

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Endocrine/metabolic disease				
Obesity	Poly(ADP-ribose) polymerase (PARP)	<p><i>In vitro</i> and mouse studies suggest PARP inhibition could help treat muscle dysfunction caused by mitochondrial defects. In mice fed a high-fat diet, a PARP inhibitor decreased weight gain and increased energy expenditure compared with vehicle and did not alter food intake. In the mouse model, long-term treatment with a PARP inhibitor did not cause genomic instability or observable toxicities, which are potential concerns with use of PARP inhibition in indications other than cancer. In human skin fibroblasts with impaired mitochondrial activity and skeletal muscle cells from obese patients, a PARP inhibitor increased mitochondrial function compared with vehicle. Next steps could include testing PARP inhibitors in additional models of metabolic dysfunction.</p> <p>AstraZeneca plc has the PARP inhibitor Olaparib in FDA and EMA review to treat ovarian cancer. At least 12 other companies have PARP inhibitors in Phase III or earlier testing to treat various cancers.</p> <p>SciBX 7(23); doi:10.1038/scibx.2014.681 Published online June 12, 2014</p>	Patent and licensing status unavailable	<p>Pirinen, E. <i>et al. Cell Metab.</i>; published online May 8, 2014; doi:10.1016/j.cmet.2014.04.002 Contact: Johan Auwerx, Swiss Federal Institute of Technology Lausanne, Lausanne, Switzerland e-mail: admin.auwerx@epfl.ch Contact: Carles Cantó, Nestlé Institute of Health Sciences, Lausanne, Switzerland e-mail: carlos.cantoalvarez@rd.nestle.com</p>