

Fig S2

A)

Nutrient	Concentration (uMol/dL)								
	Control			-Serum			-Nutrients		
	24 hr	48 hr	72 hr	24 hr	48 hr	72 hr	24 hr	48 hr	72 hr
Glutamine	206	91	15	228	156	110	74	nd	nd
Proline	15	29	38	15	32	44	12	21	28
Glycine	60	81	92	60	83	96	50	65	74
Alanine	93	124	121	81	114	119	51	57	33
Leucine	50	54	53	55	62	66	55	53	47
Tyrosine	31	30	31	35	34	35	35	35	34
Lysine	60	60	60	69	77	81	69	76	81
Histidine	15	15	14	17	17	18	17	17	18
Aspartic Acid	9	6	4	8	5	3	8	5	3

B)

Oxygen flux (pM/10 ⁴ cells/min)			
height of media	20% oxygen	5% oxygen	1% oxygen
0.1cm	1800	450	90
0.2cm	900	225	45
0.5cm	360	90	18

