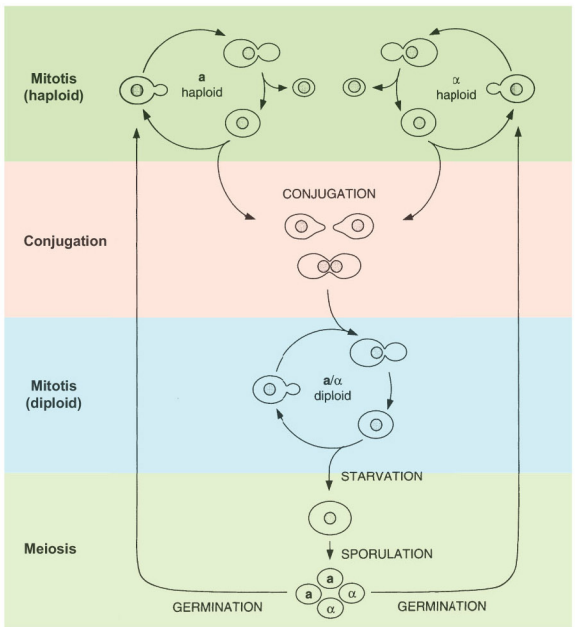


a



b

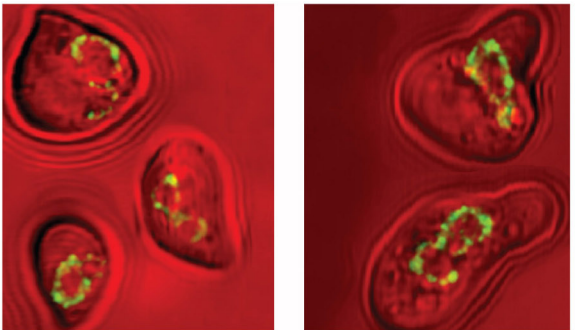


Figure 2. The Life Cycle of Budding Yeast

(a) Yeast cells divide mitotically in both haploid and diploid forms. Sporulation is induced in a diploid by starvation, whereas mating occurs spontaneously when haploids of opposite mating type are in the vicinity of each other. This occurs by pheromone secretion, which arrests the cell cycle in G_1 of a cell of the opposite mating type, and after sufficient exposure to pheromone, the mating pathway is induced. The diploid state represses the mating pathway. (b) In response to pheromone, haploid cells distort toward cells of the opposite mating type. These are called shmooes. The nuclear envelope is visible as green fluorescence.