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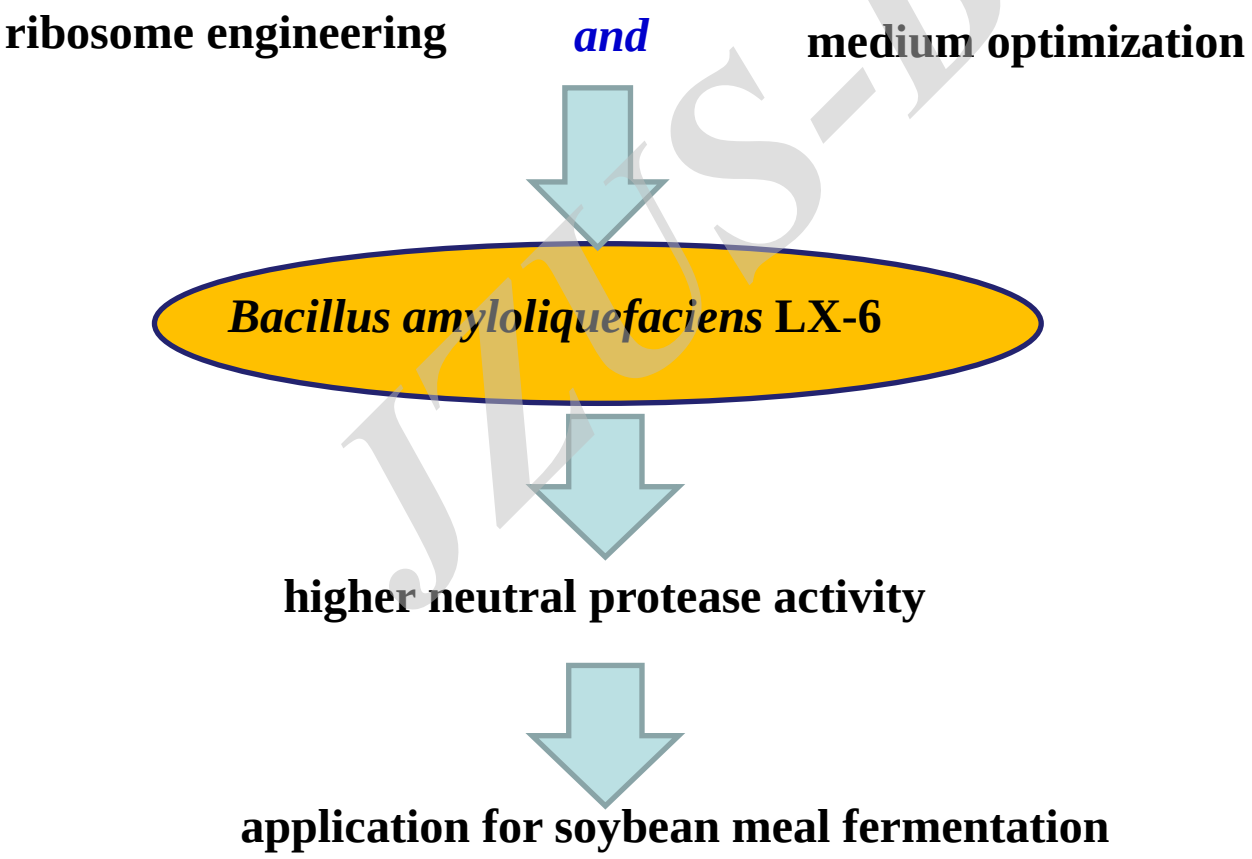
Improvement of neutral protease activity of *Bacillus amyloliquefaciens* LX-6 by combined ribosome engineering and medium optimization and its application in soybean meal fermentation

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Key words: *Bacillus amyloliquefaciens*, Ribosome engineering, Fermentation optimization, Neutral protease, Soybean meal

Research Plan

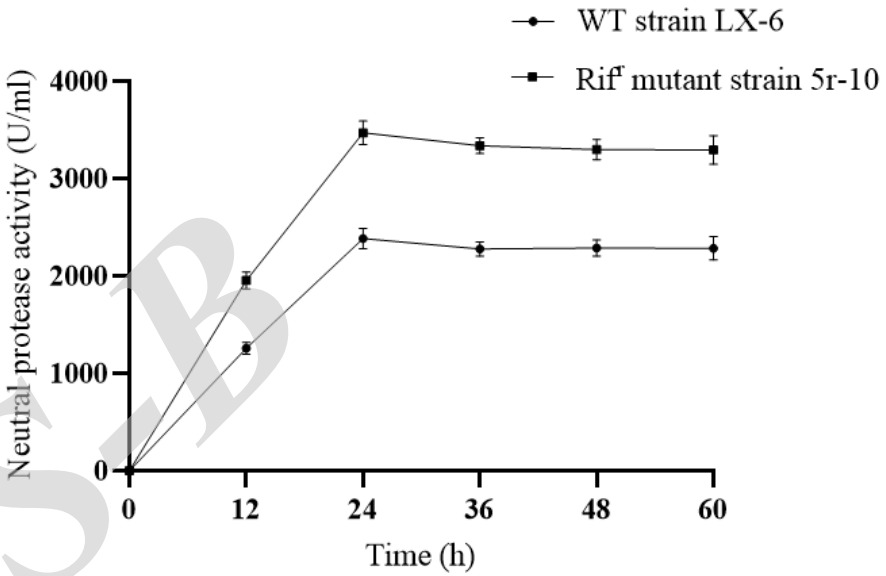
This correspondence mainly focused on improving the neutral protease activity of *Bacillus amyloliquefaciens* LX-6 which used for soybean meal (SBM) fermentation

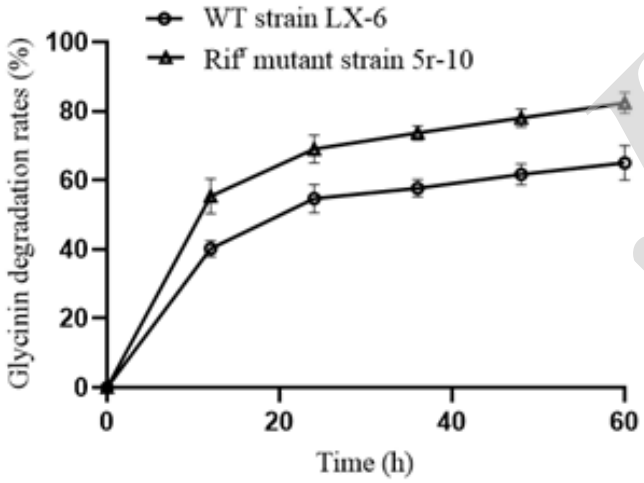


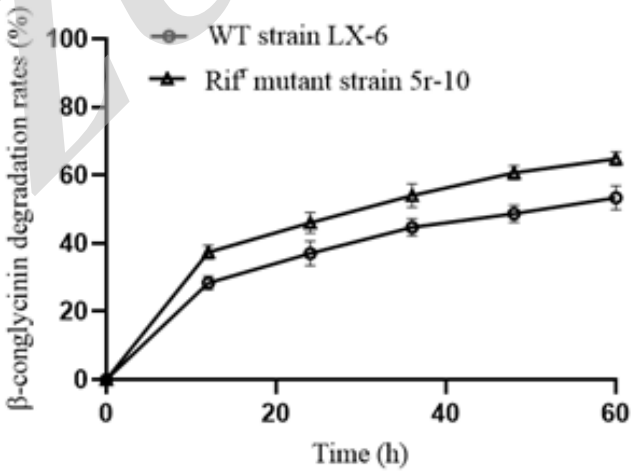
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Results

✓**The spontaneous rifamycin-resistant (Rif^r) mutant named 5r-10 has higher neutral protease activity in optimized medium, which is 1.49 times higher than that produced by the WT strain LX-6 in the original medium.**







✓**The degradation rates of glycinin and β-conglycinin in SBM significantly increased after fermentation with 5r-10**

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Innovation points

● A mutant 5r-10 strain with higher neutral protease activity was yielded and screened by using ribosome engineering technology

● Medium optimization by response surface methodology to improve neutral protease production of mutant 5r-10 that used for SBM fermentation

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