



Figure 1. Asexual life cycle of *Dictyostelium discoideum*

Undifferentiated, free living amoebae of *Dictyostelium discoideum* initiate a program of cell differentiation when subjected to starvation. Initially, the starving cells aggregate chemotactically in response to extracellular pulses of 3', 5' cyclic AMP (cAMP) secreted by the cells themselves. Differentiation leads to the formation of prestalk and prespore cells that eventually form the stalk and spore cells of the fruiting body. Spores are dispersed into the environment where they germinate into free living amoebae under favorable conditions.