

## **LIST OF PUBLICATIONS IN REFEREED JOURNALS**

97. Thompson, GJ, Kucharski, R, **Maleszka, R** & Oldroyd, BP (2008) Genome-wide analysis of genes related to ovary activation in worker honey bees. *Insect Mol. Biol.*, 17, 657-665
96. **Maleszka, R** (2008) Epigenetic integration of environmental and genomic signals in honey bees: the critical interplay of nutritional, brain and reproductive networks. *Epigenetics*. 3, 188-192
95. Kucharski, R, Maleszka, J., Foret, S. **Maleszka, R** (2008) Nutritional control of reproductive status in honey bees via DNA methylation. *Science*. 319:1827-1830.
94. **Maleszka, R.** as a member of the Tribolium Genome Sequencing Consortium (2008) The genome of the model beetle and pest *Tribolium castaneum*. *Nature*, 452, 949-955.
93. Barchuk, AR, dos Santos Cristino, A, Kucharski, R, da Fontoura Costa, L., Simões, ZLP, **Maleszka, R.** (2007) Molecular determinants of caste differentiation in the highly eusocial honeybee *Apis mellifera*. *BMC Dev Biol.* 7: 70
92. Ashby, R., McCarthy, S. **Maleszka, R.**, Megaw, P., Morgan, I. (2007) A muscarinic cholinergic antagonist and a dopamine agonist rapidly increase ZENK mRNA expression in the form-deprived chicken retina. *Exp Eye Res.* 85, 15-22.
91. Kucharski, R., Mitri, C., Grau, Y. and **Maleszka, R.** (2007) Characterization of a metabotropic glutamate receptor in the honey bee (*Apis mellifera*): implications for memory formation. *Invertebrate Neurosci.* 7, 99-108.
90. Barron, A.B., **Maleszka, R.**, Vander Meer, R. and G.E. Robinson. (2007) Octopamine modulates honey bee dance behavior. *Proc Natl Acad Sci U S A.* 104, 1703-1707.
89. Barron, AB, Maleszka J, Vander Meer, RK, Robinson, GE, and **Maleszka, R** (2007) Comparing injection, feeding and topical application methods for treatment of honey bees with octopamine. *J. Insect Physiol.* 53, 187-194.
88. Maleszka, J, Forêt, S, Saint, R & **Maleszka, R** (2007) RNAi-induced phenotypes suggest a novel role for a chemosensory protein CSP5 in the development of embryonic integument in the honey bee (*Apis mellifera*). *Dev Genes Evolution.* 217, 189-196.
87. Kucharski, R., Maleszka, J. and **Maleszka, R.** (2007) Novel cuticular proteins revealed by the honey bee genome. *Insect Biochem. Mol. Biol.* 37, 128-134.
86. Forêt. S, Wanner, K.W, **Maleszka, R** (2007) Chemosensory proteins in the honey bee: insights from the annotated genome, comparative analyses and expressional profiling. *Insect Biochem. Mol. Biol.* 37, 19-28.
85. Vidovic, M., Nighorn, A., Koblar, S. and **Maleszka, R.** (2007) Eph Receptor and Ephrin Signaling in Developing and Adult Brain of the Honeybee (*Apis mellifera*). *Dev Neurobiol.* 67:233-251.

84. Wang, Y, Jorda, M. Jones, PL, **Maleszka, R**, Ling, X, Robertson, HM, Mizzen, CA, Peinado, M Robinson, GE (2006) Functional CpG Methylation System in a Social Insect. *Science*. 314, 645-647.
83. Robinson G.E., Evans, J.D., **Maleszka, R.**, Robertson, H. M, Weaver, D. B, Worley, K, Gibbs, R.A. & Weinstock, G. M. (2006) Sweetness and Light: Illuminating the Honey Bee Genome. *Insect Mol Biol*. 15, 535-539.
82. Evans, JD, **Maleszka, R.**, Robertson, HM, Robinson, GE, Weaver, DB (2006) Genome alert. *Apidologie*, 37, V-VI.
81. Thompson, G, Kucharski, R. **Maleszka, R.** Oldroyd, BP (2006) Towards a molecular definition of worker sterility: differential gene expression and reproductive plasticity in honey bees. *Insect Mol Biol*. 15, 537-644.
80. Drapeau, M.D., Albert, S., Kucharski, R, Prusko, C., **Maleszka, R.** (2006) Evolution of the Yellow / Major Royal Jelly Protein family and the emergence of social behavior in honeybees. *Genome Res*. 16, 1385-1394.
79. Kunieda, T. , Fujiyuki, T., Kucharski, R, Foret, S., Ament, S. A., Toth, A.L., Ohashi, K, Takeuchi, H, Kamikouchi, A., Kage, E., Morioka, M., Beye, M., Kubo, T., Robinson, G.E., **Maleszka, R.** (2006) Carbohydrate metabolism genes and pathways in insects: insights from the honey bee genome. *Insect Mol. Biol*. 15, 563-576.
78. Honey Bee Genome Consortium (2006) Insights into social insects from the genome of the honey bee *Apis mellifera*. *Nature*, 443, 931-949.
77. Foret, S. and **Maleszka, R.** (2006) Function and evolution of a gene family encoding odorant binding-like proteins in a social insect, the honey bee (*Apis mellifera*). *Genome Res*. 16, 1401- 1413.
76. Si, A., Zhang, S. W. and **Maleszka, R.** (2005) Effects of caffeine on olfactory and visual learning in the honey bee (*Apis mellifera*). *Pharmacol. Biochem. Behav.* 82, 664-672.
75. Kucharski, R. and **Maleszka, R.** (2005) Microarray and rtPCR analyses of gene expression in the honey bee brain following caffeine treatment. *J. Mol. Neurosci.* 27:269-276.
74. Koywiwattrakul, P., Thompson, G., Oldroyd, B., **Maleszka, R** (2005) Effects of Carbon Dioxide Narcosis on Ovary Activation and Gene Expression in Worker Honey Bees. *J. Insect Sci.* 5, 36
73. Jones JC, Helliwell P, Beekman M, **Maleszka R**, Oldroyd BP. (2005)The effects of rearing temperature on developmental stability and learning and memory in the honey bee, *Apis mellifera*. *J Comp Physiol A (Neuroethol Sens Neural Behav Physiol)*. 28: 1-9.
72. Miklos, G. L. G. and **Maleszka, R.** Microarray reality checks in the context of a complex disease. *Nature Biotechnol.* 2004, 22, 615-621.

71. Morgan, I., Kucharski, R., Krongkaew, N., Firth, S., Megaw, P. and **Maleszka, R.**  
Screening for differential gene expression during the development of form- deprivation myopia in the chicken. *Optometry Vision Sci.* 2004, 81, 148-155.
70. Miklos GLG, **Maleszka R** (2004) The clinical consequences of massive genomic imbalances in human cancers *Cellular Oncol.*, 26, 237-241.
69. Barchuk, A. R., **Maleszka, R.** and Simoes, A.L. P.  
Apis mellifera Ultraspiracle: cDNA sequence and rapid up-regulation by juvenile hormone. *Insect Mol. Biol.* 2004, 13, 459-467.
68. Aung Si, Paul Helliwell and **Maleszka, R.**  
Effects of NMDA receptor antagonists on olfactory learning and memory in the honeybee (*Apis mellifera*). *Pharmacol. Biochem. Behav.* 2004, 77, 191-197.
67. Kucharski, R., **Maleszka, R.**  
Transcriptional profiling reveals multifunctional roles for transferrin in the honeybee (*Apis mellifera*). *J. Insect Sci.* 2003, 3: 27-36.
66. Guez, D., Belzunces, L. P. and **Maleszka, R.**  
Effects of imidacloprid metabolites on habituation in honeybees suggest the existence of two subtypes of nicotinic receptors differentially expressed during adult development. *Pharmacol. Biochem. Behav.* 2003, 75, 217-222.
65. McGinn, P.J., Price, G. D., **Maleszka, R.** and Badger, M. R.  
Inorganic Carbon Limitation and Light Control the Expression of Transcripts Related to the CO<sub>2</sub>-Concentrating Mechanism in the Cyanobacterium *Synechocystis* sp. Strain PCC6803. *Plant Physiol.* 2003, 132: 218-229.
64. Kucharski R, **Maleszka R.**  
Molecular profiling of behavioural development: differential expression of mRNAs for inositol 1,4,5-trisphosphate 3-kinase isoforms in naive and experienced honeybees (*Apis mellifera*). *Mol Brain Res.* 2002, 99:92-101.
63. Kucharski R, **Maleszka R.**  
Evaluation of differential gene expression during behavioral development in the honeybee using microarrays and northern blots. *Genome Biol.* 2002, 3: 7.1-7.9.
62. Miklos GL, **Maleszka R.**  
Integrating molecular medicine with functional proteomics: realities and expectations. *Proteomics.* 2001, 1:30-41. Review.
61. **Maleszka R,** Helliwell P.  
Effect of juvenile hormone on short-term olfactory memory in young honeybees (*Apis mellifera*). *Hormones Behav.* 2001, 40:403-408.
60. Morgans CW, Gaughwin P, **Maleszka R.**  
Expression of the alpha1F calcium channel subunit by photoreceptors in the rat retina. *Mol Vision.* 2001, 7:202-209.

59. Miklos GL, **Maleszka R**.  
Protein functions and biological contexts. *Proteomics*. 2001, 1(2):169-178.  
Review.
58. Guez D, Suchail S, **Maleszka R**, Belzunces LP.  
Contrasting effects of imidacloprid on habituation in 7- and 8-day-old honeybees (*Apis mellifera*). *Neurobiol Learn Mem*. 2001, 76:183-191.
57. **Maleszka R**, Helliwell P, Kucharski R.  
Pharmacological interference with glutamate re-uptake impairs long-term memory in the honeybee, *Apis mellifera*. *Behav Brain Res*. 2000, 115:49-53.
56. **Maleszka R**, Kucharski R.  
Analysis of *Drosophila* yellow-B cDNA reveals a new family of proteins related to the royal jelly proteins in the honeybee and to an orphan protein in an unusual bacterium *Deinococcus radiodurans*. *Biochem Biophys Res Commun*. 2000, 270:773-776.
55. Miklos GL, **Maleszka R**.  
Deus ex genomix. *Nature Neurosci*. 2000, 3:424-425.
54. Kucharski R, Ball EE, Hayward DC, **Maleszka R**.  
Molecular cloning and expression analysis of a cDNA encoding a glutamate transporter in the honeybee brain. *Gene*. 2000, 242:399-405.
53. **Maleszka, R**.  
Molecules to behaviour in the honeybee- the emergence of comparative neurogenomics. *Trends Neurosci*. 2000, 23, 513-514.
52. Morgans, C.W., Gaughwin, P. and **Maleszka, R**.  
Expression of the alpha-1F calcium channel subunit in the rat retina. *Eur. J. Neurosci*. 2000, 12: 364-364.
51. **Maleszka, R**.  
Discovering the secrets of gene expression. *Today's Life Science*. 2000, 11, 28-32.
50. Kucharski R, **Maleszka R**, Hayward DC, Ball EE.  
A royal jelly protein is expressed in a subset of Kenyon cells in the mushroom bodies of the honeybee brain. *Naturwissenschaften*. 1998, 85:343-346.
49. Kucharski R, **Maleszka R**.  
Arginine kinase is highly expressed in the compound eye of the honeybee, *Apis mellifera*. *Gene*. 1998, 211:343-349.
48. **Maleszka, R**.  
Yeast genome and the inositol trisphosphate kinase controversy. *Microbiology*. 1997, 143:1781-1782.
47. **Maleszka R**, de Couet HG, Miklos GL.

Data transferability from model organisms to human beings: insights from the functional genomics of the flightless region of *Drosophila*. *Proc Natl Acad Sci U S A*. 1998, 95:3731-3736.

46. Miklos GL, Hanes SD, **Maleszka R**.

Pinning down cell division? *Science*. 1998, 279:1287-1287.

45. **Maleszka R**, Stange G.

Molecular cloning, by a novel approach, of a cDNA encoding a putative olfactory protein in the labial palps of the moth *Cactoblastis cactorum*.

*Gene*. 1997, 202:39-43.

44. **Maleszka R**, Lupas A, Hanes SD, Miklos GL.

The dodo gene family encodes a novel protein involved in signal transduction and protein folding. *Gene*. 1997, 203:89-93. Review.

43. **Maleszka, R.** and Miklos , G. L. G.

*Drosophila melanogaster* dodo. In: Guidebook to Molecular Chaperones and Protein Folding Factors , M.J. Gething , ed.Oxford: Sambrook & Tooze at Oxford University Press , 1997, pp. 434-446.

42. Miklos GL, Yamamoto M, Burns RG, **Maleszka R**.

An essential cell division gene of *Drosophila*, absent from *Saccharomyces*, encodes an unusual protein with tubulin-like and myosin-like peptide motifs. *Proc Natl Acad Sci U S A*. 1997, 94:5189-5194.

41. **Maleszka R**, Hanes SD, Hackett RL, de Couet HG, Miklos GL.

The *Drosophila melanogaster* dodo (dod) gene, conserved in humans, is functionally interchangeable with the ESS1 cell division gene of *Saccharomyces cerevisiae*. *Proc Natl Acad Sci U S A*. 1996, 93:447-451.

40. **Maleszka R**.

The in vivo effects of ethidium bromide on mitochondrial and ribosomal DNA in *Candida parapsilosis*. *Yeast*. 1994, 10:1203-1210.

39. Skrzypek M, **Maleszka R**.

A gene homologous to that encoding UDP galactose-4-epimerase is inducible by xylose in the yeast *Pachysolen tannophilus*. *Gene*. 1994, 140:127-129.

38. **Maleszka R**.

Electrophoretic analysis of the nuclear and organellar genomes in the ultra-small alga *Cyanidioschyzon merolae*. *Curr Genet*. 1993, 24:548-550.

37. **Maleszka R**, Clark-Walker GD.

Yeasts have a four-fold variation in ribosomal DNA copy number. *Yeast*. 1993, 9:53-58.

36. **Maleszka R**.

Single-stranded regions in yeast mitochondrial DNA revealed by pulsed-field gel electrophoresis. *Appl Theor Electrophor*. 1993, 3:259-263.

35. **Maleszka , R**.

- In vivo conformation of mitochondrial genomes in yeasts and other fungi, *Curr. Topics Mol. Genet.* 1993, 1:353 - 368.
34. **Maleszka R**, Clark-Walker GD.  
In vivo conformation of mitochondrial DNA in fungi and zoosporic moulds. *Curr Genet.* 1992, 22:341-344.
33. **Maleszka R**.  
Electrophoretic profiles of mitochondrial plasmids in *Neurospora* suggest they replicate by a rolling circle mechanism. *Biochem Biophys Res Commun.* 1992, 186:1669-1673.
32. **Maleszka R**, Skelly PJ, Clark-Walker GD.  
Rolling circle replication of DNA in yeast mitochondria. *EMBO J.* 1991, 10:3923-3929.
31. Skelly PJ, **Maleszka R**.  
Distribution of mitochondrial intron sequences among 21 yeast species. *Curr Genet.* 1991, 19:89-94.
30. **Maleszka R**, Clark-Walker GD.  
Magnification of the rDNA cluster in *Kluyveromyces lactis*. *Mol Gen Genet.* 1990, 223:342-344.
29. **Maleszka R**, Skrzypek M.  
Assignment of cloned genes to electrophoretically separated chromosomes of the yeast *Pachysolen tannophilus*. *FEMS Microbiol Lett.* 1990, 57:79-82.
28. Dmochowska A, Dignard D, **Maleszka R**, Thomas DY.  
Structure and transcriptional control of the *Saccharomyces cerevisiae* POX1 gene encoding acyl-coenzyme A oxidase. *Gene.* 1990, 88:247-252.
27. **Maleszka R**, Clark-Walker GD.  
Sequence of the gene for the cytoplasmic ribosomal RNA small subunit from *Kluyveromyces lactis*. *Nucleic Acids Res.* 1990, 18:1889-1889.
26. Skrzypek M, Borsuk P, **Maleszka R**.  
Cloning and sequencing of the ornithine carbamoyltransferase gene from *Pachysolen tannophilus*. *Yeast.* 1990, 6:141-148.
25. **Maleszka R**, Clark-Walker GD.  
A petite positive strain of *Kluyveromyces lactis* has a 300 kb deletion in the rDNA cluster. *Curr Genet.* 1989, 16:429-432.
24. Skelly PJ, **Maleszka R**.  
Isolation of mitochondrial DNA using pulsed field gel electrophoresis. *Nucleic Acids Res.* 1989, 17:7537-7538.
23. James, A. P. **Maleszka, R.**, Zahab, D. M., and Schneider, H.  
Genetic and biochemical characterization of mutations affecting the ability of the yeast *Pachysolen tannophilus* to metabolise D-xylose, *Appl. Environm. Microbiol.* 1989, 55:2871-2876.

22. **Maleszka R**, Dmochowska A, Zaborowska D, Cybis J, Weglenski P. Intracellular localization of *Aspergillus nidulans* ornithine carbamoyltransferase in native host cells and in *Saccharomyces cerevisiae* cells harbouring its cloned structural gene. *Acta Biochim Pol.* 1986, 33:217-227.
21. Schneider , H. , **Maleszka , R.** , Lee , H. & James , A. P. Recent progress in obtaining ethanol from xylose, in: *Biotechnology and Renewable Energy* (M. Moo-Young , S. Hasnain , & J. Lamptey , eds.). Elsevier Science Publishers. 1986 pp. 161-172.
20. Lee, H., **Maleszka, R.**, James, A. P., Zahab, D. and Schneider, H. Mutants of *Pachysolen tannophilus* with improved production of ethanol from D-xylose, *Appl. Environm. Microbiol.* 1986, 51:1252-1258.
19. Schneider, H. **Maleszka, R.**, Wang, P. Y. & Veliky, I. A. Pentose fermentation with selected yeast. *Biotechnol Adv.* 1985: 3-86.
18. Neirinck LG, **Maleszka R**, Schneider H. The requirement of oxygen for incorporation of carbon from D-xylose and D-glucose by *Pachysolen tannophilus*. *Arch Biochem Biophys.* 1984, 228:13-21.
17. **Maleszka R**, Schneider H. Involvement of oxygen and mitochondrial function in the metabolism of D-xylulose by *Saccharomyces cerevisiae*. *Arch Biochem Biophys.* 1984, 228:22-30.
16. **Maleszka ,R.** , Neirinck ,L. , James ,A. P. and Schneider ,H. Xylitol dehydrogenase mutants of *Pachysolen tannophilus* and the role of xylitol in D-xylose metabolism , *FEMS Microbiol. Lett.*, 1983, 17:227 - 229.
15. **Maleszka ,R** , James, A. P. and Schneider ,H. Ethanol production from various sugars by strains of *Pachysolen tannophilus* bearing different number of chromosomes , *J. Gen. Microbiol.*, 1983, 129:2495 – 2500.
14. Schneider ,H. , **Maleszka ,R.** , Neirinck ,L. and Wang ,P. Y. Bio-conversion of D-xylose and several other carbohydrates by *P. tannophilus* and other yeasts, *Advances Biochem. Engineer. Biotechnol.*, 1983, 27:57 - 71.
13. Mahmoudides ,G. , **Maleszka ,R.** , James ,A. P. and Schneider ,H. Mutants of *Pachysolen tannophilus* that produce enhanced amounts of acetic acid from D-xylose and other sugars , *Biotechnol.*, 1983, 17:227 - 229.
12. **Maleszka R**, Schneider H. Fermentation of D-xylose, xylitol, and D-xylulose by yeasts. *Can J Microbiol.* 1982, 28:360-363.
11. **Maleszka R**, Wang PY, Schneider H. A Col E1 hybrid plasmid containing *Escherichia coli* genes complementing d-xylose negative mutants of *Escherichia coli* and *Salmonella typhimurium*. *Can J Biochem.* 1982, 60:144-151.

10. **Maleszka ,R.** and Schneider ,H.  
Fermentation of D- xylose , xylitol and D-xylulose by yeasts , *Can. J. Microbiol.*, 1982, 28:360 - 363.
9. **Maleszka ,R.** and Schneider ,H.  
Concurrent production and consumption of ethanol by cultures of *Pachysolen tannophilus* growing on D-xylose, *Appl. Environm. Microbiol.*, 1982, 44:909 - 912.
8. **Maleszka ,R.** , Wang ,P. Y. and Schneider ,H.  
Yeasts that catabolise D-cellobiose as well as D- xylose, *Biotechnol.* , 1982, 4:133 -136.
7. **Maleszka ,R.** , Wang ,P. Y. and Schneider ,H.  
Metabolism of D-galactose and glycerol in *Pachysolen tannophilus*, *Enzyme Microbiol. Technol.* , 1982, 4:349 - 352.
6. Neirinck ,L. , **Maleszka ,R.** and Schneider ,H.  
Conversion of biomass by *Pachysolen tannophilus*, *Biotechnology and Bioengineering* , 1982, 12: 161 - 169.
5. **Maleszka ,R.** , Veliky ,I. A. and Schneider ,H.  
Enhanced rate of fermentation from D- xylose using recycled and immobilized cells of *Pachysolen tannophilus*, *Biotechnol. Lett.*, 1981, 3:415 - 420.
4. Schneider ,H. , Wang ,P. Y. and **Maleszka , R.**  
Conversion of D- xylose into ethanol by the yeast *Pachysolen tannophilus* , *Biotechnol.*,1981, 3:89 - 92.
3. **Maleszka ,R.** and Pieniazek ,N.  
Modified replica plating technique of microcolonies of *Aspergillus nidulans* using Triton X- 100 , *Acta Microbiol.* 1981, 15:36 - 38.
2. **Maleszka R.**  
Isolation of DNA from *Aspergillus nidulans*. *Acta Biochim* 1978, 25:169-173.
1. Bal J, **Maleszka R**, Stepien P, Cybis J.  
Subcellular mislocation of cysteine synthase in a cysteine auxotroph of *Aspergillus nidulans*. *FEBS Lett.* 1975, 58:164-166.

#### **BOOK CHAPTERS**

Schneider , H. , **Maleszka** , R. , Lee , H. & James , A. P. (1986) Recent progress in obtaining ethanol from xylose , in: *Biotechnology and Renewable Energy* ( M. Moo-Young , S. Hasnain , & J. Lamptey , eds.). Elsevier Science Publishers. pp. 161-172.

**Maleszka** , R. and Miklos , G. L. G. (1997) *Drosophila melanogaster* dodo. In: *Guidebook to Molecular Chaperones and Protein Folding Factors* , M.J. Gething , ed.Oxford: Sambrook & Tooze at Oxford University Press , pp. 434-446.

#### **OTHER PUBLICATIONS**

**Maleszka, R.** (2007) A queen is made, not born. *Australasian Science*, 28, 22-24.