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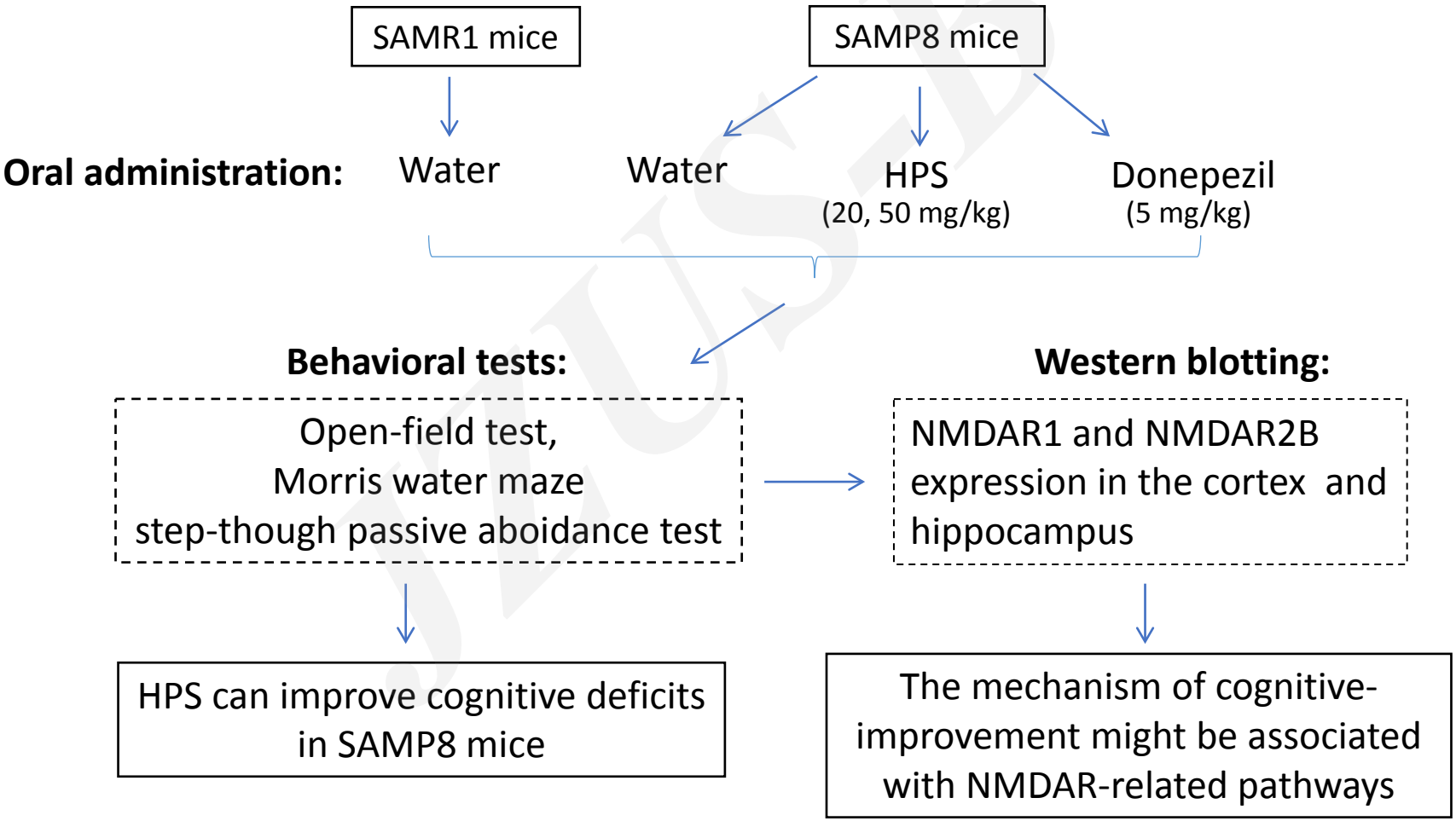
Cognitive-enhancing effects of hydrolysate of polygalasaponin in SAMP8 mice

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

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.

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.