Mouse phenotyping methods: Prediabetes

**intervention**
- Nutrients: Enriched diets, Food deprivation
- Exercise: Voluntary Training (treadmills)

**phenotyping**
- Metabolic/Imaging: Body weight, GTT, GSIR, ITT, Glucose uptake, MRI, PET-MRI
- Behavior/Brain function: Food intake, Locomotor activity, Electrocorticography, Microdialysis, Brain metabolism (in primary astrocytes)
- Exercise performance: Distance, time, Endurance, Respiratory exchange rate
- Renal function: Metabolic cages, Non-invasive BP, Disease models, Tissue analysis

**samples/tissues**
- serum/plasma
- brain: endocrine pancreas, liver, fat
- muscle: Oxidative (soleus, RG), Glycolytic (EDL, plantaris, WG)

**Clinical chemistry**

**Metabonomics**

**Isolation of primary cells**
- Functional tests
- Molecular analysis

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