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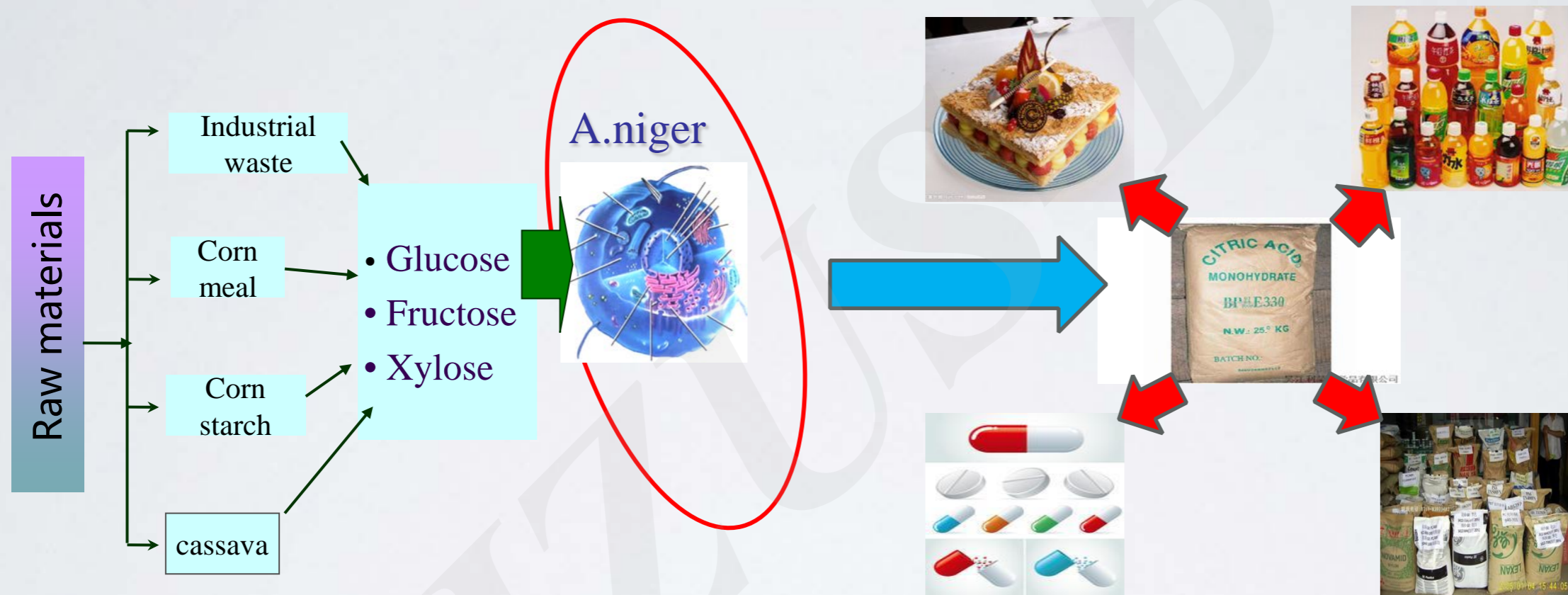
A mutation of *Aspergillus niger* for hyper-production of citric acid from corn meal hydrolysate in a bioreactor

Key words: mutation, citric acid production, corn meal hydrolysate



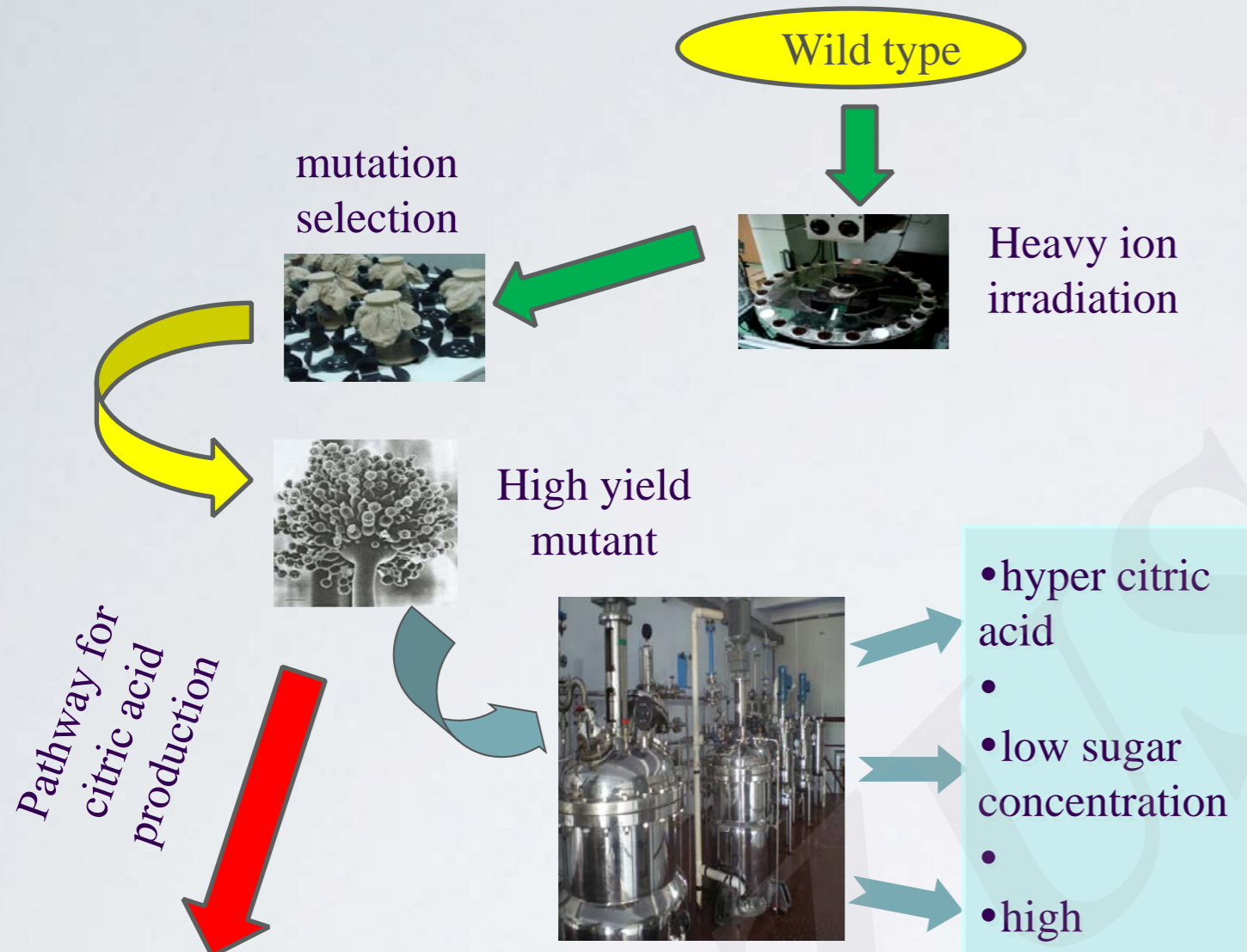
Research summary

This review mainly focused on raw materials for citric acid production and application of citric acid, and summarized the key roles they played in the following aspects:

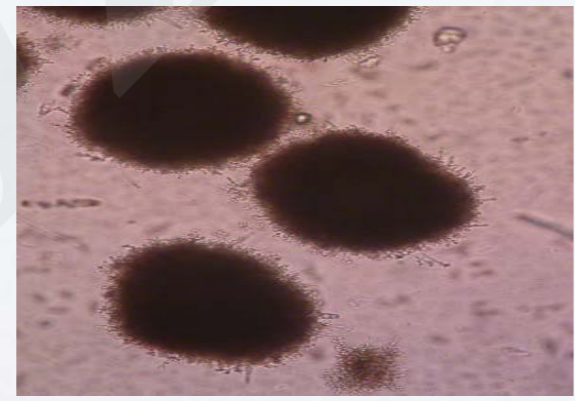
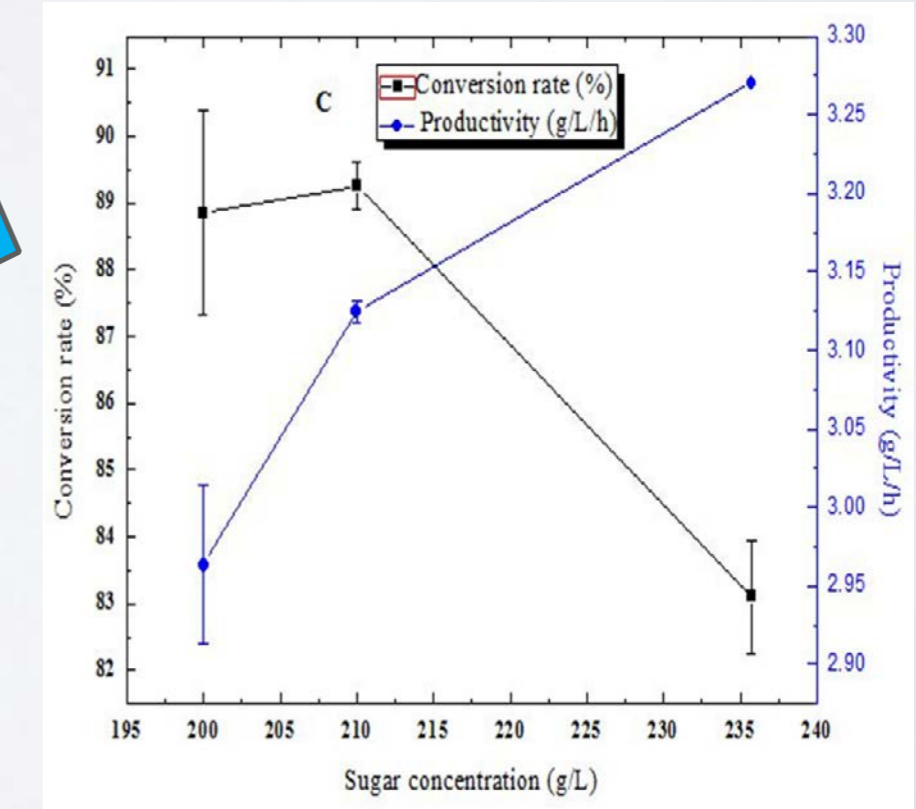
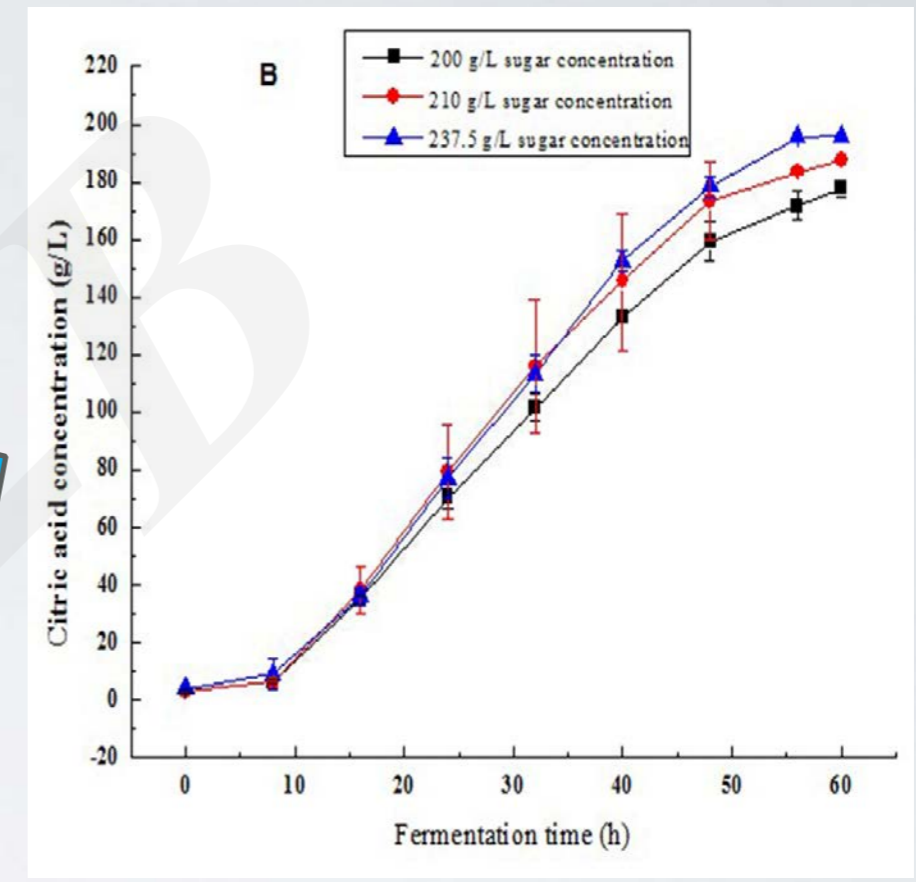
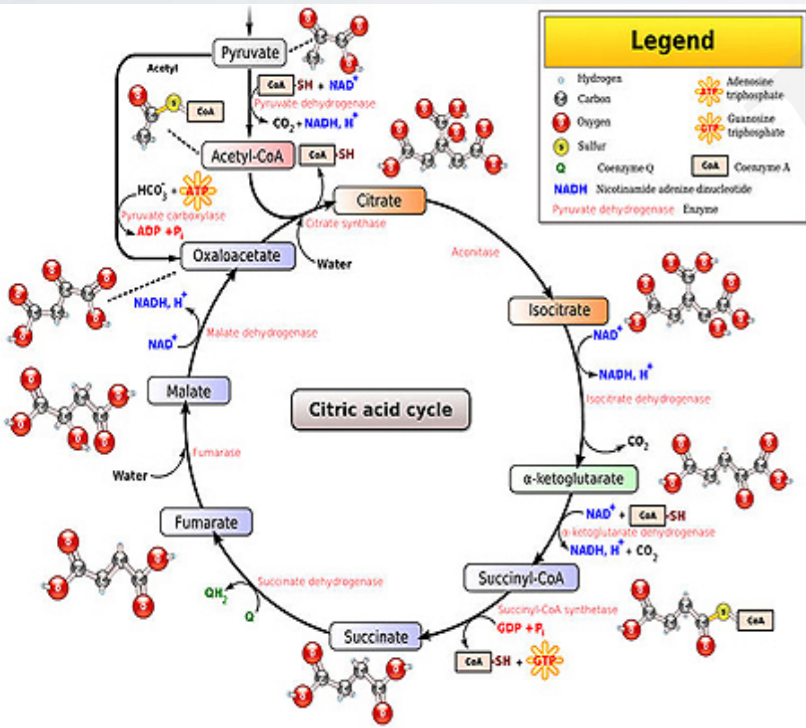


Citric acid fermentation is one of the largest biotechnological industries (Ikram-ul *et al.*, 2004). According to various estimates, citric acid produced through fermentation is 1.7×10^6 ton/annum (Dhillon *et al.*, 2011) and the industrial demands for citric acid are still increasing.

High efficient citric acid production by mutant in a bioreactor



Pathway for citric acid production



Pellets morphology