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Statistical culture-based strategies to enhance chlamydospore production by *Trichoderma harzianum* SH2303 in liquid fermentation

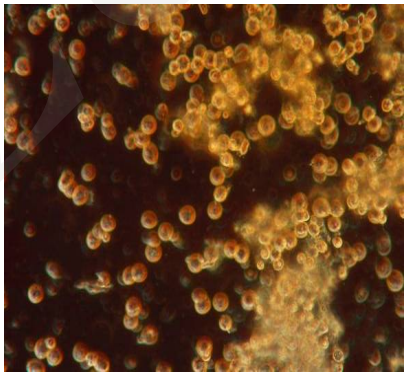
Key words: ***Trichoderma harzianum*** **SH2303, Chlamydospore; Plackett-Burman screening, Box-Behnken design, Liquid fermentation optimization**

Research Summary

This study mainly focused on the optimization of a cost effective medium and cultural conditions for the production of chlamydospores in *T. harzianum* SH2303, and thus to lay a solid foundation for the development of *Trichoderma*-based active chlamydospore formulations in agriculture.



***T. harzianum* SH2303**

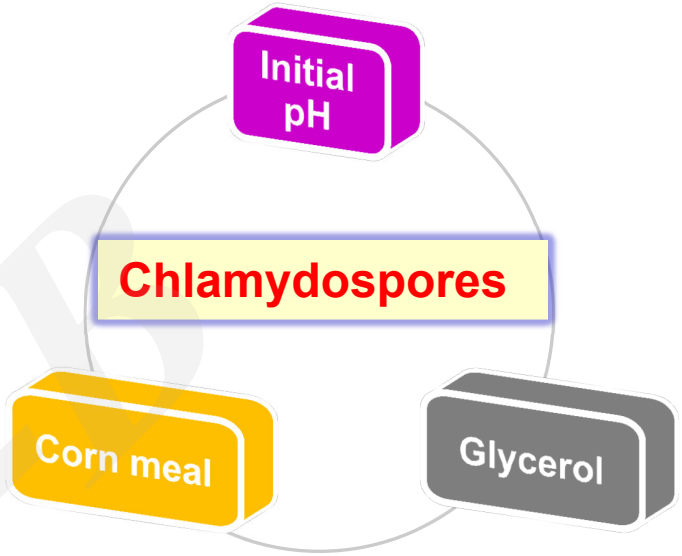


chlamydospore



Trichoderma formulations

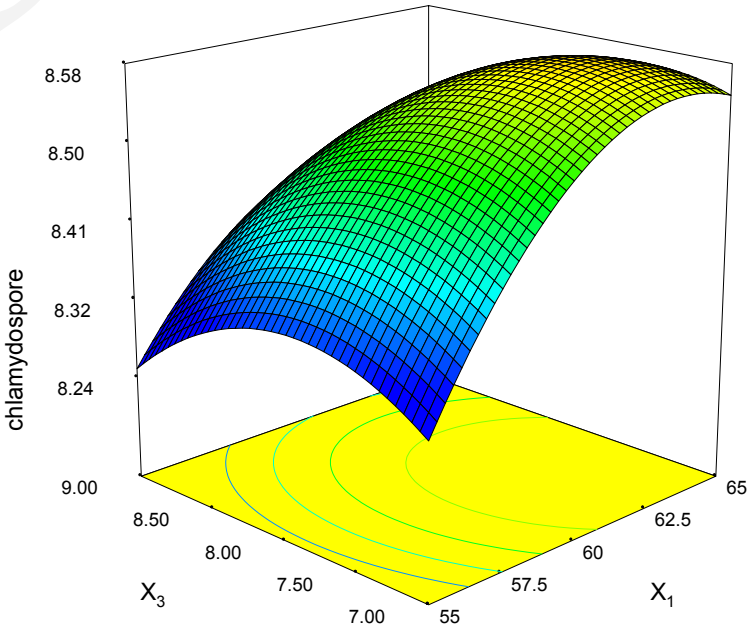
Innovation points

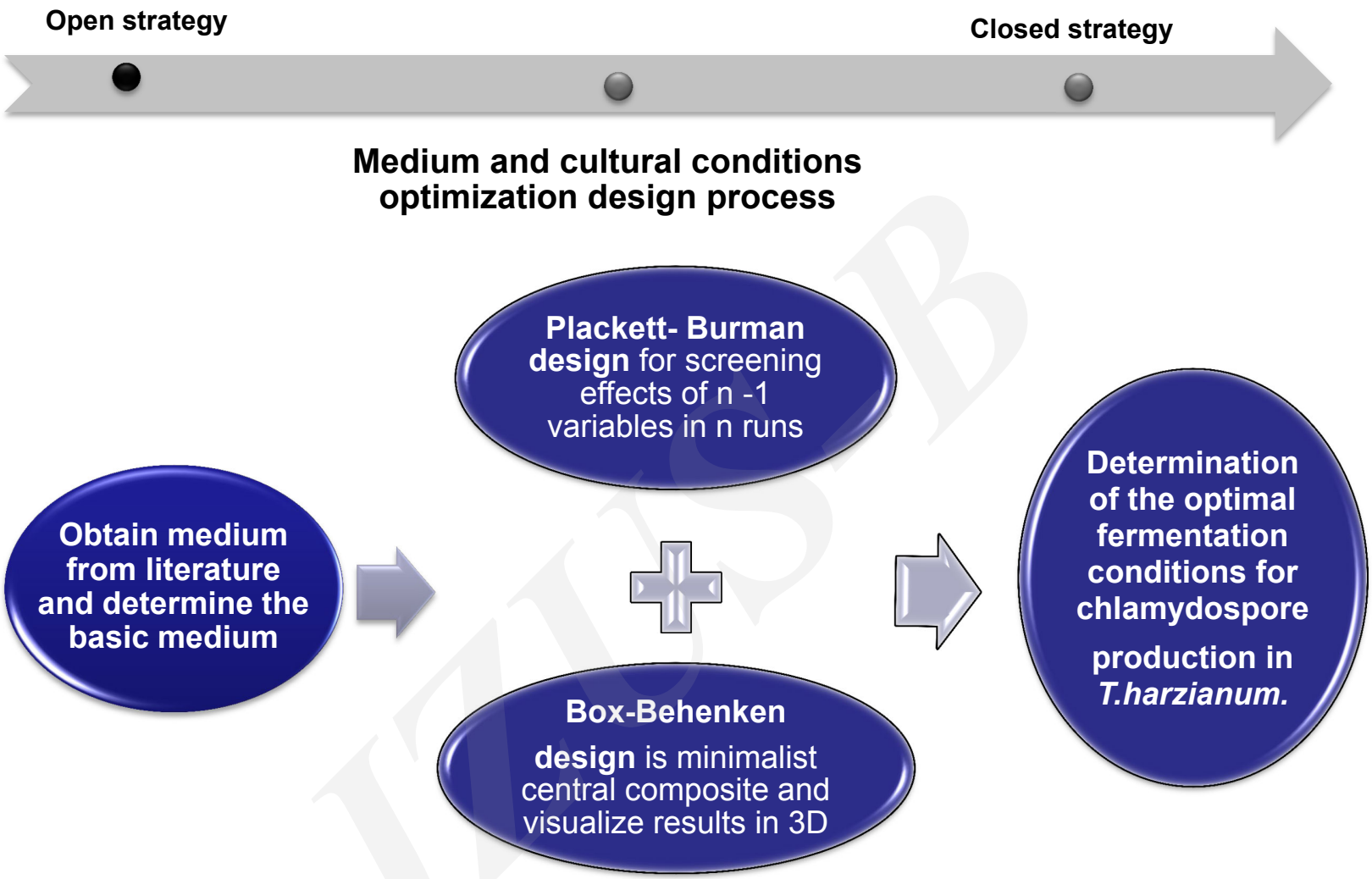


- **Introduction** of the three factors cornmeal, pH, and glycerol play pivotal roles for enhancing the production of chlamydospores in strian SH2303.

- **Summary** of the optimal chlamydospores (4.5×10^8 spores/mL) obtained under the following condition: corn flour 62.86 g/L, glycerol 7.54 ml/L, pH 4.17 and 6 days incubation in liquid fermentation.

- **Emphasis** of the possibility for development of novel biocontrol agents, of which chlamydospore as the main composition of liquid fermentation in a cost-efficient mode .





A integrated fermentation optimization design for the maximize production of chlamydopores in *T. harzianum*.