

Table 1. Behavioral alterations in *Plasmodium berghei* ANKA infected C57BL/6 mice model of experimental malaria

dpi	Paradigm	Parameter	Performance/deficit	Related neuroanatomic regions	OBS	REF
7	NORT	New object exploration	Short-term visual working memory deficit	Hippocampus [#] , cortex [#] , posterior parahippocampal region ^{§*} , perirhinal cortex ^{§*} , fornix [#] , thalamus [#] , midbrain [#] , cerebellum [#]	Behavior alterations in NORT at 5 dpi and locomotor activity in OFT at 5, 7 and 11 dpi were NS.	124
~15	OFT					
	IAT	Crossings and rearings	Long-term habituation memory deficit			
	Continuous multiple trials step-down IAT	Latency test	Long-term aversive memory deficit	Hippocampus [#] (OFT, NORT), cerebral cortex [#] (OFT), cerebellum [#] , dorsal hippocampus ^{§*} (IAT) entorhinal and parietal cortex ^{§*} (IAT) and/or amygdala ^{§*} (IAT)	Locomotor activity and exploration in OFT at 20 dpi and latency time in Continuous multiple trials step-down IAT at 15 dpi were NS.	17
		Training trials to reach the platform	Learning impairment			
NORT	Index of recognition	Short and long-term recognition memory deficit				
~30	OFT	Crossings and rearings	Habituation memory deficit			
9	OFT	Grids crossed/min and rears	Lower activity			
~26	OPT	Preference scores	Short-term spatial memory deficit	Brainstem [#] , medulla [#] , cortex [#] , hippocampus [#] , cerebellum [#] (BBT)	Preference scores in NORT at ~56 dpi were NS with 45 min of RI. Grip strength in BBT at ~26 or ~56 dpi were NS. Slips and latency in BBT (1.8 cm beam) at ~56 dpi were NS, slips at ~26 dpi were NS and more latency at ~26 dpi was detected.	33
	NORT	Preference scores	Short-term recognition memory deficit (45 min RI)			
	BBT	Slips and latency	Motor coordination deficit (1.2 cm beam)			
~56	OPT	Preference scores	Short-term spatial memory deficit			
	NORT	Preference scores	Short-term recognition memory deficit (120 min RI)			
	BBT	Slips and latency	Motor coordination deficit (1.2 cm beam)			
5	EPM	Open arm time and entries	Anxiety-like behavior	Brainstem [#] , cerebral cortex [#] and hippocampus [#]	Closed arms entries in EPM at 5 dpi were NS.	125
15	IAT	Latency	Short-term aversive memory deficit	Cerebral cortex [#]	-	126
5	Step-down IAT	Latency	Short-term aversive memory deficit	Hippocampus [#] and frontal cortex [#]	Latency 24h RI in Step-down IAT at ~5 dpi was NS. Crossings and rearings in OFT at 5 dpi were NS.	127
4	BFT	Time to find food	Loss of smell	Olfactory bulb [#]	-	111

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5	NORT	New object exploration	Working memory deficit	Hippocampus# ^s , frontal cortex# ^s	Distance traveled in NORT at 5 dpi was NS.	128
18	EPM	Open arm time and entries	Anxiety-like behavior			
	OFT	Distance traveled	Anxiety-like behavior			
5	NORT	New object exploration	Sickness behavior	Prefrontal cortex#, Hippocampus#	Crossings in OFT at 5 dpi, enclosed arms entries in EPM at 18 dpi, distance traveled in NORT at 17 dpi were NS.	115
	MWM	Time in the target quadrant	Long-term recognition memory deficits			
			Long-term spatial memory deficits			
17	NORT	New object exploration	Long-term recognition memory deficits			
6, ~21 and 52	NORT	New object exploration	Working memory deficit	Brainstem#, cerebellum#, hippocampus#, cerebral cortex#	-	110
5	NORT	New object exploration	Short-term memory deficit	Hippocampus# ^s , frontal cortex#, subventricular zone#, cerebellum#, olfactory bulb#, corpus callosum#	-	22
	Y Maze	New arm exploration	Spatial memory deficit			
~25	NORT	New object exploration	Long-term recognition memory deficit		Latency in training and test sessions of Step-Down IAT at ~25 dpi were NS. Distance traveled in NORT at ~25 dpi was NS. Open arms time and entries in EPM at ~25 dpi were NS. Time in center in OFT at ~25 dpi were NS.	129
	FST	Immobility	Depressive-like behavior	Frontal cortex#, hippocampus#		
~45	MB	Marble buried	Neophobia or compulsive-like behavior		Crossings, rearings and time in center in OFT at ~45 dpi were NS. Latency to fall in Rotarod at ~45 dpi were NS. Consumption in sucrose preference at ~45 dpi were NS.	130
	NB	Nest score	Spontaneous behavior impairment	Hippocampus# ^s , cerebral cortex#		
~74	OFT	Distance traveled	Short-term habituation deficit (1 st and 3 rd min)		Total distance traveled and time in center zone in OFT at ~74 dpi were NS. Percentage of spontaneous arm alternance in Y-Maze at ~74 dpi was NS. Transitions in LDT at ~74 dpi were NS.	23
		Centre distance	Anxiety-like behavior			
	NORT	New object exploration	Long-term recognition memory deficit	NA		
	Y Maze	Time in each arm	Different temporal pattern suggesting anxiety-like behavior			
	LDT	Time in light zone	Anxiety-like behavior			

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dpi	Paradigm	Parameter	Performance/deficit	Related neuroanatomic regions	OBS	REF
5 and 15	TST FST	Immobility	Depressive-like behavior	Cortex# ^{\$}	-	131
6	OFT	Crossings Groomings Lifting	Locomotor and exploratory behavior deficits	Cortex#	-	132
~88	OFT	Centre distance	Anxiety-like behavior	Hippocampus ^{\$*}	Distance traveled in OFT at ~88 dpi was NS.	24
	NORT	New object exploration	Long-term memory deficit			
	LDT	Time in light zone	Anxiety-like behavior			
~12	Y Maze	Alternations and successful alternations (%)	Memory deficit	Cerebellum#, midbrain#, olfactory bulb#, cortex#	-	133
	MWM	Escape latency and distance to reach the platform	Memory deficits			
6-8	CT	Rears	Spontaneous activity impairment	Nigrostriatal ^{\$*} (CT and ART), hippocampus# ^{\$} (T maze, BMT, NORT)	Rears, times of contact and removal in CT and ART at ~35 dpi were NS.	134
	ART	Time of contact Time of removal	Sensorimotor activity deficit			
	BBT BMT	Time to traverse the beam and foot slips Primary latency and errors	Motor coordination deficits Spatial memory deficits			
~31-53	T maze	Correct alternations and side preference rate	Short-term memory deficits			
	One-trial NORT	New object exploration and discrimination index	Recognition memory deficits			
~22 and ~155	NORT LDT	New object exploration Time in light zone	Long-term memory Anxiety-like behavior	Hippocampus ^{\$*}	Distance traveled and centre distance in OFT at ~22 and ~155 dpi were NS. Time in center zone in OFT at ~22, ~87 and ~155 dpi were NS (except anxiety-like behavior in larger	122

arena at ~155 dpi). Transitions in LDT at ~22,
~87 and ~155 dpi were NS.

dpi: days post-infection; OBS: observations; REF: reference; ~: approximately; RI: retention interval; cm: centimeters; min: minutes; NS: not significant; NA: not available; # region analyzed in the study during infection; * region suggested in discussion; [§] neuroanatomic region related to the function; - : no remark; NORT: novel object recognition task; OFT: open field test; IAT: inhibitory avoidance task; OPT: object placement test; BBT: balance beam test; EPM: elevated plus maze; BFT: buried food test; MWM: morris water maze; FST: forced swim test; MB: marble burying; NB: nest building; LDT: Light/Dark task; TST: tail suspension test; CT: cylinder test; ART: adhesive removal test; BMT: barnes maze test.