

**Table S1. Proteins implicated in *A. fumigatus* pathogenicity.**

Protein	Cellular Function	Genome Locus Identifier	Reference(s)
PyrG	Pyrimidine biosynthesis	Afu2g08360	d'Enfert et al., 1996 <sup>1</sup>
PabaA	Folate biosynthesis	Afu6g04820	Brown et al., 2000 <sup>2</sup>
LysF	Lysine biosynthesis	Afu5g08890	Liebmann et al., 2004a <sup>3</sup>
PksP	Pigment biosynthesis	Afu2g17600	Langfelder et al., 1998 <sup>4</sup> ; Tsai et al., 1998 <sup>5</sup>
SidA	Siderophore biosynthesis	Afu2g07680	Schrettl et al., 2004 <sup>6</sup>
ChsG	Chitin biosynthesis	Afu3g14420	Mellado et al., 1996 <sup>7</sup>
CgrA	Ribosome biosynthesis	Afu8g02750	Bhabhra et al., 2004 <sup>8</sup>
AreA	Regulation of nitrogen metabolism	Afu6g01970	Hensel et al., 1998 <sup>9</sup>
CpcA	Regulation of amino acid biosynthesis	Afu4g12470	Krappmann et al., 2004 <sup>10</sup>
LaeA	Regulation of secondary metabolism	Afu1g14660	Bok and Keller, 2003 <sup>11</sup>
Cat1	Oxidative stress	Afu3g02270	Paris et al., 2003 <sup>12</sup>
Cat2	Oxidative stress	Afu8g01670	Paris et al., 2003 <sup>12</sup>
Fos-1	Stress response	Afu6g10240	Clemons et al., 2002 <sup>13</sup>
GpaB	cAMP signaling	Afu1g12930	Liebmann et al., 2004b <sup>14</sup>
PkaC1	cAMP signaling	Afu2g12200	Liebmann et al., 2004b <sup>14</sup>
RhbA	Nutrient sensing	Afu5g05480	Panepinto et al., 2003 <sup>15</sup>
AcyA	cAMP signaling	Afu6g08520	Liebmann et al., 2004b <sup>14</sup>

## Table S1 References

1. D'Enfert, C. et al. Attenuated virulence of uridine-uracil auxotrophs of *Aspergillus fumigatus*. *Infect Immun* 64, 4401-5 (1996).
2. Brown, J. S. et al. Signature-tagged and directed mutagenesis identify PABA synthetase as essential for *Aspergillus fumigatus* pathogenicity. *Mol Microbiol* 36, 1371-80 (2000).
3. Liebmann, B. et al. Deletion of the *Aspergillus fumigatus* lysine biosynthesis gene *lysF* encoding homoaconitase leads to attenuated virulence in a low-dose mouse infection model of invasive aspergillosis. *Arch Microbiol* 181, 378-83 (2004).
4. Langfelder, K. et al. Identification of a polyketide synthase gene (*pksP*) of *Aspergillus fumigatus* involved in conidial pigment biosynthesis and virulence. *Med Microbiol Immunol (Berl)* 187, 79-89 (1998).
5. Tsai, H. F., Chang, Y. C., Washburn, R. G., Wheeler, M. H. & Kwon-Chung, K. J. The developmentally regulated *alb1* gene of *Aspergillus fumigatus*: its role in modulation of conidial morphology and virulence. *J Bacteriol* 180, 3031-8 (1998).
6. Schrettl, M. et al. Siderophore biosynthesis but not reductive iron assimilation is essential for *Aspergillus fumigatus* virulence. *J Exp Med* 200, 1213-9 (2004).
7. Mellado, E., Specht, C. A., Robbins, P. W. & Holden, D. W. Cloning and characterization of *chsD*, a chitin synthase-like gene of *Aspergillus fumigatus*. *FEMS Microbiol Lett* 143, 69-76 (1996).
8. Bhabhra, R. et al. Disruption of the *Aspergillus fumigatus* gene encoding nucleolar protein *CgrA* impairs thermotolerant growth and reduces virulence. *Infect Immun* 72, 4731-40 (2004).
9. Hensel, M., Arst, H. N., Jr., Aufauvre-Brown, A. & Holden, D. W. The role of the *Aspergillus fumigatus* *areA* gene in invasive pulmonary aspergillosis. *Mol Gen Genet* 258, 553-7 (1998).
10. Krappmann, S. et al. The *Aspergillus fumigatus* transcriptional activator *CpcA* contributes significantly to the virulence of this fungal pathogen. *Mol Microbiol* 52, 785-99 (2004).
11. Bok, J. W. & Keller, N. P. *LaeA*, a regulator of secondary metabolism in *Aspergillus* spp. *Eukaryot Cell* 3, 527-35 (2004).
12. Paris, S. et al. Catalases of *Aspergillus fumigatus*. *Infect Immun* 71, 3551-62 (2003).
13. Clemons, K. V., Miller, T. K., Selitrennikoff, C. P. & Stevens, D. A. *fos-1*, a putative histidine kinase as a virulence factor for systemic aspergillosis. *Med Mycol* 40, 259-62 (2002).
14. Liebmann, B., Muller, M., Braun, A. & Brakhage, A. A. The cyclic AMP-dependent protein kinase a network regulates development and virulence in *Aspergillus fumigatus*. *Infect Immun* 72, 5193-203 (2004).
15. Panepinto, J. C. et al. Deletion of the *Aspergillus fumigatus* gene encoding the Ras-related protein *RhbA* reduces virulence in a model of Invasive pulmonary aspergillosis. *Infect Immun* 71, 2819-26 (2003).

