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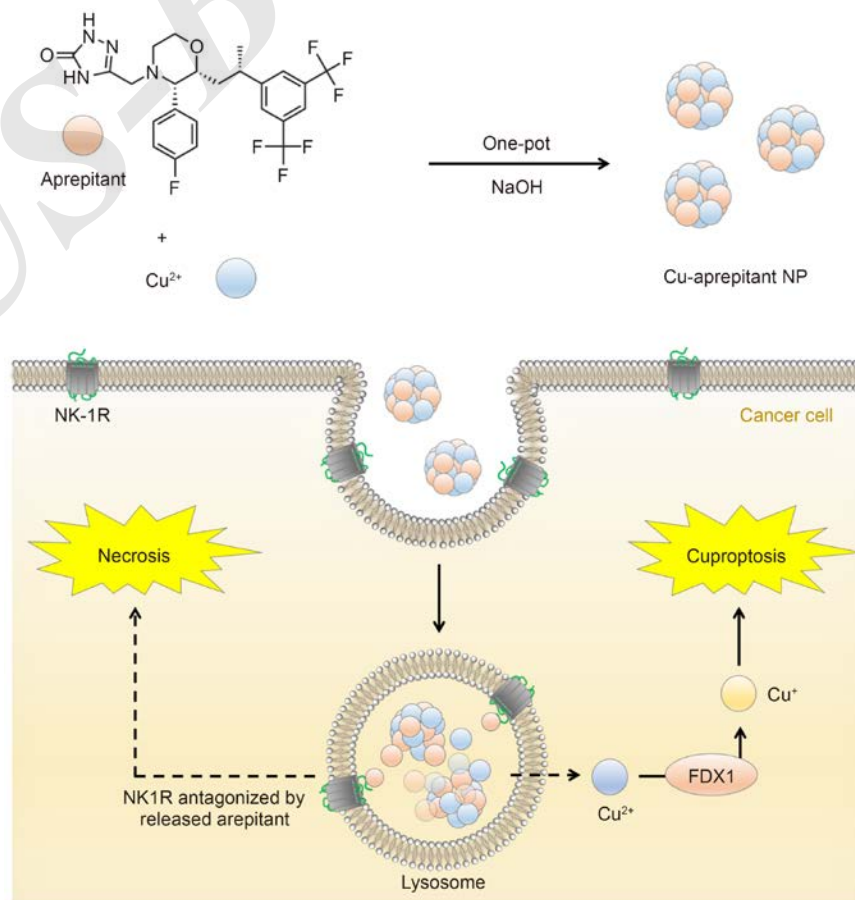
Drug-assisted synthesis of copper nanoparticles and their induction of cuproptosis and necrosis for breast cancer therapy

Key words: Carrier-free nanoparticles; Copper nanoparticles; Cuproptosis; Neurokinin-1 receptor; Aprepitant

Research Summary

This correspondence mainly focused on the preparation of drug-assisted carrier-free copper nanoparticles and their antitumor effects:

It was found that the carrier-free aprepitant-copper nanoparticles exerted both cellular pathway modulation effect of the aprepitant and cuproptosis induced by copper, thus achieving multi-modal anti-tumor efficacy.



Innovation points

- A drug-assisted preparation of copper nanoparticles elucidated.
- Drug aprepitant in copper nanoparticles retained its role in inducing cancer cell necrosis.
- Copper nanoparticles effectively induced cuproptosis in breast cancer cells.