

The effect of mRNA binding protein Slr1 on transport of mRNAs in *Candida albicans*
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The yeast *Candida albicans* is a common human fungal pathogen that can cause diseases ranging in severity from minor infection of the skin to the fourth most common hospital-acquired bloodstream infection in the United States, with a mortality rate of up to 71 percent [1]. Because yeast species have exhibited increasing resistance to antifungal drugs [2], a deeper understanding of the cellular mechanisms that allow yeast cells to invade host cells must be developed.

To infect animal models, yeast cells must be able to transition between a circular shape and a hyphal or elongated shape [3,4]. Different proteins expressed in the hyphal form but not in the yeast form allow the hyphal form to infect host cells. One mechanism that another fungus uses to differentially express proteins and transition between shapes is called directional mRNA transport [5]. mRNAs are fragments of genetic material that are used to make proteins within cells. Forming certain proteins in specific regions of cells is one of the mechanisms that drives cells to change shape. Transporting mRNA to specific regions allows formation of proteins at their sites of function, instead of near the nucleus, the structure containing their genetic material [6]. Directional mRNA transport could be one of the mechanisms by which *C. albicans* cells transition between circular and elongated hyphal shapes and differentially express proteins that allow for stronger host cell adherence of the hyphal form. Evidence for this hypothesis involves She3, an RNA-binding protein that transports mRNA

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