

## Supplementary Materials: Expression of Castor LPAT2 Enhances Ricinoleic Acid Content at the *sn*-2 Position of Triacylglycerols in Lesquerella Seed

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**Table S1.** Non-HFA composition of transgenic lesquerella seeds of T<sub>1</sub> lines expressing *RcLPAT2*.

| FA                  | 16:0            | 16:1           | 18:0           | 18:1            | 18:2            | 18:3            | 20:1           |
|---------------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|----------------|
| Wild type           | 2.04 ± 0.02     | 1.44 ± 0.01    | 1.84 ± 0.07    | 16.85 ± 0.44    | 8.58 ± 0.29     | 12.21 ± 0.40    | 0.87 ± 0.03    |
| Transgenics         |                 |                |                |                 |                 |                 |                |
| Line 1              | 3.18 ± 0.29 *   | 1.94 ± 0.48 ** | 2.63 ± 0.09 ** | 16.50 ± 1.03    | 8.79 ± 0.22     | 13.06 ± 0.46    | 0.83 ± 0.05    |
| Line 2              | 2.08 ± 0.08     | 1.18 ± 0.06 *  | 2.00 ± 0.01    | 16.07 ± 0.64    | 7.92 ± 0.20     | 12.83 ± 0.31    | 1.01 ± 0.01 ** |
| Line 3              | 1.97 ± 0.08     | 1.09 ± 0.05 ** | 2.01 ± 0.02    | 16.07 ± 0.68    | 7.84 ± 0.20     | 12.67 ± 0.48    | 0.93 ± 0.07    |
| Line 4              | 1.85 ± 0.02 **  | 1.19 ± 0.12    | 2.11 ± 0.09    | 15.38 ± 0.20 *  | 7.77 ± 0.19     | 13.10 ± 0.29    | 0.98 ± 0.04    |
| Line 5              | 1.90 ± 0.03 *   | 1.05 ± 0.08 ** | 2.12 ± 0.17    | 16.75 ± 1.42    | 8.00 ± 0.19     | 12.56 ± 0.59    | 0.99 ± 0.03 *  |
| Line 7              | 2.60 ± 0.06 *** | 1.21 ± 0.05 *  | 1.91 ± 0.11    | 13.05 ± 0.22 ** | 9.12 ± 0.40     | 13.91 ± 0.30 *  | 0.64 ± 0.03 ** |
| Line 8              | 2.74 ± 0.15 **  | 1.40 ± 0.17    | 2.09 ± 0.06    | 15.85 ± 0.91    | 9.26 ± 0.18     | 15.43 ± 0.05 ** | 0.66 ± 0.01 ** |
| Line 9              | 1.76 ± 0.08 *   | 0.99 ± 0.08 ** | 1.66 ± 0.04    | 15.22 ± 0.10 *  | 6.94 ± 0.23 *   | 12.10 ± 0.33    | 0.88 ± 0.02    |
| Line 10             | 1.97 ± 0.11     | 1.20 ± 0.23    | 2.03 ± 0.10    | 18.57 ± 0.72    | 7.92 ± 0.13     | 12.21 ± 0.25    | 0.93 ± 0.02    |
| Line 11             | 2.12 ± 0.14     | 1.40 ± 0.07    | 2.26 ± 0.11 *  | 17.82 ± 0.18    | 8.54 ± 0.27     | 12.45 ± 0.12    | 0.92 ± 0.05    |
| Line 12             | 1.90 ± 0.13     | 1.40 ± 0.13    | 2.05 ± 0.09    | 17.43 ± 1.29    | 7.63 ± 0.15 *   | 12.52 ± 0.24    | 0.91 ± 0.03    |
| Line 13             | 2.76 ± 0.31     | 1.57 ± 0.24    | 2.12 ± 0.14    | 17.85 ± 1.06    | 8.87 ± 0.25     | 12.99 ± 0.33    | 0.84 ± 0.07    |
| Line 14             | 2.50 ± 0.02 *** | 1.11 ± 0.10 *  | 1.80 ± 0.14    | 14.18 ± 0.71 *  | 10.62 ± 0.10 ** | 11.93 ± 0.09    | 0.67 ± 0.04 *  |
| Line 15             | 2.34 ± 0.11     | 1.18 ± 0.13    | 2.06 ± 0.18    | 14.20 ± 0.16 ** | 9.35 ± 0.20     | 12.33 ± 0.49    | 0.76 ± 0.04    |
| Line 16             | 2.55 ± 0.37     | 1.12 ± 0.17    | 2.35 ± 0.13 *  | 17.55 ± 0.96    | 8.39 ± 0.22     | 12.39 ± 0.69    | 0.99 ± 0.09    |
| Line 17             | 2.37 ± 0.05 **  | 1.19 ± 0.05 ** | 1.92 ± 0.07    | 16.74 ± 0.31    | 7.83 ± 0.22     | 12.59 ± 0.11    | 0.92 ± 0.02    |
| Average among lines | 2.29 ± 0.10     | 1.26 ± 0.06    | 2.06 ± 0.06    | 16.20 ± 0.38    | 8.42 ± 0.22     | 12.82 ± 0.21    | 0.87 ± 0.03    |

Each HFA composition was measured as percentage of total fatty acids. Triplicates of 10-seed sample were measured for wild type and each independent transgenic line. All data are averages of three measurements ± SE. Bold numbers represent either the maximum or minimal level of the FAs in each column. Fatty acid legend: 16:0 is palmitic; 16:1 is palmitoleic; 18:0 is stearic; 18:1 is oleic; 18:2 is linoleic; 18:3 is linolenic; 20:1 is eicosenoic acid. Two-tailed student's *t*-test. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .