

**Supplementary material of the article:**

**Glycosylation of epigallocatechin gallate by engineered glycosyde hydrolases from *Talaromyces amestolkiae*: antiproliferative and neuroprotective properties of the novel glycosides.**

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**Supplementary Data S1. Equations for maximum production and maximum conversion for EGCG glycosides**

EGCG glucoside maximum production was adjusted to the following quadratic model equation: Production (g/L) = - 3.14841 + 0.005127 \* Time + 0.151687 \* [EGCG] + 0.099441 \* [GF] + 2.72465 \* [BGL-1-E521G].

EGCG glucoside maximum conversion was adjusted to the following quadratic model equation: Yield (%) = 16.89094 + 0.015827 \* Time - 0.246401 \* [EGCG] + 0.243565 \* [GF] + 12.52816 \* [BGL-1-E521G].

EGCG sophoroside maximum production was adjusted to the following quadratic model equation: Production (g/L) = 0.631575535 - 0.000879907 \* Time + 0.024362149 \* [EGCG] - 0.025933534 \* [GF] - 0.57690485 \* [BGL-1-E521G] - 5.72538E-06 \* Time \* [EGCG] + 7.38884E-05 \* Time \* [GF] + 0.002949491 \* Time \* [BGL-1-E521G] - 0.000594511 \* [EGCG] \* [GF] - 0.040613467 \* [EGCG] \* [BGL-1-E521G] + 0.095248319 \* [GF] \* [BGL-1-E521G].

EGCG sophoroside maximum conversion was adjusted to the following quadratic model equation: Yield (%) = - 18.50356536 + 0.038519128 \* Time - 0.287082415 \* [EGCG] + 0.574977698 \* [GF] + 58.31594217 \* [BGL-1-E521G] - 0.001449099 Time \* [EGCG] + 0.00028466 \* Time \* [GF] + 0.012664991 \* Time \* [BGL-1-E521G] - 0.01379129 [EGCG] \* [GF] - 1.404943926 \* [EGCG] \* [BGL-1-E521G] + 0.311310773 \* [GF] \* [BGL-1-E521G] + 1.21476E-05 \* Time<sup>2</sup> + 0.021742508 [EGCG]<sup>2</sup> - 0.004837327 \* [GF]<sup>2</sup> - 13.93947116 \* [BGL-1-E521G]<sup>2</sup>.

EGCG xyloside maximum production was adjusted to the following quadratic model equation: Production (g/L) = - 27.0092 + 0.107516 \* Time + 0.352642 \* [EGCG] - 0.121914 \* [pNPX] + 11.10301 \* [BxTW1-E495A] + 3.52688 \* pH + 0.000064 \* Time

$$* [EGCG] + 0.000268 * Time * [pNPX] + 0.000036 * Time * [BxTW1-E495A] -$$

$$0.019671 * Time * pH - 0.000032 * [EGCG] * [pNPX] + 0.021935 * [EGCG] *$$

$$[BxTW1-E495A] + 0.000379 * [EGCG] * pH + 0.049546 * [pNPX] * [BxTW1-E495A]$$

$$+ 0.018371 [pNPX] * pH - 1.82195 * [BxTW1-E495A] + 7.24E-06 * Time^2 - 0.006808$$

$$* [EGCG]^2 - 0.000125 * [pNPX]^2 - 0.30183 * [BxTW1-E495A]^2 + 0.112643 pH^2.$$

EGCG xyloside maximum conversion was adjusted to the following quadratic model equation: Yield (%) =  $-182.3495071 + 0.254393427 * Time + 3.57259018 * [EGCG] -$   
 $0.610354702 * [pNPX] + 30.19055765 * [BxTW1-E495A] + 40.24645123 * pH +$   
 $0.001349786 * Time * [EGCG] + 0.004772928 * Time * [pNPX] + 0.002106576 * Time$   
 $* [BxTW1-E495A] - 0.07393721 * Time * pH - 0.02061489 * [EGCG] * [pNPX] +$   
 $0.289477271 * [EGCG] * [BxTW1-E495A] - 0.711293945 * [EGCG] * pH +$   
 $0.201917046 * [pNPX] * [BxTW1-E495A] + 0.072974668 * [pNPX] * pH -$   
 $6.774289987 * [BxTW1-E495A] * pH.$