D302 Regulation of Cell Wall Biosynthesis during Cell Division Cycle in *Aspergillus nidulans.*

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Chitin and β-1,3-glucan are major structural components of fungal cell wall and they are synthesized by chitin synthase and β-1,3-glucan synthase, respectively. Five different chitin synthase genes(*chsA, chsB, chsC, chsD* and *chsE*) and one β-1,3-glucan synthase gene(*fksA*) have been reported from *A. nidulans*. To find out the expression pattern of each gene during cell division cycle, their transcripts have been analyzed by nothern hybridization and enzyme activity have been assayed. The transcript of *fksA* started to be detected at G1 phase and diminished at M phase followed by showing its maximum amount at S phase. On the other hand, the enzyme activity of FksA showed the highest peak at G2 phase. Among chitin synthase genes, it seems that *chsE* is constantly expressed throughout cell division cycle. Currently, we are trying to figure out the expression pattern of chitin synthase genes.

[This work was supported by KOSEF(98-0401-0301-5)]

D303 Functional analysis of the myosin family on growth and dimorphic switches of *Candida albicans*

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Dimorphic yeast *Candida albicans* reciprocally switches between the form of yeast and hyphae depending on external conditions. We investigated the possible roles of the myosin family in the growth and dimorphic switches of *C. albicans* with a general myosin ATPase inhibitor, 2, 3-butanedione-2-monoxime (BDM). Transition to hyphae as well as proliferation by budding was completely inhibited by BDM at 16 mM. Presence of 16 mM BDM did not affect hyphae to bud transition but did block budding. The effects of BDM on yeast growth and dimorphic switches were reversible. BDM-treated cells demonstrated the defects in the amount and the polarized localization of F-actin as well as in shape and migration of the nucleus, suggesting that myosin activities are needed in these cellular processes of *C. albicans*. Genome sequence efforts reported partial sequences of the three class of putative myosin genes in *C. albicans*. Cloning and knock-out of these three myosin genes are in progress to elucidate the functions of each class of myosin on dimorphic switches of *C. albicans*.