

Table S4. TS-gene content per each *Trichoderma* spp. Terpene synthase--protein groups identified by computational analysis are highlighted in different colours according to those used in Figure 1 and Figure S1, in different shadows depending on the gene amount per each species. Specific portions of the terpenoid inventory are boxed in red.

| Strain | N° TSs | <i>B. bassiana</i> ARSEF2860 | <i>T. virens</i> Gv29-8 | <i>T. pleurotica</i> Tr1 | <i>T. pleuroti</i> TPhu1 | <i>T. harzianum</i> CBS 226.95 | <i>T. harzianum</i> TR274 | <i>T. guizhouense</i> NJAU 4742 | <i>T. afroharzianum</i> T6776 | <i>T. atrobrunneum</i> ITEM 908 | <i>T. atroviride</i> IMI 206040 | <i>T. gamsii</i> A5MH | <i>T. gamsii</i> T6085 | <i>T. hamatum</i> GD12 | <i>T. asperellum</i> TR356 v1.0 | <i>T. asperellum</i> CBS 433.97 | <i>T. arundinaceum</i> IBT 40837 | <i>T. brevicompactum</i> IBT 40841 | <i>T. citrinoviride</i> TUCIM 6016 | <i>T. longibrachiatum</i> ATCC 18648 | <i>T. parareesei</i> CBS 125925 | <i>T. reesei</i> RUT C-30 | <i>T. reesei</i> QM6a | |
|-----------------------------------|--------|---------------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------------|------------------------------|------------------------------------|----------------------------------|------------------------------------|------------------------------------|--------------------------|---------------------------|---------------------------|------------------------------------|------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|---|------------------------------------|------------------------------|--------------------------|--|
| TS-family size | 387 | 16 | 20 | 23 | 23 | 18 | 18 | 19 | 20 | 16 | 18 | 15 | 16 | 15 | 21 | 20 | 20 | 21 | 18 | 15 | 16 | 17 | 18 | |
| HAD-like | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Uncharacterized group 1 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | |
| TRI5 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | |
| Uncharacterized group 2 | 14 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Longiborneol synthases | 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Presilphiperfolan-8β-ol synthases | 16 | 0 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Pentalenene synthases | 22 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Uncharacterized group 3 | 7 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Uncharacterized group 4 | 58 | 0 | 5 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 3 | 1 | 2 | 2 | 2 | |
| Squalene synthases | 22 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| GGTases 1 | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| GGTases 2 | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| FTases | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Uncharacterized group 5 | 21 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Oxidosqualene cyclases | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Diterpene synthases | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | |
| GGPP synthases | 22 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | |
| FPP synthases | 31 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | |
| Indole diTS | 23 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Chimeric-like | 22 | 3 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| CLADE | | VIRENS | | | | HARZIANUM | | | | VIRIDE | | | | | BREVICOMPACTUM | | | | LONGIBRACHIATUM | | | | | |