Heart rate variability, autonomic tone and depressive-like behavior differences in resilient and susceptible rats to social defeat stress

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Not every person whom face adversity in life develop mood disorders

**Susceptibility**

- Social defeat stress
  - 4 encounters – 48h interval
  - 25 min each
  - Intruder: Male Wistar rats
  - Resident: Male Long Evans

**Resilience**

Ethical approval

- CEUA FCFAr
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Segregation of phenotypes

- Two phases: 150 sec each
- Interaction Ratio = Time in interaction zone during Target phase / Time in interaction zone during No Target phase

**Aim:** Evaluation of the cardiovascular alterations related to heart rate variability, autonomic tone and depressive-like behavior in resilient and susceptible rats to social defeat stress.

**Methodology**

- Forced-swim Habitation Test
- Heart rate variability
- Surgery

**Results and conclusion**

- Our results suggest a correlation between depressive-like state and bad cardiovascular alterations in rats classified as susceptible to SDS. The basal tachycardia found in susceptible rats might be due to the increased sympathetic tone to the heart, which in turn decreases HRV. Increased vagal tone in resilient animals probably acts as a protector factor against these alterations.

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**References**


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