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## ing the TCM compounds for inhibition of in-stent enosis in coronary atherosclerosis

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**[illegible]kgrounds:** Coronary atherosclerosis is the disease that the plaques formation [illegible]hary arteries due to the accumulation of fatty materials, cholesterol-containing [illegible]eins, and proliferated cells. The formation of plaques causes narrowing of lumen in [illegible]y and hinders the oxygen and nutrient supply to heart. In-stent restenosis (ISR) is [illegible]omena that an artery has become narrowed and received treatment by stent to clear [illegible]kage but renarrowed again. Genetic alternation can increase the probability of ISR. [illegible]ation of the genetic allele that related to ISR may be helpful for stenosis treatment [illegible]anti-ISR drug development. Recently, the diseases treatment with traditional [illegible] herbs is getting more and more attention. In this poster, we present the possible [illegible]nds in traditional Chinese herbs for anti-ISR in the coronary atherosclerosis based [illegible]iscovery of ISR-related SNPs. **Materials and Methods:** To identify the ISR-related [illegible]e experiment of case–control study was conducted in the China Medical University, [illegible] There were nine patients with a confirmed diagnosis of restenosis and defined as [illegible] group. The control group consisted of nine patients without restenosis diagnosis [illegible]me clinic. All the patients were suffering from coronary atherosclerosis. For this [illegible]pling groups, the genome-wide SNP typing was determined using the Affymetrix [illegible]SNP Array Set (Affymetrix, Santa Clara, CA). Genome-wide association analysis [illegible]lied to decipher the ISR-related SNP sites at the significance level of 0.01. The [illegible]he regarding the SNPs pattern was selected as receptor for virtual screening. The [illegible]nt compounds of traditional Chinese herbs used in this screening were downloaded [illegible]M Database@Taiwan. The protein structure of the target gene was downloaded [illegible]B database. **Results:** The results showed that there are 54 SNPs distributing on [illegible] associated with ISR. In which, the gene CDC42BPA was selected as the target in [illegible]ning for the component compounds of traditional Chinese herbs. The component [illegible]ds of traditional Chinese herbs used in this screening were downloaded from TCM [illegible]@Taiwan. The CDC42BPA protein structure (PDB ID: 4AW2) was downloaded [illegible]B database and let the ligand Pyr1 in 4AW2 as the reference compound. Pyr1 [illegible]t cell motility in vitro. This property may inhibit the plaques formation in coronary [illegible]We adopted Discovery Studio 2.5 to implement ADME properties calculation, drug-[illegible]g, and molecular docking. There are 20 component compounds distributing on 16 [illegible]erbs which docking with CDC42BPA are better than Pyr1. **Conclusion:** These TCM [illegible]s may have the potential to inhibit ISR that should be studied in the future.

## P622
## The Flavonoid Quercetin and Luteolin Inhibits EMT Transition by Depleting E2EPF Expression.

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**Backgrounds:** The flavonoids have been reported as a multiple kinase inhibitor to decrease cell proliferation, invasion, angiogenesis and EMT-transition. However, the inhibition role in EMT transition and metastasis through gene regulation is poor reported. Here, we study the effects of flavonoids luteolin and quercetin in EMT-transition and metastasis by regulating E2-EPF/Hif-1α gene expression in higher invasive A431-III cells. By comparison with A431-P cells, A431-III cells contain higher E2-EPF gene and protein expression. **Materials and Methods:** A431 cells (human epidermal carcinoma cells; named A431-P in this study) were obtained from ATCC (Manassas, VA, USA). The A431-III cells were isolated in our laboratory from the parental A431 tumor cells (A431-P) using a Boyden chamber. **Results:** By comparison with A431-P cells, A431-III cells exhibit higher E2-EPF mRNA and protein expression levels. The Hif-1α and VHL expression in A431-III cells were also higher than A431-P cells. From E2-EPF siRNA knockdown and overexpression experiments, we observed that Hif-1α and VHL expression level was positively or negatively correlated with E2-EPF expression. **Conclusion:** our results suggest that the higher E2-EPF expression in A431-III cells was probably related to its higher malignancy ability through positive regulation Hif-1α/VHL signaling. The flavonoids luteolin and quercetin affects its malignancy ability by inhibited E2-EPF expression through inhibition of Akt/mTOR/Hif-1α signaling. We also hypothesis that probably another regulation mechanism through controlling mTOR transcription by E2-EPF to affect Hif-1α signaling.

## [illegible]ation of Antitumor Functions by Indoleamine [illegible]oxygenase -mediated Tryptophan Metabolites

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**[illegible]ounds:** Indoleamine 2,3-dioxygenase (IDO) cleaves the pyrrole ring of L-Trp to [illegible]ynurenine by incorporating molecular oxygen. This step involves the oxidative [illegible]f the 2,3 double bond in the indole moiety of L-Trp, resulting in the production [illegible] kynurenine. IDO expression has been associated with poor prognosis in many [illegible]man cancer. IDO-expressed antigen presenting cells have been demonstrated [illegible] effective T-cell priming in tumor-draining lymph nodes. **Materials and Methods:** [illegible]/OVA melanoma cells were genetically modified to express mouse *Indo* cDNA. [illegible]tion tumor progression and antitumor efficacy of T cells in IDO-expressing tumor [illegible] chemotherapy, C57BL/6 mice were inoculated s.c. with IDO or control plasmids [illegible]B16/OVA melanoma cells on right flank. IDO pathway inhibitors and paclitaxel [illegible]ed intraperitoneally twice per week. To address whether IDO-expressed tumor [illegible]d the quantity, phenotype, and function of tumor-associated T cells, the numbers [illegible]iltrating $CD8^+$ and $CD4^+CD25^+$ T cells were monitored for a 4-wk period. The [illegible]evel of Gcn2 and aryl hydrocarbon receptor was analyzed by RT-PCR in these [illegible]ts:** Tumor weight per mouse increased in C57BL/6 mice implanted with IDO-[illegible]ed B16/OVA melanoma cells compare to B16/OVA melanoma cells. Tumor areas [illegible]axel combination therapy groups were smaller compare to paclitaxel group. [illegible]tric analysis of tumors in mice treated with MT/paclitaxel and paclitaxel group [illegible]gnificant increase of $CD8^+$ T cells. Additionally, a synergistic effect of MT and [illegible]s found to affect a decreased tumor-associated $CD4^+CD25^+$ T cells. The activity [illegible]sion level of Gcn2 and aryl hydrocarbon receptor was upregulated in $CD8^+$ T [illegible]overexpressed group. **Conclusion:** The above results suggest that inhibition of [illegible]atabolism by IDO inhibitor-MT may restore cytotoxicity of antitumor activity. The [illegible]ressive action of IDO is through tryptophan depletion and tryptophan metabolites [illegible]Gcn2 and aryl hydrocarbon receptor expression in T cells. Evaluation and [illegible]f Gcn2 and aryl hydrocarbon receptor acticity in T cells during cancer therapy [illegible]l for IDO positive tumor treatment.

## P624
## To Prepare Peptides Derived from Tuna Cooking Juice on Anti-metastatic in Human MCF-7 Breast Cancer Cell and The Role of Bioavailability

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**Backgrounds:** Our previous study has found the peptides derived from tuna cooking juice hydrolyzed by Protease XXIII (PA) possess anti-cancer effects against human breast cancer cell, MCF-7. Especially the fraction over 2500Da (PAH) of the hydrolysates showed the 38% antiproliferation after 72-h treatment at the protein concentration of 1 mg/mL. PAH induced the cell cycle to arrest at phase S by elevation of p21 and inhibition of cyclin A expression. However, the peptide sequences of PAH and the effect of PAH on the invasion and metastasis of MCF-7 were never investigated. **Materials and Methods:** MCF-7 was induced to be metastatic by 12-O-tetradecanoylphorbol-13-acetate (TPA) and then treated with PAH at various concentrations (0.5, 1.0 and 1.5 mg/mL) for 24 h. We used HPLC and *MALDI-TOF/TOF* to *analyze* the peptide sequences of PAH. **Results:** The peptide sequences of PAH with the antiproliferation effect on MCF-7 were identified by MALDI-TOF/TOF as KLPPLLLAKLLMSGKLLAEPCTGR (2563.27Da) and KPEGMDPPLSEPEDRRDGAAGPK (2449.70Da). After the wound healing assay, PAH did not show any effect on MCF-7 metastasis. **Conclusion:** The results showed that tuna cooking juice had the potential for antiproliferation of human breast cancer cell, but it had no effect on metastasis or even invasion.