

## SUPPLEMENTARY DATA

Table S1- Patterns of behavior analyzed by scan sampling of home-cage videos.

Behaviour patterns		Description
Active		Includes all behaviour except sleeping
Sleeping		when the animal is lying unalert with both eyes closed
Rearing		Standing on the hind paws and stretching the body while sniffing the air from the upper part of the cage
Self -maintenance		Includes self-grooming and self-licking several body parts
Locomotion	Hopping	Moving fast with small jumps
	Moving fast/running	Moving fast running to different areas of the cage
	Climbing/Jumping	Climbing or jumping from a box placed inside the central cage of PhW
	Running in wheel	Event of going to run in a wheel (only possible for PhW group)
Digging		Pushing or pulling bedding material with paws or nose
Interacting with cage objects		Sniffing, schewing, climbing and manipulating objects inside the cage (tubes for all groups and for PhW group it includes also a box placed in the central cage)
Social interaction (given/received)	Social investigation	Sniffing or being sniffed by cage partners and allogrooming or social grooming (given and received)
	Social Play	Includes pouncing (soliciting behaviour: attempt to nose or rub of the neck of the play partner) and pinning (lying with the dorsal body surface on the floor with the other animal standing over it)
	Allogrooming	Grooming a cage partner (social grooming)
	Clump	The presence of at least 2 animals, resting or sleeping, while in direct bodily contact

Table S2- Behaviours registered by Phenomaster software in PhenoWorld.

Behaviour designation		Description
<b>Activity registered automatically in Phenoworld</b>	Water (ml)	Water consumed per animal along time
	Food (g)	Food consumed per animal along time
	Run Wheel_Right (cm)	Distance covered to the right in each run along time
	Run Wheel_Left (cm)	Distance covered to the left in each run along time
	Run Wheel_total (cm)	Distance covered running along time
	Run Wheel_time (min)	Time running in the wheels
	Run Wheel_N	Number of run episodes (a run was counted when the system exceeded a movement threshold set to 10 rpm, and ended when the value failed below threshold)
	MaxSpeed_RW (m/s)	Maximum speed that occurs within an interval (each run episodes has its own maximum speed and for each animal the maximum speed reached per night was analysed)
	AvgSpeed_RW (m/s)	Average speed over all run episodes within an interval (the mean of each run episodes has its own maximum speed and for each animal the mean of those were calculated per night)
	MaxLen_RW (s)	Longest individual duration of a run episode (s) (the longer value for each animal, reached during a night period, was chosen for analysis)