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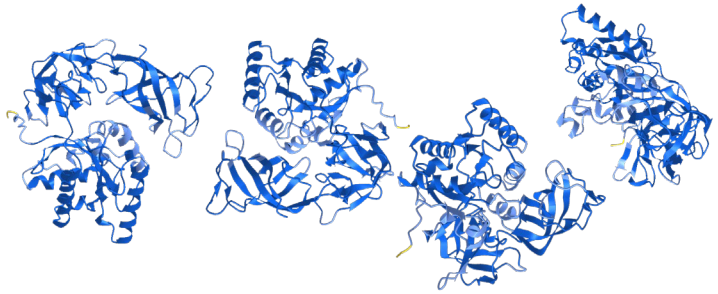
Unveiling the innovative green synthesis mechanism of selenium nanoparticles by exploiting intracellular protein elongation factor Tu from *Bacillus paramycoides*

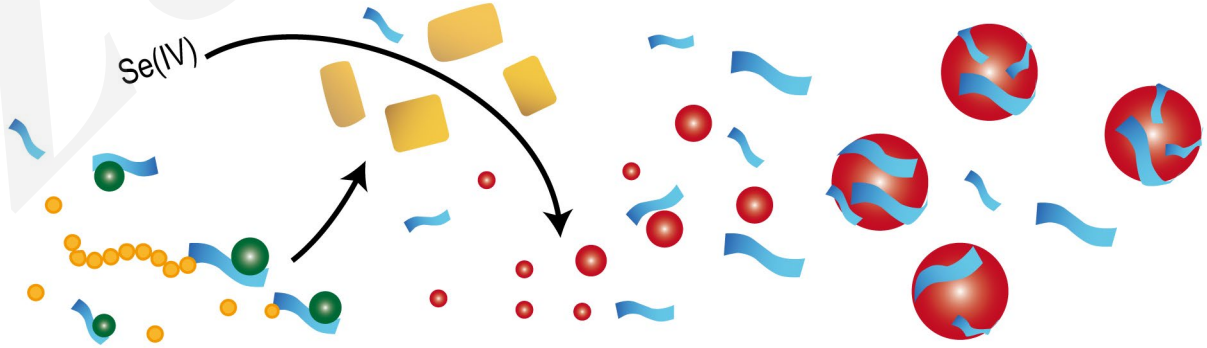
Key words: **Selenium nanoparticles (SeNPs), *Bacillus paramycoides*, Elongation Factor Tu (EF-Tu), Selenite reduction, Green synthesis mechanism**

Research Summary

This study mainly focused on the green synthesis mechanism of selenium nanoparticles by EF-Tu extracted from *Bacillus paramycoides*, and summarized the main results in the following aspects:

- **Characteristic of SeNPs**
- **Purify and identify the suface proteins of SeNPs**
- **Location of selenite reduction**
- **Possible mechanism**





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Innovation points

- **High efficiency in selenite biotransformation**

- **Rare reduction process that do not require NADPH/NADP as electron donors**

- **Identify of unique reduction-related proteins**

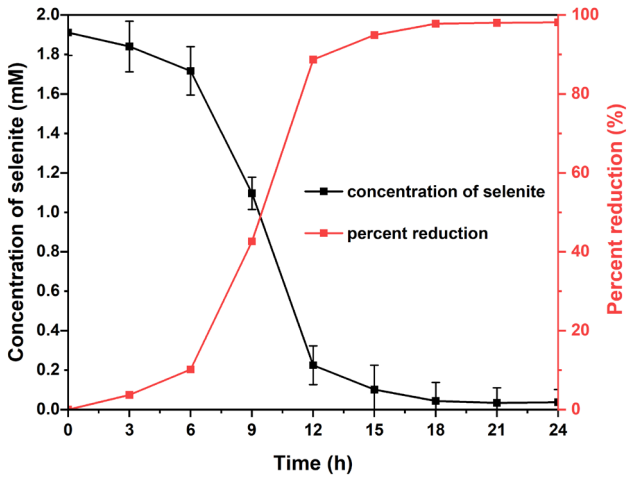
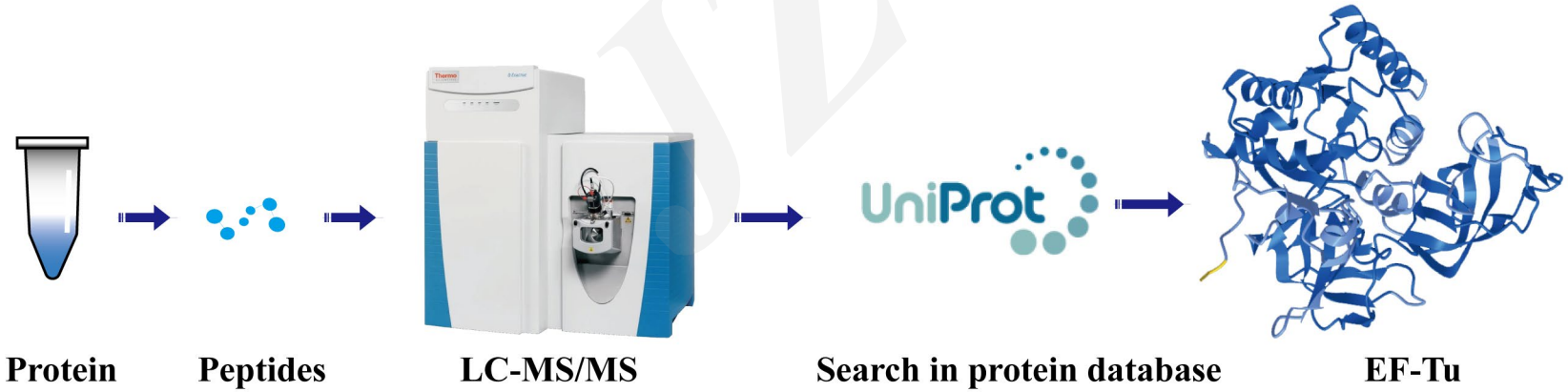


Figure S1(c)



Innovation points

- **Innovative synthesis mechanism**

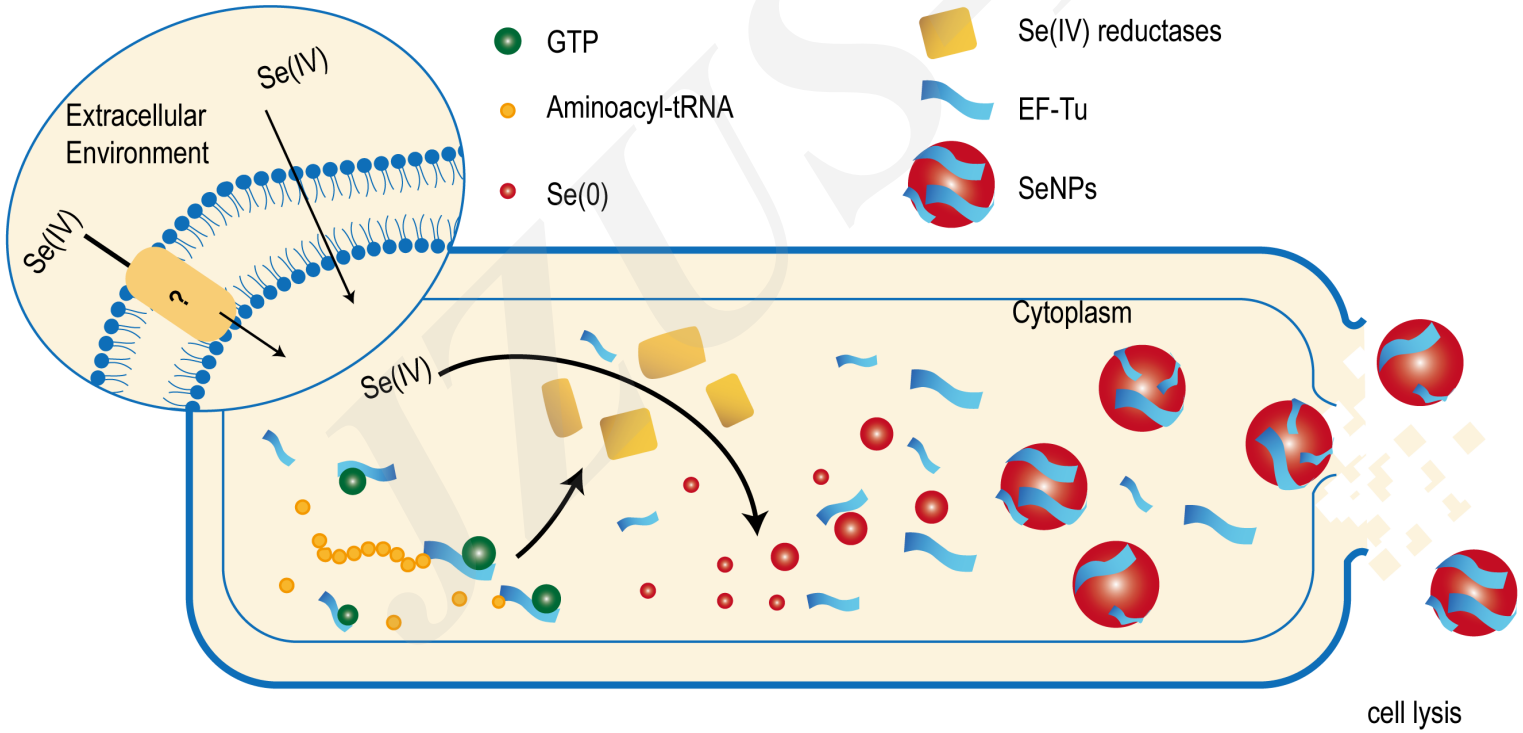


Figure 3