

P054 Analysis of the role of Cfh3 in ring contraction and septum synthesis in *S. pombe*

**Mirza Mohammad Reza Sharifmoghadam and
M.-H. Valdivieso**

Universidad de Salamanca/CSIC. Spain

Saccharomyces cerevisiae Chs4 is a SEL1-domain protein required for the endocytic turnover of the chitin synthase Chs3. Additionally, Chs4 links Chs3 to the septins through Bni4. In *S. pombe* there is no chitin synthesis during vegetative growth but in its genome several genes similar to chitin synthases and their regulators are present, including 4 genes with similarity to *CHS4* (*cfh1⁺-cfh4⁺*). Since in the fission yeast Chs2 is required for CAR stability but not for septum synthesis, there is no homologue to Bni4 and septins are not involved in septum formation but in cell separation, we have addressed the role of Cfh proteins. Deletion of the 4 genes does not lead to any strong phenotype but *cfh3⁺* overexpression produces pseudohyphal cells because of abnormal cytokinesis.

Genetic and cytological analyses indicated that Cfh3 exerts its function at the time of CAR contraction/septum synthesis. We have found that Cfh3 is a component of the CAR and that rings are sensitive to stress in the absence of *cfh3⁺*. Additionally, the function of Cps1/Bgs1, the glucan synthase required for the synthesis of the primary septum, is defective in the *cfh3Δ* null mutant. Finally, we have found that Cfh3 is required for proper localization of Bgs1 under stress conditions. These results point to a role of Cfh3 as a scaffold required for proper ring contraction and septum synthesis under stress conditions.