**标题**

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**摘要**

目的： 。方法： 。结果： 。结论： 。

**参考文献**

**个人简介**

照片

XX，理学博士，XX年毕业于XXX大学,指导老师为XXX。现任职于上海交通大学电子信息与电气工程学院XXX，目前主要研究方向为XX。申请人三年内以第一作者及通讯作者发表SCI论文XX篇，H-index为XX，他引XX次，包括有国际著名期刊*XXX*等。主持项目XX项等。

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投稿邮箱：[nanocc@nanocc.org.cn](mailto:nanocc@nanocc.org.cn)。

**High-purified Isolation and Proteomic Analysis of Urinary Exosomes from Healthy Persons**

Meng Yang 1, Xiao Zhi 1, Yanlei Liu 1, Tianliang Li 1, Gabriel Alfranca 1, Fangfang Xia 1, Chenlu Li 1, Jie Song 1\*, Daxiang Cui 1\*

1Institute of Nano Biomedicine and Engineering, Shanghai Engineering Research Center for Intelligent Instrument for Diagnosis and Therapy, Key Laboratory for Thin Film and Microfabrication of Ministry of Education, Department of Instrument Science and Engineering, School of Electronic Information and Electronical Engineering, 800 Dongchuan Road, Shanghai Jiao Tong University, Shanghai 200240, P. R. China.

\* Corresponding authors. E-mail: [dxcui@sjtu.edu.cn](mailto:dxcui@sjtu.edu.cn); [sjie@sjtu.edu.cn](mailto:sjie@sjtu.edu.cn)

**Abstract**

**Purposes：**Urinary exosomes containing specific biomarkers have recently been considered as novel potential non-invasive candidates for renal disease diagnosis. However, the development of urinary exosomes in basic research and their subsequent diagnostic application are impeded by the lack of an efficient isolation method. One of the main challenges during urinary exosomes isolation is how to remove a large number of Tamm Horsfall proteins (around 92 kDa) and other biological components from exosome enrichment mixture. Herein, we report a facile and low-cost isolation method for highly-purified human urinary exosomes based on dialysis. **Methods：**The key protocol for exosome isolation includes only two steps: (1) Healthy person urines were collected. 10 mL urine in 300 kDa dialysis tubes was firstly dialyzed in phosphate-buffered saline solution three times for sequential nine hours; (2) The dialysis suspension was concentrated to 200 μL by using 100 kDa ultracentrifuge tubes to achieve urinary exosome isolation. For verification, the concentrated solution was examined by western blot, transmission electronic microscopy, atomic force microscopy and qNano, which demonstrated the highly-purified urinary exosomes were present. Furthermore, a total of 359 proteins were identified by the proteomic analysis of purified urinary exosomes from healthy persons. **Results：**Those results demonstrated that highly-purified urinary exosomes could be achieved by our isolation method; 359 proteins were identified from healthy persons. **Conclusions：**Further works will focus on screening and identifying disease-related biomarkers from human urine exosomes for clinical diagnosis.

**Keywords:**Urinary exosomes; Hamm-horsfall protein; Dialysis; Proteomic analysis

**References**

# T. Pisitkun, R.F. Shen, M.A. Knepper, Identification and proteomic profiling of exosomes in human urine. *Proc. Natl. Acad. Sci.*, 2004, 101: 13368–13373.

# A. Øverbye, T. Skotland, C.J. Koehler, et al. Identification of prostate cancer biomarkers in urinary exosomes. *Oncotarget,* 2015, 6: 30357–30376.