***Cite this as*:** Hong-yun PENG, Xue-hong ZHANG, Jin-zhong XU, 2016. Apigenin-7-*O*-β-D-glycoside isolation from the highly copper-tolerant plant *Elsholtzia splendens*. *Journal of Zhejiang University-Science B (Biomedicine & Biotechnology).* **17**(6):447-454. http://dx.doi.org/10.1631/jzus.B1500242

Apigenin-7-*O*-β-D-glycoside isolation from the highly copper-tolerant plant *Elsholtzia splendens*

JZUS-B

Key words: Chromatographic separation, Copper-tolerant plant, *Elsholtzia splendens*, Flavonoid glycoside, Structure elucidation

Research Summary

This paper mainly investigated the chemical constituents in *Elsholtzia splendens*, a copper tolerant plant which holds many pharmacological activities. Research led to the isolation of apigenin-7-O-β-D-glycoside, and herein we present its isolation and structural elucidation .

- **Chromatographic separation**
- **flavonoid glycosides**
- **Structure elucidation**

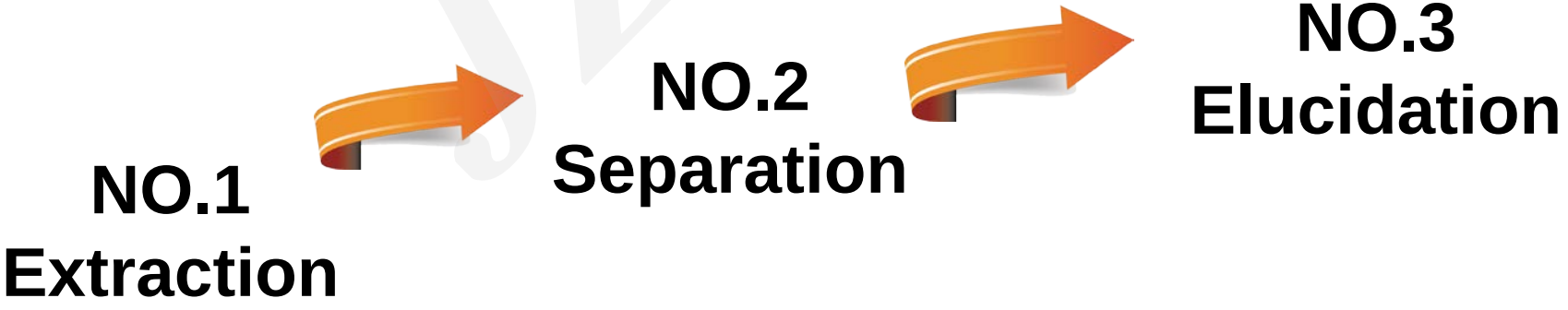
Innovation points

- **Methods for extracting and separating Apigenin-7-O-β-D-glycoside from *Elsholtzia splendens* biomass**

Organic solvent extraction; Column chromatography separation, including Macroporous resin, Sephadex^{TM} LH-20, polyamide resin, and Thin layer chromatography.

- **Structure elucidation of Apigenin-7-O-β-D-glycoside.**

Spectroscopic techniques: HPLC/ESI MS, FTIR, ^{1}H NMR/^{13}C NMR.



JZUSB

Conclusion

Apigenin-7-O-β-D-glycoside could be the post-harvesting product from *E. splendens* biomass. Chromatographic column separation was set up for the preparation and purification of apigenin-7-O-β-D-glycoside in the n-BuOH extracts from the flowering aerial biomass of *E. splendens*.

JZUSB