

bilities whether acupuncture exerts hepatoprotective function were investigated using MP+APAP-induced hepatic damage model.

Methods: Rats received chronic morphine and withdrawal. Acetaminophen was given and 12h after, blood and liver were taken. Acupuncture was performed once a day across all experiment. Aspartate aminotransferase (AST) and alanine aminotransferase (ALT) levels were observed, and percentages of abnormally decreased hepatocyte regions, mean liver cell counts, and mean inflammatory cell numbers infiltrated on hepatic parenchyma were examined. In addition, antioxidant effects were evaluated based on liver lipid peroxidation malondialdehyde (MDA) and glutathione (GSH) contents, superoxide dismutase (SOD) and catalase (CAT) activities with the number of immunopositive hepatocytes against nitrotyrosine (NT) as marker of inducible nitric oxide synthase (iNOS) related-oxidative stresses and 4-hydroxynonenal (4HNE) as marker of lipid peroxidation).

Results: Significant elevations of AST and ALT were noticed by MP or APAP, and they also showed increases of MDA contents as well as decreases in GSH levels and activities of SOD and CAT. Also, centrolobular decreases of hepatocytes along with degenerative changes of hepatocytes were observed at histopathological analysis, and increases of NT and 4HNE immunoreactive hepatocytes were shown. These hepatocellular damages resulted more severely from the treatment of MP+APAP. However, these MP+APAP-induced hepatic damages were significantly inhibited by acupunctures at SI5, ST36, and HT7, but not at LI5.

Conclusion: Results suggest that acupunctures on the specific acupoints have hepatoprotective effects on the MP+APAP-induced hepatic damages through elevations of hepatic antioxidant defense systems.

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P1.085

Acupuncture Suppresses Morphine Craving in Progressive Ratio through GABA system



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Purpose: Previous studies revealed that acupuncture suppresses morphine self-administration as well as morphine-seeking behavior after abstinence. Based on these results, this study examined whether acupuncture attenuates morphine-craving under a progressive ratio (PR) schedule, and investigated the possible neuronal mechanism.

Methods: Male Sprague-Dawley rats were trained to self-administer morphine (0.5 mg/kg) under a fixed ratio for 9 days, and rats who achieved stable infusion were switched to PR. When animals had taken no more morphine for 1h,

the number of infusions was defined as break point (BP). After PR training, animals that established stable BP received acupuncture the next day. Acupuncture was applied for 1 min immediately before the test session. Bicuculline (1.0 mg/kg) and SCH 50911 (2.0 mg/kg) were given 30 min prior to acupuncture. The c-Fos was examined in the ventral tegmental area (VTA) and nucleus accumbens (NAc).

Results: Acupuncture at SI5, reduced the BP significantly. In addition, the effects of acupuncture were blocked by either bicuculline or SCH 50911. Immunofluorescence revealed that acupuncture at SI5 decreased c-Fos expression in the VTA and NAc.

Conclusion: Results of this study demonstrate that acupuncture at SI5 is effective for the treatment of morphine-craving, and that this effect is mediated via GABA pathway.

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P1.086

A possible mechanism of action for the placebo response: human biofield activation via therapeutic ritual



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Purpose: The purpose of the paper is to explore the relationship between placebo response, therapeutic ritual as investigated by the scientific community, and the biofield theory, with intention of elucidating important aspects of natural healing mechanisms.

Methods: Method of investigation is cross-fertilization of recently published studies in these three diverse fields of study, for example placebo research from the Harvard Medical School's Program in Placebo Studies, biofield research from the Samuelli Institute, and diverse empirical research studies of traditional medicine. Lenses of inquiry are used to explore placebo response as indicative of an undiscovered healing mechanism. The theoretical hypothesis of the biofield is considered both from the approach of a possible role in healing, as well as a structural model for investigating mechanisms of interpersonal and interpersonal communication pathways here-to-for unexplained in current research. Evidence of therapeutic benefits from ritual healing is examined, along with recent research and theorizing of mechanisms of action across cultures and procedures.

Results: Results show indications that the perspectives of placebo research, therapeutic ritual healing studies, and boiled theory bring the diverse angles of inquiry into increased understanding of natural healing mechanisms.

Conclusion: The conclusion is that the natural healing mechanisms can be explored more completely through comparing different lenses within medical, biophysics, psychological, anthropological and psych-spiritual scientific inquiry. The biofield theory yields a fertile area of future research to explore the evidence being developed in examining healing mechanisms uncovered through closer attention to the placebo response and wider investigation of tra-

ditional healing and therapeutic ritual, both Western and non-Western.

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Natural ingredient of Ignatius beans inhibits mTOR activity



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Purpose: This study screened a collection of >2,800 naturally occurring products and identified Ignatius beans extract capable of inhibiting mTORC1 activity. HeLa cells were treated with aqueous extract from Ignatius beans to assess the activity of mTORC1. Treatment of HeLa cells with Ignatius bean extract inhibits the enzymatic activity of mTORC1 as assessed by the phosphorylation of p70 S6K (S6K) at Thr 308 in HeLa cells. This plant seed extract also exerts inhibitory effects on the activation phosphorylation of Akt. In addition, flow cytometry analysis revealed that Ignatius bean extract causes HeLa cells to accumulate in G2/M phase of cell cycle. Trypan blue dye exclusion assay was carried out to determine the cytotoxicity of Ignatius Beans

Methods: This plant seed extract also exerts inhibitory effects on the activation phosphorylation of Akt. In addition, flow cytometry analysis revealed that Ignatius bean extract causes HeLa cells to accumulate in G2/M phase of cell cycle. Trypan blue dye exclusion assay was carried out to determine the cytotoxicity of Ignatius Beans.

Results: This study has found that an aqueous extract from Ignatius beans inhibits mTORC1 activity as well as PI3K/Akt pathway resulting the accumulation of cell cycle at G2 to M phase in cultured human HeLa cells. This result suggests that the natural ingredient of Ignatius beans may directly inhibit mTORC1 activity or indirectly influence mTORC1 activity through the inhibition of Akt signaling. The inhibition of Akt phosphorylation at Thr308 strongly denies the involvement of negative feedback effect by PI3K/Akt pathway in cells treated with Ignatius bean extract.

Conclusion: These data suggest that Ignatius bean extract could be used as a potent inhibitor of cell growth and cell proliferation.

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Safety control of manual vacuum pump for plastic cupping



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Purpose: In Korea, disposable cupping unit is applied to the patient for safe treatment. But, even though disposable cup-

ping unit is used, there are still infection event exit yet. This study aims to find out the cause of infection occurs in the traditional medical clinic associated with cupping treatment.

Methods: Used manual vacuum pump was collected from 5 private hospitals and 8 university hospitals in airtight condition to prevent the additional contamination. Bacterial smear was made by blot of the inside surface of the connecting part between cupping unit and vacuum pump. Bacterial culture and identification is performed by the company specializing in microbiological analysis (ChunLab Inc., Seoul, Korea), using next generation sequencing and EzTaxon Database of ChunLab.

Results: Pathogenic microbes were found in 3 of 8 university hospitals' and 1 of 5 private hospitals' vacuum pumps. Bacterial family was found in the order methylobacteriaceae (29.95%), alcaligenaceae (14.92%), spinningomonadaceae(14.23%) etc.

Conclusion: Vacuum pump is modernized cupping method to control the negative pressure exquisitely. But, compare to the disposable cupping unit, the vacuum pump is used several times until broken down. Because of the multi-use vacuum pumps are easily contaminated and air exchange between cupping unit with vacuum pump can occur the contamination of the wound at blood-letting cupping treatment. To prevent the infection at blood-letting cupping treatment, not only the disinfection of wound but also the sterilization of whole cupping device including vacuum pump should be regarded.

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Oryongsan improves hypertonic stress-induced water channel expression and apoptosis in renal collecting duct cells



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Purpose: Oryongsan (ORS, Wulingsan) has been reported to possess renal protective effects from renal diseases such as diabetes-induced renal damage, and nephrocalcinosis. This study was conducted to evaluate the inhibitory effect of ORS on hypertonic stress-induced AQP2 expression and apoptosis in murine inner medullary collecting duct cell line (mIMCD-3).

Methods: mIMCD-3 were pretreated with ORS (50-120 ug/ml) for 1h, and stimulated with 175mM NaCl for 1h. The supernatant, conditioned medium was collected for measurement of electrolyte levels and osmolality. The protein expression used western blot, and the mRNA expression used RT-PCR.

Results: Hypertonic stress (175 mM NaCl) increased in the levels of AQP2 expression by hypertonic stress in mIMCD-3. ORS attenuated the hypertonic stress-induced increase in protein levels of AQP2 in a concentration-dependent manner. Pretreatment with ORS presented the similar effect of