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**Extremes in motility: actin acrobatics, spasmin spasms and jellyfish jabs**

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Fast movements in biology are functionally relevant in the context of avoidance and capture. I will talk about some of the adaptations in biology that lead to speed at the cellular level in a variety of organisms, and then discuss three in some detail: the explosive motility of jellyfish stings, the fast contraction of some pond weeds, and the extrusion of an actin spring. In each case, the morphology and mechano-chemistry come together in unusual ways that are adapted for functionality. This leads to questions of both a comparative and an evolutionary nature, and serve to perhaps move these questions from the realm of stamp collecting to physiology and physics.