## Supplementary Table - Extracellular concentration of aromatic compounds produced by engineered *S. cerevisiae* strains in shake flask cultures

Determination of the intermediates of the anthocyanin pathway in *S. cerevisiae* strains IMF41 (Cir NeoChr, 1X *coAtCHS3*), IMF42 (Lin NeoChr, 1X *coAtCHS3*), IMF47 (Lin NeoChr, 9X *coAtCHS3*) and IMF48 (Lin NeoChr, 9X *coAtCHS3* repaired *coAtANS*), grown in aerobic shake flask batch cultures on glucose (20 g L-1) and urea. The data represents the average ± mean deviation of independent biological triplicates. Intermediates of the anthocyanin pathway coumaroyl-CoA, naringenin-chalcone, and leucopelargonidin were not measured. \* Indicates statistical significance when comparing IMF47 or IMF48 to IMF42, and # when comparing IMF48 to IMF47 (Student *t*-test, two-tailed, homoscedastic, *p*-value threshold 0.05).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **(mM)** | IMF41 | IMF42 | IMF47 | IMF48 |
| Phenylpyrurate | 2.00E-02 ± 0.00E+00 | 4.33E-02 ± 4.04E-02 | BDa | BDa |
| 2-Phenylethanol | 8.67E-02 ± 1.15E-02 | 8.67E-02 ± 2.52E-02 | 3.23E-01 ± 3.51E-02\* | 1.97E-01 ± 2.62E-03\*# |
| *p*-Hydroxyphenylethanol | 2.33E-02 ±2.08E-02 | 3.33E-02 ±5.77E-03 | 1.10E-01 ±1.73E-02\* | BDa |
| Cinnamic acid | 3.80E-01 ±2.00E-02 | 1.60E-01 ± 2.00E-02 | 0.00E+00 ± 0.00E+00\* | 1.46E-01 ± 3.06E-03# |
| Coumaric acid | 4.27E-01 ± 1.15E-02 | 5.40E-01 ± 2.00E-02 | 7.13E-01 ± 1.15E-02\* | 7.64E-01 ± 6.24E-03\*# |
| Phloretic acid | 7.25E-01 ± 1.21E-02 | 7.18E-01 ± 8.72E-03 | 5.09E-01 ± 1.15E-03\* | 1.07E+00 ± 7.66E-03\*# |
| Naringenin | BDa | BDa | BDa | BDa |
| Dihydrokaempferol | 2.25E-02 ± 2.57E-03 | 2.84E-02 ± 1.27E-03 | 9.49E-02 ± 4.29E-03\* | 3.83E-01 ± 8.34E-02\*# |
| Kaempferol | 6.33E-04 ± 3.44E-05 | 6.96E-04 ± 3.46E-05 | 2.14E-03 ± 3.06E-04\* | 1.39E-02 ± 5.72E-03\*# |
| Pelargonidin | 2.45E-03 ± 1.60E-04 | 1.81E-03 ± 1.98E-04 | 5.76E-03 ± 4.11E-04\* | 3.65E-02 ± 7.64E-03\*# |
| Kaempferol 3-O-glucoside | 2.24E-04 ± 1.83E-05 | 2.24E-04 ± 5.98E-06 | 4.39E-04 ± 2.41E-05\* | 5.53E-03 ± 1.13E-03\*# |
| Pelargonidin 3-O-glucoside | BDa | BDa | BDa | 2.14E-05 ± 3.93E-06\*# |
| Total aromatics before CHS | 1.66 ± 0.06 | 1.58 ± 0.06 | 1.66 ± 0.05 | 1.98 ± 0.01\*# |
| Total anthocyanins (after CHS) | 0.03 ± 0.00 | 0.03 ± 0.00 | 0.1 ± 0.0\* | 0.45 ± 0.10\*# |
| Total aromatics | 1.69 ± 0.06 | 1.61 ± 0.08 | 1.76 ± 0.05 | 2.43 ± 0.11\*# |

aBD: below detection