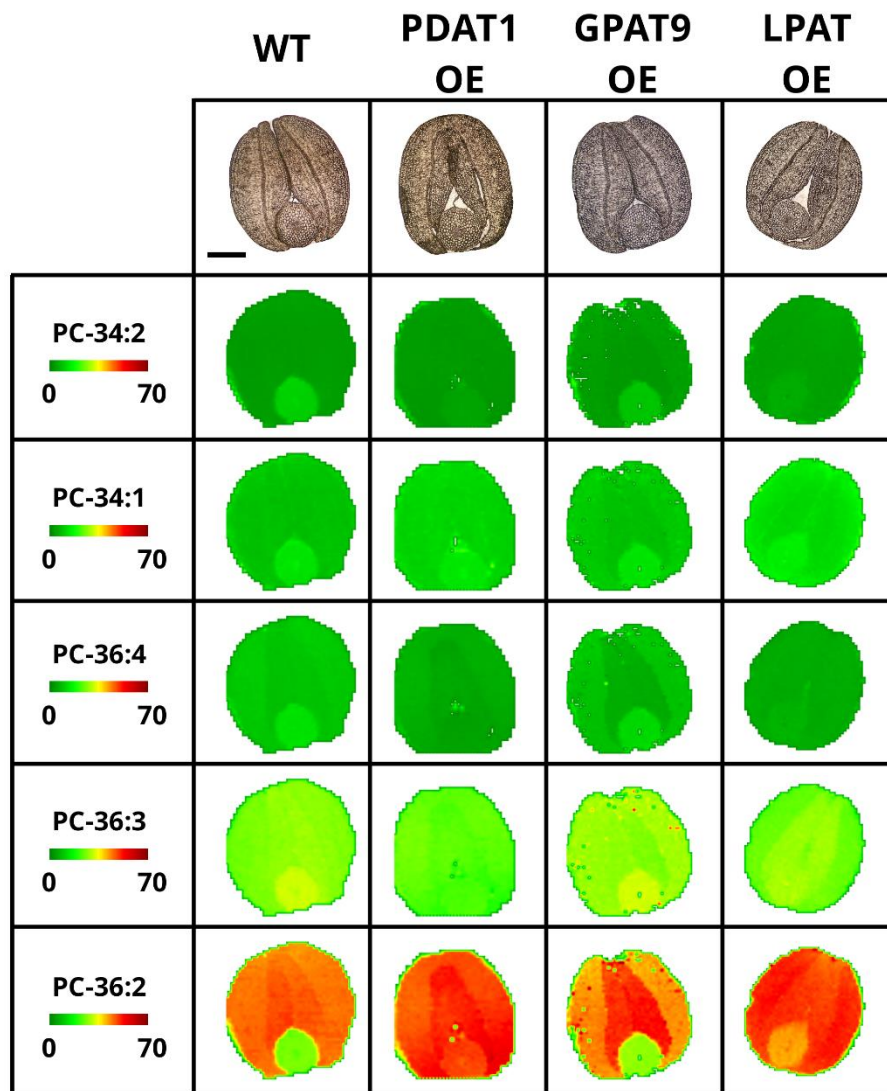
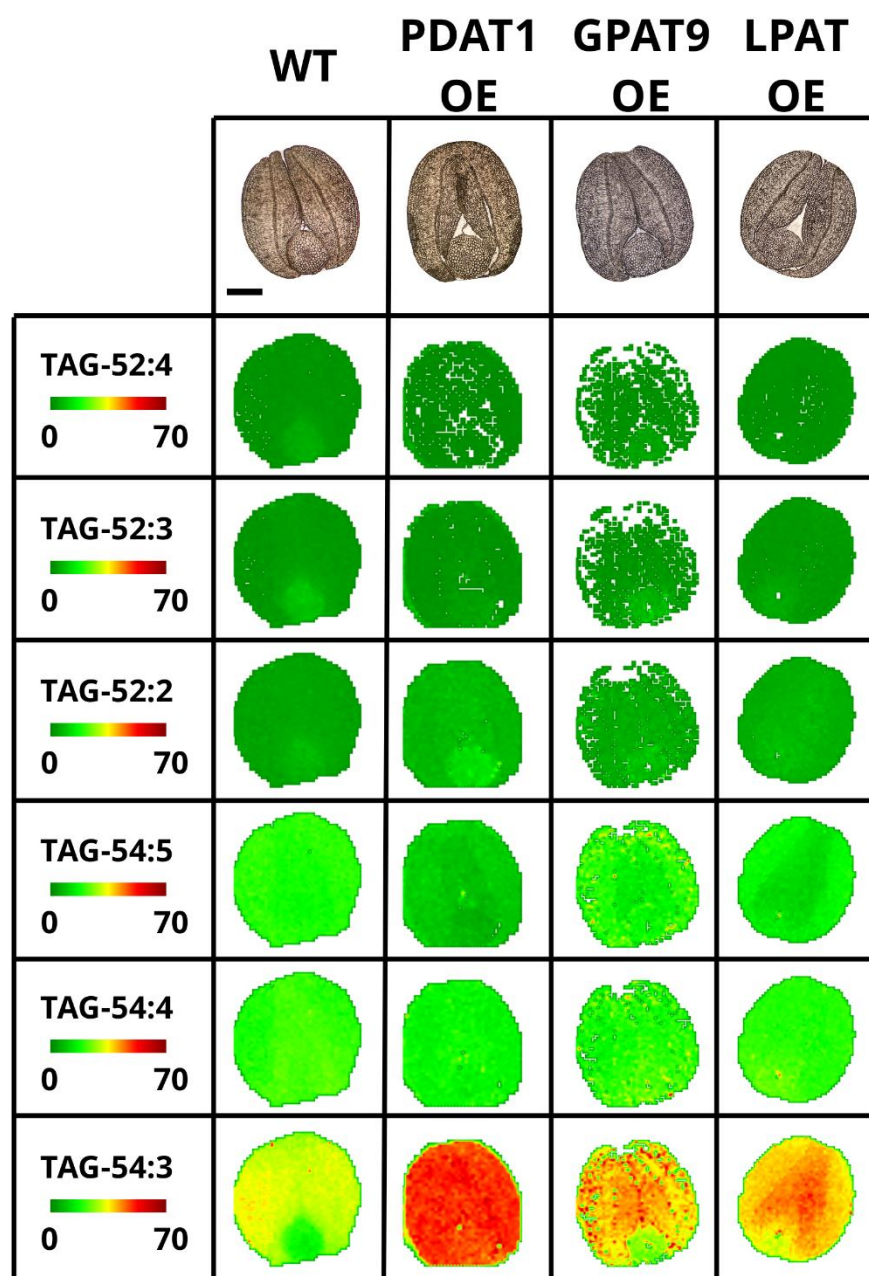
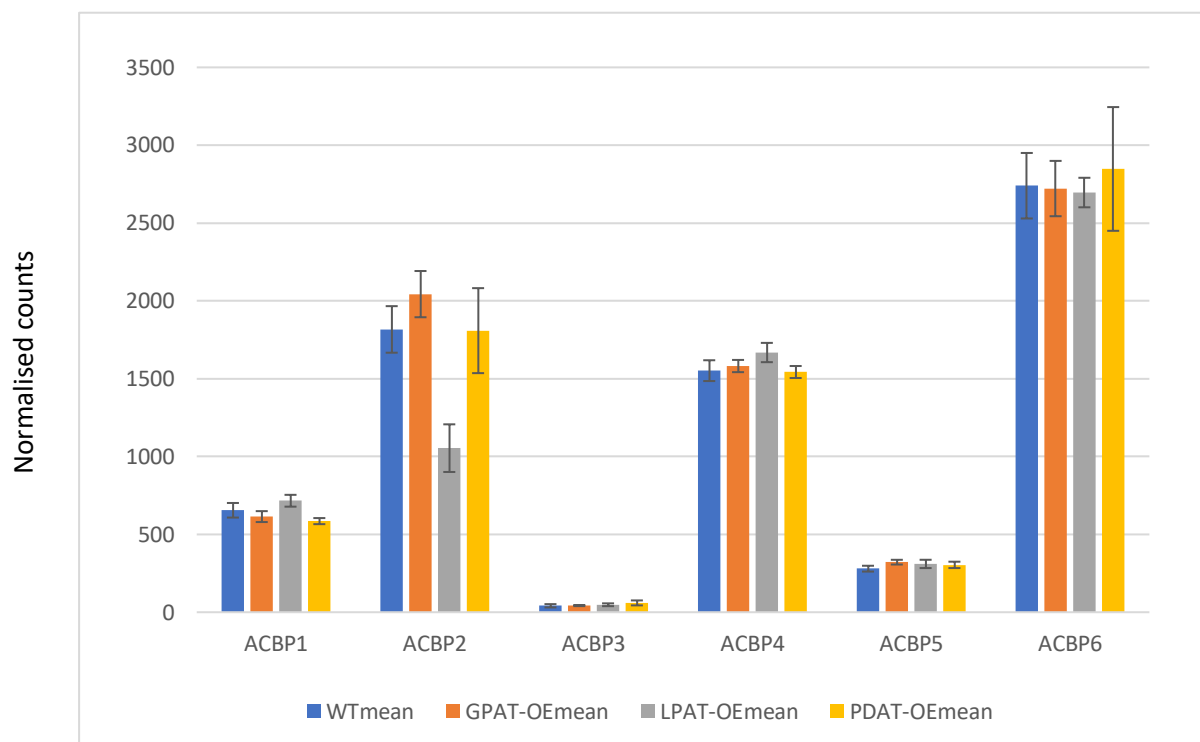




Supplemental Figure 1. MS imaging of PC in mature embryos from the WT and transgenic lines. MS images of selected PC molecular species for each genotype set at the same intensity value to show the relative abundance and distribution.



Supplemental Figure 2. MS imaging of TAG in mature embryos from the WT and transgenic lines. MS images of selected TAG molecular species for each genotype set at the same intensity value to show the relative abundance and distribution.



	WTmean	GPAT-OEmean	LPAT-OEmean	PDAT-OEmean
<i>ACBP1</i>	655	614	716	585
<i>ACBP2</i>	1817	2043	1054	1809
<i>ACBP3</i>	41	43	48	60
<i>ACBP4</i>	1552	1581	1668	1543
<i>ACBP5</i>	280	322	310	304
<i>ACBP6</i>	2740	2722	2696	2848

Supplementary Figure S3. Expression of *ACBP* genes in WT and transgenic lines by RNA-seq analysis. For each *ACBP*, the normalised counts represent the sum of the expression values for each differentially-spliced isoform.

Species	WT	GPAT-OE	LPAT-OE	PDAT-OE
PC-34:3	1.08 +/- 0.06	1.02 +/- 0.10	0.62 +/- 0.09 **	0.62 +/- 0.09 **
PC-34:2	4.33 +/- 0.19	4.91 +/- 0.31 *	3.91 +/- 0.58	3.24 +/- 0.47 **
PC-34:1	9.59 +/- 0.39	10.64 +/- 0.47 *	12.98 +/- 0.72 **	11.78 +/- 0.39 **
PC-34:0	0.41 +/- 0.25	0.80 +/- 0.08 *	0.36 +/- 0.40	0.39 +/- 0.40
PC-36:6	0.08 +/- 0.05	0.05 +/- 0.02	0.02 +/- 0.01	0.01 +/- 0.00 *
PC-36:5	1.31 +/- 0.27	1.17 +/- 0.11	0.52 +/- 0.11 **	0.49 +/- 0.10 **
PC-36:4	9.06 +/- 0.97	8.57 +/- 0.44	5.50 +/- 0.61 **	5.05 +/- 0.51 **
PC-36:3	27.44 +/- 0.44	27.32 +/- 0.57	24.03 +/- 2.34 *	22.40 +/- 1.52 **
PC-36:2	45.80 +/- 1.84	42.40 +/- 1.65 *	51.34 +/- 3.39 *	54.27 +/- 4.47 *
PC-36:1	0.89 +/- 1.01	3.12 +/- 0.43 **	0.71 +/- 0.83	1.75 +/- 1.75
PC-36:0	0.01 +/- 0.00	0.01 +/- 0.00	0.01 +/- 0.01	0.00 +/- 0.00

Species	WT	GPAT-OE	LPAT-OE	PDAT-OE
TAG-50:4	0.01 +/- 0.00	0.01 +/- 0.01	0.01 +/- 0.00	0.00 +/- 0.00
TAG-50:3	0.02 +/- 0.02	0.05 +/- 0.05	0.02 +/- 0.01	0.01 +/- 0.01
TAG-50:2	0.05 +/- 0.06	0.11 +/- 0.08	0.05 +/- 0.02	0.03 +/- 0.02
TAG-50:1	0.04 +/- 0.05	0.06 +/- 0.05	0.09 +/- 0.02	0.07 +/- 0.07
TAG-52:7	0.02 +/- 0.02	0.01 +/- 0.01	0.01 +/- 0.00	0.05 +/- 0.08
TAG-52:6	0.07 +/- 0.06	0.09 +/- 0.11	0.09 +/- 0.05	0.11 +/- 0.07
TAG-52:5	0.22 +/- 0.20	0.38 +/- 0.27	0.37 +/- 0.18	0.11 +/- 0.03
TAG-52:4	1.87 +/- 0.67	2.51 +/- 0.23	1.90 +/- 0.28	1.05 +/- 0.43
TAG-52:3	3.10 +/- 0.60	3.48 +/- 0.75	3.12 +/- 0.29	2.43 +/- 0.64
TAG-52:2	5.90 +/- 0.90	6.16 +/- 1.19	7.05 +/- 0.61	7.54 +/- 0.46 *
TAG-52:1	0.17 +/- 0.17	0.32 +/- 0.14	0.21 +/- 0.10	0.32 +/- 0.26
TAG-54:9	0.01 +/- 0.01	0.01 +/- 0.02	0.01 +/- 0.00	0.00 +/- 0.01
TAG-54:8	0.11 +/- 0.18	0.09 +/- 0.12	0.04 +/- 0.03	0.01 +/- 0.01
TAG-54:7	1.26 +/- 1.21	1.90 +/- 0.64	0.99 +/- 0.45	0.22 +/- 0.17
TAG-54:6	4.39 +/- 2.15	4.84 +/- 0.57	3.46 +/- 1.07	1.62 +/- 0.58 *
TAG-54:5	16.12 +/- 3.49	17.41 +/- 1.48	14.00 +/- 2.04	10.33 +/- 0.53 *
TAG-54:4	20.54 +/- 2.71	19.10 +/- 0.82	19.29 +/- 1.06	17.56 +/- 1.25
TAG-54:3	40.38 +/- 8.56	36.44 +/- 1.79	42.31 +/- 4.63	51.27 +/- 4.37
TAG-54:2	2.39 +/- 0.87	3.43 +/- 0.22	1.83 +/- 1.11	2.67 +/- 1.03
TAG-54:1	0.07 +/- 0.03	0.07 +/- 0.05	0.11 +/- 0.04	0.14 +/- 0.09
TAG-56:7	0.01 +/- 0.01	0.03 +/- 0.04	0.01 +/- 0.01	0.01 +/- 0.01
TAG-56:6	0.02 +/- 0.02	0.04 +/- 0.05	0.01 +/- 0.01	0.01 +/- 0.00
TAG-56:5	0.21 +/- 0.20	0.35 +/- 0.22	0.36 +/- 0.13	0.14 +/- 0.13
TAG-56:4	0.61 +/- 0.25	0.76 +/- 0.18	1.01 +/- 0.15 *	0.58 +/- 0.29
TAG-56:3	1.74 +/- 0.66	1.83 +/- 0.10	2.43 +/- 0.32	2.40 +/- 0.51
TAG-56:2	0.67 +/- 0.48	0.51 +/- 0.05	1.23 +/- 0.36	1.30 +/- 0.44
TAG-56:1	0.01 +/- 0.01	0.01 +/- 0.01	0.02 +/- 0.01	0.03 +/- 0.02

Table S1. MALDI-MS quantification (mol%) of PC and TAG molecular species in mature embryos of WT, GPAT-OE, LPAT-OE and PDAT-OE lines. Means +/- S.D. (n=4) are shown. * indicates significance in *t*-test (p<0.05). ** indicates significance in *t*-test (p<0.01).