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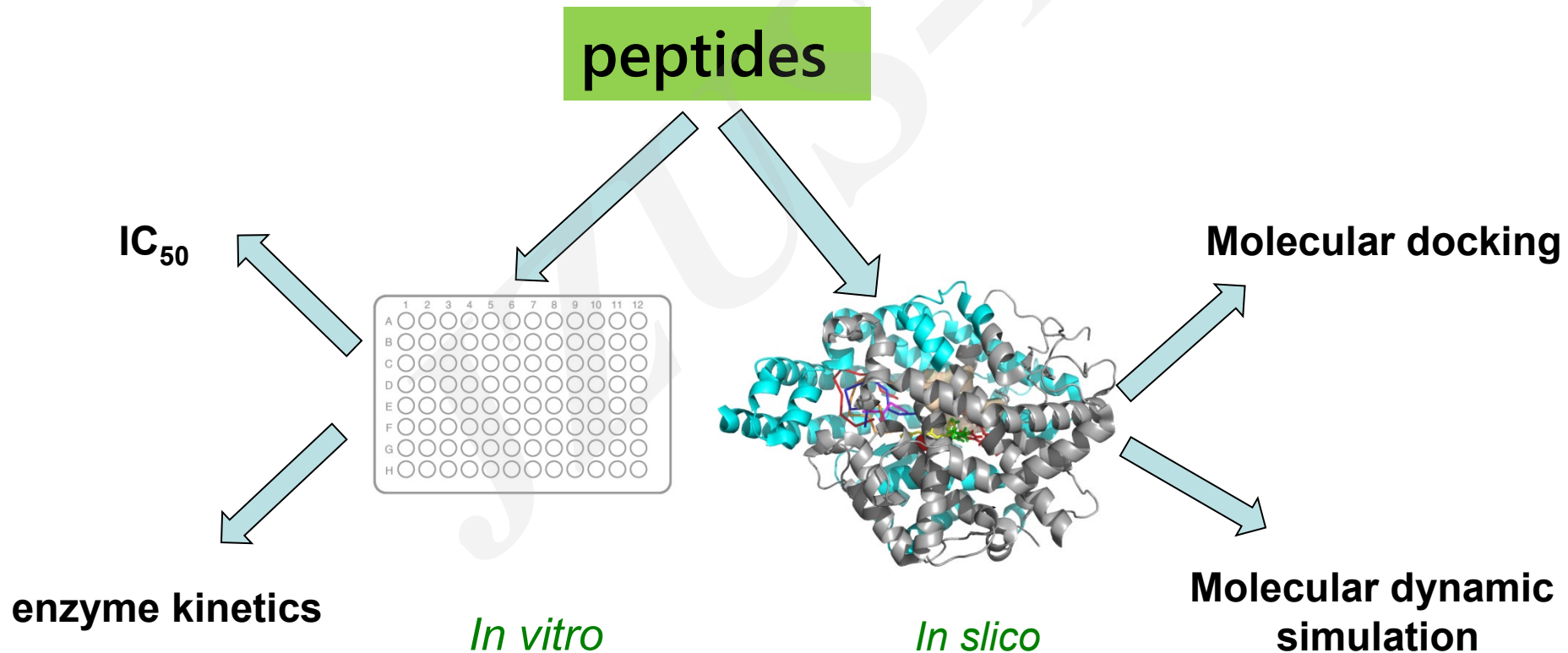
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Inhibitory mechanism of angiotensin-converting enzyme inhibitory peptides from black tea

Key words: Tea peptides; ACE inhibitory peptides; Kinetic study;
Molecular docking; Molecular dynamic simulation

Research Summary

This work discovered the antihypertensive mechanism of tea peptides and analysed the affinities between the peptides and the angiotensin 1-converting enzyme (ACE) using two methods.



Innovation points

- **New natural tea products**

Peptides we used was purified directly from black tea without any additional treatments.

- **New react mode**

Three peptides inhibited ACE activity in an uncompetitive manner were first reported.

- **Novel functional ingredients**

Four bioactive peptides can be considered as novel functional ingredients.

Innovation points

The peptides showing its inhibitory *in vitro* were revealed and characterized by:

Reason 1 | the stability between peptides-ACE complex

Reason2 | the fluctuations of individual residues of ACE after docking with peptides

Reason 3 | the unfolding degree of ACE protein after docking with peptides

Reason 4 | the binding sites of peptides when docking with ACE