

KEITH G DAVIES

PUBLICATIONS, COLLABORATIONS AND OTHER ACTIVITIES

BOOKS

- 2) **Davies, K. G.**, and Spiegel, Y. (Edits) (2011) *Biological Control of Plant-parasitic nematodes: building coherence between microbial ecology and molecular mechanisms*. Springer
- 1) Powlson, D.S., Bateman, G.L., **Davies, K.G.**, Gaunt, J.L. and Hirsch, P.R. (2002) *Interactions in the Root Environment – An Integrated Approach*. Kluwer Academic Publishers.

SCIENTIFIC BOOK CHAPTERS & REVIEWS

- 19) Talwana H, Sibanda Z, Wanjohi W, Kimenju W, Luanbano-Nyoni N, Massawe C, **Davies KG**, (2015) Manzanilla-Lopez R, Hunt D, Gowen SR, Sikora R, Coyne D, Kerry BR (2014) Agricultural importance of nematodes in Eastern and Central Africa *Pest Management Science* (submitted)
- 18) Viaene, N, Coyne, DL & **Davies KG** (2013) Biological and Cultural Management. In: RN Perry and M. Moens, Chapter 13, *Plant Nematology* pp 383-410. CABI Wallingford, UK.
- 17) Schaff JE, Mauchline TH, Opperman CH & **Davies KG** (2011) Exploiting genomics to understand the interactions between root-knot nematodes and *Pasteuria penetrans*. In: Davies KG and Spiegel Y Eds. Pp. 91-113. *Biological Control of Plant-parasitic Nematodes: building coherence between microbial ecology and molecular mechanisms*. Springer
- 16) Curtis, RHC, Jones JT, **Davies KG**, Sharon E, Spiegel Y (2011) Plant nematode surfaces In: **Davies KG** and Spiegel Y Eds. Pp. 115-144. *Biological Control of Plant-parasitic Nematodes: building coherence between microbial ecology and molecular mechanisms*. Springer
- 15) **Davies KG** and Spiegel Y (2011) Root patho-systems nematology and biological control. In: Davies KG and Spiegel Y Eds. Pp. 291-303. *Biological Control of Plant-parasitic Nematodes: building coherence between microbial ecology and molecular mechanisms*. Springer
- 14) **Davies KG** and Spiegel Y (2011) Biological Control of Plant-Parasitic Nematodes: towards understanding field variation through molecular mechanisms In: Genomics and molecular mechanisms of plant-nematode interactions Eds John Jones, Godelieve Gheysen, and Carmen Fenoll. Springer
- 13) Hallmann, J., **Davies, K.G.** and Sikora, R. (2009) Biological Control Using Microbial Pathogens, Endophytes and Antagonists. In: *Root-Knot Nematodes* Eds. R.N. Perry, M. Moens and J.L. Starr. pp 380-411. CABI, Wallingford, UK.
- 12) Gowen, S.R., **Davies, K.G.** and Pembroke, B. (2007) Potential use of *Pasteuria* spp. in the management of plant parasitic nematodes. In *Integrated Management and Biocontrol of vegetable and Grain Crop Nematodes*. P 197-210. Springer, The Netherlands.

- 11) **Davies, K. G.** (2006) R. N. Perry and M. Moens (Eds). *Plant Nematology*. CABI Publishing, Wallingford, UK (2006). 447 pp. ISBN-10: 1-84593-056-8; ISBN-13: 978-1-84593-056-1. Price, £55 US \$100 *Journal of Nematology* 38, 401-403
- 10) **Davies, K. G.** (2006) P.S. Grewal, R.-U. Ehlers and D.I. Shapiro (Eds). *Nematodes as biocontrol agents*. Wallingford, UK, CABI Publishing (2005). 505 pp. ISBN 0-85199-017-7. Price £85 *Nematology* 8, 315.
- 9) Timper, P and **Davies, K.G.** (2004) Biotic Interactions: In *Nematode Behaviour* eds R. Gaugler and A.L. Bilgrami. CABI Publishing Wallingford.
- 8) Powlson, D.S., Bateman, G.L., **Davies, K.G.**, Gaunt, J.L., Hirsch, P.R. and Barlow, P.W. (2002) *Interactions in the Root Environment - An Integrated Approach* The Rothamsted Millennium Conference. Kluwer Academic Publishers. Dordrecht/Boston/London.
- 7) Speizer, B., Glen, D., Piggott, S., Ester, A., **Davies, K. G.**, Castillejo, J., Coupland, J. (2000) Slug Damage and Control of Slugs in Horticultural Crops. www.slugcontrol.iacr.ac.uk
- 6) Whipps, J.M. and **Davies, K.G.** (2000) Biocontrol of plant pathogens and nematodes by microorganisms. In *Measures of Success in Biological Control* Edt. Geoff Gurr and Steve Wratten. Kluwer Academic Publishers, Dordrecht, The Netherlands.
- 5) **Davies, K. G.** (1999) The Physiology and Biochemistry of Free-living and Plant-parasitic Nematodes Eds. , R. N. Perry and D. Wright. CAB International. 1998. 438 pp. *Newsletter of the Association of Applied Biologists*, Issue 43, p10.
- 4) **Davies, K. G.** (1998) Natural parasites and biological control research. In: *Cyst Forming Nematodes* (Ed) S.B. Sharma, Chapman Hall, London.
- 3) **Davies, K. G.** (1997) Identification and quantification of plant parasitic nematodes using immunological techniques. In *Diagnosis of Key Nematode Pests of Chickpea and Pigeonpea and their Management*. Ed S.B. Sharma International Crop Research Institute for the Semi-Arid Tropics p 112.
- 2) **Davies, K. G.** (1994) A nematode case study focusing on the application of serology. In: *Identification and Characterisation of Pest Organisms* (Ed) D. L. Hawksworth. CABI, Wallingford, UK. pp 395-413.
- 1) **Davies, K. G.**, De Leij, F. A. A. M. and Kerry, B. R. (1991) Microbial agents for the biological control plant-parasitic nematodes in tropical agriculture. *Tropical Pest Management* 37 303-320.

DATABASE ACCESSIONS

- 1) Opperman, C.H., **Davies, K.G.**, Sosinski, B.R., Waterman, J., Burke, M. (2003) Genome survey sequences (3916) obtained from *Pasteuria penetrans* (Res-147). Centre for the Biology of Nematode Parasitism, University of North Carolina, Raleigh, USA & Nematode Interactions Unit, Rothamsted Research, Harpenden, UK.

SCIENTIFIC REFEREED PUBLICATIONS (WEB OF SCIENCE H FACTOR 20) LISTED UNDER SUBJECT AREA (MOST RECENT FIRST)

Nematodes and biological control

- 52) Davies, KG, Zimmerman, B, Dudley, E, Newton, RP, Hart JE (2015) Reproduction potentiated in nematodes (*Caenorhabditis elegans*) and guppy fish (*Poecilia reticulata*)

by adding a synthetic peptide to their aqueous environment *Journal of Experimental Biology* (in press).

- 51) Srivastava, A, Hall, AM, Greame-Cook, K and **Davies, KG** (2014) Exploiting genomics to improve the biological control potential of *Pasteuria* spp. an organism with potential to control plant-parasitic nematodes *Aspects of Applied Biology* 127, 9-14.
- 50) Patil, J, Powers, SJ, **Davies KG**, Gaur, HS & Miller, AJ (2013) Effect of root nitrogen supply forms on attraction and repulsion of second-stage juveniles of *Meloidogyne graminicola*. *Nematology* 15, 469-482. DOI:10.1163/15685411-00002697
- 49) Costa, SR, Kerry, BR, Bardgett, RD & **Davies KG** (2012) Interactions between nematodes and their microbial enemies in coastal sand dunes. *Oecologia* 170, 1053-1066 DOI: 10.1007/s00442-012-2359-z.
- 48) Rao, U., Mauchline, TH & **Davies KG** (2012) The 16s rRNA gene of *Pasteuria penetrans* provides an early diagnostic of infection of root-knot nematodes (*Meloidogyne* spp.) *Nematology* 14: 799-804.
- 47) Mohan, S, Mauchline, TH, Rowe, J, Hirsch, PR, **Davies, KG** (2012) *Pasteuria* endospores from *Heterodera cajani* (Nematoda: Heteroderidae) exhibit inverted attachment and altered germination in cross-infection studies with *Globodera pallida* (Nematoda: Heteroderidae) *FEMS Microbiology Ecology* 79: 675-684.
- 46) **Davies KG** and Curtis RH (2011) Cuticle surface coat of plant-parasitic nematodes. *Ann. Review. Phytopath.* 49: 135-156
- 45) **Davies, KG**, Rowe, J, Manzanella-Lopez, R and Opperman, CH (2011) Re-evaluation of the life-cycle of the nematode parasitic bacterium *Pasteuria penetrans* in root-knot nematodes, *Meloidogyne* spp. *Nematology* DOI:10.1163/138855410X552670.
- 44) Mauchline, TM., Mohan, S, **Davies, KG**, Schaff, JE, Opperman, CH, Kerry, BR, Hirsch, PR (2010) A method for the release and multistrand amplification of small quantities of DNA from endospores of the fastidious bacterium *Pasteuria penetrans* *Letters in Applied Microbiology* 50: 515-521.
- 43) **Davies, K. G.** (2009) Understanding the interaction between an obligate hyperparasitic bacterium, *Pasteuria penetrans* and its obligate plant parasitic nematode host, *Meloidogyne* spp. *Advances in Parasitology* 68, 211 - 245.
- 42) **Davies, K.G.**, Rowe, J., and Williamson, V.M. (2008) Cuticle variation amongst amphimictic and parthenogenetic populations of nematode (*Meloidogyne* spp.) as exhibited by a bacterial parasite (*Pasteuria penetrans*) *International Journal for Parasitology* 38, 851-859.
- 41) Vagelas, I.K., Pembroke, B., Gowen, S.R. and **Davies, KG**. (2007) The control of root-knot nematodes (*Meloidogyne* spp.) by *Pseudomonas oryzae* and its immunological detection on tomato roots. *Nematology* 9, 363-370.
- 40) Costa, S.R., Kerry, B.R., Bardgett, R., **Davies, K.G.** (2006) Exploitation of Immunofluorescence for the Quantification and Characterisation of Small Numbers of *Pasteuria* Endospores *FEMS Microbiology Ecology* **58**, 593-600.
- 39) **Davies, K.G.** & Opperman, C. H. (2006) A potential role for collagen in the attachment of *Pasteuria penetrans* to nematode cuticle. *Multitrophic Interactions in the Soil and Integrated Control* Eds Jos M. Raaijmakers and Richard A. Sikora. *IOBC wprs Bulletin* **29** (2) 11 – 15.
- 39) **Davies, K.G.** & Williamson, V.M. (2006) Host-specificity exhibited by populations of endospores of *Pasteuria penetrans* to the juvenile and male cuticles of *Meloidogyne hapla*. *Nematology* **8**, 475-476.
- 37) van der Putten, W.H/, Cook, R., Costa, S., **Davies, K.G.**, Fargette, M., Freitas, H., Hol, W.H.G., Kerry, B.R., Maher, N., Mateille, T., Moens, M., Peña, Piśkiewicz, A.M., Raeymaekers, A.D.W., Rodríguez-Echeverría, and van der Wurff, A.W.G. (2006)

- Nematode Interactions in Nature: models for sustainable control of nematode pests of crop plants. *Advances in Agronomy* 89, 227 – 260.
- 36) **Davies, K.G.** (2005) Interactions between nematodes and microorganisms: Bridging ecological and molecular approaches *Advances in Applied Microbiology* 57, 53-78.
 - 35) Kojetin, D.J., Thompson, R.J., Benson, L.M., Naylor, S., Waterman, J., **Davies, K.G.**, Opperman, C.H., Stephenson, K., Hoch, J.A., Cavanah, J. (2005) The structural analysis of divalent metals to the *Bacillus subtilis* response regulator Spo0F: the possibility for *in vitro* metalloregulation in the initiation of sporulation. *Biometals* 18, 449-466.
 - 34) Charles, L., Carbonne, I., **Davies, K.G.**, Bird, D., Burke, M., Kerry, B.R., Opperman, C.H. (2005) Phylogenetic analysis of *Pasteuria penetrans* using multiple genetic loci. *Journal of Bacteriology* 187, 5700-5708.
 - 33) Wishart, J., Blok, V.C., Phillips, M.S., **Davies, K.G.** (2004) *Pasteuria penetrans* and *P. nischizawae* attachment to *Meloidogyne chitwoodi*, *M. fallax* and *M.hapla* *Nematology* 6, 507-510.
 - 32) Bird, D., Opperman, C.H. & **Davies, K.G.** (2003) Interactions between bacteria and plant parasitic nematodes: now and then. *International Journal of Parasitology* 33, 1269-1276.
 - 31) Mendoza de Gives, P., Behnke, J.M. and **Davies, K.G.** (2003) Extracellular enzyme production by nematophagous fungi in the presence and absence of nematodes. *International Journal of Nematology*, 13, 27-36.
 - 30) Giannakou, I.O., Gowen, S.R. and **Davies, K. G.** (2002) Aspects on the attachment of *Pasteuria penetrans* on root-knot nematodes. *Russian Journal of Nematology* 10, 25-31.
 - 29) Vaid, A., Bishop, A.H. and **Davies, K. G.** (2002) The polypeptide components of the parasporal fibres of *Pasteuria penetrans*. *World Journal of Microbiology & Biotechnology* 18, 151-157.
 - 28) Fould, S., Dieng, A.L., **Davies, K. G.**, Normand, P. & Mateille, T. (2001) Immunological quantification of the nematode parasitic bacterium *Pasteuria penetrans* in soil. *FEMS Microbiology Ecology* 37, 187-195.
 - 27) Gravato Nobre, M.J., **Davies, K.G.**, von Mende, N. & Evans, K (2001) The identification of cuticular and ES antigens conserved across some groups of plant parasitic and free living nematodes. *International Journal of Nematology*, 11, 157-167.
 - 26) Mohan, S., Fould, S. and **Davies, K.G.** (2001) The interaction between the gelatine binding domain of fibronectin and the attachment of *Pasteuria penetrans* endospores to nematode cuticle. *Parasitology*, 123, 271-276.
 - 25) **Davies, K. G.**, Fargette, M., Balla, G., Daudi, A., Duponnois, R., Gowen, S.R., Mateille, T., Phillips, M. S., Sawadogo, A., Trivino, C., Vouyoukalou, E. & Trudgill, D.L. (2001) Cuticle heterogeneity as exhibited by *Pasteuria* spore attachment is not linked to the phylogeny of parthenogenetic root-knot nematodes (*Meloidogyne* spp.) *Parasitology* 122, 111-120.
 - 24) Trudgill, D.L., Bala, G., Blok, V.C., Daudi, A., **Davies, K.G.**, Fargette, M., Gowen, S.R., Madulu, J.D., Mateille, T., Mwangeni, W., Netscher, C., Phillips, M.S., Abdoussalam, S., Trivino, G.C. and Voyoulallou, E. (2000) The importance of tropical root-knot nematodes (*Meloidogyne* spp.) and factors affecting the utility of *Pasteuria penetrans* as a biocontrol agent. *Nematology* 2, 823-845.
 - 23) Duponnois, R., Fargette, M., Fould, S., Thioulouse, J. and **Davies, K.G.** (2000) Diversity of the bacterial hyperparasite *Pasteuria penetrans* in relation to root-knot nematodes (*Meloidogyne* spp.) control on *Acacia holosericea*. *Nematology* 2 235-442.
 - 22) Gravato-Nobre, M.J., McClure, M. A., Dolan, L., Calder, G., **Davies, K.G.**, Mulligan, B., Evans, K. & von Mende, N., (1999). *Meloidogyne incognita* surface antigen epitopes in infected *Arabidopsis* roots. *Journal of Nematology* 31, 212-223.

- 21) **Davies, K. G.** and Redden, M. (1997) Diversity and partial characterisation of putative virulence determinants in *Pasteuria penetrans*, the hyperparasite of root-knot nematodes *Journal of Applied Microbiology*, 83, 227-235
- 20) Sharma, S. B. & **Davies, K. G.** (1997) Modulation of spore adhesion of the hyperparasitic bacterium *Pasteuria penetrans* to nematode cuticle. *Letters in Applied Microbiology* 25, 426-430.
- 19) Espanol, M., Verdejo-Lucas, S., **Davies, K. G.** and Kerry, B. R. (1997) Compatibility between *Pasteuria penetrans* and *Meloidogyne* populations from Spain. *Biocontrol Science and Technology*, 7, 219-230.
- 18) Giannakou, I. O., Pembroke, B., Gowen, S. R. and **Davies, K. G.** (1997) Effects of long term storage and above normal temperatures on spore adhesion of *Pasteuria penetrans* and infection of root-knot nematode *Meloidogyne javanica*. *Nematologica* 43, 185-192.
- 17) Sharma, S.B. and **Davies, K.G.** (1996) Characterisation of *Pasteuria* isolated from *Heterodera cajani* using morphology, pathology and serology of endospores *Systematic and Applied Microbiology* 19, 106-112.
- 16) Sharma, S.B. and **Davies, K.G.** (1996) A comparison of two sympatric species of *Pasteuria* isolated from a tropical vertisol soil. *World Journal of Microbiology and Biotechnology* 12, 361-366.
- 15) **Davies, K.G.**, Afolabi, P. and O'Shea, P.S. (1996) Adhesion of *Pasteuria penetrans* to the cuticle of root-knot nematodes (*Meloidogyne* spp) inhibited by fibronectin: a study of electrostatic and hydrophobic interactions. *Parasitology* 112, 553-559
- 14) Afolabi, P., **Davies, K.G.** and O'Shea, P. (1995) The electrostatic nature of the spore surface of *Pasteuria penetrans*, the bacterial parasite of root-knot nematodes. *Journal of Applied Bacteriology* 79, 244-249.
- 13) **Davies, K. G.**, Redden, M. and T. K. Pearson, (1994) Endospore heterogeneity in *Pasteuria penetrans* related to attachment to plant-parasitic nematodes. *Letters in Applied Microbiology* 19, 370-373.
- 12) **Davies, K.G.** (1994) *In vitro* recognition of a 190 kD putative attachment receptor from the cuticle of *Meloidogyne javanica* by *Pasteuria penetrans* spore extract. *Biocontrol Science and Biotechnology* 4, 367-374.
- 11) Fargette, M., **Davies, K. G.**, Robinson, M. P., & Trudgill, D. L. (1994) Characterisation of resistance breaking *Meloidogyne incognita*-like populations, using lectins, monoclonal antibodies and spores of *Pasteuria penetrans*. *Fundamental and Applied Nematology* 17, 537-542.
- 10) **Davies, K. G.** and Danks, C. (1993) Carbohydrate/protein interactions between the cuticle of infective juveniles of *Meloidogyne incognita* and spores of the obligate hyperparasite *Pasteuria penetrans*. *Nematologica* 39, 54-64.
- 9) **Davies, K. G.** and Danks, C. (1992) Interspecific differences in the nematode surface coat between *Meloidogyne incognita* and *Meloidogyne arenaria* related to the adhesion of *Pasteuria penetrans*. *Parasitology* 105, 475-480.
- 8) **Davies, K. G.**, Robinson, M. P. & Laird, V., (1992) Proteins on the surface of spores of *Pasteuria penetrans* and their involvement in attachment to the cuticle of second-stage juveniles of *Meloidogyne incognita*. *Journal of Invertebrate Pathology* 59, 18-23.
- 7) De Leij, F. A. A. M., **Davies, K. G.** and Kerry, B. R. (1992) The use of *Verticillium chlamydosporium* Goddard and *Pasteuria penetrans* (Thorne) Sayre & Starr alone and in combination to control plant parasitic root-knot nematodes: *Meloidogyne* spp. *Fundamental and Applied Nematology* 15, 235-242.
- 6) **Davies, K. G.**, Laird, V. and Kerry, B. R. (1991) The motility, development and infection of *Meloidogyne incognita* encumbered with spores of the obligate hyperparasite *Pasteuria penetrans*. *Revue de Nématologie* 14, 611-618.

- 5) **Davies, K. G.**, Flynn, C. A., Laird, V. and Kerry, B. R. (1990) The life-cycle, population dynamics and host specificity of a parasite of *Heterodera avenae*, similar to *Pasteuria penetrans*. *Revue de Nématologie* 13, 303-309.
- 4) **Davies, K. G.** and Whitbread, R. (1989) *In vitro* studies on siderophore production by wild type and rifampicin resistant strains of fluorescent *Pseudomonads*, *Plant and Soil*, 116, 123-125.
- 3) **Davies, K. G.** and Whitbread, R. (1989) A comparison of methods for measuring the colonisation of a root system by fluorescent *Pseudomonads*. *Plant and Soil*, 116, 239-246.
- 2) **Davies, K. G.** and Whitbread, R. (1989) Factors affecting the colonisation of a root system by fluorescent *Pseudomonads*: the effects of water, temperature and soil microflora. *Plant and Soil*, 116, 247-256.
- 1) **Davies, K. G.**, Kerry, B. R. and Flynn, C. A. (1988) Observations on the pathogenicity of *Pasteuria penetrans*, a parasite of root-knot nematodes. *Ann. Appl. Biol.* 112, 1491-501.

Caenorhabditis elegans and innate immunity

- 4) **Davies, K.G.**, Gravato-Nobre, M., Powers, S. and Hodgkin, J.A. (2014) RNAi knock-down of mucin-like genes altered surface coat recognition by lectins in adult hermaphrodites of *Caenorhabditis elegans* (in preparation).
- 3) **Davies, K.G.** and Hart, J.E. (2008) Fecundity and lifespan manipulations in *Caenorhabditis elegans* using peptides. *Nematology* 10, 103 – 112.
- 2) Mendoza de Gives, P., **Davies, K.G.**, Clark, S. J. and Behnke, J.M. (1999) Predatory behaviour of trapping fungi against *srf* mutants of *Caenorhabditis elegans* and different plant and animal parasitic nematodes. *Parasitology* 119, 95-104.
- 1) Mendoza de Gives, P., **Davies, K.G.**, Morgan, M., and Behnke, J.M. (1999) Attachment tests of *Pasteuria penetrans* to the cuticle of plant and animal parasitic nematodes, free living nematodes and *srf* mutants of *Caenorhabditis elegans* *Journal of Helminthology* 73, 67-71.

Identification and Diagnostics

- 9) Costa, S.R., Kerry, B.R., Bardgett, R., **Davies, K.G.** (2006) Exploitation of Immunofluorescence for the Quantification and Characterisation of Small Numbers of *Pasteuria* Endospores *FEMS Microbiology Ecology* 58, 593-600.
- 8) Fould, S., Dieng, A.L., **Davies, K. G.**, Normand, P. & Mateille, T. (2001) Immunological quantification of the nematode parasitic bacterium *Pasteuria penetrans* in soil. *FEMS Microbiology Ecology* 37, 187-195.
- 7) Hirsch, P., Atkins, S.D., Mauchline, T.H., Morton, C.O., **Davies, K.G.** & Kerry, B.R. (2001) Techniques for studying nematophagous fungi in the root environment. *Plant and Soil* 232, 21-30.
- 6) **Davies, K.G.**, Curtis, R.H. & Evans, K. (1996) Serologically based diagnostic and quantification tests for nematodes. *Pesticide Science* 47, 81-87.
- 5) Ibrahim, S., **Davies, K. G.** and Perry, R. N. (1996) Identification of root-knot nematode, *Meloidogyne incognita*, using monoclonal antibodies raised to non-specific esterases *Physiological and Molecular Plant Pathology* 49, 79-88.
- 4) **Davies, K.G.** & Beadle, J. (1995) Use of a cellulose acetate electrophoresis system for the simultaneous characterisation of individual root-knot (*Meloidogyne* spp.) females using three isozymes. *Fundamental and Applied Nematology* 18, 549-551.
- 3) **Davies, K. G.** and Carter, B. (1995) Comparison of immunoassays for the quantification of root-knot nematodes extracted from soil. *EPPO Bulletin* 25,367-375.

- 2) Robinson, M. P., Butcher, G., Curtis, R. H., **Davies, K. G.** & Evans, K. (1993) Characterisation of a 34kD protein from potato cyst nematodes, using monoclonal antibodies with potential for species diagnosis. *Annals of Applied Biology* 123, 337-347.
- 1) **Davies, K. G.** and Lander, E. B. (1992) Immunological differentiation of root-knot nematodes (*Meloidogyne* spp.) using monoclonal and polyclonal antibodies. *Nematologica* 38, 353-366.

Also over 80 non-refereed contributions to national and international conferences and proceedings

Essays and articles

- 7) **Davies, K.G.** (2007) Bring back Haldane! *Science and Public Affairs*, The British Association for the Advancement of Science, June. Pp21.
- 6) **Davies, K.G.** (2007) Science in the house for job swap week. *The Herts Advertiser* 1 February page 4.
- 5) **Davies, K.G.** & Wolf-Phillips, J.W. (2006) Scientific Citizenship and Good Governance: Implications for Biotechnology *Trends in Biotechnology* 24, 57-61.
- 4) **Davies, K.G.** (2003) Zones of Inhibition: interactions between art and science. *Endeavour*, 27, 131-133.
- 3) **Davies, K. G.** (2001) What makes genetically modified organisms so distasteful? *Trends in Biotechnology* 19, 375-428.
- 2) **Davies, K. G.** (2000) *A Universe of Consciousness: how matter becomes imagination*. Gerald M. Edelman and Giulio Tononi. Basic Books. p274 pages. *Newsletter of the Association of Applied Biologists*, Issue 46, p 3-5.
- 1) **Davies, K.G.** (2000) Creative tension: what links Aristotle, William Blake, Darwin and GM Crops? *Nature*, 407, 135-135.

Poetry

- 3) **Davies, K.G.** (2006) *Up High and Invisible* Collected poems Brambleby Books, Harpenden, UK
- 2) **Davies, K.G.** (2001) [Ghost of an Arcadian Hominid](#) (After reading *The Face of Violence* by Jacob Bronowski). *HMS Beagle: The BioMedNet Magazine* Issue 109 (Aug 31).
- 1) **Davies, K.G.** (2000) [Homo Faber 2000](#) (After reading *Homo Faber* by Max Frisch). *HMS Beagle: The BioMedNet Magazine* Issue 88 (Oct 13).

OTHER CONTRIBUTIONS AND ACTIVITIES

Invited scientific lectures and talks

- 35) **Davies KG** (2014) Unravelling the endospore attachment mechanism between *Pasteuria penetrans* and plant-parasitic nematodes. Harper Adams University, 1 May 2014.
- 34) **Davies KG** (2013) Using *Caenorhabditis elegans* to gain insights to help in the development of biological control agents Fitopathologie Congress, Ouro Preto, Brazil, 20 – 24th October 2013.
- 33) **Davies KG** (2013) Unravelling host specificity in *Pasteuria* spore adhesion to plant-parasitic nematodes and its deployment as a biological control agent Chinese Academy of Tropical Agriculture, Hainan Province, China 14 November 2013.
- 32) **Davies KG** (2011) Can genomics provide insights for the development of novel nematode control strategies for subsistence farmers? 10th African Crop Science Society Conference, Maputo, Mozambique 10-13 October 2011)

- 31) **Davies KG** (2010) Exploiting Genomics to identify *Globodera pallida* cuticle genes important in bacterial infection processes 20 Jan. 2010 Potato Cyst nematode Management Meeting Oslo, Norway.
- 30) **Davies KG**, Maria Gravato-Nobre, Jonathan Hodgkin and Valerie Williamson (2010) Exploiting *Caenorhabditis elegans* as a heterologous expression system for the functional characterisation of surface coat genes of plant-parasitic nematodes NEMASYM Meeting University of Arizona, Tucson 11- 13 November 2010.
- 29) **Davies KG** (2009) How to become attached to a nematode cuticle: bacterial pathogenesis and the role of collagen. Laboratory of Genes and Development, University of Oxford, 23 October 2009.
- 28) **Davies, K.G.** (2008) Innate immunity in nematodes and somaclonal variation as revealed by *Pasteuria penetrans* Annual Meeting of the Society for Invertebrate Pathology. Warwick, United Kingdom.
- 27) **Davies, K.G.** (2008) Exploring tritrophic interactions: biological control of an obligate pest by its obligate parasite. Annual Meeting of the Society for Invertebrate Pathology. Warwick, United Kingdom
- 26) **Davies, K.G.** (2008) Somaclonal variation in plant-parasitic nematodes as revealed by *Pasteuria*; the potential importance of innate immunity. . 5th International Congress of Nematology Brisbane, Australia.
- 25) **Davies, KG.**, Schaff, J.E., Kerry, B.R. and Opperman, C.H. (2008) Completion of a *Pasteuria* genomes sequence, a heuristic approach to its common thread. 5th International Congress of Nematology Brisbane, Australia.
- 24) **Davies, K.G.** (2007) Towards understanding the tritrophic interaction between a plant root, a plant parasitic nematode and its obligate bacterial hyperparasite *Pasteuria penetrans*. The Natural History of Host – Parasite Interactions The Linnean Society of London, 27 – 28 September 2007.
- 23) **Davies, K.G.** (2006) Putting Biodiversity in Context: building coherence between ecology and genomics through a tri-trophic interaction. University of Reading, Reading. 30 October.
- 22) **Davies, K.G.** (2006) Exploiting genomics to gain insights into *Pasteuria*- nematode interactions nematodes ESN XXVIII International Symposium Blagoevgrad, Bulgaria 5 – 9 June.
- 21) **Davies, K.G.** and Perry, R.N (2006) How do we make the public aware of nematodes ESN XXVIII International Symposium Blagoevgrad, Bulgaria 5 – 9 June.
- 20) **Davies, K.G.** (2006) *Pasteuria penetrans*: problems, progress and prospects. Murdoch University, Perth. 1 May.
- 19) **Davies, K.G.** (2006) Exploiting genomics to understand *Pasteuria/nematode* interactions: integrating ecology and molecular biology. University of Western Australia, Perth. 26 April.
- 18) **Davies, K.G.** (2005) Career profile for ecology graduates. Annual Meeting and AGM British Ecological Society. University of Hertfordshire 5-7 September.
- 17) **Davies, K.G.** (2005) *Pasteuria penetrans*: Problems Progress and Prospects. International Nematology Course PINC seminars. Faculty of Sciences, K.L. Ledeganckstraat 35 Gent. 11 May.
- 16) **Davies, K.G.** (2005) Attachment and Specificity of *Pasteuria penetrans* to nematodes: the role of collagen. University of Talca, Chile. 28 April 2005.
- 15) **Davies, K. G.** (2004) Integrating genomic and ecological knowledge to develop new approaches to sustainable pest management in a hostile soil environment. Plant Defence in a Hostile Soil Environment: AAB Centenary Conference 15-17 December, St Catherine's College Oxford.

- 14) **Davies, K.G.** (2004) Exploiting genomics to gain insights into *Pasteuria penetrans*. University of Florida, Gainesville, 22 September, 2004.
- 13) **Davies, K.G.** & Opperman, C.H. (2003) Biology of the *Pasteuria penetrans*-nematode interaction and the role of functional genomics. *Society for General Microbiology*, 7-11 April, University of Edinburgh.
- 12) **Davies, K.G.** (2003) Functional genomics of *Pasteuria penetrans* 8th International Congress of Plant Pathology Christchurch, New Zealand, 2 - 7 February.
- 11) **Davies, K. G.** (2001) Use of *Pasteuria penetrans* as a biological control agent. University of Florida, Gainesville, 5 October 2001.
- 10) **Davies, K. G.** & S. Mohan (2000) Host specificity and virulence in *Pasteuria penetrans*: the role of fibronectin. International meeting for the Society of Invertebrate Pathology: Mexico 13-18 August.
- 9) **Davies, K. G.** (2000) Pests, Plants and Parasites, Department of Nematology, University of California, Riverside, USA. February 22, 2000.
- 8) **Davies, K. G.** (1999) Biological control of plant parasitic nematodes. 3rd International Workshop Alternatives to Methyl bromide for Southern European Countries” 7 – 10 December Heraclion, Crete, Greece.
- 7) **Davies, K. G.** (1999) Populations, parasites and proteins: interactions between plant parasitic nematodes and the hyperparasite *Pasteuria penetrans*. Department of Plant Pathology, North Carolina State University, April 19 1999.
- 6) **Davies, K.G.** (1998) Nematode diagnostics: in search of antigenic markers. International Congress of Plant Protection, Edinburgh, 9-14 August.
- 5) **Davies, K.G.** (1998) Host specificity and virulence in *Pasteuria penetrans*: prospects for field applications. 6th Symposium on Biological Control, Rio de Janeiro, 24-28 May 1998.
- 4) **Davies, K. G.** (1996) The spore/nematode interaction: a biochemical examination of host specificity in *Pasteuria*. Third International Nematology Congress, Guadeloupe, 7 - 11 July, 1996.
- 3) **Davies, K. G.** (1996) Immunological dissection of *Pasteuria* spp. Third International Nematology Congress, Gosier, Guadeloupe, July 7 - 12 July.
- 2) **Davies, K. G.,** & Curtis, R.H. (1995) Serologically based diagnostic and quantification tests for nematodes. *Society of Chemical Industries* 21 April. London.
- 1) **Davies, K. G.** (1994) Surface interactions of Biocontrol Organisms: BARD Workshop on Non-conventional control of plant-parasitic nematodes & soil-borne diseases, Jerusalem Israel.

Conference organisation, workshops and exhibitions

- 2006 *Rhizosphere dynamics workshop*: University of Western Australia, Perth, 3rd May, 2006
- 2004 *Plant Defence in a Hostile Soil Environment*: AAB Centenary Conference 15-17 December, St Catherine’s College Oxford.
- 2001 *Zones of Inhibition*: an exhibition of the private lives of fungi, IACR Rothamsted, 27 November - 11 December.
- 2000 *Interactions in the root environment – an integrated approach*. IACR Rothamsted International Millennium Conference 10 – 12 April, Harpenden, UK.
- 1993-2001 AAB Offered Papers in Nematology: The Linnean Society, London

Science and society lectures and articles

- 12) **Davies, K.G.** (2009) Food security: why are genetically modified organisms distasteful: talk given at a meeting organised by *Climate Rush*, Stroud,

Gloucestershire, 18th September 2009.

- 11) **Davies, K.G.** (2006) Putting biodiversity in context. Talk to sixth form Milton Keynes. Nov 14.
- 10) **Davies, K.G.** (2006) Tolkien, Technology and Trees: integrating *Homo faber* with *Homo sapiens* through scientific citizenship. *Innovation Centre Bentley*, Perth, WA, 4 May.
- 9) **Davies, K.G.** (2006) Zones of Inhibition: interactions between science and art. *University of Western Australia*, Perth, 2nd May.
- 8) **Davies, K. G.** (2003) Beyond the Single Vision and Newton's Sleep: a talk on the interaction between art and science. *Royal Botanic Garden, Edinburgh* 23 January.
- 7) **Davies, K.G.** (2002) What links Aristotle, William Blake, Darwin and GM Crops. In Miracle or Monster GM Conference, City of London School for Girls, 5 November 2002.
- 6) **Davies, K.G.** (2002) Why are genetically modified crops so distasteful? Joint meeting of the Institute of Biology, Beds, Essex & Herts Branch with IACR-Rothamsted and the British Association for the Advancement of Science, 27 January 2002.
- 5) **Davies, K.G.** (2002) Separate the issues. In The Future of GM debate sponsored by the Natural Environmental Research Council, *Spiked-science*. <http://www.spiked-online.com>.
- 4) **Davies, K. G.** (2001) Zones of Inhibition: a talk exploring the interaction between art and Science. IACR-Rothamsted Open Meetings; 27 November 2001.
- 3) **Davies, K. G.** (2001) The GMO debate: The scientist as a modern day Prometheus. University of the Third Age, Hertford Branch. 12 January 2001.
- 2) **Davies, K. G.** (2000) Putting Biotechnology into context. University of the Third Age, Welwyn/Hatfield Branch. 28 June, 2000.
- 1) **Davies, K. G.** (1999) Plant, pests and parasites: biological control as a sustainable management strategy. Ecological Impacts of Agricultural Intensification, Ecology and Conservation Studies Society, Birkbeck College, University of London. 22 October 1999.

COLLABORATIONS

United Kingdom

Prof. J Hodgkin (U. Oxford) *C. elegans* Srf mutants in relation to bacterial pathogenicity.

Prof. R. Bardgett (Manchester University) Interactions between nematodes and their microbial enemies

B. Pembroke (U. Reading) Immunological characterisation of rhizosphere bacteria.

Prof. D Wright, (Imperial College, Silwood Park) Host specificity in *Pasteuria* interactions

Dr J. Jones (James Hutton Institute) Sequencing *Globodera pallida* genome.

Prof. Peter Urwin (U. Leeds) Sequencing *Globodera pallida* genome

Prof J Behnke (U. Nottingham) Predatory behaviour of nematode trapping fungi

Prof P O'Shea (U. Nottingham) Biochemical mechanism of *Pasteuria* attachment

European

Dr. R. Holgado, (Bioforsk, Norway) Biological Control Potato Cyst nematodes

Prof. M. Moens (Ghent University) International M Sc Nematology.

Prof. W. Van der Putten (Netherlands Institute of Ecology) Multi-trophic ecology of nematodes, their host plants and antagonists

Dr T Mateille (IRD France) Immunological quantification of *Pasteuria* in soil.

Dr M Fargette (IRD France) Molecular characterisation of root-knot nematodes.

Dr S Verdejo-Lucas (IRTA, Spain) *Pasteuria* to control root-knot nematodes

Americas

Prof. Valerie Williamson, (U C Davis, USA) Attachment of *Pasteuria* to *M. hapla*

Prof. C H Opperman (NCSU, USA) Genomics of *Pasteuria penetrans*.

Dr P Mendoza de Gives (CNIDVP, Mexico) Biocontrol of nematodes

Asia

Prof. Harish Gaur (IARI, New Delhi, India) Interactions in the Rhizosphere

Dr S Mohan (IARI, New Dehli, India) Attachment of *Pasteuria* to nematode cuticle

Prof. Ming Sun, (Huazhong Agri. Univ. Wuhan, China) Biocontrol phytonematodes

Prof. Bao, (Chinese Academy of Tropical Agriculture, Hainan Province, China) Biocontrol phytonematodes on black pepper.

Africa

Dr Zibusiso Sibanda, Goldengro Pvt Ltd, Harare, Zimbabwe

Dr John Kimenju, Faculty of Agriculture, University of Nairobi, Kenya.

Dr Waceke Wanjohi, School of Pure and Applied Sciences, Kenyatta University, Nairobi, Kenya.

Dr Herbert Talwana, Faculty of Agriculture, University of Makerere, Kampala, Uganda.