



The Western Diet, characterized by a high intake of refined sugars, saturated fats, animal proteins and salt but little fiber, is spreading across the World. It is known to have various and numerous deleterious effects on health and increasing the risk of diseases, such as metabolic syndrome and complications. Nutraceuticals and food supplements could help reverse these adverse effects and prevent the development of associated diseases.

Physiogenex has developed an integrated and global physiological approach with specific and adapted animal models and diets that allow, in optimized costs and time, to screen the efficacy of your products, to get proofs of concept, to elucidate their mechanisms of action and to anticipate clinical trials with targeted population (patients).

Western diet
(mice, rats, hamsters)



- Insulin resistance
- Obesity
- Dyslipidemia
- Hypertension
- Inflammation/
oxidative stress in
various tissues
- Type 2 diabetes

Key objectives:

- ✓ Tailor made nutrition-induced **metabolic syndrome** animal models mimicking **western diet** habits
- ✓ Take advantage of our “in vivo” full package platform to assess body composition, energy expenditure, lipid and glucose metabolism, cholesterol metabolism, vascular impairments, Intestine barrier & Liver functions.
- ✓ Use of gold-standard translational biomarkers or imaging tools allowing a better follow-up for clinical trials

CardioVascular Health

- Blood lipid profile (cholesterol, triglycerides, free fatty acids, lipoprotein metabolism)
- Endothelial function
- Vascular reactivity
- Blood pressure (Telemetry)

Body weight management

- Adipose tissue function and morphology
- Energy expenditure measurement
- Body composition (DEXA)
- Food intake assessment

Nutraceuticals & Food supplements

Digestive Health

- Intestine barrier function
- Nutrients absorption
- Inflammation
- Feces analysis
- Gut microbiota analysis (partnership with VAIOMER)

Glucose homeostasis

- Insulinemia, glycemia (clamp, OGTT)
- Glucose uptake
- Glucose intolerance
- B cell dysfunction

Detox Functions

- Oxidative stress assesment
- Oxidative damage
- Functional and morphological integrity of the liver
- Renal function

