**ACTIVE DROPLETS**

We discuss hydrodynamic approaches to self-propulsion of microorganisms. The simplest, analytically tractable model is a viscous fluid droplet with given activity on its surface or in the interior. The activity can give rise to turbulent flows and mixing in the droplet, favourably competing with diffusion. Other applications include compound droplets, driven by an encapsulated swimmer or squirmer. Activity in general gives rise to deformations of the droplet and hence can account for amoeboid motion.