

1 Mushroom body experiment

Parameter	Units	Mine			Paper		
		Kenyon	Horn	Decision	Kenyon	Horn	Decision
C_m	nF		0.09			0.3	
V_{reset}	mV		-70			—	
V_{rest}	mV		-65			—	
V_{thresh}	mV		-55			—	
$e_{rev,E}$	mV		0			0	
$e_{rev,I}$	mV		-92			-92	
τ_m	ms		10				
τ_{refrac}	ms		1				
τ_{syn_E}	ms	1.0	1.0	1.0	2.0	1.0	10.0
τ_{syn_I}	ms	3.0	—	5.0	3.0	—	5.0

Table 1: Neuron parameters

From Pre	To Post	Me	Paper	Target
Input	Kenyon	Prob (0.15)	Prob (0.15)	Exc
Input	Horn	A2A (decreasing)	A2A (decreasing)	Exc
Horn	Kenyon	A2A	A2A	Inh
Kenyon	Decision	Rand A2A; 20% High, 80%Low	Rand A2A; 20% High, 80% Low	Exc
Decision	Decision	A2A	A2A	Inh

Table 2: Connectivity stats

From → To	Me	Paper
Input → Kenyon	Gauss(ω , 20%)	Gauss(4.545, 1.25)nS
Input → Horn	$6.5\omega/(15 + n)$	$53.75/(15 + n)$ nS
Horn → Kenyon	1.925ω	8.75nS
Kenyon → Decision	Gauss(High= ω , 20%), Gauss(High/10, 20%)	G(1.25, 0.25)nS, G(0.125, 0.025)nS
Decision → Decision	0.3ω	75nS

Table 3: Weight generation