**Table S5: Heatmap showing the taxonomic diversity of the matches to the 215 predictions.**

The shading in SEQ, PPI, COEX column shows if the prediction was also made when only links of that type are used. Hits are counted once, at the lowest possible taxonomy level, so for example *F. graminearum* counts are not included in any of the subsequent levels. The *Nectriacaea* column contains all hits from the species in that taxonomy group, excluding those from *F. graminearum.*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene** | **SEQ** | **PPI** | **COEX** | | **G. zeae** | **Nectriaceae** | **Hypocreales** | **Hypocreomycetidae** | **Sordariomycetes** | **Pezizomycotina** | **Ascomycota** | **Dikarya** | **Fungi** | **Eukaryota** | **Other** |
| **FGSG\_06878** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16809** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00337** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16497** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09612** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_15983** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00786** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16828** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07251** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05393** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04054** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08729** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05406** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07423** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04484** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08468** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16323** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01506** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07329** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04947** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16947** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16693** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16816** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06311** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06684** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16768** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16967** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09715** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09410** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07469** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01410** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04293** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07310** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_13314** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05547** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17687** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17728** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16818** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17001** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16633** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17594** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00362** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05734** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06940** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01271** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09408** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17186** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16718** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06970** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06959** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16743** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16988** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16540** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07121** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11812** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05845** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16006** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00472** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17226** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10095** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10725** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00408** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00469** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04053** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01188** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09660** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01312** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00433** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07520** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08635** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08691** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06206** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04418** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01842** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01058** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05418** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05455** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_15867** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10470** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00792** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00342** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16005** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10116** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16273** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07504** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_15838** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02743** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17038** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17351** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11561** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_03170** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_12297** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06550** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01949** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06324** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04311** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16039** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07884** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08135** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16269** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07335** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00559** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10066** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08811** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02014** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00637** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00838** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16980** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02010** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17028** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01338** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09271** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06021** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01392** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16028** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09857** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01559** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09778** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05737** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06832** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16299** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09690** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16383** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05698** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11064** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09870** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00677** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05535** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09988** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05038** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07855** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04286** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10251** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09535** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08607** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02795** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08920** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08421** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04618** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11878** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05977** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_15841** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04910** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01354** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05512** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_03146** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02488** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06266** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01623** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00536** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09663** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00460** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_17398** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16412** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00760** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11614** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_13944** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10822** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_15757** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07004** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07075** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11626** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08543** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07946** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_11627** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06847** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10272** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06922** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04107** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04382** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09689** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_04400** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10067** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09739** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06921** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10782** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09862** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00883** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02022** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_03540** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10002** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08537** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02699** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01228** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09586** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10387** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08888** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_09954** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00071** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10167** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02661** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05407** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01548** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08359** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02083** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06846** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01888** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_03534** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_16912** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10808** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06886** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05619** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08560** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10873** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06209** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_08857** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_07306** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00414** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_05778** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_01014** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_06895** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_00644** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_10327** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_02531** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |
| **FGSG\_03535** |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |