

**Table S3. Biochemical data on metabolic pathways and macromolecule syntheses during yeast meiosis<sup>&</sup>.**

Hours	Scaled SK1 hours	Measurements	Activities	Scaled activities
<b>Glutamate formation:</b> the proportion of 1,2,3,4- <sup>13</sup> C-labeled glutamate is measured by NMR spectroscopy (Figure 4 of [1]). The S41 strain reaches the steady state level of ascus formation in 36 hours (Figure 4B of [2]).				
0	0	0	0	0
1	0.33	10	10	1
2	0.67	20	10	1
4	1.33	30	10	1
8	2.66	33	3	0.3
<b>TCA cycle:</b> the percentage of oxygen consumed per minute is measured by an oxygen monitor (Figure 1 of [3]). The AP1 strain reaches the steady state level of ascus formation in 24 hours (Figure 1 of [3]).				
0	0	20	20	0.8
2	1	25	25	1
4	2	20	20	0.8
6	3	15	15	0.6
8	4	10	10	0.4
10	5	8	8	0.32
12	6	6	6	0.24
14	7	4	4	0.16
16	8	3	3	0.12
<b>Gluconeogenesis:</b> mg carbohydrate /10 <sup>8</sup> cells is measured by the anthrone procedure (Figure 2A of [4]). The SK1 strain reaches the steady state level of ascus formation in 12 hours (Figure 1 of [4]).				
0	0	0.4	0	0
2	2	0.9	0.5	0.45
4	4	2	1.1	1
6	6	2.2	0.2	0.18
<b>Glycogenolysis:</b> glycogenolytic enzyme activity is measured (Figure 2 of [5]). The AP1 strain reaches the steady state level of ascus formation in 24 hours (Figure 2 of [5]).				
0	0	0	0	0
4	2	0	0	0
6	3	0	0	0
8	4	8	8	0.15
9	4.5	12	12	0.23
10	5	18	18	0.34
12	6	22	22	0.42
14	7	40	40	0.75
16	8	50	50	0.94
18	9	52	52	0.98
20	10	53	53	1
24	12	50	50	0.94
<b>DNA:</b> percentage of DNA content is measured by the diaminobenzoic acid fluorimetric procedure (Figure 2A of [3]). The AP1 strain reaches the steady state level of ascus formation in 24 hours (Figure 1 of [3]).				
0	0	0	0	0
1	0.5	5	5	0.25

2	1	9	4	0.2
3	1.5	20	11	0.55
4	2	40	20	1
5	2.5	60	20	1
8	4	80	20	1
<b>RNA:</b> <sup>3</sup> H incorporated into RNA is measured (Figure 3A of [3]). The AP1 strain reaches the steady state level of ascus formation in 24 hours (Figure 1 of [3]).				
0	0	40	40	0.29
0.5	0.25	50	50	0.36
1.5	0.75	65	65	0.46
2	1	80	80	0.57
3	1.5	135	135	0.96
4	2	140	140	1
5	2.5	120	120	0.86
6	3	100	100	0.71
7	3.5	90	90	0.64
8	4	70	70	0.5
9	4.5	60	60	0.43
10	5	50	50	0.36
11	5.5	40	40	0.29
<b>Protein:</b> <sup>35</sup> S incorporated into protein is measured (Figure 3A of [3]). The AP1 strain reaches the steady state level of ascus formation in 24 hours (Figure 1 of [3]).				
0	0	90	90	0.56
1	0.5	120	120	0.75
1.5	0.75	150	150	0.94
2	1	160	160	1
3	1.5	155	155	0.97
3.5	1.75	150	150	0.94
4	2	120	120	0.75
4.5	2.25	110	110	0.69
5	2.5	90	90	0.56
<b>Lipid:</b> <sup>14</sup> C-acetate incorporated into lipids is measured (Figure 2A of [6]). The Y-185 strain reaches the steady state level of ascus formation in 30 hours (Figure 1 of [6]).				
0	0	0	0	0
2.5	1	3	3	0.46
5	2	5	2	0.31
6	2.4	6.5	1.5	0.23
8	3.2	11	4.5	0.69
10	4	15.5	4.5	0.69
11	4.4	16	0.5	0.08
12	4.8	17	1	0.15
14	5.6	18	1	0.15
19	7.6	19	1	0.15
20	8	20	1	0.15
22	8.8	22.5	2.5	0.38
24	9.6	29	6.5	1

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12

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0.62

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& The scaled SK1 hours and the scaled activities are plotted in Figure 2.

## REFERENCES

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