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## Age-related changes in cerebellar and hypothalamic function accompany non-microglial immune gene expression, altered synapse organization, and excitatory amino acid neurotransmission deficits

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## DATA KEY FOR MATLAB home cage monitoring data files

These files can be read by MATLAB R6 or later versions. Each file represents one-day-one-mouse worth of data. Each file contains a single structure (MouseDayStruct) containing the following fields:

All times are reported in milliseconds from midnight of the day that the system was started unless otherwise specified

ExpName	: experiment name
ExpRndName	: experiment round name (identifies system cage rack)
Rnd	: round (identifies system cage rack)
Run	: identifies if longitudinal experiment
Sys	: data collection system (usually same as cage rack)
Enc	: enclosure (specific cage within the rack)
ExpDay	: day from placing mice into the home cage system
Date	: date mm/dd/yyyy
Mouse	: mouse ID number
GroupCode	: mouse cohort code
GroupName	: mouse cohort name
meData	: structure containing the above fields as well as the following information for load cell data
MoveOnCumCT_ms	: column vector; movement start times for event <sub><i>i</i></sub> in ms
MoveOnOn_ms	: not used
XM_cm	: column vector; distance along x axis moved for event <sub><i>i</i></sub>
YM_cm	: column vector; distance along y axis moved for event <sub><i>i</i></sub>
MoveQuality	: column vector; data quality for event <sub><i>i</i></sub> ; good data = 1
MoveComment	: column vector; comment number (if any) for event <sub><i>i</i></sub>
PosOnCumCT_ms	: not used
PosOffCumCT_ms	: not used
PosDur_ms	: column vector; movement event <sub><i>i</i></sub> duration in ms
XP_cm	: column vector; drift corrected x position for event <sub><i>i</i></sub>
YP_cm	: column vector; drift corrected y position for event <sub><i>i</i></sub>
PosQuality	: column vector; data quality for positions; good data = 1
PosComment	: column vector; comment number (if any) for event <sub><i>i</i></sub>
peData	: structure containing above fields as well as the following information for photobeam data
OnCumCT_ms	: column vector; photobeam break start time for event <sub><i>i</i></sub> in ms
OffCumCT_ms	: column vector; photobeam break stop time for event <sub><i>i</i></sub> in ms
OnOn_ms	: column vector; photobeam duration from event <sub><i>i</i></sub> break start to event <sub><i>i+1</i></sub> break start, in ms
Dur_ms	: column vector; duration of photobeam event <sub><i>i</i></sub> , in ms

OffOn\_ms : column vector; duration of photobeam break stop time for event<sub>*i*</sub> to photobeam start time for event<sub>*i+1*</sub>, in ms (photobeam interevent interval)

XP\_cm : column vector; drift corrected x position for event<sub>*i*</sub>  
 YP\_cm : column vector; drift corrected y position for event<sub>*i*</sub>  
 Quality : column vector; data quality for photobeam breaks; good data = 1  
 Comment : column vector; comment number (if any) for event<sub>*i*</sub>  
 PosQuality : column vector; data quality for positions; good data = 1  
 PosComment : column vector; comment number (if any) for event<sub>*i*</sub>

leData : structure containing above fields as well as information for lickometer data; organization identical to that of peData

nestData : structure containing above fields as well as information for nest position

Xcoord : user-provided visual x coordinate of nest (x = 1-3)  
 Yccord : user-provided visual y coordinate of nest (y = 1-7)  
 CoordXPlim\_cm : user x coordinate of nest potential range  
 CoordYPlim\_cm : user y coordinate of nest potential range  
 PredXPlim\_cm : predicted x coordinate of nest (generated during state analysis)  
 PredYPlim\_cm : predicted y coordinate of nest (generated during state analysis)  
 UserXPlim\_cm : not implemented  
 UserYPlim\_cm : not implemented  
 LimitsType : limit type (only 'coord' supported)  
 CoordQuality : data quality for nest, good data = 1  
 CoordComment : data comment number (if any) for nest  
 PredQuality : data quality for nest prediction (generated during state analysis)  
 PredComment : data comment number (if any) for nest prediction

sysData : structure containing above fields as well as information for system operation

SysStartMT : system start time, military time  
 SysStopMT : system stop time, military time  
 SystemStartCumCT\_hrs: system start time, hours from midnight of start day  
 SystemStopCumCT\_hrs: system stop time, hours from midnight of start day  
 LightStartState : 1 if lights on, 0 if lights off when system started  
 LightsOffCumCT\_hrs : time for lights off, hours from midnight of start day  
 LightsOnCumCT\_hrs : time for lights on, hours from midnight of start day  
 LightsOffCumCT\_ms : time for lights off, ms from midnight of start day  
 LightsOnCumCT\_ms : time for lights on, ms from midnight of start day  
 StartStopQuality : successful system start, good data = 1  
 StartStopComment : data comment number (if any) for system start  
 LightsQuality : lights confirmed by system sensor, good data = 1  
 LightsComment : data comment number (if any) for lighting

sumData : structure containing above fields as well as summary data for this mouse, this day

StartAge\_days : mouse age on this day (in days)

StartBW\_g : mouse body weight at experiment start (g)  
 EndBW\_g : mouse body weight at experiment finish (g)  
 AvgBW\_g : mouse average body weight (g)  
 DeltaBW\_g : change in mouse body weight over experiment (g)  
 Length\_cm : mouse length (often not input)  
 Chow\_g : mouse chow intake (g) for this day  
 DC\_Chow\_g : mouse dark cycle chow (g) for this day  
 LC\_Chow\_g : mouse light cycle chow (g) for this day  
 FeedingCoeff\_mgs : feeding coefficient (grams ingested/photobeam break duration)  
 ChowType : not used  
 Liquid\_g : mouse water intake (g) for this day  
 DC\_Liquid\_g : mouse dark cycle water (g) for this day  
 LC\_Liquid\_g : mouse light cycle water (g) for this day  
 LickingCoeff\_mgl : licking coefficient (grams ingested/lickometer on duration)  
 LiquidType : not used  
 Move\_m : mouse movement (m) for this day  
 DC\_move\_m : mouse dark cycle movement (m) for this day  
 LC\_move\_m : mouse light cycle movement (m) for this day  
 PerCageInt : percent of cage area crossed by mouse for this day  
 GenQuality : general experiment quality (1 = good data) for this day  
 GenComment : general experiment comment number (if any) for this day  
 ChowQuality : quality of feeding data (1 = good data) for this day  
 ChowComment : feeding comment number (if any) for this day  
 DC\_ChowQuality : DC chow data quality (1 = good data) for this day  
 DC\_ChowComment : DC chow comment number (if any) for this day  
 LC\_ChowQuality : LC chow data quality (1 = good data) for this day  
 LC\_ChowComment : LC chow comment number (if any) for this day  
 FeedingCoeffQuality : feeding coefficient quality (1 = good data) for this day  
 FeedingCoeffComment : feeding coefficient comment number (if any) for this day  
 LiquidQuality : quality of drinking data (1 = good data) for this day  
 LiquidComment : drinking comment number (if any) for this day  
 DC\_LiquidQuality : DC drinking data quality (1 = good data) for this day  
 DC\_LiquidComment : DC drinking comment number (if any) for this day  
 LC\_LiquidQuality : LC drinking data quality (1 = good data) for this day  
 LC\_LiquidComment : LC drinking comment number (if any) for this day  
 LickingCoeffQuality : drinking coefficient quality (1 = good data) for this day  
 LickingCoeffComment : drinking coefficient comment number (if any) for this day  
 MoveQuality : quality of movement data (1 = good data) for this day  
 MoveComment : movement comment number (if any) for this day  
 DC\_MoveQuality : DC movement data quality (1 = good data) for this day  
 DC\_MoveComment : DC movement comment number (if any) for this day  
 LC\_MoveQuality : LC movement data quality (1 = good data) for this day  
 LC\_MoveComment : LC movement comment number (if any) for this day  
 MEQuality : load beam data quality (1 = good data) for this day

MEComment : load beam comment number (if any) for this day  
PEQuality : photobeam data quality (1 = good data) for this day  
PEComment : photobeam comment number (if any) for this day  
LEQuality : lickometer data quality (1 = good data) for this day  
LEComment : lickometer comment number (if any) for this day  
NestQuality : nest data quality (1 = good data) for this day  
NestComment : nest comment number (if any) for this day