

A2 – Model of anxiety – Light/Dark Box

The light/dark box test measures the anxiety-related behaviour (Crawley, Neurosci Biobehav Rev. 9:37-44, 1985).

The mouse is placed for 10 min in a box made of two compartments, one white and lit and the other dark.

Two parameters are recorded.

- The percent of time spent in the lit compartment (**figures 1 and 2**) which is an index of the anxiety-related behaviour. Anxiety is considered to be high if the percent of time spent in the lit compartment is low (i.e. < 50%).
- The number of transitions between compartments (**figures 3 and 4**). This parameter is an index of anxiety-related behaviour, but also of the motor-exploratory activity. Anxiety is considered to be high if this index is low, indicating a motor inhibition.



All the results presented here have been obtained in experiments performed in accordance with EU guidelines and the regulations of the French Ministry of Agriculture for experiments with laboratory animal (law 87 848), in the laboratory of Key-Obs company (license n° A-45-234-8).

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Figure 1 – Percent of time spent in the lit compartment by different batches of inbred mouse strains 129SvPas, BALB/cByJ, C3H/HeOuJ, C57BL/6J, CBA/J and DBA/2J, SJL/J and of the Swiss strain.. M: male; F: female. Origin of animals: ° Charles River Laboratories, France; ¹ Key-Obs, parents from Charles River Laboratories; ² Centre d’Elevage Janvier, France; ³ Key-Obs, parents from Centre d’Elevage Janvier.

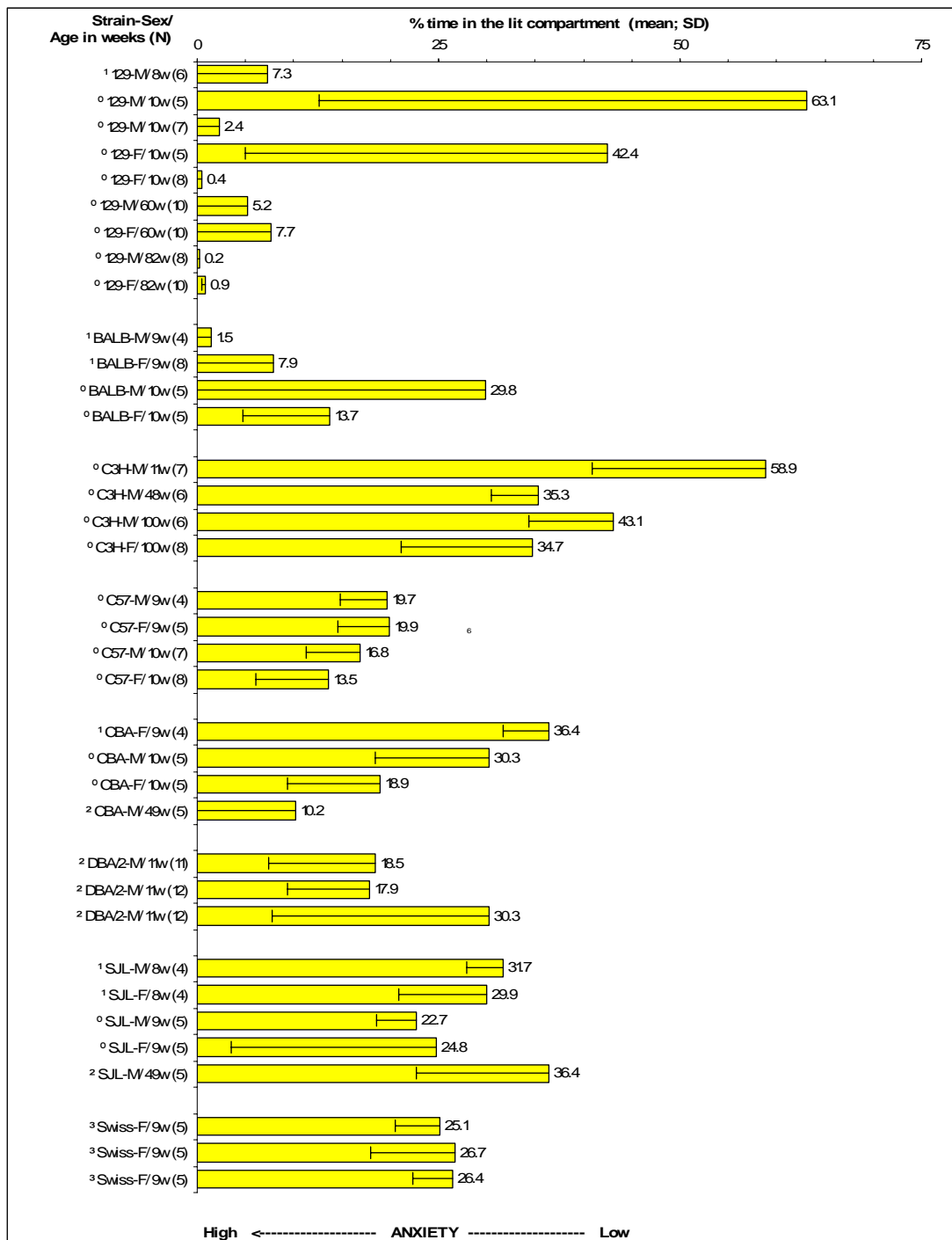


Figure 2 – Percent of time spent in the lit compartment by different batches of F1 hybrid mice. Origin of animals: ⁰ Charles River Laboratories, France; ¹ Key-Obs, parents from Charles River Laboratories; ² Centre d’Elevage Janvier, France; ³ Key-Obs, parents from Centre d’Elevage Janvier.

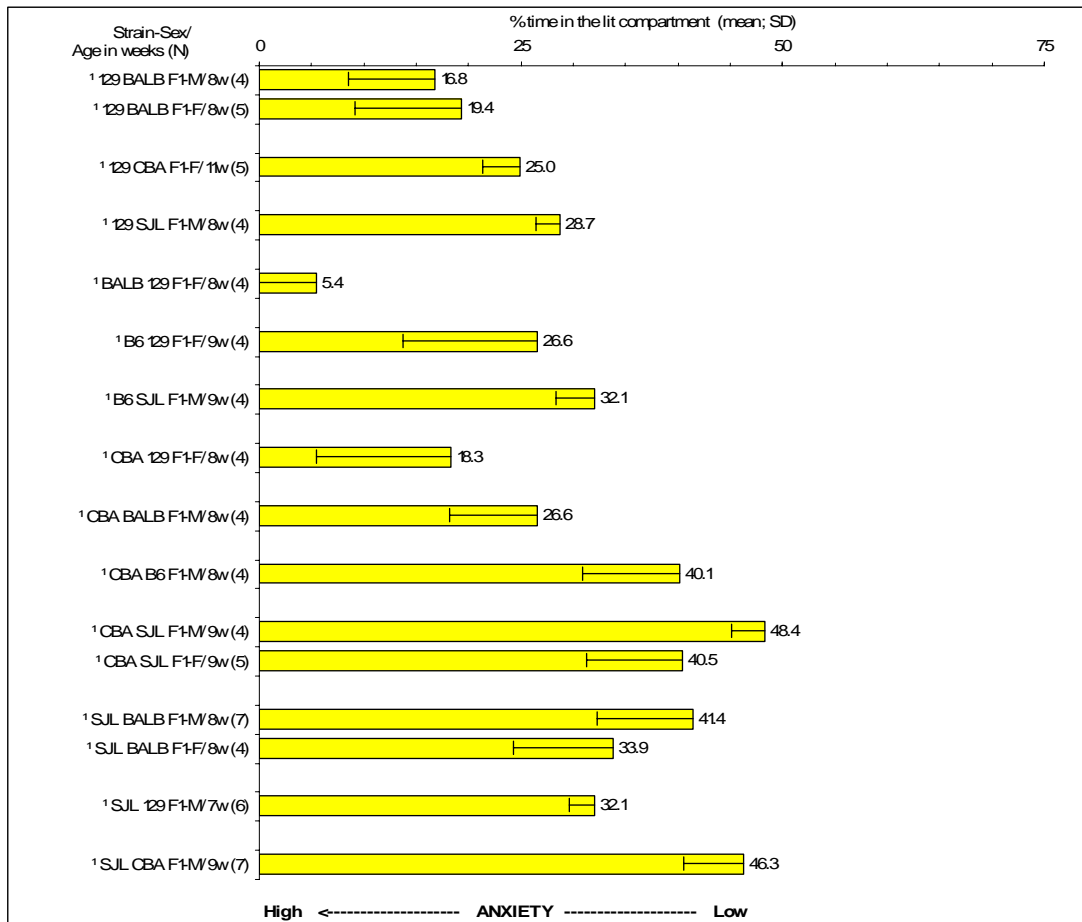


Figure 3 – Number of transitions between the two compartments made by different batches of inbred mouse strains 129SvPas, BALB/cByJ, C3H/HeOuJ, C57BL/6J, CBA/J and DBA/2J, SJL/J and of the Swiss strain. M: male; F: female. Origin of animals: ⁰ Charles River Laboratories, France; ¹ Key-Obs, parents from Charles River Laboratories; ² Centre d’Elevage Janvier, France; ³ Key-Obs, parents from Centre d’Elevage Janvier.

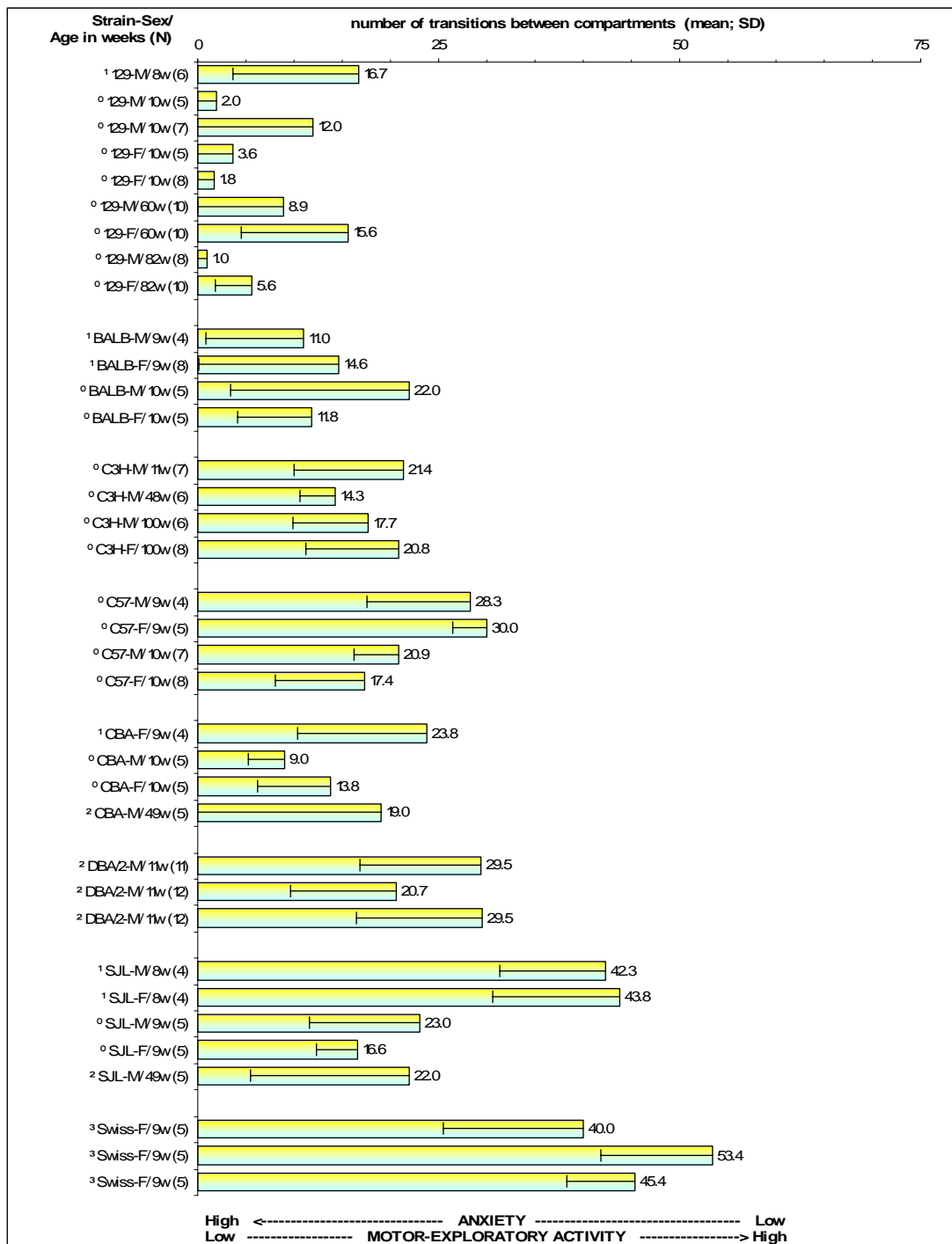


Figure 4 – Number of transitions between the two compartments made by different batches of F1 hybrid mice. Origin of animals: ° Charles River Laboratories, France; ¹ Key-Obs, parents from Charles River Laboratories; ² Centre d'Elevage Janvier, France; ³ Key-Obs, parents from Centre d'Elevage Janvier.

