

Elevation of endocannabinoids in the brain by synthetic cannabinoid JWH-018: the
mechanism and the effect on learning and memory

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Supplemental Table 1. Suggested components the levels of which were altered by JWH-018 treatment or JWH-018 co-administration of AM251 in the brain of male mice.

Representative components altered by JWH-018			
sample	Increased	Decreased	
Control vs. JWH-018	glutamic acid	<i>N</i> -acetyl-aspartate	
	2-AG		
	AEA		
	succinic acid		
	acetylcarnitine		
	AMP		
	glutathione disulfide		
	phenylalanine		
	glutamine		
	tyrosine		
	glucose		AEA
	myoinositol		

Supplemental Table 2. Calibration curves of tested endocannabinoids.

Compound	Linear equation	r ²
AEA	$y = 8.0879x + 127.4$	0.99934
2-AG	$y = 19.006x + 18.958$	0.99896

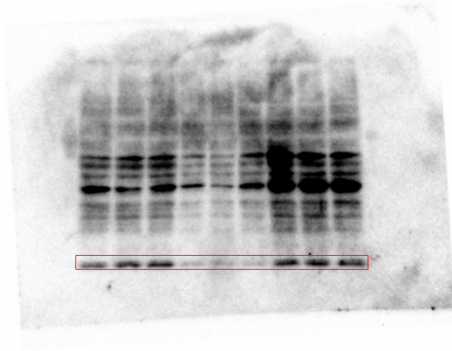
Supplemental Table 3. Primer pairs used for real-time RT-PCR for the quantification of mRNA.

Targets	Forward primer (5'→3') Reverse primer (5'→3')	Size of product (bp)	Accession No ^a
FAAH	ttcagaggccttgctgctc actcccagccttcccag	111	NC_000070
phospholipase D	tgttggtgcctcagcggag ccatgtccctcggcgagaag	165	NC_000071
MAGL	cgcagtagtctggctctagc atcctgcaggggtcttagg	103	NC_000072
DAG	gtgatcagtatccggggaac ccgtaccatgagagtcgact	131	NC_000085
BDNF	tggcctaacaatgtttgcagat ccactcagaaattcctcctgct	155	NC_005102
β-actin	gattactgctctggctccta tcctgcttctgatccac	135	NM_007393

^a The GenBank accession numbers are shown.

Abbreviations used are: FAAH, fatty acid amide hydrolase; phospholipase D, *N*-acyl-phosphatidylethanolamines-hydrolyzing; phospholipase D; MAGL, monoacylglycerol lipase; DAG, diacylglycerol and BDNF, brain-derived neurotrophic factor.

Supplementary Figure S1. Full-length blots of Figure 7



 **BDNF**