

# Department of Animal Physiology and Pharmacology

Institute of Biological  
Sciences

Faculty of Biology  
and Biotechnology  
UMCS in Lublin



# List of bachelor's thesis supervisors

prof. dr hab. Piotr Wlaż

dr hab. Katarzyna Socała,  
prof. UMCS

dr hab. Dorota Nieoczym

dr Aneta Unkiewicz-  
Winiarczyk

dr Mateusz Pieróg

List of  
master's  
thesis  
supervisors

prof. dr hab. Piotr  
Wlaź

dr hab. Katarzyna  
Socała, prof. UMCS

dr hab. Dorota  
Nieoczym

# Topics of bachelor's theses

- Animal and human physiology issues
- Pharmacology, especially neuro- and psychopharmacology





# Sample topics of bachelor's theses:

Stress and its effects on health

prof. dr hab. Piotr Wlaź

Anxiety disorders and their treatment

dr hab. Katarzyna Socala

Caffeine and its effect on functioning of the human body

dr hab. Dorota Nieoczym

Influence of selected hormones on pain perception

dr Aneta Unkiewicz-Winiarczyk

Skeletal muscle physiology and the aging of the organism

dr Mateusz Pieróg

# Topics of master's theses

- Behavioral and biochemical studies in selected epilepsy models
- Studies on the mechanisms underlying the pathogenesis of some neurological and neuropsychiatric disorders such as epilepsy, depression and anxiety



# Sample topics of master's theses:

Effect of salvinorin A on the seizure threshold in the electrically-induced seizure models in mice

prof. dr hab. Piotr Wlaż

Effect of sildenafil on the activity of phenobarbital and tiagabine in 6 Hz seizure test in mice

dr hab. Katarzyna Socała

Effect of pterostilbene on seizure activity in the pentetrazole kindling model in mice

dr hab. Dorota Nieoczym

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A student carrying out his master's thesis at the Department of Animal Physiology and Pharmacology has contact with animals (mice, rats) and animal material, participates in experiments with the use of laboratory animals

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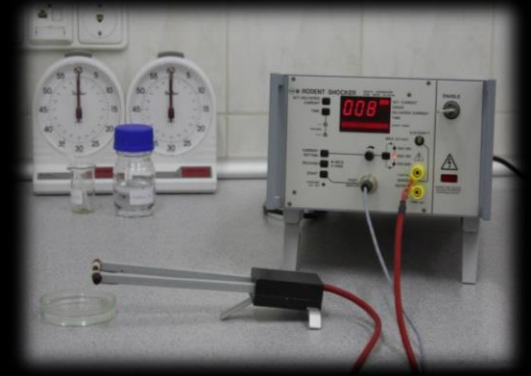
Animal procedures are performed only after approval by the Local Ethics Committee in Lublin





## Examples of experimental models used in our research work:

- Maximal electroshock seizure threshold (MEST) test
- Six-hertz (6 Hz) psychomotor seizure threshold test in mice





## Examples of experimental models used in our research work:

### Models of chemically induced epileptic seizures

- Intravenous pentylenetetrazole seizure threshold test (*i.v.* PTZ)
- Subcutaneous pentylenetetrazole seizure threshold test (*s.c.* PTZ)

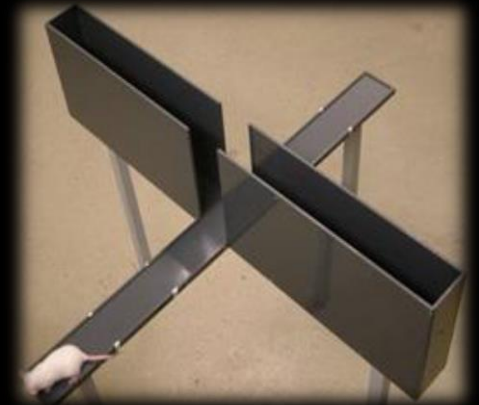
Pentylenetetrazole kindling – epilepsy model

## Examples of experimental models used in our research work:

Forced swim test (FST) to measure the effects of antidepressant compounds in rats and mice (Porsolt test)



The Elevated Plus Maze (EPM) test - used to assess anxiety-related behavior in rodent models of CNS disorders.



# Examples of experimental models used in our research work:

Tests evaluating adverse effects of substances:

- The chimney test and the rotarod test - to assess motor coordination
- Passive Avoidance Test - to assess long-term memory impairment
- Grip strength test in mice
- Measurement of spontaneous locomotor activity of animals using actimeters

