

CILR Research Publications 2009

- Beckman, M., Freeman, C., **Parish, C.** and Small, D. (2009) Activation of cathepsin D by glycosaminoglycans. *FEBS Journal*. **276(24)**: 7343-7352.
- Biswas, B, Chan, P.K. and **Gresshoff, P.M.** (2009) A novel ABA insensitive mutant of *Lotus japonicus* with a wilted phenotype displays unaltered nodulation regulation. *Molecular Plant*. **2(3)**: 487-499.
- Brewer, P., Dun, E.A., Ferguson, B.J., Rameau, C. and **Beveridge, C.A.** (2009) Strigolactone acts downstream of auxin to regulate bud outgrowth in pea and Arabidopsis. *Plant Physiology*. **150(1)**: 482-493.
- Buer, C.S. and **Djordjevic, M.A.** (2009) Architectural phenotypes in the transparent testa mutants of *Arabidopsis thaliana*. *Journal of Experimental Botany*. **60(3)**: 751-763.
- Chaudhri, G., Quah, B., Wang, Y., Tan, A., Zhou, J., Karupiah, G. and **Parish, C.R.** (2009) T cell receptor sharing by cytotoxic T lymphocytes facilitates efficient virus control. *Proceedings of the National Academy of Sciences (USA)*. **106(35)**: 14984-14989.
- Chen, H.C., Bodulovic, G., Hall, P., Moore, A., Higgins, T., **Djordjevic, M.** and **Rolfe, B.** (2009) Unintended changes in protein expression revealed by proteomic analysis of seeds from transgenic pea expressing a bean α -amylase inhibitor gene. *Proteomics*. **9(18)**: 4406-4415.
- Chen, S-K., Kurdyukov, S., Kerestz, A., Wang, X-D., **Gresshoff, P.M.** and **Rose, R.J.** (2009) The association of gene expression with stem cell formation and morphogenesis in cultured *Medicago truncatula*. *Planta*. **230(4)**: 827-840.
- Dam, S., Laursen, B.S., Ornfelt, J.H., Jochimsen, B., Staerfeldt, H.H., Friis, C., Nielsen, K., Goffard, N., Besenbacher, S., Krusell, L., Sato, S., Tabata, S., Thogersen, I.B., Enghild, J.J. and Stougaard, J. (2009) The proteome of seed development in the model legume *Lotus japonicus*. *Plant Physiology*. **149(3)**: 1325-1340.
- Dun, E.A., Brewer, P.B. and **Beveridge, C.A.** (2009) Strigolactones: discovery of the elusive shoot branching hormone. *Trends in Plant Science*. **14(7)**: 364-372.
- Dun, E.A., Hanan, J. and **Beveridge, C.A.** (2009) Computational modeling and molecular physiology experiments reveal new insights into shoot branching in pea. *Plant Cell*. **21(11)**: 3459-3472.
- Ferguson, B.J. and **Beveridge, C.A.** (2009) Roles for auxin, cytokinin, and strigolactone in regulating shoot branching. *Plant Physiology*. **149(4)**: 1929-1944.
- Ferguson, B.J. and **Gresshoff, P.M.** (2009) Soybean as a model legume. *Grain Legumes*. **53**:7.
- Frickey T. and Kannenberg, E. (2009) Phylogenetic analysis of the triterpene cyclase protein family in prokaryotes and eukaryotes suggests bidirectional lateral gene transfer. *Environmental Microbiology*. **11(5)**: 1224-1241.

Gresshoff, P.M., Indrasumuar, A., Miyahara, A., Nontachaiyapoom, S., Biswas, B., Lin, Y.-H., Lin, M.-H., Reid, D., Callahan, D., Capon, R., Zhang, H., Hirani, T., Kobe, B., Men, A., Scott, P., Kereszt, A., Miyagi, M., Li, D.-X., Can, P.-K., Roessner, U., **Djordjevic, M.A.**, Kinkema, M. and Ferguson, B. (2009) Functional genomic analysis of systemic cell division regulation in legumes. **In:** Shu, Q.Y. (Ed.) *Induced Mutations in the Genomics Era*. Food and Agriculture Organization of the United Nations (FOA)/International Atomic Energy Agency (IAEA), Rome, Italy. pp 399-402.

Gresshoff, P.M. (2009) Developmental genomics of legume nodulation. Proceedings of the Indian National Academy of Sciences. *NAAS*. **8**: 7-9.

Gresshoff, P.M., Lohar, D., Chan, P-K., Biswas, B., Jiang, Q, Reid, D., Ferguson, B. and Stacey, G. (2009) Genetic analysis of ethylene regulation of legume nodulation. *Plant Signaling & Behaviour*. **4(9)**: 818-823.

Gresshoff, P.M., Ferguson, B.J., Indrasumunar, A. and Jiang, Q. (2009) Modern genetics and biotechnology of soybean nitrogen fixation and nodulation. *Chinese Journal of Nature*. **31(6)**: 320-326.

Grunewald, W., Van Noorden, G, Van Isterdael, G., Beeckman, T., Gheysen, G., and **Mathesius, U.** (2009) Manipulation of auxin transport in plant roots during rhizobium symbiosis and nematode parasitism. *Plant Cell*. **21(9)**: 2553-2562.

Haerizadeh, F., Wong, C.E., **Bhalla, P.L.**, **Gresshoff, P.M.** and **Singh, M.B.** (2009) Genomic expression profiling of mature soybean (*Glycine max*) pollen. *BMC Plant Biology*. **9**: 25.

Haerizadeh, F., Wong, C.E., **Singh, M.B.** and **Bhalla, P.L.** (2009) Genome-wide analysis of gene expression in soybean shoot apical meristem. *Plant Molecular Biology*. **69(6)**: 711-727.

Hamzah, J., Altin, J.G., Herringson, T., **Parish, C.R.**, Hammerling, G.J., O'Donoghue, H. and Ganss, R. (2009) Targeted liposomal delivery of TLR9 ligands activates spontaneous antitumor immunity in an autochthonous cancer model. *J. Immunology*. **183(2)**: 1091-1098.

Hayward, A., Stirnberg, P., **Beveridge, C.** and Leyser, O. (2009) Interactions between auxin and strigolactone in shoot branching control. *Plant Physiology*. **151(1)**: 400-412.

Hernandez, G., Valdes-Lopez, O., Ramirez, M., Goffard, N., **Weiller, G.**, Aparicio-Fabre, R., Fuentes, S.I., Erban, A., Kopka, J., Udvardi, M.K. and Vance, C.P. (2009) Global changes in the transcript and metabolic profiles during symbiotic nitrogen fixation in phosphorus-stressed common bean plants. *Plant Physiology*. **151(3)**: 1221-1238.

Høgslund, N., Radutoiu, S., Krusell, L., Voroshilova, V., Hannah, M.A., Goffard, N., Sanchez, D.H., Lippold, F., Ott, T., Sato, S., Tabata, S., Liboriussen, P., Lohmann, G.V., Schauser, L., **Weiller, G.F.**, Udvardi, M.K. and Stougaard, J. (2009) Dissection of symbiosis and organ development by integrated transcriptome analysis of *Lotus japonicus* mutant and wild-type plants. *PLoS ONE* **4(8)**: e6556.

- Krisantini, S., Johnston, M., **Beveridge, C.A.**, Ross, J. and Williams, R. (2009) Rooting, quantification of indole-3-acetic acid and indole-3-butyric acid, and IBA transport in *Grevillea* sp. *Propagation of Ornamental Plants*. **9(2)**: 90-96.
- Li, D., Kinkema, M. and **Gresshoff, P.M.** (2009) Autoregulation of nodulation (AON) in *Pisum sativum* (pea) involves signalling events associated with both nodule primordia development and nitrogen fixation. *Journal of Plant Physiology*. **166(9)**: 955-967.
- Liang, D., Wong, C.E., **Singh, M.B.**, **Beveridge, C.A.**, Phipson, B., Smyth, G.K. and **Bhalla, P.L.** (2009) Molecular dissection of the pea shoot apical meristem. *Journal of Experimental Botany*. **60(14)**: 2401-2413.
- Lohar, D., Stiller, J., Kam, J.H.W., Stacey, G. and **Gresshoff, P.M.** (2009) Ethylene insensitivity conferred by a mutated *Arabidopsis* ethylene receptor gene alters nodulation in transgenic *Lotus japonicus*. *Annals of Botany*. **104(2)**: 277-285..
- Lonhienne, T.G.A., Forwood, J.K., Marfori, M., Robin, G., Kobe, B. and **Carroll, B.J.** (2009) Importin- β as a GDP-to-GTP exchange factor of Ran. Implications for the mechanism of nuclear import. *Journal of Biological Chemistry*. **284(34)**: 22549-22558.
- Mathesius, U.** (2009) Comparative proteomics studies of root-microbe interactions. *Journal of Proteomics*. **72(3)**: 353-366.
- Haerizadeh, F., Wong, C.E., **Bhalla, P.L.**, **Gresshoff, P.M.** and **Singh, M.B.** (2009) Genomic expression profiling of mature soybean (*Glycine max*) pollen. *BMC Plant Biology*. **9**: 25.
- Li, D.X., Kinkema, M. and **Gresshoff, P.M.** (2009) Autoregulation of nodulation (AON) in *Pisum sativum* (pea) involves signalling events associated with both nodule primordia development and nitrogen fixation. *Journal of Plant Physiology*. **166(9)**: 955-967.
- Lohar, D., Stiller, J., Kam, J.H.W., Stacey, G. and **Gresshoff, P.M.** (2009) Ethylene insensitivity conferred by a mutated *Arabidopsis* ethylene receptor gene alters nodulation in transgenic *Lotus japonicus*. *Annals of Botany*. **104(2)**: 277-285.
- Nolan, K.E., Kurdyukov, S. and **Rose, R.J.** (2009) Expression of the *SOMATIC EMBRYOGENESIS RECEPTOR-LIKE KINASE* (*SERK1*) gene is associated with developmental change in the life cycle of the model legume *Medicago truncatula*. *Journal of Experimental Botany*. **60(6)**: 1759-1771.
- Oelkers, K., Goffard, N., **Weiller, G.F.**, **Gresshoff, P.M.**, **Mathesius, U.** and Frickey, T. (2009) Bioinformatic analysis of the CLE signaling peptide family. *BMC Plant Biology*. **9**: 17.
- Parish, C.R.**, Glidden, M.H., Quah, B.J.C. and Warren, H.S. (2009) Use of the intracellular fluorescent dye CFSE to monitor lymphocyte migration and proliferation. In: J.E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach and W. Strober (Eds.) *Current Protocols in Immunology*. Wiley: New York, Chapter **4**: Unit 4.9.

- Poon, I.K., Olsson, A.K., Hulett, M.D. and **Parish, C.R.** (2009) Regulation of histidine-rich glycoprotein (HRG) function via plasmin-mediated proteolytic cleavage. *Biochemical Journal*. **424(1)**: 27-37.
- Rispail, N., Kaló, P., Kiss, G.B., Ellis, T.H.N., Gallardo, K., Thompson, R.D., Prats, E., Larrainzar, E., Ladrera, R., González, E.M., Arrese-Igor, C., Ferguson, B.J., **Gresshoff, P.M.** and Rubiales, D. (2009) Model legumes contribute to Faba bean breeding. *Field Crops Research*. **115(Sp.Iss.)**: 253-269.
- Rose, R.J.**, Mantiri, F.R., Kudyukov, S., Chen, S.-K., Wang, X.-D., Nolan, K.E., and Sheahan, M.B. (2009) Developmental biology of somatic embryogenesis. **In:** E-C. Pua and M. Davey (Eds.) *Plant Developmental Biology-Biotechnological Perspectives*. Vol. 2. Springer: Berlin, London, pp 3-26.
- Shane, M.W., McCully, M.E., Canny, M.J., Pate, J.S., Ngo, H., **Mathesius, U.**, Cawthray, G.R. and Lambers, H. (2009) Summer dormancy and winter growth: root survival strategy in a perennial monocotyledon. *New Phytologist*. **183(4)**: 1085-1096.
- Shaw, L.M., McIntyre, C.L., **Gresshoff, P.M.** and Xue, G.P. (2009) Members of the Dof transcription factor family in *Triticum aestivum* are associated with light-mediated gene regulation. *Functional and Integrative Genomics*. **9(4)**: 485-498.
- Simson, L, Ellyard, J.I. and **Parish, C.R.** (2009) The role of Th2-mediated anti-tumor immunity in tumor clearance. **In:** E. Jensen-Jarolim, M. Penichet (Eds.) *Cancer and IgE: Introducing the concept of AllergoOncology*. Springer: New York, pp 255-276.
- Singh, M.B.** and **Bhalla, P.L.** (2009) Transgenic strategies for eliminating allergens and toxins. **In:** Tony Conner and Jeanne ME Jacobs (Eds.) *Opportunities for Applications of Transgenic Plants*. Annual Plant Reviews Series, **Vol 3**. Wiley: UK.
- Staiger, C.J., Sheahan, M.B., Khurana, P., Wang, X., McCurdy, D.W. and Blanchoin, L. (2009) Actin filament dynamics are dominated by rapid growth and severing activity in the *Arabidopsis* cortical array. *Journal of Cell Biology* . **184(2)**: 269-280.
- Sun, R.C., Fadia, M., Dahlstrom, J.E., **Parish, C.R.**, Board, P.G. and Blackburn, A.C. (2009) Reversal of the glycolytic phenotype by dichloroacetate inhibits metastatic breast cancer cell growth *in vitro* and *in vivo*. *Breast Cancer Research and Treatment*. **120(1)**: 253-260.
- Sutcliffe, E.L., Parish, I.A., He, Y.Q., Juelich, T., Tierney, M.L., Rangasamy, D., Milburn, P.J., **Parish, C.R.**, Tremethick, D.J. and Rao, S. (2009) Dynamic histone variant exchange accompanies gene induction in T cells. *Molecular and Cellular Biology*. **29(7)**: 1972-1986.
- Tiwari, R., **Bhalla, P.L.** and **Singh, M.B.** (2009) Mapping IgE-binding epitopes of Cyn d 1, a major allergen from Bermuda Grass Pollen (BGP). *Clinical and Molecular Allergy*. **7**: 3.
- Tiwari, R., **Bhalla, P.L.** and **Singh, M.B.** (2009) Evaluation of molecular basis of cross reactivity between rye and bermuda grass pollen allergens. *Allergy International*. **58(4)**: 557-564.

Wasson, A.P., Ramsay, K., Jones, M.G.K., **Mathesius, U.** (2009) Differing requirements for flavonoids during the formation of lateral roots, nodules and root knot nematode galls in *Medicago truncatula*. *New Phytologist*. **183(1)**: 167-179.

Wenden, B., Dun, E.A., Hanan, J., Andrieu, B., Weller, J.L., **Beveridge, C.A.** and Rameau, C. (2009) Computational analysis of flowering in pea (*Pisum sativum*). *New Phytologist*. **184(1)** :153-167.

Wong, C.E., **Singh M.B.** and **Bhalla, P.L.** (2009) Floral initiation process at the soybean shoot apical meristem may involve multiple hormonal pathway. *Plant Signalling and Behaviour*. **4(7)**: 648-651.

Wong, C.E., **Singh, M.B.** and **Bhalla, P.L.** (2009) Molecular processes underlying floral transition in the soybean shoot apical meristem. *The Plant Journal*. **57(5)**: 832-845.

Yu, D., Rao, S., Linterman, M., Srivastava, M., He, Y.Q., Tsai, L., Simpson, N., Ellyard, J.I., Parish, I.A., Ma, C., **Parish, C.R.**, Mackay, C.R. and Vinuesa, C.G. (2009) The transcriptional repressor Bcl-6 directs T follicular helper lineage commitment. *Immunity*. **31(3)**: 457-468.

Batley J and Edwards D. (2009) Genome sequence data: management, storage and visualization. *Biotechniques* **46**: 333-336

Duran C, Appleby N, Vardy M, Imelfort M, Edwards D and **Batley J.** (2009) Single Nucleotide Polymorphism Discovery in Barley using AutoSNPdb. *Plant Biotechnology Journal* **7**: 326-333

Imelfort M, Duran C, **Batley J** and Edwards D. (2009) Discovering genetic polymorphisms in next generation sequencing data. *Plant Biotechnology Journal*. **7**: 312-317

Duran C, Appleby N, Edwards D and **Batley J.** (2009) Molecular genetic markers: discovery, applications, data storage and visualisation. *Current Bioinformatics* **4**: 16-27

Duran C, Appleby N, Clark T, Wood D, Imelfort M, **Batley J** and Edwards D. (2009) AutoSNPdb: An Annotated Single Nucleotide Polymorphism Database for Crop Plants. *Nucleic Acids Research* **37**: 951–953

Kaur S, Cogan NOI, Ye G, Baillie RC, Hand ML, Ling AE, McGearey AK, Kaur J, Hopkins CJ, Todorovic M, Mountford H, Edwards D, **Batley J**, Burton W, Salisbury P, Gororo N, Marcroft S, Kearney G, Smith KF, Forster JW and Spangenberg GC.(2009) Genetic map construction and QTL mapping of resistance to blackleg (*Leptosphaeria maculans*) disease in Australian canola (*Brassica napus* L.) cultivars. *Theoretical and Applied Genetics* **120**: 71-83