

QUORUM (NMP4-CT-2006-032811)

Publishable Executive Summary

Summary description of the project objectives

The Quorum approach has four objectives:

- Investigation of fungal quorum sensing for better understanding of biosynthesis of the industrially important target products.
- Study of quorum sensing and signal transduction in relation to fungal physiology and morphology in agitated systems.
- Comparative analyses of fungal cell communication in small and large scale submerged fermentations.
- Exploration of the relevance and interrelation of traditional scale-up factors to quorum sensing in fungal cultures.

The above objectives will be achieved through joint functional genomics (fungal genomics/transcriptomics/proteomics) and molecular biology, fungal physiology and biochemical engineering investigations.

This STREP proposal aims to act as a first step to discover QS molecules in laccases producing basidiomycetes, which could be followed by a more ambitious integrated project during the next framework program. This novel approach, if successful, could be applied to improve other industrial fermentation processes.