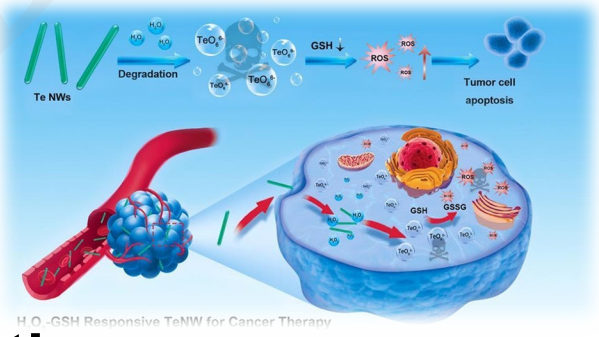
Cite this as: Tianrun ZHENG, Junyi ZHAN, Ming YANG, Maojia WANG, Wenjun SUN, Zhi SHAN, Hui CHEN. Hemin-induced increase in saponin content contributes to the alleviation of osmotic and cold stress damage to *Conyza blinii* in a heme oxygenase 1-dependent manner[J]. Journal of Zhejiang University Science B, 2021, 22(8): 682-694. http://doi.org/10.1631/jzus.B2000697

Hemin-induced increase in saponin content contributes to the alleviation of osmotic and cold stress damage to *Conyza blinii* in a heme oxygenase 1-dependent manner

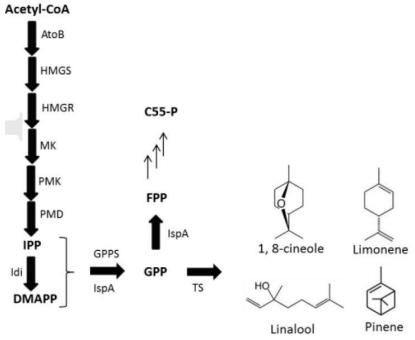
Key words: Hemin，Saponin，*Conyza blinii*，Heme oxygenase，Abiotic stress

Research Summary

This review mainly focused on the effects of hemin treatment on saponin content in *C. blinii*, as well as its relationship to plant abiotic stress relief, and summarized the key role of CbHO-1 played in the following aspects:



- **Function in *C. blinii* growth**
- **Alleviation of oxidative damage**
- **Regulation of MVA metabolic pathway**



Innovation points

- **Introduction** of the physiological and biochemical functions of natural heme and heme oxygenase in anti-oxidation.

- **Summary** of the most updated research progress about hemin in plant physiology.

- **Emphasis** of the key role of CbHO-1 in both osmotic and cold stress, and the potential function of saponin.