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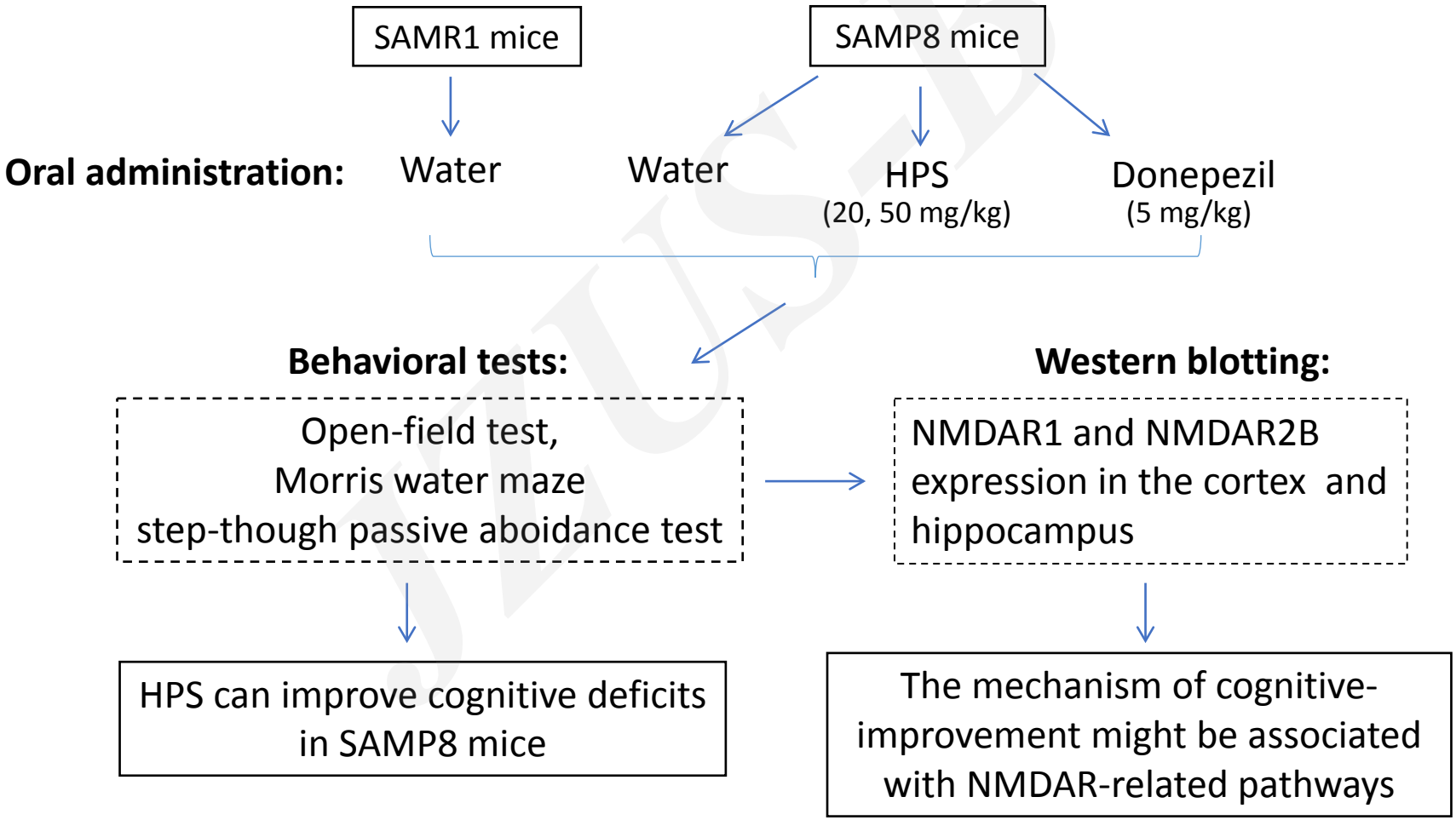
Cognitive-enhancing effects of hydrolysate of polygalasaponin in SAMP8 mice

Key words: Cognitive improvement, Hydrolysate of polygalasaponin, SAMP8 mice

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Research Summary

This study was designed to assess the cognitive effect of Polygalasaponin Hydrolysate (HPS) in SAMP8 mice and explore the related mechanism



Innovation points

● Good model

SMAP8 is a metabolic model which exhibits the cognitive deficits and pathological changes including Aβ peptide deposition, cholinergic system dysfunction and neuroenergetic imbalances.

● Security

Hydrolysates of polygalasaponins (HPS) could attenuate or abrogate the toxicity of polygalasaponins which may cause nose bleeding, gastrointestinal tract abnormality and even death.

● Cognitive improvement

HPS could improve the cognitive deficit in SAMP8 model, and the mechanisms underlying this might be related to changes in NMDAR expression. HPS may be a potential drug for treatment of cognitive deficit.

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Summary of Results

Figure 2 | Effects of HPS on locomotor activities of mice.

Figure 3 | Effects of HPS and model on visible platform test of MWM.

Figure 4 | Effect of HPS on the acquisition of spatial memory of aged SAMP8 mice in the MWM.

Figure 5 | Effect of HPS on probing and working memory of aged SAMP8 mice in the MWM.

Figure 6 | Effect of HPS on memory of the aged SAMP8 mice in the step-through passive avoidance tests.

Figure 7 | Effect of HPS on NMDAR1 and NMDAR2B in the hippocampus and cortex of SAMP8 mice.

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