# *Dictyostelium discoideum:* a model for testing novel inhibitors of urokinase-type plasminogen activator

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The social amoeba *Dictyostelium discoideum* is a useful non-animal eukaryote for testing novel compounds and dissecting cell regulatory molecular networks. We used this model organism to investigate the effect of a series of arylboronic acids and pinacol esters on development, chemotaxis and viability. These compounds were studied in parallel by collaborators for serine protease and urokinase-type plasminogen activator (uPA) inhibition, both *in vitro* and *in vivo*. In those biochemical assays, three compounds, BC11, SR3 and BC57, displayed micromolar (50 µM) inhibition of uPA, with an excellent selectivity profile over related proteases (Smith *et al.*, 2012). Notably, the same compounds disturbed cell adhesion and migration in *Dictyostelium*, without any effect on viability. Compound BC11 was chemotoxic rather than just chemostatic, proving to be the most potent and selective inhibitor of uPA in these independent *Dictyostelium* and biochemical assays.

Smith E, Spencer J, Ali M, et al. (2012) Elucidating novel urokinase-type plasminogen activator inhibitors. In Journal of Thrombosis and Haemostasis, ppe10–e24.