

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Neurology				
Huntington's disease (HD); Parkinson's disease (PD)	Huntingtin; α -synuclein	<p>A pharmacological screen identified multiple generic drugs that could be repurposed to treat HD and PD. Five L-type Ca^{2+} channel antagonists including verapamil and loperamide, as well as the $\text{K}^{+}_{\text{ATP}}$ opener minoxidil and the G_i signaling activator clonidine, promoted the clearance of α-synuclein and huntingtin aggregates by stimulating autophagy, a mechanism for digesting intracellular proteins by encapsulating them in membranous compartments. In fly and zebrafish models of HD, the generic drugs reduced huntingtin aggregation compared with no treatment. Next steps include testing the drugs or other compounds identified in the screen in mouse models of HD and PD.</p> <p>Verapamil is marketed to treat angina pectoris, loperamide to treat acute diarrhea, minoxidil to treat alopecia and clonidine to treat hypertension.</p>	Patented; available for licensing through Cambridge Enterprise Ltd.	<p>Sarkar, S. <i>et al. Nat. Chem. Biol.</i>; published online March 23, 2008; doi:10.1038/nchembio.79</p> <p>Contact: David C. Rubinsztein Department of Medical Genetics, University of Cambridge, U.K. e-mail: dcr1000@hermes.cam.ac.uk</p>