Binge-eating disorder (BED) is a newly recognised psychiatric disorder (DSM-5, May 2013)

RenaSci has successfully developed a new model of BED in rats and validated it using lisdexamfetamine, the first drug approved by the FDA for the treatment of moderate to severe BED in adults (Jan 2015)

Impulsivity is a core symptom in the psychopathology of BED that can be assessed by enhanced delay discounting (ie subjects with BED will choose smaller, immediate rewards rather than wait for a larger, delayed reward)

We have developed a delay discounting model to evaluate impulsivity and intolerance of delayed gratification in rats

Animals are trained in two-lever operant chambers to press one lever for a small, immediate reward of palatable food and the other lever for a larger but delayed food reward

Binge-eating rats show greater impulsivity and enhanced delay discounting in the test. This response develops with increasing number of binge-eating sessions

The delay discounting model has been validated with lisdexamfetamine

Lisdexamfetamine increased the responding of binge-eating rats for the larger, delayed reward (Hutson et al., 2015, ACNP Meeting)

The delay discounting model can now be used to evaluate the effect of novel drugs on impulsivity in binge-eating or normal rats

For more information contact: e: inform@renasci.co.uk t: +44 (0) 115 912 4260 www.renasci.co.uk