

Cluster 1

Cluster 2

Cluster 3

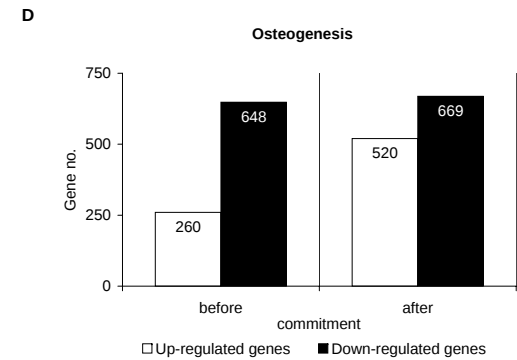
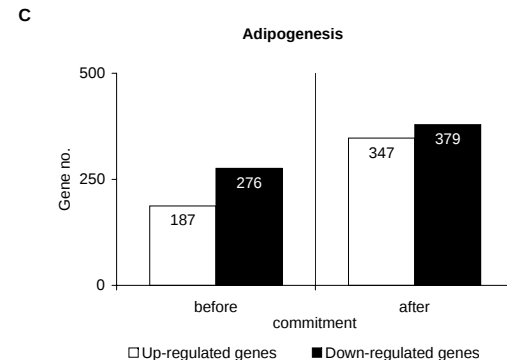
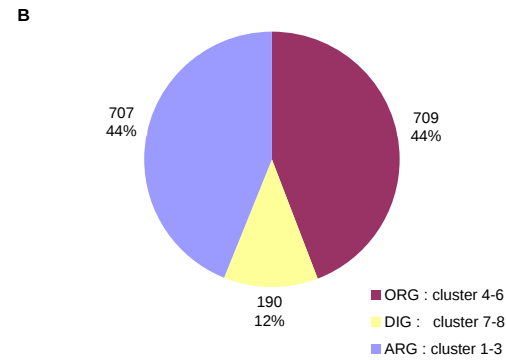
Cluster 4

Cluster 5

Cluster 6

Cluster 7

Cluster 8



E

Adipogenesis-related genes

before commitment		after commitment	
Enriched G			
p-value	GO term	ARG (Cluster 1-3)	p-value
2.23E-02		fatty acid metabolism	1.55E-08
3.25E-02		metabolism	4.09E-07
3.27E-02		lipid metabolism	4.29E-07
		fatty acid beta-oxidation	1.19E-05
		cholesterol homeostasis	7.28E-05
		electron transport	9.59E-05
		cholesterol biosynthesis	1.00E-04
		glutamine metabolism	1.26E-02
		germ cell migration	3.92E-02

Enriched			
p-value	GO term	Cluster 1	p-value
		no significantly enriched GO term	

p-value	GO term	Cluster 2	p-value
6.00E-04		metabolism	8.15E-14
3.60E-02		lipid metabolism	2.58E-10
3.66E-02		apoptosis	2.83E-11
3.73E-02		neg. regulation of cell proliferation	2.18E-06
		cholesterol biosynthesis	2.33E-06
		electron transport	2.00E-04
		cholesterol homeostasis	4.70E-03
		generation of precursor metabolites and energy	1.07E-02
		tricarboxylic acid cycle	2.43E-02
		lipid catabolism	2.90E-02
		carbohydrate metabolism	4.11E-02
		gluconeogenesis	4.15E-02
		lipid transport	4.47E-02
		lipid biosynthesis	4.47E-02
		steroid biosynthesis	4.57E-02
		inactivation of MAPK activation	4.73E-02
		induction of apoptosis	4.81E-02
		cholesterol metabolism	4.91E-02

p-value	GO term	Cluster 3	p-value
1.00E-04		hemopoiesis	
1.00E-04		epithelial to mesenchymal transition	
4.20E-03		angiogenesis	
5.70E-03		notch signaling pathway	
5.70E-03		b-cell differentiation	
6.30E-03		heart development	
1.90E-02		response to stress	
1.99E-02		cell cycle	
2.09E-02		neg. regulation of transcription, DNA-dependent	
2.20E-02		cell motility	
2.57E-02		defense response to bacteria	
4.69E-02		integrin-mediated signaling pathway	

p-value	GO term	Cluster 4	p-value
2.30E-03		protein biosynthesis	1.20E-03
1.15E-02		regulation of translational initiation	1.40E-03
3.56E-02		response to unfolded protein	2.09E-02
4.00E-03		response to heat	2.11E-02
1.15E-02		protein catabolism	
1.19E-02		regulation of progression through cell cycle	
1.47E-02		anion transport	
1.47E-02		actin filament organization	
3.86E-02		RNA splicing	
4.84E-02		cellular morphogenesis	

F

Osteogenesis-related genes

before commitment		after commitment	
p-value	GO term	ORG (Cluster 4-6)	p-value
2.58E-02		regulation of translational initiation	2.32E-05
4.10E-03		protein biosynthesis	8.10E-03
9.20E-03	response to heat	protein heterooligomerization	1.05E-02
2.58E-02	protein catabolism	response to unfolded protein	2.50E-02
3.07E-02	anion transport		
3.07E-02	actin filament organization		
3.67E-02	regulation of progression through cell cycle		

GO terms for Biological Process for adipogenic-/osteogenic-related and differentiation-in

GO terms for Biological Process for genes inversely regulated between adipogenesis and

p-value	GO term	Cluster 4	GO term	p-value
		no significantly enriched GO term		

Enriched GO-BP for up-regulated genes

p-value	GO term	Cluster 5	GO term	p-value
		intermediate filament cytoskeleton organization and biogenesis		0.0229

Enriched GO terms for Biological Process for down-regulated genes

p-value	GO term	Cluster 6	GO term	p-value
2.30E-03		protein biosynthesis		1.20E-03
1.15E-02		regulation of translational initiation		1.40E-03
3.56E-02		response to unfolded protein		2.09E-02
4.00E-03	response to heat	protein folding		2.11E-02
1.15E-02	protein catabolism			
1.19E-02	regulation of progression through cell cycle			
1.47E-02	anion transport			
1.47E-02	actin filament organization			
3.86E-02		RNA splicing		
4.84E-02	cellular morphogenesis			

G

Differentiation lineage-independent genes

before commitment

after commitment

dependent genes

p-value	GO term	DIG (Cluster 7+8)	GO term	p-value
1.30E-02		glycolysis		5.50E-03
1.13E-02	circulation	DNA replication		1.27E-02

d osteogenesis

p-value	GO term	Cluster 7	GO term	p-value
2.62E-02	negative regulation of cell proliferation			1.75E-02
		metabolism		4.48E-02

p-value	GO term	Cluster 8	GO term	p-value
8.60E-03		glycolysis		2.00E-03
		DNA replication		6.80E-03