Carbon starvation in the filamentous fungus Aspergillus niger

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Stellingen

1. Enrichment analysis of functional annotations can strongly facilitate omics data analysis.
   This thesis

2. Loss of mycelial integrity and productivity during carbon starvation in submerged cultures of *Aspergillus niger* is not necessarily associated with hydrolytic weakening of the fungal cell wall and subsequent hyphal fragmentation.
   This thesis

3. The autophagy-related genes *atg*1 and *atg*8 but not *atg*17 are essential for efficient autophagy in *Aspergillus niger*.
   This thesis

4. Impairment of autophagy accelerates the emergence of empty hyphal compartments and cryptic growth in response to carbon starvation during submerged cultivation of *Aspergillus niger*.
   This thesis

5. It is worth noting that the term "autophagic cell death" describes autophagy associated cell death rather than cell death executed by autophagy.
   Kroemer et al. (2008) Cell Death and Differentiation (16):3-11

6. Retentostat cultivation of *Aspergillus niger* approaching a specific growth rate of zero is a promising approach for the production of small cystein rich proteins and secondary metabolites.
   Jørgensen et al. (2010) Applied and Environmental Microbiology (76):5344-55

7. Not only do open source and open development packages for data analysis such as R and Bioconductor have cost-saving potential, but they have been developed by experts from within the scientific community and thus strongly promote academic independence.
   This thesis and personal communications

8. It is important to note that the mind can only see what it is prepared to see, in particular during data analysis.
   Edward de Bono

9. Like babies, maltose as the sole carbon source in batch cultures of *Aspergillus niger* causes sleepless nights.

10. A biologist capable of automating everyday computational tasks feels like the "One-Eyed Man" in the "Country of the Blind".

11. It is advisable to watch out for speed traps, even when leaving the Netherlands for good in a removal van!

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