



Tests for anxio-depressive behaviour

Sylvia Badurek (VBCF), Agata Miska-Schramm (ICRC)

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Pilot project introduction



- *Project partners:*



- *Basic project idea:*

Quality benchmarking for mouse behavioral testing

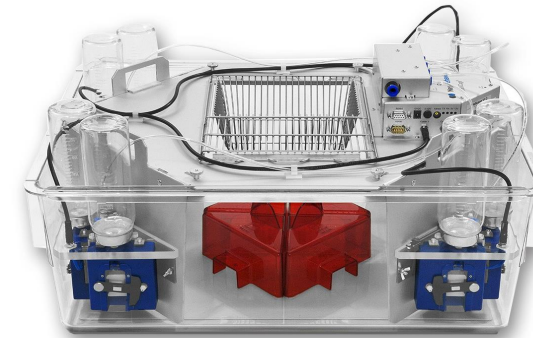
- *Complementary equipment used for the project:*

Intellicage (TSE, Germany), PhenoMaster (TSE, Germany)

- *Project goal:*

**- the improvement of the methodology
and reproducibility of pre-clinical data**

- *Potential end-users:* **pharma companies, academic users**



<https://www.tse-systems.com/product-details/intellicage>

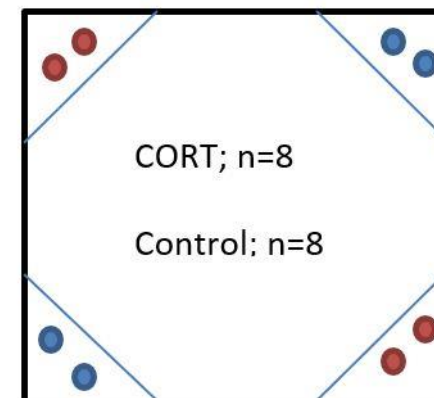
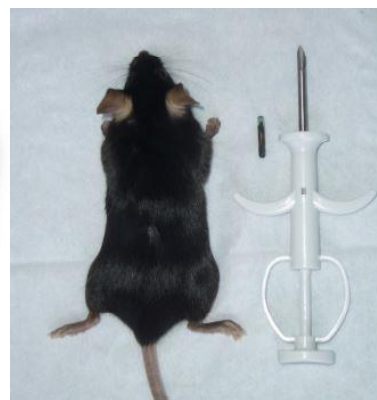
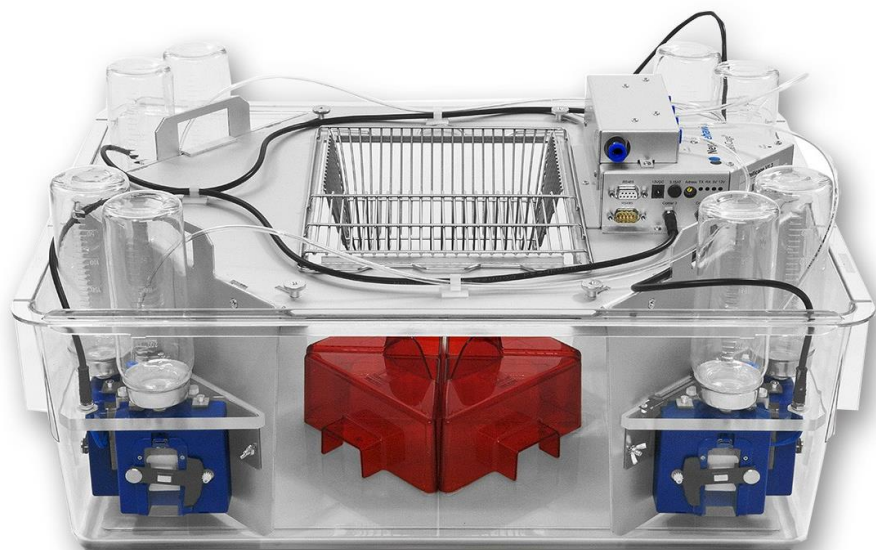


Project implementation

- *Methodology:*

Mouse model: wild type mice (commercial breeder) under corticosterone treatment (in drinking water) and normal drinking water for controls; idea: corticosterone causes chronic stress and anxiety-/depression-like symptoms

Vogel-water-lick conflict test using the Intellicage system:



- Corticosteroid
- No - corticosteroid

<https://www.tse-systems.com/product-details/intellicage>

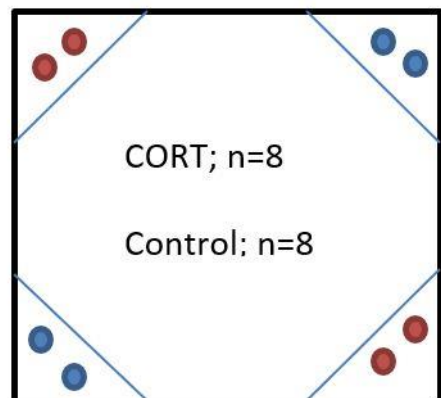
Project implementation

• Methodology:

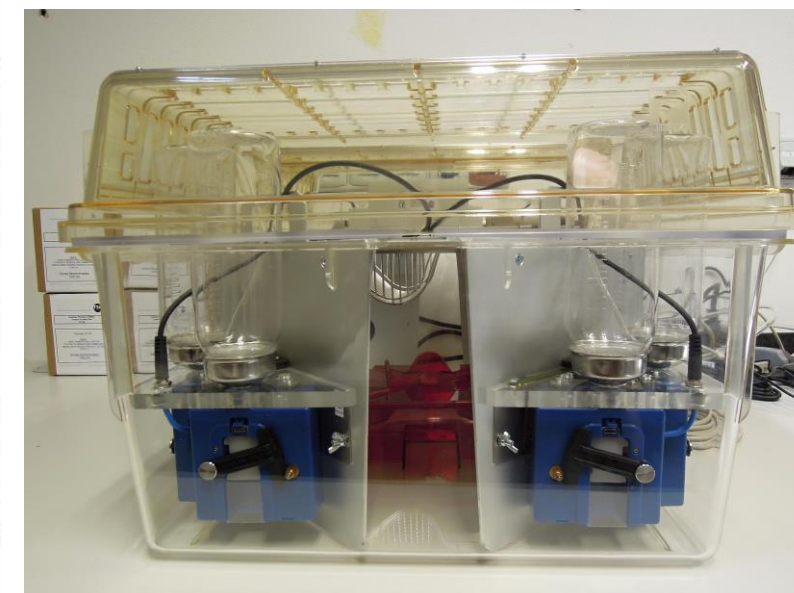
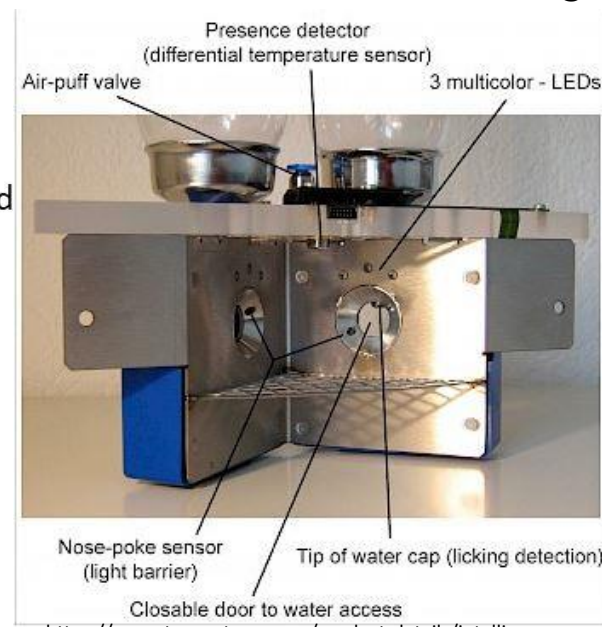
Vogel-water-lick conflict protocol:

- Habituation: doors open in 2 corners for each mouse ad libitum
- Water deprivation phase
- Learning phase: door open only in 1 corner for each mouse ad libitum
- Punishment phase: air puff after 1 sec of drinking, ensuing visits not punished (1 punishment in 24hrs)

Idea: corticosterone should lead to anxio-/depressive-like behavior and stronger responses to punishment- longer latencies to start drinking after punishment.



- Corticosteroid
- No - corticosteroid





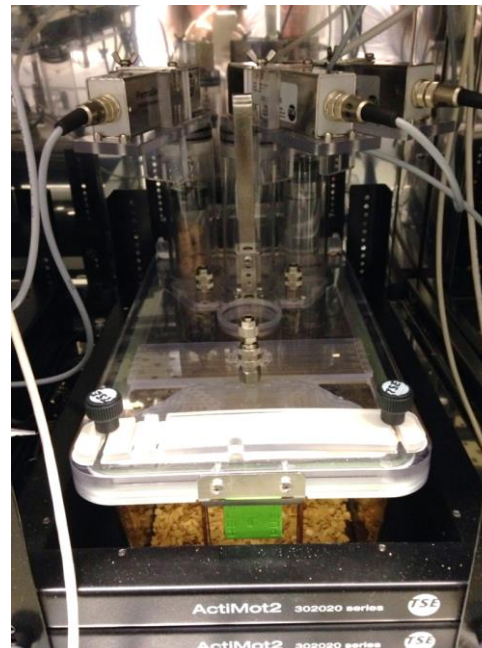
Project implementation

- *Methodology:*

PhenoMaster measurement of circadian rhythms:

Idea: corticosterone should lead to anxio-/depressive-like behavior and changes in the day-night cycle and metabolism.

- Additional test for depression: sucrose preference test



Tests for anxio-depressive behaviour

Project implementation

- *The way, how we worked on it jointly :*
- Design of the procedures (one out of 3 pilot projects)
- Staff exchange - VBCF (11-13th Mar 2018 and 26th Aug-19th Sep 2018)
- Workshop in ICRC – AC/OL ‘*Best practice in the use of TSE IntelliCage and Phenomaster systems*’ (15th -18th May 2018)

Practical workshops on the TSE systems: IntelliCage, Phenomaster & MotoRater

Tuesday May 15 – Friday May 18

Dear Colleagues, it is our pleasure to invite you to AC Workshop 2018. This Workshop gives us an opportunity to learn from each other's experiences, share knowledge and start or revive collaborations. We are looking forward to seeing you in Olomouc!

Best,
Václav Galigowski, DVM PhD
Animal Center Director
FNUSA-ICRC

Agata Miska-Schramm, PhD
Staff scientist in charge of rodent experiments
FNUSA-ICRC

15th May 2018
→ 9:30 – 18:00 CEST
Emrah Birinci
IntelliCage training:
- Hardware
- Software
- Practical application

16th May 2018
→ 9:30 – 18:00 CEST
Emrah Birinci
Evaluation of the overnight test with the use of IntelliCage
Phenomaster training

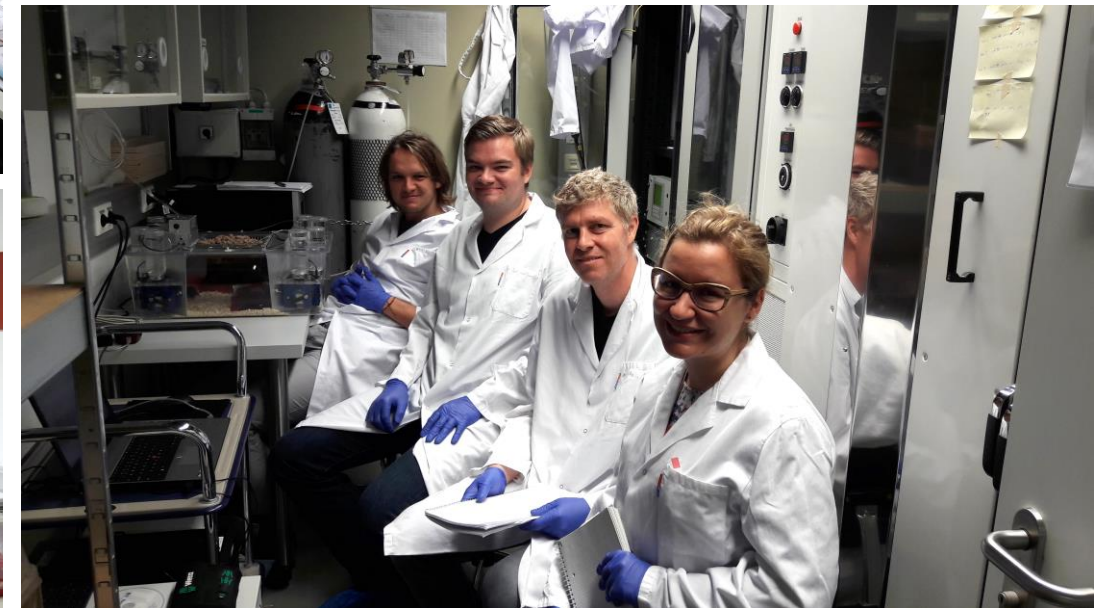
17th May 2018
→ 9:30 – 18:00 CEST
Emrah Birinci and Gerhard Vornholt
Phenomaster training – continuation
MotoRater training

18th May 2018
→ 9:30 – 12:00 CEST
Emrah Birinci and Gerhard Vornholt
Summary of the IntelliCage, Phenomaster and MotoRater trainings
Individual consultations

FNUSA ICRC
AT: ANIMAL CENTER FOR RESEARCH
INTERNATIONAL, CLINICAL, AND TRANSLATIONAL
Contact & registration:
Marta Duchonova
marta.duchonova@icrc.cz

Institute of Molecular and Translational Medicine (IMTM)
Faculty of Medicine and Dentistry
Palacky University Olomouc
Hněvotínská 133/35
779 00 Olomouc
Czech Republic
GPS: 49° 35' 10.1865512" N,
17° 14' 6.292305" E



Project results



- No results yet.
- ICRC animal facility in Olomouc, instead of animal facility in Brno → 1 year delay in the project
- lack of the procedures approvals from both Ethical Committees