

**Supplementary Table S1.** Identity of 117 *Aspergillus*, *Fusarium* and *Scedosporium* species/species complexes isolates used to construct the in-house mass spectral database. Clinical isolates (n=116) were recovered from a range of body sites from diverse patient groups.

| <b>Organism ID</b>                  | <b>No. isolates</b> | <b>Gene loci sequenced to confirm ID</b> |
|-------------------------------------|---------------------|--|
| <i>Aspergillus/Neosartorya spp.</i> | 53                  |  |
| <i>Aspergillus alliaceus</i>        | 1                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus amstelodami</i>      | 1                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus chevalieri</i>       | 1                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus creber</i>           | 1                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus deflectus</i>        | 1                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus flavus</i>           | 5                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus fumigatus</i>        | 19 <sup>a</sup>     | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus lentulus</i>         | 4                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus nidulans</i>         | 4                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus niger</i>            | 5                   | ITS, $\beta$ -tubulin                    |
| <i>Aspergillus ochraceus</i>        | 1                   | ITS, $\beta$ -tubulin                    |

|  |           |                                     |
|--|-----------|-------------------------------------|
| <i>Aspergillus sclerotiorum</i>                | 1         | ITS, $\beta$ -tubulin               |
| <i>Aspergillus sydowii</i>                     | 1         | ITS, $\beta$ -tubulin               |
| <i>Aspergillus terreus</i>                     | 3         | ITS, $\beta$ -tubulin               |
| <i>Aspergillus tetrazonus</i>                  | 1         | ITS, $\beta$ -tubulin               |
| <i>Aspergillus versicolor</i>                  | 2         | ITS, $\beta$ -tubulin               |
| <i>Aspergillus virinutans</i>                  | 1         | ITS, $\beta$ -tubulin               |
| <i>Neosartorya fischeri</i>                    | 1         | ITS, $\beta$ -tubulin               |
| <b><i>Fusarium species complex</i></b>         | <b>43</b> |                                     |
| <i>Fusarium chlamyosporum</i><br>complex       | 4         | ITS, <i>EF1-<math>\alpha</math></i> |
| <i>Fusarium dimerum</i> complex                | 2         | ITS, <i>EF1-<math>\alpha</math></i> |
| <i>Fusarium fujikuroi</i> complex              | 10        | ITS, <i>EF1-<math>\alpha</math></i> |
| <i>Fusarium incarnatum-equiseti</i><br>complex | 6         | ITS, <i>EF1-<math>\alpha</math></i> |
| <i>Fusarium oxysporum</i> complex              | 10        | ITS, <i>EF1-<math>\alpha</math></i> |
| <i>Fusarium solani</i> complex                 | 11        | ITS, <i>EF1-<math>\alpha</math></i> |
| <b><i>Scedosporium spp.</i></b>                | <b>21</b> | ITS, $\beta$ -tubulin <sup>b</sup>  |
| <i>Scedosporium apiospermum</i>                | 8         | ITS, $\beta$ -tubulin               |

|                                 |            |                       |
|---------------------------------|------------|-----------------------|
| <i>Scedosporium aurantiacum</i> | 5          | ITS, $\beta$ -tubulin |
| <i>Scedosporium boydii</i>      | 1          | ITS, $\beta$ -tubulin |
| <i>Scedosporium prolificans</i> | 7          | ITS, $\beta$ -tubulin |
| <b>Total</b>                    | <b>117</b> |                       |

Abbreviations: ID, identification; ITS, internal transcribed spacer region

<sup>a</sup> Includes *Aspergillus fumigatus* ATCC 204305. All isolates referred to as *A. fumigatus* are *A. fumigatus* sensu stricto

<sup>b</sup> If required