as drug, functional food and cosmetic material from lots of researchers. In this study, the antioxidant activity of 100 kinds' pure different standard chemical of oriental medicine herbs (OMHs) compounds has been investigated.

Methods: Also, a couple of compounds having noticeable antioxidant activity were screened, identified and quantified by off-line and on-line screening HPLC-ABTS assay.

Results: This work investigates applications of DPPH and ABTS assay for bioactivity screening of 100 different standard chemical, so that the IC50 rates of 17 more practical compounds are determined. The three most practical compounds (Galic acid, Quercetin, Caffeic acid) were screened, identified and quantified, using coupled off-line-ABTS and on-line HPLC-ABTS screening assay.

Conclusion: This result shows that there is a very small different of error between off-line-ABTS method and on-line screening HPLC-ABTS method. The shows that an on-line screening HPLC-ABTS assay can be a powerful technique for the rapid characterization of bioactivity compounds in plant extracts. Moreover, this result can be considered to be applicable to determinations of the basic antioxidant of OMHs and the data base of phytochemical. And use of information of the experiment should facilitate resistance to internal body stress by ROS.

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http://dx.doi.org/10.1016/j.imr.2015.04.048

P1.042

Guibitang, a traditional herbal medicine, induces apoptotic death in A431 cells by regulating the activities of mitogen-activated protein kinases

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Purpose: Guibi-tang (GBT), a traditional herbal formula, mainly has been shown to possess immune regulation, antioxidant and protective effect of the gastric mucosa. In the present study, we explored the mechanism of chemopreventive/chemotherapeutic efficacy of GBT against human squamous cell carcinoma and proved the efficacy of GBT through performing in vivo xenograft assay.

Methods: For analysis of the constituents of GBT, high performance liquid chromatography (HPLC)-DAD system was performed. To detect the anticancer effect of GBT, cell viability assay, caspase activity assay, cell cycle analysis, DNA fragmentation analysis, and Western blot analysis were performed in A431 cells. Furthermore, the inhibitory effect of tumor growth by GBT was evaluated in athymic nude mice inoculated with A431 cells.

Results: GBT showed cytotoxicity against three different squamous cell carcinoma, especially on A431 cells. GBT induced the apoptosis through activating caspase-8 in A431 cells. Inhibition of A431 cell growth by GBT was caused by G1-phase arrest through regulating proteins associated with cell cycle progression including cyclin D1, p21, and p27. Furthermore, GBT regulated the activation of mitogen-activated protein kinases (MAPKs) including extracellular signal- regulated kinase (ERK), p38 and c-Jun NH2-terminal kinase (JNK), and activated p53, a tumor suppressor protein. The inhibitors of MAPKs respectively blocked GBT-induced cell viability, indicating that MAPKs signals play critical role in cell death caused by GBT. In vivo xenografts, daily oral administration of 600 mg/kg GBT efficiently suppressed the tumorigenic growth of A431 cells without side effects.

Conclusion: We first elucidate that GBT stimulates the apoptotic signaling pathway and suppresses the proliferation of A431 cells via regulating MAPKs signaling pathway. Furthermore, GBT significantly inhibits tumor growth of A431 cells without causing systemic toxicity. Based on our study, GBT could be useful in the management of skin cancer as chemoprevention and chemotherapy remedy.

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http://dx.doi.org/10.1016/j.imr.2015.04.049

P1.043

Effect of Simiao Yong'an Decoction on Joint Arthritis of Type II Collagen-induced Arthritis in Rats

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Purpose: To address the dffciacy of Simiao Yong'an decoction on the therapy of collagen-induced arthritis (CIA) in rats and identify the mechanism.

Methods: 36 SD rats were randomly divided into 6 groups including control group, model group, positive group, and high-, medium-, low- dose groups of Chinese medicine Simiao Yong'an decoction. The molding method was injecting 0.2 mg collagen on the root of tail each one. Control group and model group were daily gavaged with distilled water (10 ml/kg / d), positive control group was daily gavaged with leflunomide by 1.9 mg/kg. High-, medium-, low-dose group of Chinese medicine was daily gavaged with Simiao Yong'an decoction by 4.2 g/(kg·d), 2.1 g/(kg·d), 1.05 g/(kg·d), ig 12 weeks. The arthritis index(AI) were observed at 0,2,4,6,8,10 and 12 weeks after treatment. The joint pathological changes were observed at the end of treatment. Levels of IL-6,IL-17and TNF-α in serum were examined by ELISA, mRNA transcription levels of IL-6,IL-17and TNF-α in synovial were detected by RT-PCR.

Results: The AI of rats in positive group, and high-, medium-, low- dose groups of Chinese medicine Simiao Yong'an decoction had significantly improvement compared with that in model group($P<0.05$, $P<0.01$). The ankle joint cartilage pathological had an improvement in in positive group, and high-, medium- Chinese medicine groups as compared with model group. mRNA expression of IL-6 and TNF-α were down-regulated in all treatment groups significantly ($P<0.01$) compared with the model group. mRNA expression of IL-17 were down-regulated significantly in positive group, and high-, medium-dose groups of Chinese medicine($P<0.01$).

Protein expression of IL-6 and IL- 17 were down-regulated in all treatment groups significantly(P<0.01). Protein expression of TNF-α were down- regulated in positive group and high-dose groups significantly (P<0.01).

Conclusion: Simiao Yong'an decoction shows a certain therapeutic effect on CIA rats, it's anti-inflammatory action mechanism may achieve by reducing expression of IL-6,IL-17 and TNF-α.

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http://dx.doi.org/10.1016/j.imr.2015.04.050

P1.044

Influence of baicalein on pharmacokinetics of ciprofloxacin after single oral administration in rats

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Purpose: Baicalein from Baikal skullcap iss a potent antibacterial agent with broad-spectrum activity. The combination of baicalein and ciprofloxacin can be an excellent antibacterial chemotherapy against multi-drug resistance bacteria. We investigated the effect of baicalein on the pharmacokinetics of ciprofloxacin in rats.

Methods: Baicalein and ciprofloxacin were orally co-administered to rats. Pharmacokinetic data were estimated by non- compartmental model.

Results: Baicalein significantly decreased AUC0→∞ of ciprofloxacin after oral administration (P<0.05). Therelative bioavailability (Frel) of ciprofloxacin after co-administration of baicalein decreased more than approximately 30% in a dose-dependent manner.

Conclusion: Based on our findings, the co-administration of baicalein may have clinical implications on the dosing of ciprofloxacin or other quinolone antibiotics.

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http://dx.doi.org/10.1016/j.imr.2015.04.051

P1.045

Hepatoprotective Effect of Herb Formula KIOM2012H Against Nonalcoholic Fatty Liver Disease

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Purpose: Nonalcoholic fatty liver disease is hepatic ailment of which incidence is rapidly increase due to the dietary hypernutrition and following obesity. Fatty liver disease can lead to steatohepatitis, fibrosis, cirrhosis, and even cancer, which is associated with various complications. Discovering effective natural materials and herbs can be alternative and complementary medical treatment in addition or instead of current chemical pharmaceuticals.

Methods: To develop effective natural agent for nonalcoholic fatty liver disease, we formulated combination of four herb mixture (KIOM2012H) and observed lipid-lowering efficacy. Inhibitory effect of KIOM2012H on free fatty acid-induced lipid accumulation, triglyceride contents, and gene expressions were analyzed in HepG2 cells. Using high fat diet-fed mice, body weight changes, gross liver appearances, hepatic triglyceride contents, and gene expressions were observed.

Results: KIOM2012H dose-dependently inhibited lipid accumulation and gene expressions involved in lipogenesis and related regulators. Experimental animals also showed decrease of body weight changes and lipid-associated physiological parameters.

Conclusion: Present study shows that KIOM2012H has alleviating effect on fatty acid and lipid accumulation, and therefore can be applied for development of new therapeutic pharmaceuticals for treatment of nonalcoholic fatty liver disease using natural products and herbs.

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http://dx.doi.org/10.1016/j.imr.2015.04.052

P1.046

Epimedium koreanum Nakai displays broad spectrum of antiviral activity in vitro and in vivo by inducing cellular antiviral state

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Purpose: The objective of this study was to determine the broad spectrum of antiviral activity of the total aqueous extract of Epimedium Koreanum Nakai in vitro and in BALB/c mice.

Methods: Green Fluorescent Protein (GFP)-tagged viruses including Influenza A (A/PuertoRico/8/34(H1N1)(PR8-GFP), NDV (Newcastle Disease Virus)-GFP, VSV (Vesicular Stomatitis Virus)-GFP, Herpes Simplex Virus and Challenge viruses [A/Aquaticbird/Korea/W81/2005(H5N2), A/PR/8/34(H1N1), A/Aquaticbird/ Korea/W44/2005(H7N3), and A/Chicken/Korea/116/2004(H9N2)] were used to examine the antiviral efficacy of Epimedium Koreanum Nakai. Antiviral effects were evaluated in viral replication, cell viability and viral gene expression level. Immune stimulating effects of Epimedium Koreanum Nakai were determined using ELISA for cytokines such as murine tumor necrosis factor-alpha (TNF-α), interleukin (IL)-6 and inferferon (IFN)-β. In vivo antiviral effect on influenza virus was tested using oral administration of extracts to mice intra-nasally infected with 50% mouse lethal dose (MLD50) of H1N1, H5N2, H7N3 or H9N2.

Results: Epimedium Koreanum Nakai significantly suppressed the replication of PR8, VSV, HSV and NDV in RAW264.7 and HEK293T cells. Epimedium Koreanum Nakai induced the production of type I interferon and pro-inflammatory cytokines at both the mRNA and protein levels and the transcriptional levels of various ISGs and antiviral genes. Additionally, the extract induced the phosphorylation of