**Appendix S4**. Enzyme repertoires involved in plant cell wall and lignin degradation across genomes of Hymenochaetales (NCBI project IDs are indicated in parentheses). Protein IDs in cells indicate presence of the given enzyme in a genome. All genomes examined are first versions.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Enzyme | *Rickenella*  *fibula*  (333301) | *Rickenella mellea* (334780) | *Fomitiporia mediterranea* (56107) | *Onnia scaura* (245618) | *Porodaedalea niemelaei* (333975) | *Schizopora paradoxa* (239088) | *Trichaptum abietinum* (210203) |
| Plant Cell Wall  Degradation | arabinosidase | 2437026 | 732500 | 147487 | – | 796448 | 917650 | 571067 |
| cellulase | 2570005 | 780071 | 110423 | 856158 | 741995 | 856939 | 542256 |
| cellobiohydrolase | 2374559 | 724856 | 143122 | – | 862746 | 664980 | 537037 |
| chitinase | 2500379 | 104836 | 150694 | 17975 | 836689 | 120580 | 26324 |
| galactosidase | 2381074 | 788250 | 148799 | 235912 | 964096 | 867681 | 543664 |
| glucanase | 2443708 | 780071 | 101593 | 786712 | 941887 | 279610 | 552447 |
| invertase | 2566836 | 836131 | – | – | – | – | – |
| mannosidase | 2378333 | 720163 | 136669 | 791227 | 786842 | 939827 | 525709 |
| polygalacturonase | 2418156 | 512477 | 28644 | 791027 | 869275 | 29198 | 548239 |
| xylanase | 2395321 | – | – | – | 792337 | – | – |
| Lignin Degradation | laccase | 2377757 | 359523 | 114163 | 73508 | 430468 | 493341 | 528592 |
| ligninase | 2378747 | 274598 | 29597 | 802909 | 878226 | 810137 | 540509 |
| peroxidase | 2398683 | 796520 | 133892 | 971256 | 860644 | 902442 | 620229 |