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## AB089. Impaired adenosine signaling influences erectile function in aging rats

Xingliang Yang, JiuHong Yuan

Andrology Laboratory, West China Hospital, Sichuan University, Chengdu 610000, China

**Background:** As one of the most common disorders in old adult, erectile dysfunction (ED) remains attracting andrological physicians' attention. The aim of this study is to investigate the alterations of adenosine signaling in the penis of aging rats, and the influence to erectile function.

**Methods:** According to apomorphine test, the aging rats (18 months) with ED were selected as age-related erectile dysfunction (A-ED) group, and the young rats (2 months) were selected as normal control (NC) group. The intracavernosal pressure (ICP) measurements were conducted to evaluate the penile erectile function. Quantitative real-time polymerase chain reaction (RT-PCR) and Western Blot were used to detect the expression levels of genes and protein related to adenosine signaling in penis.

**Results:** Compared to NC group, the outcomes of ICP showed a decreasing trend in A-ED group. Expression of adenosine A2B receptor, adenosine deaminase (ADA), and phosphodiesterase type 5 (PDE5) were increased in A-ED group, and AMP deaminase type 1 (AMPD1) and 2 (AMPD2) were decreased in A-ED group. The results of Western Blot also showed an increasing trend of A2B receptor in A-ED group.

**Conclusions:** Rats with erectile dysfunction showed an impaired adenosine signaling, our study may provide a new sight for further study to improve the erectile function of A-ED patients.

## AB090. Tobacco smoking and erection dysfunction: a systematic review

Xuanhe You, JiuHong Yuan

Andrology Laboratory, West China Hospital, Sichuan University, Chengdu 610000, China

**Background:** The aim of this review was to investigate the correlation between smoking and erectile dysfunction (ED). **Methods:** ISI Web of Science, PubMed and Google Scholar databases (until June 2017) were searched for relevant publications on the correlation between smoking and erectile dysfunction.

**Results:** A total of 163 studies were reviewed. Tobacco smoke, an aerosol produced by the incomplete combustion of tobacco, is proved to be harmful to several organs. A wealth of researches showed tobacco smoking is a high-risk factor for ED. Multiple human studies and animal researches analyzed the correlation and possible mechanism between smoking/nicotine and ED.

**Conclusions:** Almost all the researches showed the clear evidence that tobacco smoking is indeed quite harmful to erectile function. Dose-response relation also confirmed that long term or high quantity of nicotine intake may lead to higher incidence of ED. Smoking may impact on penile vascular endothelial cells and the release of acetylcholine in cerebral cortex. Multiple signal pathways are involved in the smoking-induced ED. Researches also revealed that smoking cessation could, to a certain extent, improve erectile function.

**Keywords:** Tobacco smoking; erectile dysfunction (ED); mechanism

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## AB091. C1QBP suppresses cell adhesion and metastasis of renal carcinoma cells

Yong Wang, Yuanjie Niu, Dan Yue

Institute of Inspection, Tianjin Medical University, Tianjin 300000, China

**Background:** Complement component 1q subcomponent binding protein (C1QBP) is a ubiquitously expressed cellular protein and can be upregulated or activated in a variety of malignant tumors, including those from thyroid, colon and breast, but its role remains unclear in renal cell carcinoma (RCC).

**Methods:** In this study, we constructed C1QBP knockdown RCC cell line. Microarray assay was used to analyze C1QBP regulated genes. Cell adhesion and migratory was tested.

**Results:** C1QBP knockdown influenced expression of multiple genes associated with cell adhesion. Cell invasion abilities were significantly increased with increased metastasis to lung and liver in vivo. C1QBP may regulate RCC cell adhesion and invasion through influencing the p-GSK3/β-catenin/L1CAM expression.

**Conclusions:** Overall, our study demonstrated that C1QBP could regulate RCC metastasis by regulating the GSK3/β-catenin/L1CAM signaling pathway.

**Keywords:** Complement component 1q subcomponent binding protein (C1QBP); L1CAM; renal cell carcinoma (RCC)

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## AB092. Comparison of quercetin and resveratrol in the prevention of injury due to testicular torsion/detorsion in rats

Kai-Kai Chi, Guang-Ce Wang

The First Affiliated Hospital of Henan University of TCM, Zhengzhou 450000, China

**Background:** Quercetin (QE) and resveratrol (RSV) are powerful antioxidants with the potential to protect the testes against ischemia/reperfusion (I/R) injury. We compared their effects in testicular torsion/detorsion (T/D) in adult rats.

**Methods:** Twenty-four male Wistar rats were divided in four groups: A, B, C, and D. QE and RSV were injected intra-peritoneally. After torsion, the testicular cord was restored. After torsion, blood and tissue samples were obtained.

**Results:** MDA and NO levels, TOS and TAS were higher in group B. QE and RSV lowered MDA, NO, and TOS levels and TAS consumption. QE reduced the MDA and TOS levels more than RSV. Groups C and D had lower testicular injury grade. Group C had lower testicular injury grade

**Conclusions:** Treatment with QE and RSV protects against I/R injury after testicular T/D. QE may exhibit better function than RSV at the doses tested in this study.

**Keywords:** Ischemia/reperfusion (I/R); quercetin (QE); resveratrol (RSV); testicular torsion/detorsion (T/D)

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