

Table 1: Progesterone up-regulates genes that promote cell cycle and down-regulates those inhibit the cell cycle

Genes in categories	Multivariate statistic (P ₄ vs control)	Univariate analysis (P ₄ vs control)	Gene Function	Direction of changes (P ₄ vs control)
Cyclins	P<0.001	CyclinA, p< 0.05	Regulatory subunit of Cdk2 and facilitates cell cycle progression.	Increased
		CyclinB1, p<0.05	Members of the M phase promoting factor complex.	
		CyclinG1, p<0.05 CyclinG2, p<0.05	G2/M phase promoting factor, expression peaks at late S phase.	
CDKs	P<0.001	Cdc2a, p<0.05	Members of the M phase promoting factor complex	Increased
		Cdk2, p<0.05	S phase promoting factor	
		Cdk4, p<0.05	G1 phase promoting factor.	
CDK inhibitors	P<0.001	Cdkn2b (p15), p<0.01	G1/S phase inhibitor	Decreased
		Cdkn3, p<0.05	G1/S phase inhibitor	
Cell cycle checkpoint	P<0.001	Mad2l2, p<0.05	S/M phase inhibitor	Decreased
		Nanos2, p<0.05	G1/S phase inhibitor	
		Nfatc, p<0.05	G1/S phase inhibitor	
		Wee1, p<0.01	S/M phase inhibitor	
DNA replication factor	P<0.001	Mcm5, p<0.05 Mcm7, p<0.05	Minichromosome maintenance complex components, involved in the initiation of DNA replication.	Increased
		Pcna, p<0.01	proliferating cell nuclear antigen	
Housekeeping Gene		Aldoa, p=0.245 Gapdh, p=0.098		No change

Cultures of rNPCs were treated with vehicle or 100pM P4 for 6 hr, followed by extraction of total RNA. Nonradioactive probes were prepared and hybridized to gene array. Data were determined by optical density and subjected to multivariate ANOVA.