OptoPath

NEUROCENTRE MAGENDIE

TEST OBE 1

Evaluation of the acute and chronic actions of new compounds on energy balance regulation in rodents using a comprehensive behavioral and metabolic approach

Background

Our laboratory has the required expertise and equipment needed to study feeding behavior in rodents and to couple analysis of behavior with metabolic evaluation. The latter spans from the study of body composition to the assessment of energy expenditure and glucose metabolism *in vivo.* We also have the required expertise to study the effects of compounds given either acutely or chronically through different routes of administration (central vs. peripheral). The battery of tests that we propose using diet-induced obese mouse models allows screening new compounds that might be useful for battling body weight gain and/or metabolic dysregulation.

Assay principle

Our assays are based on the fact that **compounds with anti-obesity potential are able to interfere with food intake and/or energy expenditure and/or adiposity levels overall resulting in decreased body weight and adiposity.**

Assay Information

Biological models	**Male mice**
Methods	**Central (icv or intrahypothalamic) or peripheral (sc, ip, po) administration of the compound and assessment of behavioral and metabolic responses**
Readouts	**Ability to modify:** • **feeding behavior** • **body weight** • **body composition** • **energy expenditure and use of energy substrates** • **glucose metabolism**
Standard reference	**Depending on the pharmacological features of the tested compound**
Turn around time	**3 weeks up to several weeks, depending on the route of administration, on the specific readouts analysed and on length of treatment**

Person in charge

Dr. Daniela Cota, MD

Contact : optopath « at » u-bordeaux.fr

INVESTISSEMENTS D'AVENIR

université de BORDEAUX

Instituts thématiques Inserm Institut national de la santé et de la recherche médicale

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