

Fungal Genetics Reports

Volume 51

Article 15

Aspergillus Bibliography

John Clutterbuck
University of Glasgow

Follow this and additional works at: <https://newprairiepress.org/fgr>



This work is licensed under a [Creative Commons Attribution-Share Alike 4.0 License](#).

Recommended Citation

Clutterbuck, J. (2004) "Aspergillus Bibliography," *Fungal Genetics Reports*: Vol. 51, Article 15.
<https://doi.org/10.4148/1941-4765.1145>

This Bibliography is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Fungal Genetics Reports by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

Aspergillus Bibliography

Abstract

This bibliography attempts to cover genetical and biochemical publications on *Aspergillus nidulans* and also includes selected references to related species and topics. Entries have been checked as far as possible, but please tell me of any errors and omissions. Authors are kindly requested to send a copy of each article to the FGSC for its reprint collection.

Clutterbuck: Aspergillus Bibliography
ASPERGILLUS BIBLIOGRAPHY

This bibliography attempts to cover genetical and biochemical publications on *Aspergillus nidulans* and also includes selected references to related species and topics. Entries have been checked as far as possible, but please tell me of any errors and omissions. Authors are kindly requested to send a copy of each article to the FGSC for its reprint collection.

John Clutterbuck. Institute of Biomedical and Life Sciences, Anderson College, University of Glasgow, Glasgow G11 6NU, Scotland, UK. Email: j.clutterbuck@bio.gla.ac.uk

[**Author index**](#)

[**Keyword index**](#)

- 1. Adams, D.J.** 2004 Fungal cell wall chitinases and glucanases. *Microbiology* **150**:2029-2035
- 2. Aimi, T., Taguchi, H. & Morinaga, T.** 2003 Primary structure of cytochrome c gene from the white root rot fungus *Rosellinia necatrix*. *Biosci. Biotechnol. Biochem.* **67**:174-178
- 3. Amillis, S., Cecchetto, G., Sophianopoulou, V., Koukaki, M., Scazzocchio, C. & Diallinas, G.** 2004 Transcription of purine transporter genes is activated during the isotropic growth phase of *Aspergillus nidulans* conidia. *Mol. Microbiol.* **52**:205-216
- 4. Arst, H.N.Jr. & Peñalva, M.A.** 2003 Recognizing gene regulation by ambient pH. *Fungal Genet. Biol.* **40**:1-3
- 5. Bañuelos, O., Naranjo, L., Casqueiro, J., Gutiérrez, S. & Martín, J.F.** 2003 Co-transformation with autonomous replicating and integrative plasmids in *Penicillium chrysogenum* is highly efficient and leads in some cases to rescue of the intact integrative plasmid. *Fungal Genet. Biol.* **40**:83-92
- 6. Baptista, F., Machado, M.F. & Castro-Prado, M.A.** 2003 Alternative reproduction pathway in *Aspergillus nidulans*. *Folia Microbiol.* **48**:597-604
- 7. Barreto-Bergter, E., Pinto, M.R. & Rodrigues, M.L.** 2004 Structure and biological functions of fungal cerebrosides. *An. Acad. Bras. Ciênc.* **76**:67-84
- 8. Bennion, B., Park, C., Fuller, M., Lindsey, R., Momany, M., Jennemann, R. & Levery, S.B.** 2003 Glycosphingolipids of the model fungus *Aspergillus nidulans*: characterization of GIPCs with oligo-a-mannose-type glycans. *J. Lipid Res.* **44**:2073-2088
- 9. Berthet, N., Faure, O., Bakri, A., Ambroise-Thomas, P., Grillot, R. & Brugère J.-F.** 2003 *In vitro* susceptibility of *Aspergillus* spp. clinical isolates to albendazole. *J. Antimicrob. Chemother.* **51**:1419-422
- 10. Boase, N.A. & Kelly, J.M.** 2004 A role for *creD*, a carbon catabolite repression gene from *Aspergillus nidulans*, in ubiquitination. *Mol. Microbiol.* **53**:929-940
- 11. Bok, J.W. & Keller, N.P.** 2004 LaeA, a regulator of secondary metabolism in *Aspergillus* spp. *Euk. Cell* **3**:527-535
- 12. Boyce, K.J., Hynes, M.J. & Andrianopoulos, A.** 2003 Control of morphogenesis and actin localization by the *Penicillium marneffei* RAC homolog. *J. Cell Sci.* **116**:1249-1260
- 13. Boyd, J., Gradmann, D. & Boyd, C.M.** 2003 Transinhibition and voltage-gating in a fungal nitrate transporter. *J. Membrane Biol.* **195**:109-120
- 14. Bruggeman, J., Debets, A.J. & Hoekstra, R.F.** 2004 Selection arena in *Aspergillus nidulans*. *Fungal Genet. Biol.* **41**:181-188
- 15. Busso, C. & Castro-Prado, M.A.** 2004 Cremophor EL stimulates mitotic recombination in *uvrH//uvrH* diploid strain of *Aspergillus nidulans*. *An. Acad. Bras. Ciênc.* **76**:49-55
- 16. Calvo, A.M., Bok, J., Brooks, W. & Keller, N.P.** 2004 *veA* is required for toxin and sclerotial production in *Aspergillus parasiticus*. *Appl. Environ. Microbiol.* **70**:4733-4739
- 17. Cánovas, D., Mukhopadhyay, R., Rosen, B.P. & de Lorenzo, V.** 2003 Arsenate transport and reduction in the hyper-tolerant fungus *Aspergillus* sp. P37. *Environ. Microbiol.* **5**:1087-1093
- 18. Cecchetto, G., Amillis, S., Diallinas, G., Scazzocchio, C. & Drevet, C.** 2004 The AzgA purine transporter of *Aspergillus nidulans*. Characterization of a protein belonging to a new phylogenetic cluster. *J. Biol. Chem.* **279**:3132-3141
- 19. Chang, P.-K., Yabe, K. & Yu, J.** 2004 The *Aspergillus parasiticus estA*-encoded esterase converts versiconal hemiacetal acetate to versiconal and versiconol acetate to versiconol in aflatoxin biosynthesis. *Appl. Environ.*

- Microbiol. **70**:3593-3599
- 20.** Chang, Y.C., Tsai, H.-F., Karos, M. & Kwon-Chung, K.J. 2004 *THTA*, a thermotolerance gene of *Aspergillus fumigatus*. Fungal Genet. Biol. **41**:888-896
- 21.** Chitarra, G.S., Abee, T., Rombouts, F.M., Posthumus, M.A. & Dijksterhuis, J. 2004 Germination of *Penicillium paneum* conidia is regulated by 1-octen-3-ol, a volatile self-inhibitor. Appl. Environ. Microbiol. **70**:2833-2829
- 22.** Clutterbuck, A.J. 2004 MATE transposable elements in *Aspergillus nidulans*: evidence of repeat-induced point mutation. Fungal Genet. Biol. **41**:308-316
- 23.** Dai, Z., Mao, X., Magnuson, J.K. & Lasure, L.L. 2004 Identification of genes associated with morphology in *Aspergillus niger* by using suppression subtractive hybridization. Appl. Environ. Microbiol. **70**:2474-2485
- 24.** De Souza, C.P.C., Horn, K.P., Masker, K. & Osmani, S.A. 2003 The SONB^{NUP98} nucleoporin interacts with the NIMA kinase in *Aspergillus nidulans*. Genetics **165**:1071-1081
- 25.** do Nascimento, A.M., Goldman, M.H. & Goldman, G.H. 2002 Molecular characterization of ABC transporter-encoding genes in *Aspergillus nidulans*. Genet. Mol. Res. **1**:337-349
- 26.** Dotis, J. & Roilides, E. 2004 Osteomyelitis due to *Aspergillus* spp. in patients with chronic granulomatous disease: comparison of *Aspergillus nidulans* and *Aspergillus fumigatus*. Int. J. Infect. Dis. **8**:103-110
- 27.** Dou, X., Wu, D., An, W., Davies, J., Hashmi, S.B., Ukil, L. & Osmani, S.A. 2003 The PHOA and PHOB cyclin-dependent kinases perform an essential function in *Aspergillus nidulans*. Genetics **165**:1105-1115
- 28.** Dyer, P.S., Paoletti, M. & Archer, D.B. 2003 Genomics reveals sexual secrets of *Aspergillus*. Microbiology **149**:2301-2303
- 29.** Dynesen, J. & Nielsen, J. 2003 Surface hydrophobicity of *Aspergillus nidulans* conidiospores and its role in pellet formation. Biotechnol. Prog. **19**:1049-1052
- 30.** Dynesen, J. & Nielsen, J. 2003 Branching is coordinated with mitosis in growing hyphae of *Aspergillus nidulans*. Fungal Genet. Biol. **40**:15-24
- 31.** Efimov, V.P. 2003 Roles of NUDE and NUDF proteins of *Aspergillus nidulans*: insights from intracellular localization and overexpression effects. Mol. Biol. Cell **14**:871-888
- 32.** Eisendle, M., Oberegger, H., Buttinger, R., Illmer, P. & Haas, H. 2004 Biosynthesis and uptake of siderophores is controlled by a PacC-mediated ambient-pH regulatory system in *Aspergillus nidulans*. Euk. Cell **3**:561-563
- 33.** Eisenhaber, B., Schneider, G., Wildpaner, M. & Eisenhaber, F. 2004 A sensitive predictor for potential GPI lipid modification sites in fungal protein sequences and its application to genome-wide studies for *Aspergillus nidulans*, *Candida albicans*, *Neurospora crassa*, *Saccharomyces cerevisiae* and *Schizosaccharomyces pombe*. J. Mol. Biol. **337**:243-253
- 34.** Fekete, E., Karaffa, L., Sándor, E., Bánya, I., Seiboth, B., Gyémánt, G., Sepsi, A., Szentirmai, A. & Kubicek, C.P. 2004 The alternative D-galactose degrading pathway of *Aspergillus nidulans* proceeds via L-sorbose. Arch. Microbiol. **181**:35-44
- 35.** Fernández-Martínez, J., Brown, C.V., Díez, E., Tilburn, J., Arst, H.N.Jr., Peñalva, M.A. & Espeso, E.A. 2003 Overlap of nuclear localisation signal and specific DNA-binding residues within the zinc finger domain of PacC. J. Mol. Biol. **334**:667-684
- 36.** Fierro, F., Laich, F., García-Rico, R.O. & Martín, J.F. 2004 High efficiency transformation of *Penicillium nalgiovense* with integrative and autonomously replicating plasmids. Int. J. Food Microbiol. **90**:237-248
- 37.** Flippi, M., Kociałkowska, J. & Felenbok, B. 2003 Relationships between the ethanol utilization (*alc*) pathway and unrelated catabolic pathways in *Aspergillus nidulans*. Eur. J. Biochem. **270**:3555-3564
- 38.** Fortwendel, J.R., Panepinto, J.C., Seitz, A.E., Askew, D.S. & Rhodes, J.C. 2004 *Aspergillus fumigatus rasA* and *rasB* regulate the timing and morphology of asexual development. Fungal Genet. Biol. **41**:129-139
- 39.** Gatherar, I.M., Pollerman, S., Dunn-Coleman, N. & Turner, G. 2004 Identification of a novel gene *hbrB* required for polarised growth in *Aspergillus nidulans*. Fungal Genet. Biol. **41**:463-471
- 40.** Goldman, G.H. & Kafer, E. 2004 *Aspergillus nidulans* as a model system to characterize the DNA damage response in eukaryotes. Fungal Genet. Biol. **41**:428-442
- 41.** Gómez, D., García, I., Scazzocchio, C. & Cubero, B. 2003 Multiple GATA sites: protein binding and physiological relevance for the regulation of the proline transporter gene of *Aspergillus nidulans*. Molecular Microbiology. **50**:277-289
- 42.** Grell, M.N., Mouritzen, P. & Giese, H. 2003 A *Blumeria graminis* gene family encoding proteins with a C-terminal variable region with homologues in pathogenic fungi. Gene **311**:181-192

- 43. Guelfi, A., Azevedo, R.A., Lea, P.J. & Molina, S.M.** 2003 Growth inhibition of the filamentous fungus *Aspergillus nidulans* by cadmium: an antioxidant enzyme approach. *J. Gen. Appl. Microbiol.* **49**:63-73
- 44. Guest, G.M., Lin, X. & Momany, M.** 2004 *Aspergillus nidulans* RhoA is involved in polar growth, branching and cell wall synthesis. *Fungal Genet. Biol.* **41**:13-22
- 45. Haas, H.** 2003 Molecular genetics of fungal siderophore biosynthesis and uptake: the role of siderophores in iron uptake and storage. *Appl. Microbiol. Biotechnol.* **62**:316-330
- 46. Hallsworth, J.E., Prior, B.A., Nomura, Y., Iwahara, M. & Timmis, K.N.** 2003 Compatible solutes protect against chaotrope (ethanol)-induced, nonosmotic water stress. *Appl. Environ. Microbiol.* **69**:7032-7034
- 47. Han, K.-H., Seo, J.A. & Yu, J.H.** 2004 A putative G-protein-coupled receptor negatively controls sexual development in *Aspergillus nidulans*. *Mol. Microbiol.* **51**:1333-1345
- 48. Han, K.-H., Seo, J.A. & Yu, J.H.** 2004 Regulators of G-protein signalling in *Aspergillus nidulans*: RgsA downregulates stress response and stimulates asexual sporulation through attenuation of GanB (Ga) signalling. *Mol. Microbiol.* **53**:529-540
- 49. Harris, S.D. & Momany, M.** 2004 Polarity in filamentous fungi: moving beyond the yeast paradigm. *Fungal Genet. Biol.* **41**:391-400
- 50. Harvey, A.C. & Downs, J.A.** 2004 What functions do linker histones provide? *Mol. Microbiol.* **53**:771-775
- 51. Hasper, A.A., Trindade, L.M., van der Veen, D., van Ooyen, A.J.J. & de Graaff, L.H.** 2004 Functional analysis of the transcriptional activator XlnR from *Aspergillus niger*. *Microbiology* **150**:1367-1375
- 52. Hernandez-Lopez, M.J., Blasco, A., Prieto, J.A. & Randez-Gil, F.** 2003 Ura⁻ host strains for genetic manipulation and heterologous expression of *Torulaspora delbrueckii*. *Int. J. Food Microbiol.* **86**:79-86
- 53. Hoffmann, B., Zuo, W., Liu, A. & Morris, N.R.** 2004 Retraction of: Hoffmann B, Zuo W, Liu A, Morris NR. 2001 The LIS1-related protein NUDF of *Aspergillus nidulans* and its interaction partner NUDE bind directly to specific subunits of dynein and dynactin and to α- and γ-tubulin. *J. Biol. Chem.* **276**:38877-38884 *J. Biol. Chem.* **279**:820.
- 54. Holzbaur, E.L.** 2004 Tangled NUDELs? [Comment on entry 92 below] *Nature Cell Biol.* **6**:569-570
- 55. Jadoun, J., Shadkchan, Y. & Osherov, N.** 2004 disruption of the *Aspergillus fumigatus argB* gene using a novel in vitro transposon-based mutagenesis approach. *Curr. Genet.* **45**:235-241
- 56. Jaques, A.K., Fukamizo, T., Hall, D., Barton, R.C., Escott, G.M., Parkinson, T., Hitchcock, C.A. & Adams, D.J.** 2003 Disruption of the gene encoding the ChiB1 chitinase of *Aspergillus fumigatus* and characterization of a recombinant gene product. *Microbiology* **149**:2931-2939
- 57. Johnson, H., Whiteford, J.R., Eckert, S.E. & Spanu, P.D.** 2003 Production and secretion of *Aspergillus nidulans* catalase B in filamentous fungi driven by the promoter and signal peptide of the *Cladosporium fulvum* hydrophobin gene *hcf-1*. *Curr. Genet.* **44**:155-163
- 58. Joseph, J.D., Daigle, S.N. & Means, A.R.** 2004 PINA is essential for growth and positively influences NIMA function in *Aspergillus nidulans*. *J. Biol. Chem.* **279**:32373-32384
- 59. Kacprzak, M.M., Lewandowska, I., Matthews, R.G. & Paszewski, A.** 2003 Transcriptional regulation of methionine synthase by homocysteine and choline in *Aspergillus nidulans*. *Biochem. J.* **376**:517-524
- 60. Kahl, C.R. & Means, A.R.** 2003 Regulation of cell cycle progression by calcium/calmodulin-dependent pathways. *Endocrine Rev.* **24**:719-736
- 61. Kato, N., Brooks, W. & Calvo, A.M.** 2003 The expression of sterigmatocystin and penicillin genes in *Aspergillus nidulans* is controlled by *veA*, a gene required for sexual development. *Eukaryot. Cell* **2**:1178-1186
- 62. Kiso, T., Fujita, K.-I., Ping, X., Tanaka, T. & Taniguchi, M.** 2004 Screening for microtubule-disrupting antifungal agents by using a mitotic-arrest mutant of *Aspergillus nidulans* and novel action of phenylalanine derivatives accompanying tubulin loss. *Antimicrob. Agents Chemother.* **48**:1739-1748
- 63. Koch, K.V., Suelmann, R. & Fischer, R.** 2003 Deletion of *mdmB* impairs mitochondrial distribution and morphology in *Aspergillus nidulans*. *Cell Motil. Cytoskel.* **55**:114-124
- 64. Koukaki, M., Giannoutsou, E., Karagouni, A. & Diallinas, G.** 2003 A novel improved method for *Aspergillus nidulans* transformation. *J. Microbiol. Meth.* **55**:687-695
- 65. Krappmann, S., Bignell, E.M., Reichard, U., Rogers, T., Haynes, K. & Braus, G.H.** 2004 The *Aspergillus fumigatus* transcriptional activator CpcA contributes significantly to the virulence of this fungal pathogen. *Mol. Microbiol.* **52**:785-799
- 66. Kusumoto, K.-I., Suzuki, S. & Kashiwagi, Y.** 2003 Telomeric repeat sequence of *Aspergillus oryzae* consists of dodeca-nucleotides. *Appl. Microbiol. Biotechnol.* **61**:247-251

- 67. Lamb, H.K., Leslie, K., Dodds, A.L., Nutley, M., Cooper, A., Johnson, C., Thompson, P., Stammers, D.K. & Hawkins, A.R.** 2003 The negative transcriptional regulator NmrA discriminates between oxidized and reduced dinucleotides. *J. Biol. Chem.* **278**:32107-32114
- 68. Lara-Ortíz, T., Riveros-Rosas, H. & Aguirre, J.** 2003 Reactive oxygen species generated by microbial NADPH oxidase NoxA regulate sexual development in *Aspergillus nidulans*. *Mol. Microbiol.* **50**:1241-1255
- 69. Larrondo, L.F., Salas, L., Melo, F., Vicuña, R. & Cullen, D.** 2003 A novel extracellular multicopper oxidase from *Phanerochaete chrysosporium* with ferroxidase activity. *Appl. Environ. Microbiol.* **69**:6257-6263
- 70. Lee, J.I., Choi, J.H., Park, B.C., Park, Y.H., Lee, M.Y., Park, H.M. & Maeng, P.J.** 2004 Differential expression of the chitin synthase genes of *Aspergillus nidulans*, *chsA*, *chsB*, and *chsC*, in response to developmental status and environmental factors. *Fungal Genet. Biol.* **41**:635-646
- 71. Liebmann, B., Mühlleisen, T.W., Müller, M., Hecht, M., Weidner, G., Braun, A., Brock, M. & Brakhage, A.A.** 2004 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**:378-383
- 72. Lin, X., Momany, C. & Momany, M.** 2003 SwoHp, a nucleoside diphosphate kinase, is essential in *Aspergillus nidulans*. *Eukaryot. Cell* **2**:1169-1177
- 73. Lin, X. & Momany, M.** 2003 The *Aspergillus nidulans swoC1* mutant shows defects in growth and development. *Genetics* **165**:543-554
- 74. Mabey, J.E., Anderson, M.J., Giles, P.F., Miller, C.J., Attwood, T.K., Paton, N.W., Bornberg-Bauer, E., Robson, G.D., Oliver, S.G. & Denning, D.W.** 2004 CADRE: the Central Aspergillus Data REpository. *Nucleic Acids Res.* **32** (Database issue) D401-405
- 75. MacCabe, A.P., Miró, P., Ventura, L. & Ramón, D.** 2003 Glucose uptake in germinating *Aspergillus nidulans* conidia: involvement of the *creA* and *sorA* genes. *Microbiology* **149**:2129-2136
- 76. Maurer-Stroh, S., Washietl, S. & Frank, E.** 2003 Protein prenyltransferases: anchor size, pseudogenes and parasites. *Biol. Chem.* **384**:977-989
- 77. Medina, M.L., Kiernan, U.A. & Francisco, W.A.** 2004 Proteomic analysis of rutin-induced secreted proteins from *Aspergillus flavus*. *Fungal Genet. Biol.* **41**:327-335
- 78. Melin, P., Schnürer, J. & Wagner, E.G.** 2003 Characterization of *phiA*, a gene essential for phialide development in *Aspergillus nidulans*. *Fungal Genet. Biol.* **40**:234-241
- 79. Melin, P., Schnürer, J. & Wagner, E.G.** 2004 Disruption of the gene encoding the V-ATPase subunit A results in inhibition of normal growth and abolished sporulation in *Aspergillus nidulans*. *Microbiology* **150**:743-748
- 80. Meyer, V., Mueller, D., Strowig, T. & Stahl, U.** 2003 Comparison of different transformation methods for *Aspergillus giganteus*. *Curr. Genet.* **43**:371-377
- 81. Michielse, C.B., Ram, A.F.J., Hooykaas, P.J.J. & van den Hondel, C.A.M.J.J.** 2004 Role of bacterial virulence proteins in *Agrobacterium*-mediated transformation of *Aspergillus awamori*. *Fungal Genet. Biol.* **41**:571-578
- 82. Michielse, C.B., Ram, A.F.J. & van den Hondel, C.A.M.J.J.** 2004 The *Aspergillus nidulans amdS* gene as a marker for the identification of multicopy T-DNA integration events in *Agrobacterium*-mediated transformation of *Aspergillus awamori*. *Curr. Genet.* **45**:399-403
- 83. Michielse, C.B., Salim, K., Ragas, P., Ram, A.F., Kudla, B., Jarry, B., Punt, P.J. & van den Hondel, C.A.** 2004 Development of a system for integrative and stable transformation of the zygomycete *Rhizopus oryzae* by *Agrobacterium*-mediated DNA transfer. *Mol. Gen. Genomics* **271**:499-510 + erratum *Mol. Gen. Genomics* **271**:638.
- 84. Mizutani, O., Nojima, A., Yamamoto, M., Furukawa, K., Fujioka, T., Yamagata, Y., Abe, K. & Nakajima, T.** 2004 Disordered cell integrity signaling caused by disruption of the *kexB* gene in *Aspergillus oryzae*. *Eukaryot. Cell* **3**:1036-1048
- 85. Morris, N.R. & Osbourn, A.E.** 2004 2003 Asilomar meeting report. *Fungal Genet. Biol.* **41**:109-114
- 86. Mousavi, S.A.A. & Robson, G.D.** 2003 Entry into stationary phase is associated with a rapid loss of viability and an apoptotic-like phenotype in the opportunistic pathogen *Aspergillus fumigatus*. *Fungal Genet. Biol.* **39**:221-229
- 87. Mousavi, S.A.A. & Robson, G.D.** 2004 Oxidative and amphotericin B-mediated cell death in the opportunistic pathogen *Aspergillus fumigatus* is associated with an apoptotic-like phenotype. *Microbiology* **150**:1937-1945
- 88. Mukherjee, M., Hadar, R., Mukherjee, P.K. & Horwitz, B.A.** 2003 Homologous expression of a mutated beta-tubulin gene does not confer benomyl resistance on *Trichoderma virens*. *J. Appl. Microbiol.* **95**:861-867
- 89. Mulder, H.J., Saloheimo, M., Penttilä, M. & Madrid, S.M.** 2004 The transcription factor HACA mediates the unfolded protein response in *Aspergillus niger*, and up-regulates its own transcription. *Mol. Gen. Genomics* **271**:130-140
<https://newprairiepress.org/fgr/vol51/iss1/15>

- 90. Nahalkova, J. & Fatehi, J.** 2003 Red fluorescent protein (DsRed2) as a novel reporter in *Fusarium oxysporum* f. sp. *lycopersici*. FEMS Microbiol. Lett. **225**:305-309
- 91. Nelson, G., Kozlova-Zwinderman, O., Collis, A.J., Knight, M.R., Fincham, J.R.S., Stanger, C.P., Renwick, A., Hessing, J.G.M., Punt, P.J., van den Hondel, C.A.M.J.J. & Read, N.D.** 2004 Calcium measurement in living filamentous fungi expressing codon-optimized aequorin. Mol. Microbiol. **52**:1437-1450
- 92. Nguyen, M.D., Shu, T., Sanada, K., Larivière, R.C., Tseng, H.-C., Park, S.K., Julien, J.-P. & Tsai, L.-H.** 2004 A NUDEL-dependent mechanism of neurofilament assembly regulates the integrity of CNS neurons. Nature Cell Biol. **6**:595-608 [Comment on entry 54 above]
- 93. Nozawa, S.R., Ferreira-Nozawa, M.S., Martinez-Rossi, N.M. & Rossi, A.** 2003 The pH-induced glycosylation of secreted phosphatases is mediated in *Aspergillus nidulans* by the regulatory gene pacC-dependent pathway. Fungal Genet. Biol. **39**:286-295 + addendum: **40**:287-288
- 94. O'Callaghan, J., Caddick, M.X. & Dobson, A.D.W.** 2003 A polyketide synthase gene required for ochratoxin A biosynthesis in *Aspergillus ochraceus*. Microbiology **149**:3485-3491
- 95. O'Connell, M.J., Krien, M.J. & Hunter, T.** 2003 Never say never. The NIMA-related protein kinases in mitotic control. Trends Cell Biol. **13**:221-228
- 96. Oakley, B.R.** 2004 Tubulins in *Aspergillus nidulans*. Fungal Genet. Biol. **41**:420-427
- 97. Oberegger, H., Eisendle, M., Schrettl, M., Graessle, S. & Haas, H.** 2003 4'-phosphopantetheinyl transferase-encoding *npgA* is essential for siderophore biosynthesis in *Aspergillus nidulans*. Curr. Genet. **44**:211-215
- 98. Obrian, G.R., Fakhoury, A.M. & Payne, G.A.** 2003 Identification of genes differentially expressed during aflatoxin biosynthesis in *Aspergillus flavus* and *Aspergillus parasiticus*. Fungal Genet. Biol. **39**:118-127
- 99. Oka, M., Maruyama, J., Arioka M., Nakajima, H. & Kitamoto, K.** 2004 Molecular cloning and functional characterization of *avaB*, a gene encoding Vam6p/Vps39p-like protein in *Aspergillus nidulans*. FEMS Microbiol. Lett. **232**:113-121
- 100. Osmani, S.A. & Mirabito, P.M.** 2004 The early impact of genetics on our understanding of cell cycle regulation in *Aspergillus nidulans*. Fungal Genet. Biol. **41**:401-410
- 101. Ota, T., Hamaguchi, T., Sameshima, Y., Goto, M. & Furukawa, K.** 2004 Molecular characterization of protein O-mannosyltransferase and its involvement in cell-wall synthesis in *Aspergillus nidulans*. Microbiology **150**:1973-1982
- 102. Ovechkina, Y., Maddox, P., Oakley, C.E., Xiang, X., Osmani, S.A., Salmon, E.D. & Oakley, B.R.** 2003 Spindle formation in *Aspergillus* is coupled to tubulin movement into the nucleus. Mol. Biol. Cell **14**:2192-2200
- 103. Pain, A., Woodward, J., Quail, M.A., Anderson, M.J., Clark, R., Collins, M., Fosker, N., Fraser, A., Harris, D., Larke, N., Murphy, L., Humphray, S., O'Neil, S., Pertea, M., Price, C., Rabbinowitsch, E., Rajandream, M.A., Salzberg, S., Saunders, D., Seeger, K., Sharp, S., Warren, T., Denning, D.W., Barrell, B. & Hall, N.** 2004 Insight into the genome of *Aspergillus fumigatus*: analysis of a 922 kb region encompassing the nitrate assimilation gene cluster. Fungal Genet. Biol. **41**:443-453
- 104. Palmer, D.R.J., Balogh, H., Ma, G., Zhou, X., Marko, M. & Kaminsky, S.G.W.** 2004 Synthesis and antifungal properties of compounds which target the a-amino adipate pathway. Pharmazie **59**:93-98 + Correction: **59**:336.
- 105. Payan, F., Leone, P., Porciero, S., Furniss, C., Tahir, T., Williamson, G., Durand, A., Manzanares, P., Gilbert, H.J., Juge, N. & Roussel, A.** 2004 The dual nature of wheat xylanase protein inhibitor XIP-1. J. Biol. Chem. **279**:36029-36037
- 106. Pellier, A.-L., Laugé, R., Veneault-Fourrey, C. & Langin, T.** 2003 CLNR1, the AREA/NIT2-like global nitrogen regulator of the plant fungal pathogen *Colletotrichum lindemuthianum* is required for the infection cycle. Mol. Microbiol. **48**:639-655
- 107. Pérez, P., Martínez, Ó., Romero, B., Olivas, I., Pedregosa, A.M., Palmieri, F., Laborda, F. & De Lucas, J.R.** 2003 Functional analysis of mutations in the human carnitine/acylcarnitine translocase in *Aspergillus nidulans*. Fungal Genet. Biol. **39**:211-220
- 108. Pitt, C.W., Moreau, E., Lunness, P.A. & Doonan, J.H.** 2004 The *pot1⁺* homologue in *Aspergillus nidulans* is required for ordering mitotic events. J. Cell Sci. **117**:199-209
- 109. Plüddemann, A. & van Zyl, W.H.** 2003 Evaluation of *Aspergillus niger* as host for virus-like particle production, using hepatitis B surface antigen as a model. Curr. Genet. **43**:439-446
- 110. Plumridge, A., Hesse, S.J.A., Watson, A.J., Lowe, K.C., Stratford, M. & Archer, D.B.** 2004 The weak acid preservative sorbic acid inhibits conidial germination and mycelial growth of *Aspergillus niger* through intracellular

- acidification. *Appl. Environ. Microbiol.* **70**:3506-3511
- 111. Prathumpai, W., Gabelgaard, J.B., Wanchanthuek, P., van de Vondervoort, P.J., de Groot, M.J., McIntyre, M. & Nielsen, J.** 2003 Metabolic control analysis of xylose catabolism in *Aspergillus*. *Biotechnol. Prog.* **19**:1136-1141
- 112. Prathumpai, W., McIntyre, M. & Nielsen, J.** 2004 The effect of CreA in glucose and xylose catabolism in *Aspergillus nidulans*. *Appl. Microbiol. Biotechnol.* **63**:748-753
- 113. Pries, R., Bömeke, K., Draht, O., Künzler, M. & Braus, G.H.** 2004 Nuclear import of yeast Gcn4p requires karyopherins Srp1p and Kap95p. *Mol. Genet. Genomics* **271**:257-266
- 114. Ramírez-Coronel, M.A., Viniegra-González, G., Darvill, A. & Augur, C.** 2003 A novel tannase from *Aspergillus niger* with b-glucosidase activity. *Microbiology* **149**:2941-2946
- 115. Ramón, A.M. & Fonzi, W.A.** 2003 Diverged binding specificity of Rim101p, the *Candida albicans* ortholog of PacC. *Euk. Cell* **2**:718-728
- 116. Ray, A., Macwana, S., Ayoubi, P., Hall, L.T., Prade, R. & Mort, A.J.** 2004 Negative subtraction hybridization: an efficient method to isolate large numbers of condition-specific cDNAs. *BMC Genomics* **5**:22
- 117. Ribard, C., Rochet, M., Labedan, B., Daignan-Fornier, B., Alzari, P., Scazzocchio, C. & Oestreicher, N.** 2003 Sub-families of a/b barrel enzymes: a new adenine deaminase family. *J. Mol. Biol.* **334**:1117-1131
- 118. Rischitor, P.E., Konzack, S. & Fischer, R.** 2004 The Kip3-like kinesin KipB moves along microtubules and determines spindle position during synchronized mitosis in *Aspergillus nidulans* hyphae. *Euk. Cell* **3**:632-645
- 119. Rodríguez, J.M., Ruíz-Sala, P., Ugarte, M. & Peñalva, M.A.** 2004 Fungal metabolic model for 3-methylcrotonyl-CoA carboxylase deficiency. *J. Biol. Chem.* **279**:4578-4587
- 120. Rodríguez, J.M., Ruíz-Sala, P., Ugarte, M. & Peñalva, M.Á.** 2004 Fungal metabolic model for type I 3-methylglutaconic aciduria. *J. Biol. Chem.* **279**:32385-32392
- 121. Romero, B., Turner, G., Olivas, I., Laborda, F. & De Lucas, J.R.** 2003 The *Aspergillus nidulans alcA* promoter drives tightly regulated conditional gene expression in *Aspergillus fumigatus* permitting validation of essential genes in this human pathogen. *Fungal Genet. Biol.* **40**:103-114
- 122. Rösén-Wolff, A., Koch, A., Friedrich, W., Hahn, G., Gahr, M. & Roesler, J.** 2004 Successful elimination of an invasive *Aspergillus nidulans* lung infection by voriconazole after failure of a combination of caspofungin and liposomal amphotericin B in a boy with chronic granulomatous disease. *Pediatr. Infect. Dis. J.* **23**:584-586
- 123. Roze, L.V., Calvo, A.M., Gunterus, A., Beaudry, R., Kall, M. & Linz, J.E.** 2004 Ethylene modulates development and toxin biosynthesis in *Aspergillus* possibly via an ethylene sensor-mediated signaling pathway. *J. Food Protect.* **67**:438-447
- 124. Roze, L.V., Miller, M.J., Ratrick, M., Mahanti, N. & Linz, J.E.** 2004 A novel cAMP-response element, CRE1, modulates expression of *nor-1* in *Aspergillus parasiticus*. *J. Biol. Chem.* **279**:27428-27439
- 125. Ruijter, G.J.G., Bax, M., Patel, H., Flitter, S.J., van de Vondervoort, P.J., de Vries, R.P., vanKuyk, P.A. & Visser, J.** 2003 Mannitol is required for stress tolerance in *Aspergillus niger* conidiospores. *Euk. Cell* **2**:690-698
- 126. Ruijter, G.J.G., Visser, J. & Rinzema, A.** 2004 Polyol accumulation by *Aspergillus oryzae* at low water activity in solid-state fermentation. *Microbiology* **150**:1095-1101
- 127. Rutherford, J.C. & Bird, J.** 2004 Metal-responsive transcription factors that regulate iron, zinc, and copper homeostasis in eukaryotic cells. *Eukaryot. Cell* **3**:1-13
- 128. Sadanandom, A., Findlay, K., Doonan, J.H., Schulze-Lefert, P. & Shirasu, K.** 2004 CHPA, a cysteine- and histidine-rich-domain-containing protein, contributes to maintenance of the diploid state in *Aspergillus nidulans*. *Eukaryot. Cell* **3**:984-991
- 129. Saxena, S., Madan, T., Muralidhar, K. & Sarma, P.U.** 2003 cDNA cloning, expression and characterization of an allergenic L3 ribosomal protein of *Aspergillus fumigatus*. *Clin. Exp. Immunol.* **134**:86-91
- 130. Schmidt D. & Rath P.-M.** 2003 Faster genetic identification of medically important aspergilli by using gellan gum as gelling agent in mycological media. *J. Med. Microbiol.* **52**:653-655
- 131. Seif, E.R., Forget, L., Martin, N.C. & Lang, B.F.** 2003 Mitochondrial RNase P RNAs in ascomycete fungi: lineage-specific variations in RNA secondary structure. *RNA* **9**:1073-1083
- 132. Seo, J.-A., Guan, Y. & Yu, J.-H.** 2003 Suppressor mutations bypass the requirement of *fluG* for asexual reproduction and sterigmatocystin production in *Aspergillus nidulans*. *Genetics* **165**:1083-1093
- 133. Shi, X., Sha, Y. & Kaminskyj, S.** 2004 *Aspergillus nidulans hypA* regulates morphogenesis through the secretion pathway. *Fungal Genet. Biol.* **41**:75-88
- 134. Shimizu, K., Hicks, J.K., Huang, T.-P. & Keller, N.P.** 2003 Pka, Ras and RGS protein interactions regulate

- activity of AflR, a Zn(II)2Cys6 transcription factor in *Aspergillus nidulans*. *Genetics* **165**:1095-1104
- 135. Siddiqi, O.** 2002 Guido Pontecorvo, 29 November 1907 - 25 September 1999. Biograph. Memoirs Fellows Roy. Soc. **48**:377-390
- 136. Sims, A.H., Robson, G.D., Hoyle, D.C., Oliver, S.G., Turner, G., Prade, R.A., Russell, H.H., Dunn-Coleman, N.S. & Gent, M.E.** 2004 Use of expressed sequence tag analysis and cDNA microarrays of the filamentous fungus *Aspergillus nidulans*. *Fungal Genet. Biol.* **41**:199-212
- 137. Sorensen, J.L. & Vedera, J.C.** 2003 Monacolin N, a compound resulting from derailment of type I iterative polyketide synthase function *en route* to lovastatin. *Chem. Commun.* **2003**:1492-1493
- 138. Stock, M.F., Chu, J. & Hackney, D.D.** 2003 The kinesin family member BimC contains a second microtubule binding region attached to the N terminus of the motor domain. *J. Biol. Chem.* **278**:52315-52322
- 139. Su, W., Li, S., Oakley, B.R. & Xiang, X.** 2004 Dual-color imaging of nuclear division and mitotic spindle elongation in live cells of *Aspergillus nidulans*. *Euk. Cell* **3**:553-556
- 140. Takasaki, K., Shoun, H., Yamaguchi, M., Takeo, K., Nakamura, A., Hoshino, T. & Takaya, N.** 2004 Fungal ammonia fermentation, a novel metabolic mechanism that couples the dissimilatory and assimilatory pathways of both nitrate and ethanol. Role of acetyl CoA synthetase in anaerobic ATP synthesis. *J. Biol. Chem.* **279**:12414-12420
- 141. Tanton, L.L., Nargang, C.E., Kessler, K.E., Li, Q. & Nargang, F.E.** 2003 Alternative oxidase expression in *Neurospora crassa*. *Fungal Genet. Biol.* **39**:176-190
- 142. Tanzer, M.M., Arst, H.N., Skalchunes, A.R., Coffin, M., Darveaux, B.A., Heiniger, R.W. & Shuster, J.R.** 2003 Global nutritional profiling for mutant and chemical mode-of-action analysis in filamentous fungi. *Funct. Integr. Genomics* **3**:160-170
- 143. Tavoularis, S.N., Tazebay, U.H., Diallinas, G., Sideridou, M., Rosa, A., Scazzocchio, C. & Sophianopoulou, V.** 2003 Mutational analysis of the major proline transporter (PrnB) of *Aspergillus nidulans*. *Mol. Membrane Biol.* **20**:285-297
- 144. Thrane, C., Kaufmann, U., Stummann, B.M. & Olsson, S.** 2004 Activation of caspase-like activity and poly(ADP-ribose) polymerase degradation during sporulation in *Aspergillus nidulans*. *Fungal Genet. Biol.* **41**:361-368
- 145. Toews, M.W., Warmbold, J., Konzack, S., Rischitor, P., Veith, D., Vienken, K., Vinuesa, C., Wei, H. & Fischer, R.** 2004 Establishment of mRFP1 as a fluorescent marker in *Aspergillus nidulans* and construction of expression vectors for high-throughput protein tagging using recombination in vitro (GATEWAY). *Curr. Genet.* **45**:383-389
- 146. Tsitsigiannis, D.I., Zarnowski, R. & Keller, N.P.** 2004 The lipid body protein, PpoA, coordinates sexual and asexual sporulation in *Aspergillus nidulans*. *J. Biol. Chem.* **279**:11344-11353
- 147. Tüncher, A., Reinke, H., Martic, G., Caruso, M.L. & Brakhage, A.A.** 2004 A basic-region helix-loop-helix protein-encoding gene (*devR*) involved in the development of *Aspergillus nidulans*. *Mol. Microbiol.* **52**:227-241
- 148. Unkles, S.E., Wang, R., Wang, Y., Glass, A.D.M., Crawford, N.M. & Kinghorn, J.R.** 2004 Nitrate reductase activity is required for nitrate uptake into fungal but not plant cells. *J. Biol. Chem.* **279**:28182-28186
- 149. Valdez-Taibas, J., Harispé, L., Scazzocchio, C., Gorfinkel, L. & Rosa, A.L.** 2004 Ammonium-induced internalisation of UapC, the general purine permease from *Aspergillus nidulans*. *Fungal Genet. Biol.* **41**:42-51
- 150. Valkonen, M., Ward, M., Wang, H., Penttilä, M. & Saloheimo, M.** 2003 Improvement of foreign-protein production in *Aspergillus niger* var. *awamori* by constitutive induction of the unfolded-protein response. *Appl. Environ. Microbiol.* **69**:6979-6986
- 151. vanKuyk, P.A., Diderich, J.A., MacCabe, A.P., Hererero, O., Ruijter, G.J. & Visser, J.** 2004 *Aspergillus niger* *mstA* encodes a high-affinity sugar/H⁺ symporter which is regulated in response to extracellular pH. *Biochem. J.* **379**:375-383
- 152. Varanasi, N.L., Baskaran, I., Alangaden, G.J., Chandrasekar, P.H. & Manavathu, E.K.** 2004 Novel effect of voriconazole on conidiation of *Aspergillus* species. *Int. J. Antimicrob. Agents* **23**:72-79
- 153. Walther, A. & Wendland, J.** 2003 Septation and cytokinesis in fungi. *Fungal Genet. Biol.* **40**:187-196
- 154. Wei, H., Vienken, K., Weber, R., Bunting, S., Requena, N. & Fischer, R.** 2004 A putative high affinity hexose transporter, *hxtA*, of *Aspergillus nidulans* is induced in vegetative hyphae upon starvation and in ascogenous hyphae during cleistothecium formation. *Fungal Genet. Biol.* **41**:148-156
- 155. Wilson, R.A., Chang, P.K., Dobrzyn, A., Ntambi, J.M., Zarnowski, R. & Keller, N.P.** 2004 Two D9-stearic acid desaturases are required for *Aspergillus nidulans* growth and development. *Fungal Genet. Biol.* **41**:501-509

- 156. Xiang, X. & Fischer, R.** 2004 Nuclear migration and positioning in filamentous fungi. *Fungal Genet. Biol.* **41**:411-419
- 157. Xu, J. & Gong, Z.Z.** 2003 Intron requirement for AFP gene expression in *Trichoderma viride*. *Microbiology* **149**:3093-3097
- 158. Xue, T., Nguyen, K., Romans, A. & May, G.S.** 2004 A mitogen-activated protein kinase that senses nitrogen regulates conidial germination and growth in *Aspergillus fumigatus*. *Euk. Cell* **3**:557-560
- 159. Yu, J., Chang, P.-K., Ehrlich, K.C., Cary, J.W., Bhatnagar, D., Cleveland, T.E., Payne, G.A., Linz, J.E., Woloshuk, C.P. & Bennett, J.W.** 2004 Clustered Pathway Genes in Aflatoxin Biosynthesis *Appl. Environ. Microbiol.* **70**:1253-1262
- 160. Zhang, Y.Q. & Keller, N.P.** 2004 Blockage of methylcitrate cycle inhibits polyketide production in *Aspergillus nidulans*. *Mol. Microbiol.* **52**:541-550

Authors

Abe, K. 84
Abee, T. 21
Adams, D.J. 1 56
Aguirre, J. 68
Aimi, T. 2
Alangaden, G.J. 152
Alzari, P. 117
Ambroise-Thomas, P. 9
Amillis, S. 3 18
An, W. 27
Anderson, M.J. 74 103
Andrianopoulos, A. 12
Archer, D.B. 28 110
Arioka M. 99
Arst, H.N.Jr. 4 35 142
Askew, D.S. 38
Attwood, T.K. 74
Augur, C. 114
Ayoubi, P. 116
Azevedo, R.A. 43
Bakri, A. 9
Balogh, H. 104
Bañuelos, O. 5
Bányai, I. 34
Baptista, F. 6
Barrell, B. 103
Barreto-Bergter, E. 7
Barton, R.C. 56
Baskaran, I. 152
Bax, M. 125
Beaudry, R. 123
Bennett, J.W. 159
Bennion, B. 8
Berthet, N. 9
Bhatnagar, D. 159
Bignell, E.M. 65
Bird, J. 127
Blasco, A. 52
Boase, N.A. 10
Bok, J.W. 11 16
Bömeke, K. 113
Bornberg-Bauer, E. 74
Boyce, K.J. 12
Boyd, C.M. 13
Boyd, J. 13
Brakhage, A.A. 71 147
Braun, A. 71
Braus, G.H. 65 113
Brock, M. 71
Brooks, W. 16 61
Brown, C.V. 35
Brugère J.-F. 9
Bruggeman, J. 14
Bunting, S. 154
Busso, C. 15
Buttinger, R. 32
Caddick, M.X. 94
Calvo, A.M. 16 61 123
Cánovas, D. 17

- Caruso, M.L. 147
 Cary, J.W. 159
 Casqueiro, J. 5
 Castro-Prado, M.A. 6 15
 Cecchetto, G. 3 18
 Chandrasekar, P.H. 152
 Chang, P.K. 19 155 159
 Chang, Y.C. 20
 Chitarra, G.S. 21
 Choi, J.H. 70
 Chu, J. 138
 Clark, R. 103
 Cleveland, T.E. 159
 Clutterbuck, A.J. 22
 Coffin, M. 142
 Collins, M. 103
 Collis, A.J. 91
 Cooper, A. 67
 Crawford, N.M. 148
 Cubero, B. 41
 Cullen, D. 69
 Dai, Z. 23
 Daigle, S.N. 58
 Daignan-Fornier, B. 117
 Darveaux, B.A. 142
 Darvill, A. 114
 Davies, J. 27
 de Graaff, L.H. 51
 de Groot, M.J. 111
 de Lorenzo, V. 17
 De Lucas, J.R. 107 121
 De Souza, C.P.C. 24
 de Vries, R.P. 125
 Debets, A.J. 14
 Denning, D.W. 74 103
 Diallinas, G. 3 18 64 143
 Diderich, J.A. 151
 Díez, E. 35
 Dijksterhuis, J. 21
 do Nascimento, A.M. 25
 Dobrzyn, A. 155
 Dobson, A.D.W. 94
 Dodds, A.L. 67
 Doonan, J.H. 108 128
 Dotis, J. 26
 Dou, X. 27
 Downs, J.A. 50
 Draht, O. 113
 Drevet, C. 18
 Dunn-Coleman, N.S. 39 136
 Durand, A. 105
 Dyer, P.S. 28
 Dynesen, J. 30 29
 Eckert, S.E. 57
 Efimov, V.P. 31
 Ehrlich, K.C. 159
 Eisendle, M. 32 97
 Eisenhaber, B. 33
 Eisenhaber, F. 33
 Escott, G.M. 56
 Espeso, E.A. 35
 Fakhoury, A.M. 98
 Fatehi, J. 90
 Faure, O. 9
 Fekete, E. 34
 Felenbok, B. 37
 Fernández-Martinez, J. 35
 Ferreira-Nozawa, M.S. 93
 Fierro, F. 36
 Fincham, J.R.S. 91
 Findlay, K. 128
 Fischer, R. 63 118 145 154 156
 Flippi, M. 37
 Flitter, S.J. 125
 Fonzi, W.A. 115
 Forget, L. 131
 Fortwendel, J.R. 38
 Fosker, N. 103
 Francisco, W.A. 77
 Frank, E. 76
 Fraser, A. 103

- Friedrich, W. 122
Fujioka, T. 84
Fujita, K.-I. 62
Fukamizo, T. 56
Fuller, M. 8
Furniss, C. 105
Furukawa, K. 84 101
Gabelgaard, J.B. 111
Gahr, M. 122
García, I. 41
García-Rico, R.O. 36
Gatherar, I.M. 39
Gent, M.E. 136
Giannoutsou, E. 64
Giese, H. 42
Gilbert, H.J. 105
Giles, P.F. 74
Glass, A.D.M. 148
Goldman, G.H. 25 40
Goldman, M.H. 25
Gómez, D. 41
Gong, Z.Z. 157
Gorfinkiel, L. 149
Goto, M. 101
Gradmann, D. 13
Graessle, S. 97
Grell, M.N. 42
Grillot, R. 9
Guan, Y. 132
Guelfi, A. 43
Guest, G.M. 44
Gunterus, A. 123
Gutiérrez, S. 5
Gyémánt, G. 34
Haas, H. 32 45 97
Hackney, D.D. 138
Hadar, R. 88
Hahn, G. 122
Hall, D. 56
Hall, L.T. 116
Hall, N. 103
Hallsworth, J.E. 46
Hamaguchi, T. 101
Han, K.-H. 47 48
Harispe, L. 149
Harris, D. 103
Harris, S.D. 49
Harvey, A.C. 50
Hashmi, S.B. 27
Hasper, A.A. 51
Hawkins, A.R. 67
Haynes, K. 65
Hecht, M. 71
Heiniger, R.W. 142
Hererro, O. 151
Hernandez-Lopez, M.J. 52
Hesse, S.J.A. 110
Hessing, J.G.M. 91
Hicks, J.K. 134
Hitchcock, C.A. 56
Hoekstra, R.F. 14
Hoffmann, B. 53
Holzbaur, E.L. 54
Hooykaas, P.J.J. 81
Horn, K.P. 24
Horwitz, B.A. 88
Hoshino, T. 140
Hoyle, D.C. 136
Huang, T.-P. 134
Humphray, S. 103
Hunter, T. 95
Hynes, M.J. 12
Illmer, P. 32
Iwahara, M. 46
Jadoun, J. 55
Jaques, A.K. 56
Jarry, B. 83
Jennemann, R. 8
Johnson, C. 67
Johnson, H. 57
Joseph, J.D. 58
<https://newprairiepress.org/fgr/vol51/iss1/15>

- Juge, N. 105
 Julien, J.-P. 92
 Kacprzak, M.M. 59
 Kafer, E. 40
 Kahl, C.R. 60
 Kall, M. 123
 Kaminskyj, S.G.W. 104 133
 Karaffa, L. 34
 Karagouni, A. 64
 Karos, M. 20
 Kashiwagi, Y. 66
 Kato, N. 61
 Kaufmann, U. 144
 Keller, N.P. 11 16 134 146 155 160
 Kelly, J.M. 10
 Kessler, K.E. 141
 Kiernan, U.A. 77
 Kinghorn, J.R. 148
 Kiso, T. 62
 Kitamoto, K. 99
 Knight, M.R. 91
 Koch, A. 122
 Koch, K.V. 63
 Kociałkowska, J. 37
 Konzack, S. 118 145
 Koukaki, M. 3 64
 Kozlova-Zwinderman, O. 91
 Krappmann, S. 65
 Krien, M.J. 95
 Kubicek, C.P. 34
 Kudla, B. 83
 Künzler, M. 113
 Kusumoto, K.-I. 66
 Kwon-Chung, K.J. 20
 Labedan, B. 117
 Laborda, F. 107 121
 Laich, F. 36
 Lamb, H.K. 67
 Lang, B.F. 131
 Langin, T. 106
 Lara-Ortíz, T. 68
 Larivière, R.C. 92
 Larke, N. 103
 Larrondo, L.F. 69
 Lasure, L.L. 23
 Laugé, R. 106
 Lea, P.J. 43
 Lee, J.I. 70
 Lee, M.Y. 70
 Leone, P. 105
 Leslie, K. 67
 Levery, S.B. 8
 Lewandowska, I. 59
 Li, Q. 141
 Liebmann, B. 71
 Lin, X. 44 72 73
 Lindsey, R. 8
 Linz, J.E. 123 124 159
 Liu, A. 53
 Lowe, K.C. 110
 Lunness, P.A. 108
 Ma, G. 104
 Mabey, J.E. 74
 MacCabe, A.P. 75 151
 Machado, M.F. 6
 Macwana, S. 116
 Madan, T. 129
 Maddox, P. 102
 Madrid, S.M. 89
 Maeng, P.J. 70
 Magnuson, J.K. 23
 Mahanti, N. 124
 Manavathu, E.K. 152
 Manzanares, P. 105
 Mao, X. 23
 Marko, M. 104
 Martic, G. 147
 Martín, J.F. 5 36
 Martin, N.C. 131
 Martínez, Ó. 107
 Martinez-Rossi, N.M. 93

- Maruyama, J. 99
Masker, K. 24
Matthews, R.G. 59
Maurer-Stroh, S. 76
May, G.S. 158
McIntyre, M. 111 112
Means, A.R. 58 60
Medina, M.L. 77
Melin, P. 78 79
Melo, F. 69
Meyer, V. 80
Michielse, C.B. 81-83
Miller, C.J. 74
Miller, M.J. 124
Mirabito, P.M. 100
Miró, P. 75
Mizutani, O. 84
Molina, S.M. 43
Momany, C. 72
Momany, M. 8 44 49 72 73
Moreau, E. 108
Morinaga, T. 2
Morris, N.R. 53 85
Mort, A.J. 116
Mouritzen, P. 42
Mousavi, S.A.A. 86 87
Mueller, D. 80
Mühleisen, T.W. 71
Mukherjee, M. 88
Mukherjee, P.K. 88
Mukhopadhyay, R. 17
Mulder, H.J. 89
Müller, M. 71
Muralidhar, K. 129
Murphy, L. 103
Nahalkova, J. 90
Nakajima, H. 99
Nakajima, T. 84
Nakamura, A. 140
Naranjo, L. 5
Nargang, C.E. 141
Nargang, F.E. 141
Nelson, G. 91
Nguyen, K. 158
Nguyen, M.D. 92
Nielsen, J. 29 30 111 112
Nojima, A. 84
Nomura, Y. 46
Nozawa, S.R. 93
Ntambi, J.M. 155
Nutley, M. 67
O'Callaghan, J. 94
O'Connell, M.J. 95
O'Neil, S. 103
Oakley, B.R. 96 102 139
Oakley, C.E. 102
Oberegger, H. 32 97
Obrian, G.R. 98
Oestreicher, N. 117
Oka, M. 99
Oka, T. 100
Olivas, I. 107 121
Oliver, S.G. 74 136
Olsson, S. 144
Osbourne, A.E. 85
Osherov, N. 55
Osmani, S.A. 24 27 100 102
Ota, T. 101
Ovechkina, Y. 102
Pain, A. 103
Palmer, D.R.J. 104
Palmieri, F. 107
Panepinto, J.C. 38
Paoletti, M. 28
Park, B.C. 70
Park, C. 8
Park, H.M. 70
Park, S.K. 92
Park, Y.H. 70
Parkinson, T. 56
Paszewski, A. 59
<https://newprairiepress.org/fgr/vol51/iss1/15>

- Patel, H. 125
 Paton, N.W. 74
 Payan, F. 105
 Payne, G.A. 98 159
 Pedregosa, A.M. 107
 Pellier, A.-L. 106
 Peñalva, M.A. 35 4 119 120
 Penttilä, M. 89 150
 Pérez, P. 107
 Pertea, M. 103
 Ping, X. 62
 Pinto, M.R. 7
 Pitt, C.W. 108
 Plüddemann, A. 109
 Plumridge, A. 110
 Pollerman, S. 39
 Porciero, S. 105
 Posthumus, M.A. 21
 Prade, R.A. 116 136
 Prathumpai, W. 111 112
 Price, C. 103
 Pries, R. 113
 Prieto, J.A. 52
 Prior, B.A. 46
 Punt, P.J. 83 91
 Quail, M.A. 103
 Rabbinowitsch, E. 103
 Ragas, P. 83
 Rajandream, M.A. 103
 Ram, A.F.J. 81-3
 Ramírez-Coronel, M.A. 114
 Ramón, A.M. 115
 Ramón, D. 75
 Randez-Gil, F. 52
 Rath P.-M. 130
 Ratrick, M. 124
 Ray, A. 116
 Read, N.D. 91
 Reichard, U. 65
 Reinke, H. 147
 Renwick, A. 91
 Requena, N. 154
 Rhodes, J.C. 38
 Ribard, C. 117
 Rinzema, A. 126
 Rischitor, P.E. 118 145
 Riveros-Rosas, H. 68
 Robson, G.D. 74 86 87 136
 Rochet, M. 117
 Rodrigues, M.L. 7
 Rodríguez, J.M. 119 120
 Roesler, J. 122
 Rogers, T. 65
 Roilides, E. 26
 Romans, A. 158
 Rombouts, F.M. 21
 Romero, B. 107 121
 Rosa, A.L. 143 149
 Rosen, B.P. 17
 Rösen-Wolff, A. 122
 Rossi, A. 93
 Roussel, A. 105
 Roze, L.V. 123 124
 Ruijter, G.J.G. 125 126 151
 Ruíz-Sala, P. 119 120
 Russell, H.H. 136
 Rutherford, J.C. 127
 Sadanandom, A. 128
 Salas, L. 69
 Salim, K. 83
 Salmon, E.D. 102
 Saloheimo, M. 89 150
 Salzberg, S. 103
 Sameshima, Y. 101
 Sanada, K. 92
 Sándor, E. 34
 Sarma, P.U. 129
 Saunders, D. 103
 Saxena, S. 129
 Scazzocchio, C. 3 18 41 117 143 149
 Schmidt D. 130

- Schneider, G. 33
Schnürer, J. 78 79
Schrettl, M. 97
Schulze-Lefert, P. 128
Seeger, K. 103
Seibold, B. 34
Seif, E.R. 131
Seitz, A.E. 38
Seo, J.A. 47 48 132
Sepsi, A. 34
Sha, Y. 133
Shadkchan, Y. 55
Sharp, S. 103
Shi, X. 133
Shimizu, K. 134
Shirasu, K. 128
Shoun, H. 140
Shu, T. 92
Shuster, J.R. 142
Siddiqi, O. 135
Sideridou, M. 143
Sims, A.H. 136
Skalchunes, A.R. 142
Sophianopoulou, V. 3 143
Sorensen, J.L. 137
Spanu, P.D. 57
Stahl, U. 80
Stammers, D.K. 67
Stanger, C.P. 91
Stock, M.F. 138
Stratford, M. 110
Strowig, T. 80
Stummann, B.M. 144
Su, W, Li, S. 139
Suelmann, R. 63
Suzuki, S. 66
Szentirmai, A. 34
Taguchi, H. 2
Tahir, T. 105
Takasaki, K. 140
Takaya, N. 140
Takeo, K. 140
Tanaka, T. 62
Taniguchi, M. 62
Tanton, L.L. 141
Tanzer, M.M. 142
Tavoularis, S.N. 143
Tazebay, U.H. 143
Thompson, P. 67
Thrane, C. 144
Tilburn, J. 35
Timmis, K.N. 46
Toews, M.W. 145
Trindade, L.M. 51
Tsai, H.-F. 20
Tsai, L.-H. 92
Tseng, H.-C. 92
Tsitsigiannis, D.I. 146
Tüncher, A. 147
Turner, G. 39 121 136
Ugarte, M. 119 120
Ukil, L. 27
Unkles, S.E. 148
Valdez-Taubas, J. 149
Valkonen, M. 150
van de Vondervoort, P.J. 111 125
van den Hondel, C.A.M.J.J. 81-83 91
van der Veen, D. 51
van Ooyen, A.J.J. 51
van Zyl, W.H. 109
vanKuyk, P.A. 125 151
Varanasi, N.L. 152
Vederas, J.C. 137
Veith, D. 145
Veneault-Fourrey, C. 106
Ventura, L. 75
Vicuña, R. 69
Vienken, K. 145 154
Viniegra-González, G. 114
Vinuesa, C. 145
Visser, J. 125 126 151
<https://newprairiepress.org/fgr/vol51/iss1/15>
DOI: 10.4148/1941-4765.1145

- Wagner, E.G. 78
 Wagner, E.G. 79
 Walther, A. 153
 Wanchanthuek, P. 111
 Wang, H. 150
 Wang, R. 148
 Wang, Y. 148
 Ward, M. 150
 Warmbold, J. 145
 Warren, T. 103
 Washietl, S. 76
 Watson, A.J. 110
 Weber, R. 154
 Wei, H. 145 154
 Weidner, G. 71
 Wendland, J. 153
 Whiteford, J.R. 57
 Wildpaner, M. 33
 Williamson, G. 105
 Wilson, R.A. 155
 Woloshuk, C.P. 159
 Woodward, J. 103
 Wu, D. 27
 Xiang, X. 102 139 156
 Xu, J. 157
 Xue, T. 158
 Yabe, K. 19
 Yamagata, Y. 84
 Yamaguchi, M. 140
 Yamamoto, M. 84
 Yu, J. 19 159
 Yu, J.H. 47 48 132
 Zarnowski, R. 146 155
 Zhang, Y.Q. 160
 Zhou, X. 104
 Zuo, W. 53

Keywords

- ABC transporters 25
 Acetylated FacA 140
 Acriflavine resistance 10
 Actin interaction 12
 Adenine deaminases 117
 Aequorin 91
 Aflatoxin biosynthesis 11 16 19 98 123 124 134 159
 Agrobacterium-mediated transformation 80-83
 Albendazole 9
 Aldehyde catabolism 37
 Allergens 129
 Alpha/beta barrel enzymes 117
 Alpha-amino adipate pathway 104
 Alternative oxidase 141
 Alternative reproduction 6
 AMA1 sequence 5 36
 Ammonia fermentation 140
 Ammonium-induced redistribution 149
 Amphotericin B 87
 Antifungal agents 7 9 104 122
 Antigen production 109
 APC transporters 143
 Apoptosis 86 87 144
 Arabitol dehydrogenase 34
 Arabitolonol dehydrogenase 119
 Arrestin domain 10
 Arsenate transport 17
 Asilomar report 85
 Aspergillus data repository 74
 Autoregulation 89
 Bafilomycin 78 79
 Benomyl resistance 88
 Benzimidazoles 9
 bHLH transcription factor 147
 Cadmium toxicity 43
 CADRE 74
 Calcium 60
 Calcium measurement 91

Calmodulin 60
 cAMP response 124 141
 Carbon regulation 10 112 124 136 142
 Carnitine/acylcarnitine translocase 107
 Caspases 87 144
 cDNA isolation 116
 Cell cycle 24 27 30 31 31 53 58 60 95 101 108 153
 Cell integrity signalling 84
 Cell walls 1 8 44 100
 Central Aspergillus data repository 74
 Cerebrosides 7
 Chaotropic agents 46
 Chitin synthases 70
 Chitinases 1 56
 Chitosanase 119
 CHP domain 128
 Chronic granulomatous disease 26 122
 Citric acid production 23
 Colony morphology 23 147
 Concanamycin 79
 Conidial germination 3 21 38 46 72 73 75 110 158
 Conidial robustness 125
 Conidiation 12 38 48 61 70 73 78 84 132 144 147 152 155
 Copper oxidase 69
 Cotransformation 5
 Cremophor EL 15
 Cross-pathway control 65 113
 Cyclin-dependent kinases 27
 Cytochrome C 2
 Cytokinesis 153
 Cytoskeleton 49 96 156
 Data repository 74
 Dipeptidyl aminopeptidase 28
 Diploid maintenance 118 128
 DNA damage response 40
 Dual-color imaging 139
 Dynein 31
 Endocytosis 149
 Erythritol accumulation 46
 Essential genes 121
 Esterase 19
 ESTs 136
 Ethanol utilization 37 140
 Ethanol-induced stress 46
 Ethylene 123
 Expressed sequence tags 136
 Expression vectors 121 145
 Farnesyltransferase 28
 Fatty acid biosynthesis 155
 Fatty acid dioxygenase 146
 Fatty acid metabolism 107
 Filamentous/pellet growth 23
 Flavonoid degradation 75 76
 Fluorescent markers 145
 Fungal genetics 85
 Galactitol 34
 Galactose catabolism 34
 GATA sites 41
 GATEWAY 145
 Gellan gum 130
 Gene clusters 119 159
 Gene disruption 55
 Genome analysis 103
 Genome database 74
 Germination inhibitor 21
 Glucanases 1
 Glucose uptake 75
 Glucosidase 114
 Glufosinate 142
 Glycans 8
 Glycerol accumulation 46
 Glycosphingolipids 8
 Glycosylation 93
 GPI lipid anchor prediction 33
 G-protein receptors 47
 G-protein regulators 48
 Growth measurement 104 108 142
 GTPases 12
 Guido Pontecorvo 135
 Heterokaryon recombination 6
 Hexose transporter 154
<https://newframePSS.org/gig/vol51iss1/15>
 DOI: 10.4148/1941-4765.1145

Histone H1 50
 Homoaconitase 71
 Hydrophobicity 29
 Hydrophobins 57
 Hyphal branching 30 44 79 84 133 134
 Hyphal polarity 12 39 44 49 72 73
 Hyphal walls 1 8 44 100
 Inhibitor-enzyme interaction 105
 Intracellular acidification 110
 Introns 89 157
 Intron insertion 2
 Iron uptake 45
 Karyopherins 35 113
 Kinesins 118 138
 Leucine catabolism 119 120
 Lignocellulose degradation 69 112
 Linker histones 50
 Lipid anchor 76
 Lovastatin biosynthesis 11 137
 Lysine biosynthesis 104
 Manganese regulation 23
 Mannitol 125
 MAP kinase 158
 MATE transposons 22
 Mating type 28
 Medical identification 130
 Membrane proteins 76
 Membrane trafficking 133
 Metacaspases 144
 Metal response 127
 Methionine biosynthase 59
 Methyl transferase 11
 Methylcitrate cycle 160
 Methylcrotonyl-CoA carboxylase 119
 Methylglutaconic aciduria 120
 Methylglutaconyl-CoA hydratase/lyase 120
 Microarray, phenotypic 142
 Microarrays 136
 Microtubules 62
 Microtubules binding 138
 Mitochondrial distribution 63
 Mitochondrial membrane 107
 Mitochondrial RNase P 131
 Mitosis 102 139
 Mitotic arrest 62
 Mitotic recombination 15
 Mitotic spindle 62 102 118 139
 Monacolin N 137
 Multicopy transformants 82
 Multiple drug resistance 25
 NADPH oxidase 68
 Negative subtractive hybridization 116
 Neurofilament assembly 54 55 92
 Nitrate assimilation 140
 Nitrate reductase 148
 Nitrate uptake 13 148
 Nitrogen regulation 41 57 67 106
 Nitrogen sensing 158
 Nitrogen sources 142
 Nuclear distribution 31 54 92 156
 Nuclear transport 35 51 102 113
 Nucleoporin 24
 Nucleoside diphosphate kinase 72
 Nutritional profiling 142
 Ochratoxin production 94
 Octenols 21
 O-mannosyltransferase 100
 Osmotic stress 70
 Osteomyelitis 26
 Oxidative stress 87
 Parameiosis 6
 PARP 144
 Pathogenicity 26 42 65 71 106 122
 Pellet formation 29
 Penicillin production 11 61
 Peptidyl-prolyl isomerase 58
 pH regulation 4 32 35 110 115 151
 pH sensitivity 79
 Phenotypic microarray 142
 Phenylalanine derivatives 62
 Pheromone 28

Phialide development 78 147
Phosphatases 93
Plasmid integration 64 83
Polarity 12 39 44 49 72 73
Poly(ADP-ribose) polymerase 144
Polyketide biosynthesis 94 137 160
Polyol accumulation 46 126
Pontecorvo 135
Predicting protein motifs 33
Prenyl protease 28
Prenylation 76 77
Prenylcysteine carboxymethyl transferase 28
Proline transport 143
Promoter analysis 41 124
Propionate metabolism 160
Protein excretion 93
Protein folding 150
Protein kinases 95
Protein phosphorylation 134
Protein prenylation 76
Protein production 150
Protein secretion 57
Protein tagging 145
Proteolytic processing 84
Proteomics 75
Psi factors 146
Purine transport 18 149
RAC homologue 12
Reactive oxygen species 43 68
Red fluorescent protein 90
Redox sensing 67
Regulatable promoter 121
Repeat-induced point mutation 22
Replicating plasmid 5 36 64
Ribosomal proteins 129
Ribosomal spacer 130
RIP 22
RNase P 131
Rutin-induced proteins 77
Sclerotia 16
Secondary metabolism 11
Selection arena 14
Self-sterility 14
Septation 153
Sexual reproduction 14 47 61 68 70 123 154 155
Sexual/asexual balance 146
Siderophore 32 45 97 127
Solid-state fermentation 126
Somatic selection 14
Sorbic acid 110
Sorbose 34
Spindle 62 102 118 139
Stationary phase 86
Stearic acid desaturases 155
Sterigmatocystin biosynthesis 11 61 159 132 160
Stress tolerance 48 125
Sugar transporters 151
Subtractive hybridization 23
Tannase 114
Taxonomy 2
T-DNA 81 82
Telomeres 66 108
Thermotolerance 20
Transcription factors 51
Transformation
Transformation 5 36 64 80-83
Transposable elements 22
Transposon mutagenesis 55
Transposon tagging 18
Tubulins 88 96 102
Ubiquitin ligases 10
Ubiquitination 10
Unfolded protein response 89 150
Ura-blasting 52
Vacuolar membrane 99
Vacuole 149
V-ATPase 78 79
Vesicle trafficking 49
Virulence proteins 81
Virus-like particles 109
Voltage-gated nitrate transport 13
<https://newphamepress.org/gt/vol51/iss1/15>

Voriconazole 122 152
 Water activity 126
 Water stress 46
 Xylanase inhibitor 105
 Xylose catabolism 111 112
 Zinc binuclear cluster 51
 Zinc finger 35
 Zinc sensitivity 79

Genes**Superscripts:**

^e Heterologous gene expression in *Aspergillus*
^h *Aspergillus* gene expressed elsewhere
^t Transformation selective marker

A. nidulans
 abcD 25
 acuH 107
 alc genes 37
 alcA 121
 alcR 37
 amdS^t 82
 aod-1 141
 apsA 31
 apyA 10 14
 araA 34
 arbD 119
 areA 106^h 142
 avaB 99
 azgA 3 18
 benA33 62
 bimC 138
 catB 57^h
 chpA 128
 chsA,B,C 70
 cpcA 113^h
 creA 75 112
 creD 10
 crnA 13^h
 csnA 119
 devR 147
 dewA 29
 facA 140
 fluG 132
 gale 34
 ganB 48
 gprA-I 47
 hbrB 39
 hlyA 120
 hulA-F 10
 hxtA 154
 hypA 133
 ivdA 119
 kapA 35
 kex1 28
 kipB 118
 laeA 11
 lysF 104
 mat-1,-2 28
 mccA,B 119
 mcsA 160
 mdmB 63
 meth 59
 mirA-C 32
 MRP1 131
 mstA 151 154
 mstB 154
 nadA 117
 nimA 58 95
 nimU 108
 nmrA 67
 noxA 68
 npgA 97
 nrtA 13^h 148
 nudE 31 53 54 92
 nudF 31 53
 pacC 32 35 93 115

phiA 78
phoA,B 27
pinA 58
pmtA 100
ppgA 28
ppoA 146
preA,B 28
prnB 41 143
ram1,2 28
rasA,B 38
rgsA-C 48 61
rhoA 44
rodA 29
sdeA,B 155
sfgA-D 132
sidA 32
sonB 24
sorA 75
stel3,14,24 28
swoC 73
swoH 72
uapA,C 3
uvsh 15
veA 61
vmaA 79
xlnB 52^h
xlnC 105

A. flavus
aflA-Y 159

A. fumigatus
argB 55
chiB1 56
cnx1,3 148
egh16H 42
laeA 11
lysF 71
matA 28
nudC 121
rasA rasB 38
rpl3 129
sakA 158
thtA 20

A. giganteus
AFP 157

A. niger
hacA 89
mpdA 125
mstA 151
niaD 148
xlnR 51

A. occhraceus
pks 94

A. oryzae
kexB 84
niaD 148

A. parasiticus
aflA-Y 159
estA 19
norR 124
veA 16

A. terreus
lovB,C^e, lovC^e 137

Blumeria graminis
Egh16H 42

Candida albicans
rim101 115

Colletotrichum lindemuthianu

clnr1^e 106

<https://newprairiepress.org/fgr/vol51/iss1/15>

DOI: 10.4148/1941-4765.1145

Gelasinospora aod-1 141

Neurospora crassa
aod-1 141
nit-3,10 148

Penicillium funiculosum
xynC 105

Penicillium marneffei
cflB 12

Phanerochaete chrysosporium
mcol^e 69

Saccharomyces cerevisiae
aah1 117
gnn4 113

Schizosaccharomyces pombe
dea2 117

Arabidopsis
NIA2 148

Homo sapiens
NUDEL 54,92

Organisms (see also "genes")

fungi

A. awamori 81 82 91
 A. flavus 9 77 98 152
 A. fumigatus 9 26 65 86 87 103 130 142
 A. fumigatus 52
 A. giganteus 80
 A. niger 9 23 91 109 110 111 114 150 152
 A. oryzae 66 126
 A. parasiticus 98 123
 A. terreus 9 11 130
 A. ustus 130
 Aspergillus sp.P37 17
 Cladosporium fulvum 57^h
 Fusarium oxysporum 90
 Magnaporthe grisea 142
 Mycosphaerella graminicola 142
 Neurospora crassa 91
 Penicillium chrysogenum 5
 Penicillium paneum 21
 Pichia pastoris 148
 Rhizopus oryzae 83
 Rosellinia necatrix 2
 Torulaspora delbrueckii 52
 Trichoderma virens 88 157

Other organisms

Agrobacterium tumefaciens 80-82
 Pichia pastoris 56^h
 Xenopus laevis 13^h