

The Roles of SC3 and SC15 of *Schizophyllum commune* during Growth on Wood

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The SC3 hydrophobin plays several roles in growth and development of *S. commune*. It lowers the surface tension of the aqueous substrate, enabling aerial growth, and it coats the aerial hyphae rendering them hydrophobic. SC3 also allows hyphae to attach to hydrophobic surfaces. Moreover, SC3 has a role in the cell wall architecture. In the absence of the hydrophobin, *S. commune* produces more mucilage. The SC15 protein mediates aerial hyphae formation and attachment in the absence of SC3. Besides being secreted into the medium, the protein can be found in the mucilage that binds aerial hyphae together. So far, studies were performed on minimal media. We here assessed the roles of SC3 and SC15 during growth on wood. SC3 and SC15 were shown not to play a role in colonization of wood. Biomass formation and radial extension was similar in the wild-type and in strains in which either or both *SC3* and *SC15* were deleted. Interestingly, in contrast to growth on minimal medium deletion of *SC15* alone affected formation of aerial hyphae. A similar reduction was observed for the *SC3* mutant while reduction in the $\Delta SC3 \Delta SC15$ was most dramatic. At the moment we assess the role of SC15 in the fruiting body. Preliminary data using GFP as a reporter indicate that *SC15* is expressed within the fruiting body. Here it may play a role in the mucilage surrounding the hyphae.