p=0.003). This study is a safe procedure and has no side effects.

Conclusion: The influenced regions of anesthesia acupuncture at Shenshu acupoints are dermatomes from T6 to S1 and symmetrically on two sides of dorsal body.

6th International Conference and Exhibition on

Traditional & Alternative Medicine

September 14-16, 2016 Amsterdam, Netherlands

Madhuras, a poly herbal formulation in 3T3L1 cell lines augments glucose uptake and ameliorates insulin resistance by regulating glucose transporter-4, peroxisome proliferator-activated receptor - gamma gene expression *in vitro*

Srivani Telapolu

Sri Ramachandra University, India

Back ground: Major barrier for integrating CAM into modern clinical practice is the lack of the proof for quality control, safety and efficacy through an evidence based approach. Identification of underlying mechanism of action of polyherbal formulations, have generally not been elucidated due to the lack of knowledge in identifying their contained active phytochemical constituents. In our present work we made an attempt to identify the possible mechanism of action of an antidiabetic poly herbal 'Madhuras' which is standardized for its specific phytochemical markers.

Methods: Methanol extract of the formulation (MEF) was tested for cytotoxicity in 3T3L1 preadipocytes. 3T3-L1 preadipocytes, were induced for adipocyte differentiation by adding differentiation media containing 0.5 mM/l of IBMX, 0.25 μ M/l of DEX and 1 μ g/l of insulin in DMEM medium with 10% FBS. Glucose uptake potential of MEF was estimated in differentiated adipocytes from 1-1000 μ g/ml concentration using Pioglitazone as a standard drug. For evaluating the adipogenic activity, MEF was added along with differentiation media to preadipocytes at 32.5-500 μ g/ml concentration and activity was measured by oil red O staining using pioglitazone as negative control. For confirming the actual mechanism of MEF, regulation of PPAR gamma and Glut4 mRNA were studied using RT-PCR analysis.

Results: Cytotoxicity of MEF is negligible even at 1000 μ g/ml. At the tested doses, MEF increased glucose uptake in dose dependently and at 125 μ g/ml it completely inhibited lipid droplet formation. PPAR gamma and glut4 expression is upregulated in a dose dependant manner at 100, 200, 300 μ g/ml concentration.

Conclusion: Madhuras is showing antidiabetic activity by ameliorating insulin resistance through inhibiting the adipogenesis.