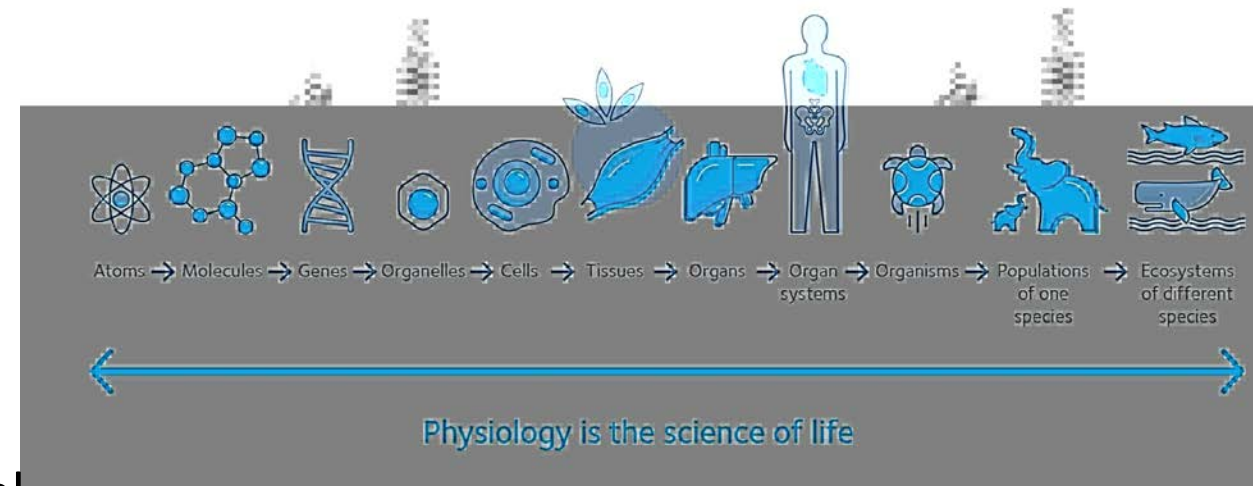


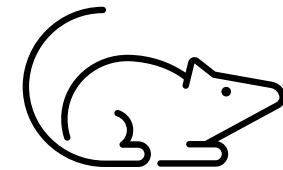
Dokuz Eylul University
Institute of Health Sciences
Department of Physiology

Physiology

- Physiology aims to understand the mechanisms of living things, from the basis of cell function to the influence of the body and the external environment.
- Examines the physical, mechanical, and biochemical functions and systems of living things.
- It offers a holistic approach to the study of molecular mechanisms, cellular effects, systems, and whole-body function.
- Research Interests:
 - How the body works in health
 - How it responds and adapts to the challenges of everyday life
 - Determining what goes wrong in disease
 - It facilitates the development of new treatments to maintain human and animal health.







Experimental Animal Models

Studies are carried out with various experimental animal models using rats and mice:

- Nutrition
- Obesity
- Social isolation
- Autism
- Nerve damage
- Exercise
- Ischemia-reperfusion
- Alzheimer's
- Aging
- Electromagnetic field

Behavioral Experiments

- Various behavioral tests are used to evaluate behavioral effects in experimental animal models.

Learning and memory

Anxiety-like behavior

Depression-like behavior

Social behavior

Motor Function

Learning and Memory Tests

- Morris water maze
- New object recognition test



Anxiety-Like Behavior Tests

- Elevated plus maze
- Open field test
- Light/dark box test
- Object burrying test



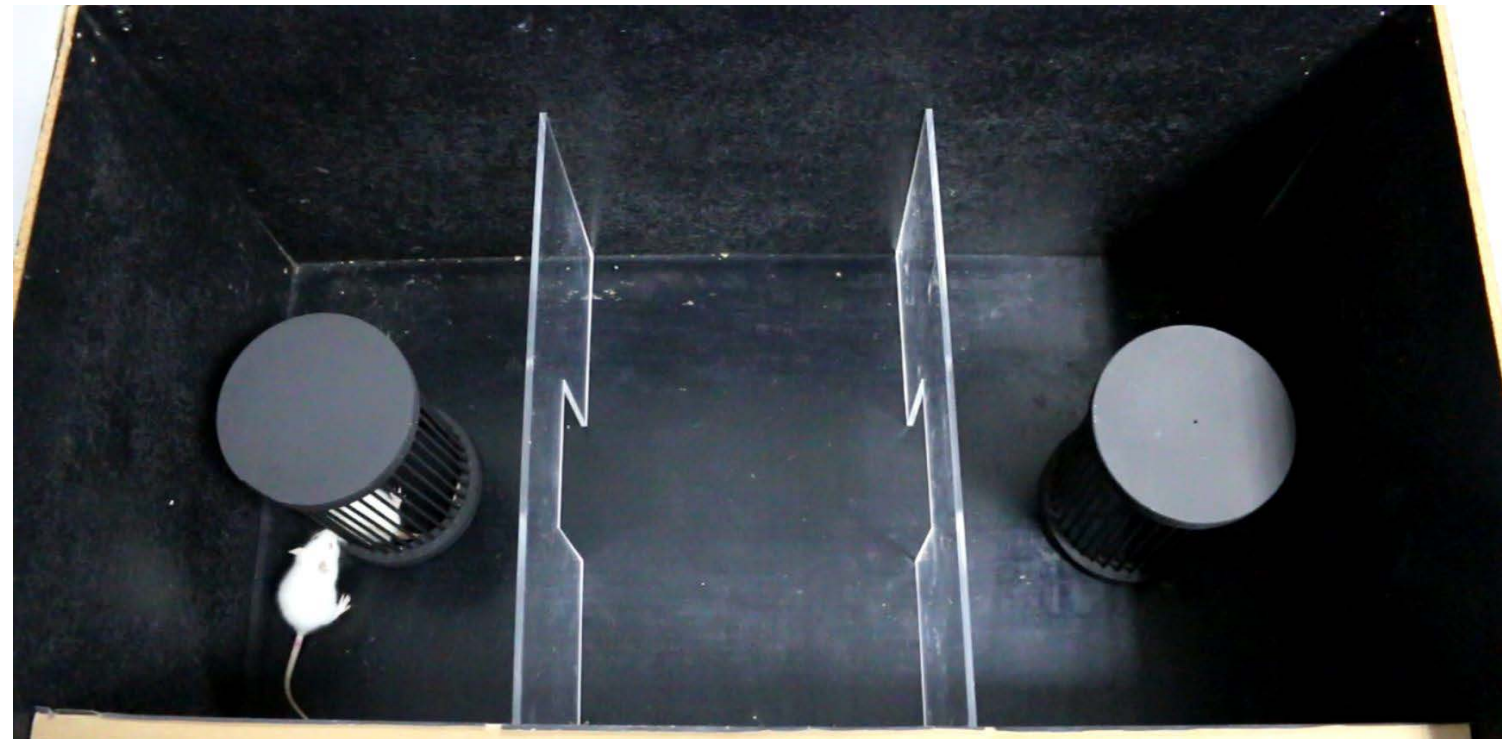
Depression-Like Behavior Tests

- Porsolt (forced swimming) test
- Tail suspension test
- Sucrose preference test



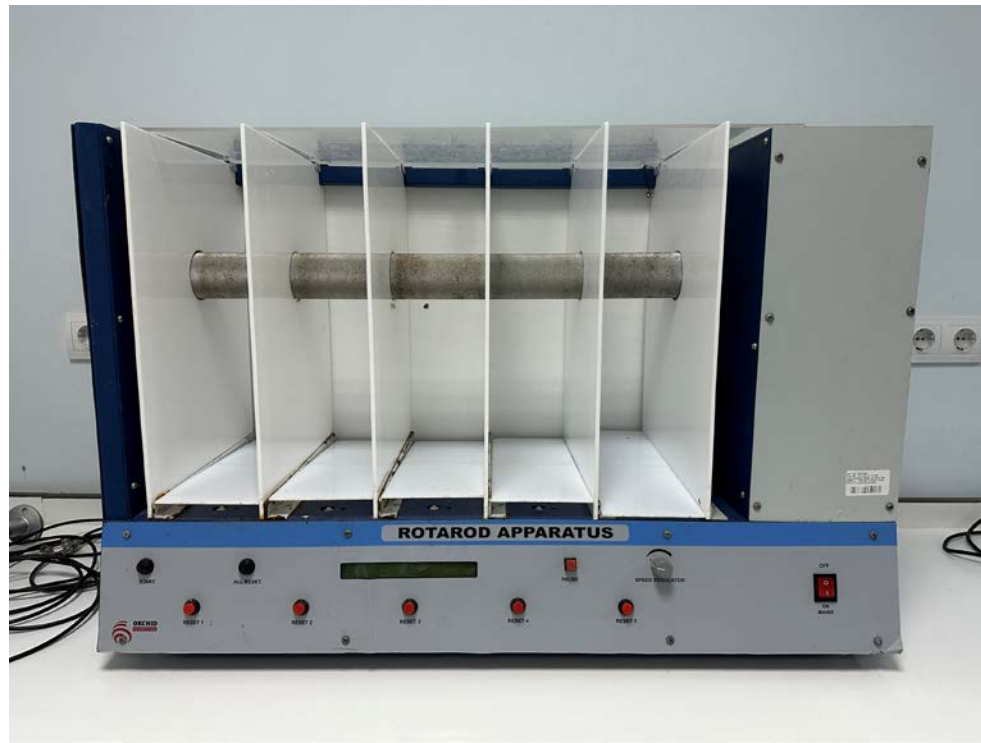
Social Behavior Tests

- Three-chamber sociability and social novelty test
- Ultrasonic vocalization analysis
- Empathy box



Motor Function Tests

- Grip strength
- Hot plate
- Rotarod



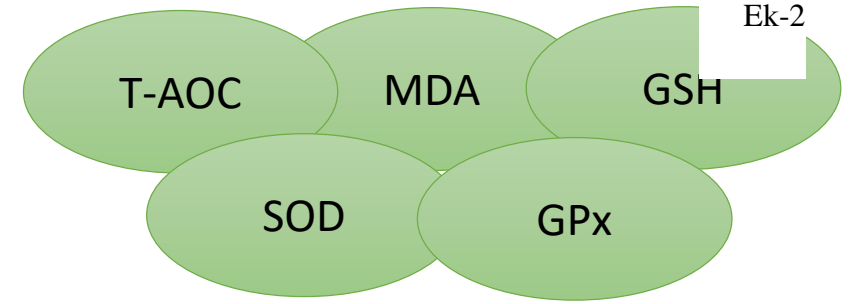
Laboratory Equipments

- Centrifuge
- Precision lab scale
- Refrigerators
- Ice machine
- Water distiller
- Fume hood
- Hot water bath
- Magnetic stirrer
- pH meter
- Ultrasonic Homogenizer
- Incubator
- Microtome
- Microscopes
- Spectrophotometer (Plate reader)
- Western blot system

Ek-2

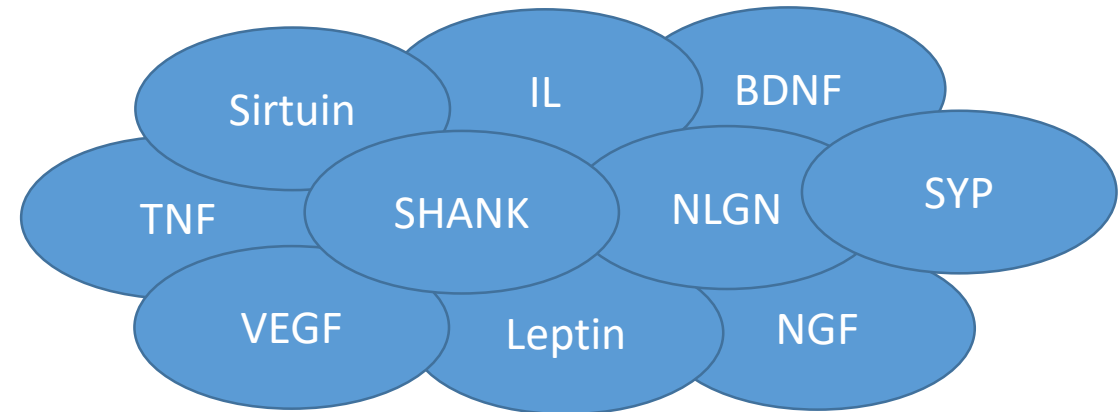


Analysis



Investigation of oxidative stress markers (Spectrophotometry)

Protein quantity analysis (ELISA)



Immunohistological examinations

Histological staining

