

Chisholm, R.L. and R.A. Firtel (2004). Insights into morphogenesis from a simple developmental system. *Nature Rev. Mol. Cell Biol.* 5:531–541.

We are only starting to understand the molecular mechanisms that underlie cell and tissue movements during morphogenesis in metazoans. *Dictyostelium discoideum* provides a valuable model system for understanding these events — as it has for chemotaxis — despite the many differences that exist between this social amoeba and more complex organisms. Genetic and genomic studies, combined with real-time imaging, have identified key pathways that regulate morphogenesis in *D. discoideum*, and which are likely to have similar roles in metazoans.