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Screening of the ε-poly-l-lysine producing strains and identification of the strains by 16S rDNA sequencing

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In this research, initially 10 ε-poly-L-lysine (ε-PL) production strains were obtained by using of the nature to form the transparent circle due to electrostatic repulsion between ε-poly-L-lysine (ε-PL) and methylene blue. Then shake flask fermentation rescreening was done. According to the reaction between the fermentation supernatant and Dragendorff reagent and the paper chromatography both appeared as positive reactions, and referring the Itzhaki method to calculate the yield of ε-PL in the fermentation broth to screen out the highest ε-PL production strains. From the 10 above candidate strains, three production strains were screened, numbered 4#, 8# and Y#, for which ε-PL production reached 0.757 g/L, 0.751 g/L and 0.808 g/L respectively. The identification of molecular biology for 4#, 8# and Y# based on 16S rDNA sequence analysis and system phylogenetic analysis were done. The results indicate that 4# may be *Delftia acidovorans*, 8# may be *Stenotrophomonas maltophilia* and Y# may be *Streptomyces griseolus*.

Biography

Xing Hua Gou has completed his Ph.D. at the age of 28 years from Sichuan University and a visiting scholar studies from the Institute of Food Reseach, UK. He is the Dean of Bioengineering Department Chengdu University, China.

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