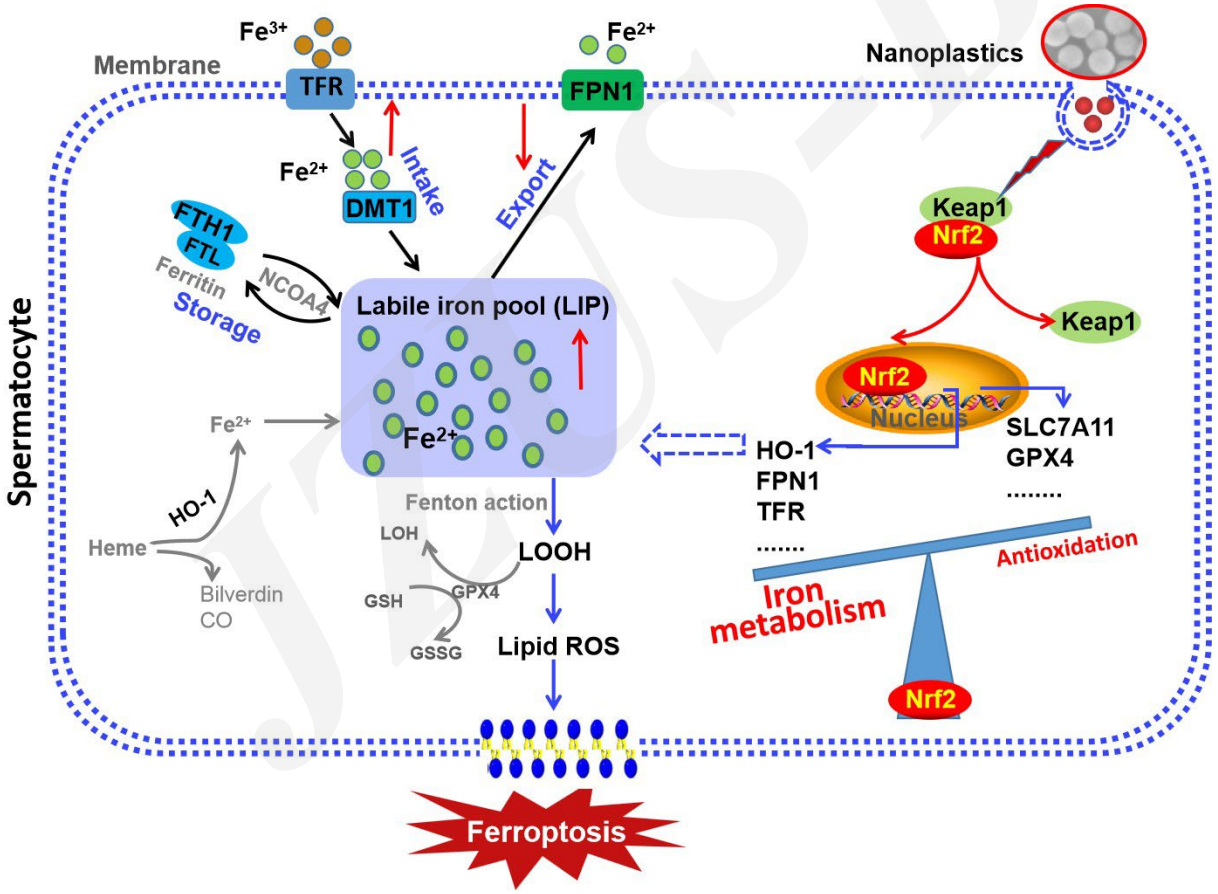
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Nrf2-mediated ferroptosis of spermatogenic cells involved in male reproductive toxicity induced by polystyrene nanoplastics in mice

Key words: **Polystyrene nano plastics (PS-NPs); Reproductive toxicity; Ferroptosis; Nuclear factor erythroid 2-related factor 2 (Nrf2)**

Research Summary

This study demonstrated that PS-NPs induce male reproductive dysfunction in mice by causing spermatogenic cell ferroptosis dependent on Nrf2.



Nrf2-mediated PS-NPs-induced ferroptosis-related mechanisms in spermatocytes

Innovation points

This paper mainly focused on the PS-NPs cause male reproductive toxicity in mice and trigger Nrf2-mediated ferroptosis of spermatogenic cells and summarized as following aspects:

- **Polystyrene nanoparticles (PS-NPs) could cause male reproductive toxicity in mice and damage spermatogenic cells.**
- **PS-NPs damaged spermatogenic cells through triggering ferroptosis.**
- **Nrf2 plays a critical role in PS-NPs-induced ferroptosis of spermatogenic cells.**

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