

Figure S1 Scheme of the carotenoid biosynthesis pathway in *B. trispora*.

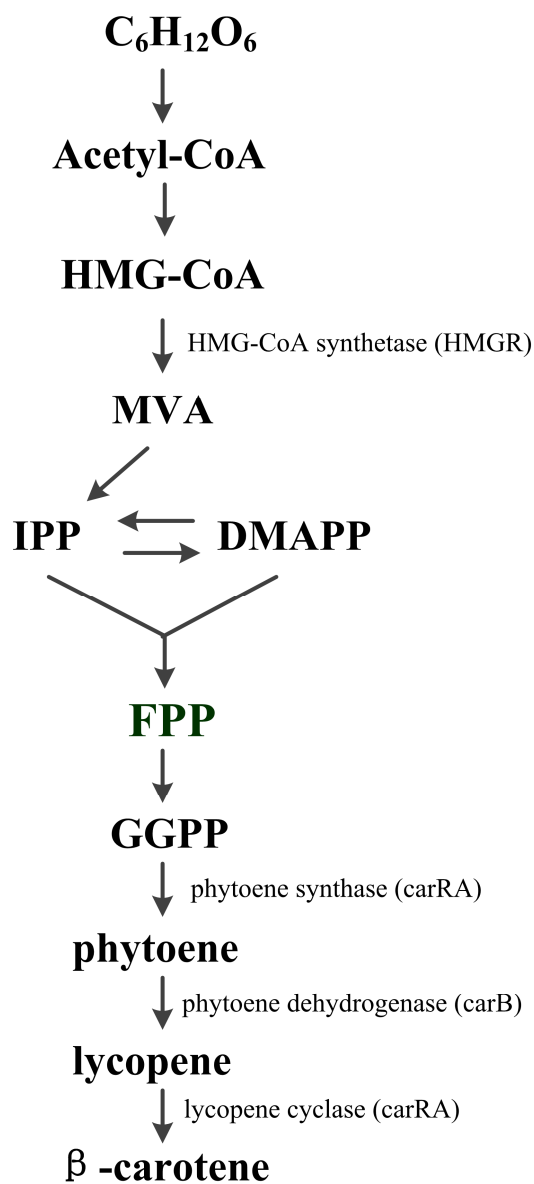


Table S1

Statistical data from PLS-DA at different time points in control and ALA-treated groups in *B. trispora*

Sample	R <sup>2</sup> X (cum)	R <sup>2</sup> Y (cum)	Q <sup>2</sup> (cum)
Control versus ALA-treated group at 36h	0.842	0.976	0.948
Control versus ALA-treated group at 48h	0.872	0.991	0.956
Control versus ALA-treated group at 72h	0.976	1.000	0.978

Table S2

Real-time PCR primes used in this study.

Genes	Forward and reverse primers (5' → 3')	Amplicon length (bp)
tef 1-F	AACTCGGTAAGGGTTCCTTCAAG	138
tef 1-R	CGGGAGCATCAATAACGGTAAC	
ACC-F	TTGAAGGCCAATGCTGAATA	183
ACC-R	GCAAGCATCTCAGGCAAACG	
HMGR-F	AAACGATGGATTGAACAAGAGGG	113
HMGR-R	TAGACTAGACGACCGCAAGAGC	
carRA-F	CCGTTTCACTCACAGCAAGA	135
carRA-R	GACAGCCACAACACAAGTAGGA	
carB-F	AGACCTAGTACCAAGGATTCCACAA	92
carB-R	AGAACGATAGGAACACCAGTACCTG	

Table S3

List of the intracellular differential metabolites identified by GC-MS.

Retention time	Metabolite	36h		48h		72h	
		ALA	Control	ALA	Control	ALA	Control
4.424	Alanine	0.080 ± 0.025**	0.295 ± 0.049	0.029 ± 0.007**	0.062 ± 0.013	0.027 ± 0.003	0.051 ± 0.046
6.660	Phosphoric acid	0.475 ± 0.088**	1.018 ± 0.156	0.464 ± 0.080	0.602 ± 0.340	0.430 ± 0.070	0.597 ± 0.196
6.708	Glycerol	0.080 ± 0.015**	0.451 ± 0.147	0.122 ± 0.138	0.103 ± 0.150	0.351 ± 0.175	0.134 ± 0.148
7.143	Glycine	0.046 ± 0.013**	0.115 ± 0.023	0.030 ± 0.007**	0.044 ± 0.004	0.023 ± 0.004	0.029 ± 0.010
8.184	Threonine	0.044 ± 0.010**	0.072 ± 0.015	0.027 ± 0.005**	0.048 ± 0.003	0.028 ± 0.005	0.026 ± 0.008
9.505	Malic acid	0.080 ± 0.012**	0.130 ± 0.028	0.089 ± 0.015*	0.115 ± 0.013	0.072 ± 0.012*	0.134 ± 0.052
9.927	Proline	0.136 ± 0.079	0.171 ± 0.065	0.160 ± 0.024**	0.211 ± 0.022	0.133 ± 0.020*	0.207 ± 0.060
11.439	Phenylalanine	0.015 ± 0.003*	0.039 ± 0.017	0.017 ± 0.003**	0.039 ± 0.009	0.011 ± 0.001	0.015 ± 0.005
12.869	$\alpha$ -Aminoadipic acid	0.017 ± 0.007**	0.004 ± 0.001	0.009 ± 0.002**	0.032 ± 0.005	0.004 ± 0.001	0.010 ± 0.006
13.617	Phosphoric acid	0.372 ± 0.156	0.219 ± 0.076	0.255 ± 0.008*	0.337 ± 0.067	0.243 ± 0.070	0.194 ± 0.081
14.584	Citrate	0.054 ± 0.037*	0.005 ± 0.005	0.141 ± 0.015**	0.088 ± 0.031	0.142 ± 0.021*	0.227 ± 0.057
15.906	Glucose	0.996 ± 0.147**	0.194 ± 0.182	2.379 ± 0.554*	1.472 ± 0.360	1.396 ± 0.997	1.605 ± 0.539
16.225	Histidine	0.225 ± 0.042**	0.070 ± 0.033	0.541 ± 0.136*	0.365 ± 0.066	0.457 ± 0.197	0.394 ± 0.121
16.353	Lysine	0.087 ± 0.012**	0.213 ± 0.036	0.071 ± 0.014**	0.181 ± 0.025	0.040 ± 0.011	0.058 ± 0.024
16.611	Tyrosine	0.086 ± 0.010	0.043 ± 0.043	0.070 ± 0.014**	0.098 ± 0.011	0.031 ± 0.008*	0.050 ± 0.016
18.259	Unknown	0.037 ± 0.007**	0.009 ± 0.006	0.084 ± 0.023*	0.052 ± 0.012	0.062 ± 0.032	0.053 ± 0.019
18.539	Hexadecanoic acid	0.075 ± 0.011	0.098 ± 0.036	0.084 ± 0.014**	0.152 ± 0.019	0.056 ± 0.013	0.103 ± 0.043
20.173	Unknown	0.008 ± 0.005	0.018 ± 0.009	0.025 ± 0.005**	0.054 ± 0.007	0.037 ± 0.007**	0.066 ± 0.016
20.966	Linolenic acid	0.032 ± 0.014*	0.122 ± 0.058	0.034 ± 0.005**	0.121 ± 0.010	0.036 ± 0.011	0.068 ± 0.031
21.317	Linoleic acid	0.644 ± 0.241**	0.167 ± 0.072	0.434 ± 0.093**	0.255 ± 0.020	0.171 ± 0.063	0.154 ± 0.043
21.423	Linolenic acid	1.213 ± 0.488**	0.162 ± 0.065	0.727 ± 0.148**	0.214 ± 0.032	0.304 ± 0.114*	0.141 ± 0.085
21.909	Octadecanoic acid	0.107 ± 0.018	0.135 ± 0.041	0.095 ± 0.013**	0.209 ± 0.030	0.072 ± 0.011	0.130 ± 0.047

24.569	Myo-Inositol	0.032 ± 0.008	0.036 ± 0.010	0.033 ± 0.008**	0.066 ± 0.010	0.019 ± 0.006	0.030 ± 0.010
26.755	Unknown	0.006 ± 0.004**	0.044 ± 0.014	0.008 ± 0.009**	0.036 ± 0.008	0.003 ± 0.003	0.004 ± 0.009
27.975	Adenosine	0.074 ± 0.017**	0.024 ± 0.013	0.162 ± 0.027	0.140 ± 0.031	0.115 ± 0.019	0.136 ± 0.033
30.943	Tetracosanoic acid	0.005 ± 0.006	0.012 ± 0.007	0.012 ± 0.009*	0.027 ± 0.003	0.013 ± 0.003*	0.027 ± 0.010
35.750	ergosterol	0.293 ± 0.200	0.359 ± 0.159	0.207 ± 0.010**	0.390 ± 0.044	0.182 ± 0.059	0.263 ± 0.059
36.521	Unknown	0.038 ± 0.050*	0.107 ± 0.042	0.035 ± 0.022	0.075 ± 0.036	0.026 ± 0.019*	0.055 ± 0.014
37.206	Unknown	0.022 ± 0.021	0.034 ± 0.017	0.021 ± 0.006	0.039 ± 0.018	0.010 ± 0.006*	0.022 ± 0.005
38.708	Unknown	0.003 ± 0.005**	0.022 ± 0.010	0.001 ± 0.003*	0.034 ± 0.020	0.003 ± 0.004*	0.014 ± 0.009

Note: the VIP values of all the metabolites are greater than 1. The values are means of five independent experiments. The data represent the relative peak intensity and are presented as the mean ± SEM.

\* means significantly different ( $P < 0.05$ ) and \*\* means great significantly different ( $P < 0.01$ ).