

Alston, Julian M. and Philip G. Pardey. 2013. "U.S. Public Agricultural R&D in the 21st Century: Losing Ground?," Farm Foundation AgChallenge2050. Washington, DC: Farm Foundation

Alston, Julian M.; Philip G. Pardey and William J. Martin. 2013. "Influences of Agricultural Technology on the Size and Importance of Food Price Variability," J.-P. Chavas, D. Hummels and B. Wright, *The Economics of Food Price Volatility*. Cambridge, MA: National Bureau of Economic Research (NBER)

Alver B, Jauert PA, Brosnan L, O'Hehir M, VanderSluis B, Myers CL, Kirkpatrick DT: A Whole Genome Screen for Minisatellite Stability Genes in Stationary Phase Yeast Cells. *G3: Genes | Genomes | Genetics*. 2013, 3(5):doi:10.1534/g3.112.005397

Andolfo, G., et al., Overview of tomato candidate pathogen recognition genes reveals important *Solanum* R locus dynamics. *New Phytologist*, 2013. 197: p. 223-237.

Anuj Karpatne, James H. Faghmous, Jaya Kawale, Luke Styles, Mace Blank, Varun Mithal, Xi C. Chen, Ankush Khandelwal, Shyam Boriah, Karsten Steinhaeuser, Michael Steinbach, Vipin Kumar, Stefan Liess: *Earth Science Applications of Sensor Data. Managing and Mining Sensor Data 2013: 505-530*

Ariyadasa, R., M. Mascher, T. Nussbaumer, D. Schulte, Z. Frenkel, N. Poursarebani, R. Zhou, B. Steuernagel, H. Gundlach, S. Taudien, M. Felder, M. Platzer, A. Himmelbach, T. Schmutzer, P.E. Hedley, G.J. Muehlbauer, U. Scholz, A. Korol, K.F.X. Mayer, R. Waugh, P. Langridge, A. Graner, and N. Stein. 2013. A sequence-ready physical map of barley anchored genetically by two million SNPs. *Plant Physiol*. DOI:10.1104/pp.113.228213.

Atluri, Gowtham, Kanchana Padmanabhan, Gang Fang, Michael Steinbach, Jeffrey R. Petrella, Kelvin Lim, Angus MacDonald III, Nagiza F. Samatova, P. Murali Doraiswamy, and Vipin Kumar. "Complex biomarker discovery in neuroimaging data: Finding a needle in a haystack." *NeuroImage: Clinical* 3 (2013): 123-131.

Aukema, K, T. Makris, S. Stoian, J. Richman, E Munck, J.D. Lipscomb, and L.P. Wackett (2013) Cyanobacterial aldehyde deformylase oxygenation of aldehydes yields n-1 aldehydes and alcohols in addition to alkanes. *ACS Catalysis* (in press).

B.-G. Kim, S. Malla, Mattheos Koffas, Romas Kazlauskas "Production of 7-O-methyl aromadendrin, a medicinally valuable flavonoid, in *Escherichia coli*" *Appl. Environ. Microbiol.* 2012, 78, 684-694; more... <http://dx.doi.org/10.1128/AEM.06274-11>

Bakker, M.G., et al., Plant monocultures produce more antagonistic soil *Streptomyces* communities than high-diversity plant communities. *Soil Biol Biochem*, 2013. 65: p. 304-312.

Bakker, M.G., J.M. Bradeen, and L.L. Kinkel, Effects of plant host species and plant community richness on streptomycete community structure. *FEMS Microbiology Ecology*, 2013. 83: p. 596-606.

Balint, M., P. Tiffin, B. Hallstrom, R.B. Ohara, M.S. Olson, J.D. Fankhauser, M. Piepenbring, and I. Schmitt. 2013. Host genotype shapes the foliar fungal microbiome of Balsam poplar. *PLoS ONE* 8:e53987 10.1371/journal.pone.0053987

Bannantine JP, Li LL, Sreevatsan S, Kapur V. How does a Mycobacterium change its spots? Applying molecular tools to track diverse strains of Mycobacterium avium subspecies paratuberculosis. *Lett Appl Microbiol.* 2013 Sep;57(3):165-73. doi: 10.1111/lam.12109. Epub 2013 Jun 19. PubMed PMID: 23721475.

Barney, BM, Mann, RL, Ohlert JM, Identification of a Residue Affecting Fatty Alcohol Selectivity in Wax Ester Synthase. *Applied and Environmental Microbiology* (2013), 79, pages 396-399. (Corresponding author)

Barrett, John S. F.; Srienc, Friedrich (Apr 7, 2013) Controlled biosynthesis of PHB-co-PHV block copolymers from CO₂ and valeric acid. ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY : 245: 38-BIOT

Baryshnikova A, VanderSluis B, Costanzo M, Myers CL, Cha RS, Andrews B, Boone C. Global Linkage Map Connects Meiotic Centromere Function to Chromosome Size in Budding Yeast. *G3* 2013 Aug 26 doi:10.1534/g3.113.007377

Beddow, Jason M.; Terrance M. Hurley; Darren Kriticos and Philip G. Pardey. 2013. "Measuring the Global Occurrence and Probabilistic Consequences of Wheat Stem Rust," HarvestChoice Technical Note. St. Paul, MN: University of Minnesota, HarvestChoice

Berger, G.L., S. Liu, M.D. Hall, W.S. Brooks, S. Chao, G.J. Muehlbauer, B.-K. Baik, and C.A. Griffey. 2013. Marker-trait associations in Virginia Tech winter barley identified using genome-wide mapping. *Theor. Appl. Genet.* 126:693–710.

Bethke, G., Grundman, R., Sreekanta, S., Truman, W. M., Katagiri, F., and Glazebrook, J. "Arabidopsis Pectin Methylesterases Contribute to Immunity Against *Pseudomonas syringae*." *Plant Physiol*, pending revision.

Biever J., D. Brinkman, and G. Gardner (2013) "Absorption of UV-B light by DNA induces photomorphogenic responses in etiolated Arabidopsis seedlings," Poster Presentation #CU5, International Symposium on Plant Photobiology University of Edinburgh, Edinburgh, Scotland, United Kingdom, June 3-6.

Biever J., D. Brinkman, and G. Gardner (2013) "DNA Damage Induces UV-B Photomorphogenic Responses in Etiolated Arabidopsis Seedlings." Abs # P02001, Plant Biology 2013, Annual Meeting of the American Society of Plant Biologists, Providence, Rhode Island. July 20-24, 2013.

Biever JJ, Brinkman D, Gardner G. UV-B inhibition of hypocotyl growth in etiolated Arabidopsis thaliana seedlings is a consequence of cell-cycle arrest initiated by photodimer accumulation. Submitted to *Journal of Experimental Botany*, Special issue on Photobiology, September 2013.

Bolon, Y.-T.E., D.L. Hyten, J.H. Orf, C.P. Vance, and G.J. Muehlbauer. Transcriptional networks regulate oilseed development and reveal complex genetic architecture involved in seed oil accumulation. *The Plant Genome* (In press).

Bonhomme, M., O. André, Y. Badis, J. Ronfort, C. Burgarella, N. Chantret, J-M. Prosperi, R. Briskine, J. Mudge, F. Debéllé, H. Navier, A. Hajri, A. Baranger, P. Tiffin, B. Dumas, M-L. Pilet-Nayel, N. D. Young, C. Jacquet. In press. High-density genome-wide association mapping identifies an F-box protein as the likely major component of *Medicago truncatula* resistance to *Aphanomyces euteiches*. *New Phytologist*

Briscoe Runquist, R.D. & D.A. Moeller. 2013. Resource reallocation does not influence estimates of pollen limitation or reproductive assurance in *Clarkia xantiana* ssp. *parviflora* (Onagraceae). *American Journal of Botany* 100:1916-1921.

Bruns, E., Carson, M., and May, G. 2013. Increased virulence level comes at a cost of delayed reproduction and smaller size in a plant pathogen. Review, revised for *Evolution*.

Brutinel, E.D., A.M. Dean and J.A. Gralnick. 2013. Description of a riboflavin biosynthetic gene variant prevalent in the phylum Proteobacteria. *J Bacteriol.* [Epub ahead of print]

Burch TR, Sadowsky MJ, Lapara TM. 2013. Air-Drying Beds Reduce the Quantities of Antibiotic Resistance Genes and Class 1 Integrons in Residual Municipal Wastewater Solids. *Environ Sci Technol.* PMID: 23909386

Burch, T. R., M. J Sadowsky, and T. M LaPara. 2013. Aerobic digestion reduces the quantity of antibiotic resistance genes in residual municipal wastewater solids. *Front. Antimicrob. Resist. Chemother.* 4:17. doi: 10.3389/fmicb.2013.00017

Burrack, L.S., Applen Clancy, S.E., Chacon, J. M., Gardner, M.K., and J Berman. 2013. Monopolin recruits condensin to organize centromere DNA and repetitive DNA sequences. *Mol. Biol. of the Cell.* mbc.E13-05-0229; 2013;doi:10.1091/mbc.E13-05-0229

C.Y. Li, A.L. Leopold, G.W. Sander, J.V. Shanks, L. Zhao, S.I. Gibson (2013). The ORCA2 transcription factor plays a key role in regulation of the terpenoid indole alkaloid pathway. *BMC Plant Biol*, 13:155.

Cao, Y., L. C. Van De Werfhorst, E. A. Dubinsky, B. D. Badgley, M. J. Sadowsky, G. L. Andersen, J. F. Griffith, and P. A Holden. 2013. Evaluation of Molecular Community Analysis Methods for Discerning Fecal Sources and Human Waste. *Water Res.* doi:p11: S0043-1354(13)00554-X. 10.1016/j.watres.2013.02.061.

Cavanagh CR, Chao S, Wang S, Huang BE, Stephen S, Kiani S, Forrest K, Saintenac C, Brown-Guedira GL, Akhunova A, See D, Bai G, Pumphrey M, Tomar L, Wong D, Kong S, Reynolds M, da Silva ML, Bockelman H, Talbert L, Anderson JA, Dreisigacker S, Baenziger S, Carter A, Korzun V, Morrell PL, Dubcovsky J, Morell MK, Sorrells ME, Hayden MJ, Akhunov E (2013) Genome-wide comparative diversity uncovers multiple targets of selection for improvement in hexaploid wheat landraces and cultivars. *Proc Natl Acad Sci USA* 110: 8057-8062.

Cavanagh, C.R., S.M. Chao, S.C. Wang, B.E. Huang, S. Stephen, S. Kiani, K. Forrest, C. Saintenac, G.L. Brown-Guedira, A. Akhunova, D. See, G.H. Bai, M. Pumphrey, L. Tomar, D.B. Wong, S. Kong, M. Reynolds, M.L. daSilva, H. Bockelman, L. Talbert, J.A. Anderson, S. Dreisigacker, S. Baenziger, A. Carter, V. Korzun,

P.L. Morrell, J. Dubcovsky, M.K. Morell, M.E. Sorrells, M.J. Hayden, and E. Akhunov. 2013. Genome-wide comparative diversity uncovers multiple targets of selection for improvement in hexaploid wheat landraces and cultivars. *Proc. Natl. Acad. Sci.* 110:8057-8062.

Celik, O. F., and D.J. O'Sullivan. (2013) Factors influencing the stability of freeze-dried stress-resilient and stress-sensitive strains of bifidobacteria. *J. Dairy Science* 96:3506-3516.

Chatterjee, A., Cook, L.C., Shu, C.C., Chen, Y., Manias, D., Ramkrishna, D., Dunny, G.M. and Hu, W-S. (2013). Antagonistic self-sensing and mate-sensing signaling controls antibiotic resistance transfer. *Proc. Nat. Acad. Sci. USA.* (doi:10.1073/pnas.1212256110)

Chen C, Retzel, EF (2013). Analyzing the meiotic transcriptome in Arabidopsis. *Methods Mol Biol.* 2013; 990: 203-213.

Cho, S., K. Shi, L.P. Wackett and H. Aihara (2013) Crystalization and preliminary X-ray diffraction studies of cyanuric acid hydrolase from *Azorhizobium caulinodans*. *Acta crystallographica Section F* 69:880-883.

Chun, C. L., U. Ochsner, M. Byappanahalli, R. Whitman, W. Tepp, G. Lin, E. Johnson, J. Peller, and M. J. Sadowsky. 2013. Association of Toxin-Producing *Clostridium botulinum* with the Macroalga *Cladophora* in the Great Lakes. *Environ. Sci. Technol.* 47:2587-2594.

Colak R, Kim T, Michaut M, Sun M, Irimia M, Bellay J, Myers CL, Blencowe BJ, Kim PM. Distinct Types of Disorder in the Human Proteome: Functional Implications for Alternative Splicing. *PLoS Comput Biol.* 2013, 9(4): Sekhon RS, Briskine R, Hirsch CN, Myers CL, Springer NM, Buell CR, de Leon N, Kaepler SM. Maize Gene Atlas Developed by RNA Sequencing and Comparative Evaluation of Transcriptomes Based on RNA Sequencing and e1003030. doi:10.1371/journal.pcbi.1003030

Cook, L.C., Dunny, G.M. 2013. Effects of biofilm growth on plasmid copy number and expression of antibiotic resistance genes in *Enterococcus faecalis*. *Antimicrob Agents Chemother* 2013 Apr;57(4):1850-6. doi: 10.1128/AAC.02010-12. Epub 2013 Feb 4. PubMed PMID: 23380728; PubMed Central PMCID: PMC3623358

Craig NL, Eikbush TH, Voytas DF. Reviewer acknowledgement 2013. *Mob DNA.* 2013 Feb 25;4(1):4. doi: 10.1186/1759-8753-4-4.

Crawford, J.E., Rottschaefler, S.M., Coulibaly, B., Sacko, M., Niare, O., Riehle, M.M., Traore, S.F., Vernick, K.D., and Lazzaro, B.P. (2013). No evidence for positive selection at two potential targets for malaria transmission-blocking vaccines in *Anopheles gambiae* s.s. *Infect Genet Evol* 16C, 87-92.

Curtin SJ, Anderson JE, Starker CG, Baltus NJ, Mani D, Voytas DF, Stupar RM. (2013) Targeted mutagenesis for functional analysis of gene duplication in legumes. *Methods Mol Biol* 1069: 25-42.

D.T. Yin, R. J. Kazlauskas "Revised molecular basis of the promiscuous carboxylic acid perhydrolase activity in serine hydrolases" *Chem. Eur. J.* 2012, 18, 8130-9; more...
<http://dx.doi.org/10.1002/chem.201200052>

Danzeisen, J.L., Calvert, A.J., Noll, S.L., McComb, B., Sherwood, J.S., Logue, C.M., and Johnson, T.J. Increased weight gain in commercial turkeys is associated with early colonization of segmented filamentous organisms, *Candidatus Arthromitus*. Accepted for publication in PeerJ, May 2013.

Davies PR, Alexander BH, Bender JB, Deen J, Dewey CE, Funk JA, Munoz-Zanzi CA, O'Sullivan MG, Singer RS, Sreevatsan S, Stärk KD, Stevenson MA. Livestock density as risk factor for livestock-associated methicillin-resistant *Staphylococcus aureus*, The Netherlands. *Emerg Infect Dis*. 2013;19(9):1551-2. doi: 10.3201/eid1909.130876. PubMed PMID: 23968678; PubMed Central PMCID: PMC3810905.

DeMason DA, Chetty V, Barkawi LS, Liu X, Cohen JD Unifoliata-Afila interactions in pea leaf morphogenesis. *American J Botany* 100:478-495 (2013)

Deshpande R, Asiedu M, Klebig M, Sutor S, Kuzmin E, Nelson J, Piotrowski J, Shin SH, Yoshida M, Costanzo M, Boone C, Wigle DA, Myers CL. A comparative genomic approach for identifying synthetic lethal interactions in human cancer. *Cancer Res* 72:3956-3966. 2012; Published OnlineFirst August 26, 2013; doi:10.1158/0008-5472.CAN-12-3956

Deshpande R, VanderSluis B, Myers CL. Comparison of Profile Similarity Measures for Genetic Interaction Networks. *PLoS ONE* 2013 Jul 10; 8(7):e68664. doi:10.1371/journal.pone.0068664

Dey, Sanjoy, Rohit Gupta, Michael Steinbach, and Vipin Kumar. "Integration of Clinical and Genomic data: a Methodological Survey." (2013).

Dodge, A.G., C.S. Preiner, and L.P. Wackett (2013) Expanding the cyanuric acid hydrolase protein family to the fungal kingdom. *J. Bacteriol.* 195: 5233-5241.

Dominic E Mandy, Joshua E Goldford, Hong Yang, Doug K Allen and Igor GL Libourel: Metabolic Flux Analysis Using 13C Peptide Label Measurements (Plant Journal, accepted)

Doyle EL, Stoddard BL, Voytas DF, Bogdanove AJ. TAL effectors: highly adaptable phyto-bacterial virulence factors and readily engineered DNA-targeting proteins. *Trends Cell Biol.* 2013 May 23. doi:pii: S0962-8924(13)00057-3. 10.1016/j.tcb.2013.04.003.

"Drees, J.J., Augustin, L.B., Mertensotto, M.J., Schottel, J.L., Leonard, A.S., Saltzman, D.A. (2014). Soluble production of a biologically active single-chain antibody against murine PD-L1 in *Escherichia coli*. *Protein Expression and Purification.* 94:60-66.

Available online:

<http://www.ncbi.nlm.nih.gov/pubmed/?term=Soluble+production+of+a+biologically+active+single-chain+antibody+against+murine+PD-L1+in+Escherichia+coli>

Dukowic-Schulze S, Harris A, Li J, Sundararajan A, Mudge J, Retzel EF, Pawlowski WP, Chen C, (2013). Comparative transcriptomics of early meiosis in *Arabidopsis* and maize. *J Genet. Gen.* (in press).

Dunny GM. 2013. Enterococcal Sex Pheromones: Signaling, Social Behavior, and Evolution. *Annu Rev Genet* 2013 Sep 11. [Epub ahead of print] PubMed PMID: 24050179.

E. T. Borer, L. L. Kinkel, G. May, E. W. Seabloom 2013. The world within: quantifying the determinants and outcomes of a plant host's microbiome. *Invited Views in Basic and Applied Ecology*. 14: 533–539.

Ebentiera, D., K.T. Hanleya, Y. Cao, B. D. Badgley, A.B. Boehme, J.. Ervin, K.D. Goodwing, M. Gourmelonh, J.F. Griffith, P.A. Holden, C.A. Keltyi, S. Lozachh, C. McGee, L.A. Peedi, M. Raithc, H. Ryu, M. J. Sadowsky, E. A. Scott, J. Santo Domingo, A. Schriewer, C.D. Sinigalliano, O.C. Shank, L.C. Van De Werfhorst, D. Wang, S. Wuertz, J.A. Jay. 2013. Evaluation of the repeatability and reproducibility of a suite of qPCR-based microbial source tracking methods. *Water Res.* doi:pil: S0043-1354(13)00548-4. 10.1016/j.watres.2013.01.060.

Eberle CA, Anderson NO, Clasen BM, Hegeman AD, Smith AG (2013) PELPIII: the Class III Pistil-Specific Extensin-Like *Nicotiana tabacum* proteins are essential for interspecific incompatibility, *Plant J.* 74(5): 805-814.

Eichmiller, J.J., Hicks, R.E., Sadowsky, M.J. 2013. Distribution of genetic markers of fecal pollution on a freshwater sandy shoreline in proximity to wastewater effluent. *Environ Sci Technol.* 47:3395-402.

Eichten SR, Briskine R, Song J, Li Q, Swanson-Wagner R, Hermanson PJ, Waters AJ, Starr E, West PT, Tiffin P, Myers CL, Vaughn MW, Springer NM. Epigenetic and Genetic Influences on DNA Methylation Variation in Maize Populations. *Plant Cell* August 2013 tpc.113.114793. doi:10.1105/tpc.113.114793

Eichten SR, Vaughn MW, Hermanson PJ, Springer NM. 2013. Variation in DNA methylation patterns is more common among maize inbreds than among tissues. *The Plant Genome* doi: 10.3835/plantgenome2012.06.0009

Estes. AM, DJ Hearn, EC Snell-Rood, M Feindler, K Feeser, T Abede, JC Dunning Hotopp, and AP Moczek. 2013. Vertical transmission of a unique gut microbiome in the dung beetle *Onthophagus taurus* (Coleoptera: Scarabaeinae). *PLoS One*,

Evolution of transmission mode in obligate symbionts. DM Drown, PC Zee, Y Brandvain, MJ Wade. *Evolutionary Ecology Research* 15 (1), 43-59

Fang Z, Eule-Nashoba A, Powers C, Kono TY, Morrell PL, Smith KP (in press) Comparative analyses identify the contributions of exotic donors to disease resistance in a barley experimental population. *G3* 3: 1945-1953.

Fang Z, Gonzales AM, Durbin ML, Meyer KKT, Miller BH, Volz KM, Clegg MT, Morrell PL (2013) Tracing the geographic origin of weedy *Ipomoea purpurea* (common morning glory) in the Southeastern United States. *J Hered* 104: 666-677.

Fang, Z., A. Eule-Nashoba, C. Powers, T. Y. Kono, S. Takuno, P. L. Morrell, and K. P. Smith. 2013. Comparative Analyses Identify the Contributions of Exotic Donors to Disease Resistance in a Barley Experimental Population. *G3* 3:1945-1953.

Fengli Fu; Daniel F. Voytas (2012) Zinc Finger Database (ZiFDB) v2.0: a comprehensive database of C2H2 zinc fingers and engineered zinc finger arrays. *Nucleic Acids Resource*. (2013) 41(D1): D452-D455 doi:10.1093/nar/gks1167

Fenner, K. S. Canonica, L.P. Wackett and M. Elsner (2013) Evaluating pesticide biodegradation in the environment: Blind spots and emerging opportunities. *Science* 341: 752-758.

Ferreira, J., Padilla, R., Urkasemsin, G., Yoon, K., Goeckner, K., Hu, W-S., Ko, C.C. (2013) Titanium-enriched Hydroxyapatite-Gelatin Scaffolds with Osteogenically Differentiated Progenitor Cell Aggregates for Calvaria Bone Regeneration. *Tissue Engineering Part A*. Vol. 19, No. 15-16 (DOI: 10.1089, PMID: 23495972)

Figuerola, M., Alderman, S., Garvin, D.F., and Pfender, W.F. 2013. Infection of *Brachypodium distachyon* by formae speciales of *Puccinia graminis*: early infection events and host-pathogen incompatibility. *PLoS ONE* 8: e56857.

Fisk, S., A. Cuesta-Marcos, L. Cistue, J. Russell, K.P Smith, P. Baenziger, Z. Bedo, A. Corey, T. Filichkin, I. Karsai, R. Waugh, P. Hayes. 2013. FR-H3: A New QTL to Assist in the Development of Fall-Sown Barley with Superior Low Temperature Tolerance. *Theor. Appl. Genet.* 126:335-347.

Foley, S.L., Johnson, T.J., Ricke, S.R., Nayak, R., and Danzeisen, J.L. *Salmonella* Pathogenicity and Host Adaptation in Chicken-associated Serovars. Accepted for publication in *Microbiology and Molecular Biology Reviews*, August 2013.

Frank, K.L., Guiton, P.S., Barnes, A.M., Manias, D.A., Chuang-Smith, O.N., Kohler, P.L., Spaulding, A.R., Hultgren, S.J., Schlievert, P.M., Dunny, G.M. 2013. AhrC and Eep are biofilm infection-associated virulence factors in *Enterococcus faecalis*. *Infect Immun* 2013 May;81(5):1696-708. doi: 10.1128/IAI.01210-12. Epub 2013 Mar 4. PubMed PMID: 23460519; PubMed Central PMCID: PMC3648002.

Fritz KL, Hendrickson JA, Kaese HJ, Rendahl AK, Dynes KM, Lucio MA, Cuomo FM, Brinkmeyer-Langford CL, Skow LC, Valberg SJ, Mickelson JR, Rutherford MS, McCue ME. Genetic risk factors for insidious Equine Recurrent Uveitis in Appaloosa horses. *Animal Genetics* (Accepted for publication).

Gao, L., et al., Insights into organ-specific pathogen defense responses in plants: RNA-seq analysis of potato tuber-*Phytophthora infestans* interactions *BMC Genomics*, 2013. 14: p. 340.

Geiser, D.M., Aoki, T., Bacon, C.W., Baker, S.E., Bhattacharayya, M.B., Brandt, M., Burgess, L.W., Chulze, S., Coleman, J.J., Correll, J.C., Covert, S.F., Crous, P.W., Cuomo, C.A., de Hoog, G.S., Di Pietro, A., Elmer, W.H., Epstein, L., Frandsen, R.J.N., Freeman, S., Gagkaeva, T., Glenn, A.E., Gordon, T.R., Gregory, N.F., Hammond-Kosack, K.E., Hanson, L.E., Jimenez-Gasco, M.D., Kang, S., Kistler, H.C., Kuldau, G.A., Leslie, J.F., Logrieco, A., Lu, G., Lysoe, E., Ma, L., McCormick, S.P., Migheli, Q., Moretti, A., Munaut, F., O'Donnell, K., Pfenning, L.H., Ploetz, R.C., Proctor, R.H., Rehner, S.A., Robert, V.A.R.G., Rooney, A.P., Salleh, B., Scandiani, M.M., Scauflaire, J., Short, D.P.G., Steenkamp, E.T., Suga, H., Summerell, B.A., Sutton, D.A., Thrane, U., Trail, F., van Diepeningen, A., VanEtten, H.D., Viljoen, A., Waalwijk, C., Ward,

T.J., Wingfield, M.J., Xu, J., Yang, X., Yli-Mattila, T., Zhang, N., 2013. Letter to the editor: One fungus, one name: Defining the genus *Fusarium* in a scientifically robust way that preserves longstanding use. *Phytopathology* 103:400-408.

Genomic identification of founding haplotypes reveals the history of the selfing species *Capsella rubella*. Brandvain Y, Slotte T, Hazzouri KM, Wright SI, Coop G. *PLoS Genet*. 2013 Sep;9(9):e1003754. doi: 10.1371/journal.pgen.1003754. Epub 2013 Sep 12.

Gerami-Nejad, M., Zacchi, L.F., McClellan, M., Matter, K. and J. Berman, Shuttle vectors for facile gap repair cloning and integration into a neutral locus in *Candida albicans* *Microbiology* (2013), 159, 565–579.

Giraud, E., L. Xu, C. Chaintreuil, D. Gargani, D. Gully, and Michael J. Sadowsky. 2013. Photosynthetic *Bradyrhizobium* sp. strain ORS285 is Capable of Forming Nitrogen-Fixing Root Nodules on Soybeans (*Glycine max*). *Appl. Environ. Microbiol.* In Press. PMID: 23354704

Gneme, A., Guelbeogo, W.M., Riehle, M.M., Sanou, A., Traore, A., Zongo, S., Eiglmeier, K., Kabre, G.B., Sagnon, N.F., and Vernick, K.D. (2013). Equivalent susceptibility of *Anopheles gambiae* M and S molecular forms and *Anopheles arabiensis* to *Plasmodium falciparum* infection in Burkina Faso. *Malaria journal* 12, 204.

Gneme, A., Guelbeogo, W.M., Riehle, M.M., Tiono, A.B., Diarra, A., Kabre, G.B., Sagnon, N., and Vernick, K.D. (2013). *Plasmodium* species occurrence, temporal distribution and interaction in a child-aged population in rural Burkina Faso. *Malaria journal* 12, 67.

Gould, B., D. A. Moeller, V. M. Eckhart, P. Tiffin, E. Fabio and M. A. Geber. In press. Range-wide adaptive trait differentiation in *Clarkia xantiana* ssp. *xantiana* inferred from quantitative and population genetic analyses. *Journal of Ecology*

Graff, Gregory D.; Devon Phillips; Zhen Lei; Sooyoung Oh; Carol Nottenburg and Philip G. Pardey. 2013. "Patents: Not Quite a Myriad of Gene Patents." *Nature Biotechnology*, 31(5), 404-10.

Gutierrez-Gonzalez, J. J., Tu, Z.J., and Garvin, D.F. 2013. Analysis and annotation of the oat seed transcriptome. *BMC Genomics* 14: 471.

Gutierrez-Gonzalez, J. J., Wise, M.L., and Garvin, D.F. 2013. A developmental profile of tocol accumulation in oat seeds. *Journal of Cereal Sci.* 57: 79-83.

Hamilton, M.J., A.R. Weingarden, T. Unno, A. Khoruts, and M. J. Sadowsky. 2013. High Throughput DNA Sequence Analysis Reveals Stable Engraftment of Gut Microbiota Following Transplantation of Previously Frozen Fecal Bacteria. *Gut Microbes.* 4:125-135

Hansen TJ, Hondzo M, Mashek MT, Mashek DG, Lefebvre PA. Algal swimming velocities signal fatty acid accumulation. *Biotechnol Bioeng.* 2013 Jan;110(1):143-52. doi: 10.1002/bit.24619. Epub 2012 Aug 10. PubMed PMID: 22833390.

Hermann, Mario, Pelczar, P, Voytas, D, Cermak T. Mouse Genome Engineering using Designer Nucleases. JoVE (Journal of Visualized Experiments). August, 2013. JoVE50930R2

Hickman, M.A, Zeng, G, Forche, A., Hirakawa, M.P., Abbey, D., Harrison, B.D., Wang, Y-M. Su, C-h., Bennett, R.J., Wang, Y and J Berman, 2012. The 'obligate diploid' *Candida albicans* forms mating-competent haploids. *Nature*, 494, 55–59. (Highlighted in News and Views, *Nature* 494: 45-46; and in F1000 Prime.)

Hong Yang, Dominic E. Mandy, and Igor G.L. Libourel: Optimal Design of Isotope Labeling Experiments (Ganesh Sriram (ed.), *Plant Metabolism: Methods and Protocols*, *Methods in Molecular Biology*, vol. 1083) (Book Chapter)

Hou, Z, Fink, R.C., Radtke, C., Sadowsky, M.J., and Diez-Gonzalez F. 2013. Incidence of naturally internalized bacteria in lettuce leaves. *Int J Food Microbiol.* 162:260-265.

Hou, Z., Fink, R.C., Sugawara, M., Diez-Gonzalez, F., and Sadowsky, M. J. 2013. Transcriptional and functional responses of *Escherichia coli* O157:H7 growing in the lettuce rhizosphere. *Food Microbiol.* 35:136-142.

Huang, Y., B. Millet, K. Beaubien, S. Dahl, B. Steffenson, K. Smith, G. Muehlbauer. 2013. Haplotype diversity and population structure in cultivated and wild barley evaluated for *Fusarium* head blight responses. *Theor. Appl. Genet.* 126:619-36.

Hurley, Terrance M.; Philip G. Pardey and Xudong Rao. 2013. "Returns to Food and Agricultural R&D Investments Worldwide, 1958-2011," InStePP Brief. St. Paul, MN: University of Minnesota, International Science & Technology Practice Policy center.

Igarashi D, Bethke G, Xu Y, Tsuda K, Glazebrook J, and Katagiri, F. Pattern-Triggered Immunity Suppresses Programmed Cell Death Triggered by Fumonisin B1. *PLoS ONE* 8(4): e60769. doi:10.1371/journal.pone.0060769. (2013)

Ivancic MM, Huttlin EL, Chen X, Pleiman JK, Irving AA, Hegeman AD, Dove WF and Sussman MR (2013) Candidate Serum Biomarkers for Early Intestinal Cancer Using ¹⁵N Metabolic Labeling and Quantitative Proteomics in the *ApcMin/+* Mouse, *J. Prot. Res.*, accepted.

James H. Faghmous, Muhammed Uluyol, Luke Styles, Matthew Le, Varun Mithal, Shyam Boriah, Vipin Kumar: Multiple Hypothesis Object Tracking For Unsupervised Self-Learning: An Ocean Eddy Tracking Application. *AAAI* 2013

Jang, J., Suh, Y.-S., Di, D.Y.W., Unno, T., Sadowsky, M. J., and Hur, H.-Gil. 2013. Pathogenic *Escherichia coli* strains producing extended-spectrum β -lactamases in the Yeongsan River basin of South Korea. *Environ. Sci. Tech.* 47:1128-36. doi: 10.1021/es303577

Jaya Kawale, Stefan Liess, Arjun Kumar, Michael Steinbach, Peter K. Snyder, Vipin Kumar, Auroop R. Ganguly, Nagiza F. Samatova, Fredrick H. M. Semazzi: A graph-based approach to find teleconnections in climate data. *Statistical Analysis and Data Mining* 6(3): 158-179 (2013)

Jiang S, Park S, Yoon Y, Lee JH, Wu WM, Phuoc Dan N, Sadowsky MJ, Hur HG. 2013. Methanogenesis Facilitated by Geobiochemical Iron Cycle in a Novel Syntrophic Methanogenic Microbial Community. *Environ Sci Technol*. PMID: 23919295

Johnson, K.C., Yongky, A., Vishwanathan, N., Jacob, N.M., Jayapal, K.P., Goudar, C.T., Karypis, G., Hu, W-S. Exploring the transcriptome space of a recombinant BHK cell line through next generation sequencing. *J. Biotechnol.* (in press)

Johnson, T.J., Abrahante, J.E., Hunter, S.S., Hauglund, M., Tatum, F.M., Maheswaran, S.K., and Briggs, R.E. Comparative genome analysis of an avirulent and two virulent strains of avian *Pasteurella multocida* reveals candidate genes involved in fitness and pathogenicity. *BMC Microbiology* 13:106.

Jonkers, W., Xayamongkhon, H., Haas, M., Olivain, C., van der Does, H.C., Broz, K., Rep, M., Alabouvette, C., Steinberg, C. and Kistler, H.C. 2013. EBR1 genomic expansion and its role in virulence of *Fusarium* species. *Environmental Microbiology* (In press).

Joshi D, Harris NB, Waters R, Thacker T, Mathema B, Krieswirth B, Sreevatsan S. Single nucleotide polymorphisms in the *Mycobacterium bovis* genome resolve phylogenetic relationships. *J Clin Microbiol*. 2012 Dec;50(12):3853-61. doi: 10.1128/JCM.01499-12. Epub 2012 Sep 19. PubMed PMID: 22993186; PubMed Central PMCID: PMC3502966.

K.Y. Choi, E. O. Jung, D.-H. Jung, B. Pandey, H. Yun, H. Park, B. G. Kim, Romas J. Kazlauskas "Cloning, expression and characterization of CYP102D1, a self-sufficient P450 monooxygenases from *Streptomyces avermitilis*" *FEBS J.* 2012, 279, 1650-1662; more... <http://dx.doi.org/10.1111/j.1742-4658.2011.08462.x>.

Kane, A. L., Bond, D. R. and J. A. Gralnick. 2013. Electrochemical analysis of *Shewanella oneidensis* engineered to bind gold electrodes. *ACS Synthetic Biology* 2013 2:2;93-101

Kang, X., Li, W., Zhou, Y., and Ni, M. (2013). A WRKY transcription factor recruits SYG1-like protein SHB1 to activate gene expression and seed cavity enlargement. *PLoS Genetics*. 9(3): e1003347.

Kantar, MB, Betts, K, Michno, JM, Luby, JJ, Morrell, PL, Hulke, BS, Stupar, RM, Wyse, DL 2013. Evaluating an interspecific *Helianthus annuus* × *Helianthus tuberosus* population for use in a perennial sunflower breeding program. *Field Crops Res.*(in press)

Kawale, Jaya, Stefan Liess, Arjun Kumar, Michael Steinbach, Peter Snyder, Vipin Kumar, Auroop R. Ganguly, Nagiza F. Samatova, and Fred Semazzi. "A Graph-Based Approach to Find Teleconnections in Climate Data." *Statistical Analysis and Data Mining* (2013).

"Kevin M. Dorn, Johnathon D. Fankhauser, Donald L. Wyse and M. David Marks. (2013) De novo assembly of the pennycress (*Thlaspi ravens*) transcriptome provides tools for the development of a winter cover crop and biodiesel feedstock. *Plant Journal* 75:1028-1038."

Kim, Y., Tsuda, K., Igarashi, D., Hillmer, R. A., Sakakibara, H., Myers, C. L, and Katagiri, F. "Signaling mechanisms underlying the robustness and tunability of the plant immune network" *Cell Host Microbe*, in press.

Kim, Y.C., Jähren, N., Stone, M.D., Udeshi, N.D., Markowski, T.W., Witthuhn, B.A., Shabanowitz, J., Hunt, D.F., and Olszewski, N.E. (2013). Identification and origin of N-linked beta-D-N-acetylglucosamine monosaccharide modifications on *Arabidopsis* proteins. *Plant Physiol.* 161, 455-464.

Kistler, H.C., Rep, M. and Ma, L.-J. 2013. Structural dynamics of *Fusarium* genomes In: *Fusarium: genomics, molecular and cellular biology*. Eds. Brown, D.W. and Proctor, R.H., Caister Academic Press, Norwich, United Kingdom.

Knights D, Lassen K, Xavier R. Advances in inflammatory bowel disease pathogenesis: linking host genetics and the microbiome. *Gut* 62.10 (2013): 1505-15.

Kono TY, Seth K, Poland JA, Morrell PL (in press) SNPMeta: SNP annotation and SNP metadata collection without a reference genome. *Mol Ecol Resour*

Koren O*, Knights D*, Gonzalez A, Waldron L, Segata N, Knight R, Huttenhower C, Ley RE. A Guide to Enterotypes across the Human Body: Meta-Analysis of Microbial Community Structures in Human Microbiome Datasets. *PLoS Computational Biology* 9, e1002863 (2013).

Kotloski, N.J. and J.A. Gralnick. 2013. Flavin electron shuttles dominate extracellular electron transfer by *Shewanella oneidensis*. *mBio*. 4(1) e00553-12.

Kumar SC, Ramesh N, Sreevatsan S, Joseph B, Alle P, Belani KG, Osterholm MT. Knowledge, attitudes, and poultry-handling practices of poultry workers in relation to avian influenza in India. *Indian J Occup Environ Med.* 2013 Jan;17(1):16-21. doi: 10.4103/0019-5278.116368. PubMed PMID: 24082643; PubMed Central PMCID: PMC3777283.

Lamont EA, Xu WW, Sreevatsan S. Host-*Mycobacterium avium* subsp. *paratuberculosis* interactome reveals a novel iron assimilation mechanism linked to nitric oxide stress during early infection. *BMC Genomics.* 2013 Oct 10;14(1):694. [Epub ahead of print] PubMed PMID: 24112552.

Langille MGI, Zaneveld J, Caporaso JG, McDonald D, Knights D, Reyes JA, Clemente JC, Burkepile DE, Thurber RLV, Knight R, Beiko RG, Huttenhower C. Predictive functional profiling of microbial communities using 16S rRNA marker gene sequences. *Nature Biotechnology* 31 (9), 814-821.

Lau, J.A., R.G. Shaw, P. B. Reich, and P. Tiffin. 2013. Indirect effects drive evolutionary responses to global change. *New Phytologist* in press

Le, H., Vishwanathan, N., Kantardjieff, A., Doo, I., Srienc, M., Zheng, X., Somia, N. and Hu, W-S. Engineering gene expression dynamics in mammalian cells in culture. *Metabolic Eng.* (in press)

Lenneman, EM, Ohlert, JM, Palani, NP, Barney, BM, Fatty Alcohols for Wax Esters in *Marinobacter aquaeolei* VT8: Two Optional Routes in the Wax Ester Biosynthesis Pathway. *Applied and Environmental Microbiology* (2013), 79, pages 7055-7062. (Corresponding author)

Levar, C. E., Rollefson, J. B., and D. R. Bond. 2013. Energetic and molecular constraints on the mechanism of environmental Fe(III) reduction by *Geobacter*. In: *Microbial Metal Respiration*. J. Gescher and A. Kappler, (Eds). Springer-Verlag

Li L, Petsch K, Shimizu R, Liu S, Xu W, Ying K, Schnable PS, Yu J, Timmermans MCP, Scanlon MJ, Springer NM, Muehlbauer GJ. 2013. Mendelian and non-Mendelian regulation of gene expression in maize. *PLoS Genetics* 9(1): e1003202

Li W, Zhou Y, Liu X, Yu P, Cohen JD, Meyerowitz EM Flower development master regulator LEAFY controls auxin response pathways in floral primordia formation. *Science Signaling* 6: ra23 (2013) [DOI: 10.1126/scisignal.2003937]

Locatelli, A., A. Cuesta-Marcos, L. Gutiérrez, P. M. Hayes, K.P. Smith, A. Castro. 2013. Genome-wide association mapping of agronomic traits in relevant barley germplasm in Uruguay. *Mol. Breeding* 31:631-654.

Lu, Y., C.A. Ishimaru, and J. Glazebrook. 2013 CHP-7, a putative serine protease effector from *Clavibacter michiganensis* subsp. *sepedonicus*, acts in the tobacco leaf apoplast. *Phytopathology* 103(Suppl. 2):S2.87

Lykkjen, S, Dolvik, NI, McCue, ME, Rendahl, AK, Mickelson, JR, Roed, KH. Genome-wide association analysis of osteochondrosis of the metacarpophalangeal joint in Norwegian Standardbred trotters. *Animal Genetics*. (in press)

M. Held, M.B. Quin and C. Schmidt-Dannert (2013) Eu bacterial microcompartments: insights into their function, structure, and bioengineering applications. *J. Mol. Microbiol. Biotechnol.* 23:308-20.

M.B. Quin, C. Flynn, S. Choudhary, G.T. Wawrzyn and C. Schmidt-Dannert (2013) Mushroom hunting using bioinformatics: Application of a predictive framework facilitates the selective identification of sesquiterpene synthases in Basidiomycota. *ChemBiochem*, PMID: 24166732 Epub-ahead of press.

M.B. Quin, G.T. Wawrzyn and C. Schmidt-Dannert (2013) Purification, crystallization and preliminary X-ray diffraction analysis of Omp6, a protoilludene synthase from *Omphalotus olearius* 69:574-7.

Makarevitch I, Eichten SR, Briskine R, Waters AJ, Danilevskaya ON, Meeley RB, Myers CL, Vaughn MW, Springer NM. Genomic Distribution of Maize Facultative Heterochromatin Marked by Trimethylation of H3K27. *The Plant Cell*. 2013;25(3):780-793. doi:10.1105/tpc.112.106427

Maneesh Bhargava, Sanjoy Dey, Trisha Becker, Michael Steinbach, Baolin Wu, Sang Mee Lee, LeeAnn Higgins, Vipin Kumar, Peter B. Bitterman, David H. Ingbar, Christine H. Protein expression profile of rat

type two alveolar epithelial cells during hyperoxic stress and recovery. *Wendt American Journal of Physiology - Lung Cellular and Molecular Physiology* Nov 2013,305(9)L604-L614; DOI: 10.1152/ajplung.00079.2013

Manichanh C, Eck A, Varela E, Roca J, Clemente JC, González A, Knights D, Knight R, Estrella S, Hernandez C, Guyonnet D, Accarino A, Santos J, Magdalena JR, Guarner F, Azpiroz, F. Anal gas evacuation and colonic microbiota in patients with flatulence: effect of diet. *Gut* (2013).

Marks, M.D (0000) *Arabidopsis* trichome morphogenesis and the role of microtubules in controlling trichome branch formation. In: *Plant Cell Wall Patterning and Cell Shape*. Editor: Hiro Fukuda. - invited review (submitted)

Martinson K, Coleman B, Rendahl AK, McCue, ME. Estimation of body weight and development of a body weight score for adult equines using morphometric measurements. *Journal of Animal Science* (in review).

Mascher M, Richmond TA, Gerhardt DJ, Himmelbach A, Clissold L, Sampath D, Ayling S, Steuernagel B, Pfeifer M, D'Ascenzo M, Akhunov ED, Hedley P, Gonzales AM, Morrell PL, Kilian B, Blattner FR, Scholz U, Mayer KFX, Flavell AJ, Muehlbauer GJ, Waugh R, Jeddelloh JA, Stein N (2013) Barley whole exome capture: a new tool for genomic research in the genus *Hordeum* and beyond. *The Plant Journal* 76: 494-505.

Mascher, M.*, G.J. Muehlbauer*, D.S. Rokhsar, J. Chapman, J. Schmutz, K. Barry, M. Muñoz-Amatriaín, T.J. Close, R.P. Wise, A.H. Schulman, A. Himmelbach, K.F.X. Mayer, U. Scholz, J.A. Poland, N. Stein and R. Waugh. Anchoring and ordering NGS contig assemblies by population sequencing (POPSEQ). *The Plant Journal* 76:718–727. *Indicates co-first authors.

Mascher, M., T.A. Richmond, D.J. Gerhardt, A. Himmelbach, L. Clissold, D. Sampath, S. Ayling, B. Steuernagel, M. Pfeifer, M. D'Ascenzo, P. Hedley, A.M Gonzales, P.L. Morrell, B. Kilian, F. Blattner, U. Scholz, K.F.X. Mayer, A.J. Flavell, G.J. Muehlbauer, R. Waugh, J.A. Jeddelloh and N. Stein. 2013. Barley whole exome capture: a new tool for genomic research in the genus *Hordeum* and beyond. *The Plant Journal* 76:494-505.

May, G. and Nelson, P. 2013. Defensive mutualisms: do microbial interactions within hosts drive the evolution of defensive traits? *Functional Ecology*: doi:10.1111/1365-2435.12166

Mazhar S, Cohen JD, Hasnain S Auxin producing non-heterocystous Cyanobacteria and their impact on the growth and endogenous auxin homeostasis of wheat. *Journal of Basic Microbiology* (in press, 2013) DOI: 10.1002/jobm.201100563.

McCouch, S., et al., Feeding the future. *Nature*, 2013. 499: p. 23-24.

McCoy AM, McCue ME. Validation of imputation between equine genotyping arrays. *Animal Genetics* (in press).

McCoy AM, Peterson JL, Morrell PL, Slamka MA, Mickelson JR, Valberg SJ, McCue ME (in press) Evidence of positive selection for a glycogen synthase (GYS1) mutation in domestic horse populations. *J Hered*

McCoy AM, Ralston SL, McCue ME. Short- and Long-Term Racing Performance in of Standardbred Pacers and Trotters Undergoing After Early Surgical Intervention for Tarsal Osteochondrosis. *Equine Veterinary Journal* (in revision).

McCoy AM, Schaefer R, Petersen JL, Slamka MA, Morrell PL, Mickelson JR, Valberg SJ, McCue ME. Evidence of Positive Selection for the GYS1 mutation in Equine Polysaccharide Storage Myopathy. *Journal of Heredity* published online November 9, 2013; doi: 10.1093/jhered/est075.

"McDowell SC, Akmakjian G, Sladek C, Mendoza-Cozatl D, Morrissey JB, Saini N, Mittler R, Baxter I, Salt DE, Ward JM, Schroeder JI, Guerinot ML, Harper JF. (2013) Elemental concentrations in the seed of mutants and natural variants of

Arabidopsis thaliana grown under varying soil conditions. *PLoS One*. 2013 8(5):e63014."

Menary, Kyle, Paul F. Collins, James N. Porter, Ryan Muetzel, Elizabeth A. Olson, Vipin Kumar, Michael Steinbach, Kelvin O. Lim, and Monica Luciana. "Associations between cortical thickness and general intelligence in children, adolescents and young adults." *Intelligence* 41, no. 5 (2013): 597-606.

Menke, J., Weber, J., Broz, K. and Kistler, H.C. 2013. Cellular development associated with induced mycotoxin synthesis in the filamentous fungus *Fusarium graminearum*. *PLoS ONE* 8(5): e63077.

Mergoum, M., R.C. Froberg, R.W. Stack, S. Simsek, T.B. Adhikari, J.W. Rasmussen, M.S. Alamri, T.L. Friesen, and J. Anderson. 2013. 'Prosper': a high-yielding hard red spring wheat cultivar adapted to the north central plains of the USA. *J. Plant Registrations* 7:75-80.

Metcalf J, Parfrey LW, Gonzalez A, Lauber C, Knights D, Ackermann G, Humphrey G, Gebert M, Van Treuren W, Berg-Lyons D, Keepers K, Fierer N, Carter D, Knight R. A microbial clock provides an accurate estimate of the postmortem interval in a mouse model system. *eLife* 2 (2013).

Mollov, D., Lockhart, B., Zlesak, D.C., and Olszewski, N. (2013). Complete nucleotide sequence of rose yellow vein virus, a member of the family Caulimoviridae having a novel genome organization. *Arch Virol* 158, 877-880.

Morrell PL, Gonzales AM, Meyer KKT, Clegg MT (in press) Resequencing data indicate a modest effect of domestication on diversity in barley: a cultigen with multiple origins. *J Hered*

Mossey, P. and Das, A. (2013) Expression of *Agrobacterium tumefaciens* octopine Ti-plasmid virB8 gene is regulated by translational coupling. *Plasmid* 69: 72-80 (Epub: September 16, 2012 <http://dx.doi.org/10.1016/j.plasmid.2012.09.002>).

Muñoz-Amatriaín M, Eichten SR, Wicker T, Richmond TA, Mascher M, Steuernagel B, Scholz U, Ariyadasa R, Spannagl M, Nussbaumer T, Mayer KF, Taudien S, Platzer M, Jeddloh JA, Springer NM, Muehlbauer

GJ, Stein N. 2013. Distribution, functional impact, and origin mechanisms of copy number variation in the barley genome. *Genome Biol.* 14(6):R65.

Mutlu, B.R., S. Yeom, H.-W. Tong, L.P. Wackett and A. Aksan (2013) Silicon-alkoxide cross-linked nanoparticle gels for encapsulation of bacterial biocatalysts. *J. Mater. Chem. A* 1: 11051-11060.

Nallu, S., Silverstein, K. A. T., Samac, D. A., Bucciarelli, B., Vance, C. P., and VandenBosch, K. A. 2013. Regulatory patterns of a large family of defensin-like genes expressed in nodules of *Medicago truncatula*. *PLoS ONE* 8(4):e60355.

Navara, S. and K.P. Smith. 2013. Validating Disease Resistance QTL Detected by Association Mapping Using Near-isogenic Lines in Barley. *Theor. Appl. Genet.* (in press)

Nelson DR, Mengistu S, Ranum P, Celio G, Mashek M, Mashek D, Lefebvre PA. New lipid-producing, cold-tolerant yellow-green alga isolated from the Rocky Mountains of Colorado. *Biotechnol Prog.* 2013 Jul-Aug;29(4):853-61. doi: 10.1002/btpr.1755. Epub 2013 Jun 11. PubMed PMID: 23754623.

Nguyen HD, Becker J, Thu YM, Costanzo M, Koch EN, Smith S, Myung K, Myers CL, Boone C, Bielinsky AK. Unligated Okazaki Fragments Induce PCNA Ubiquitination and a Requirement for Rad59-Dependent Replication Fork Progression. *PLoS ONE* 2013 Jun 18;8(6):e66379. doi:10.1371/journal.pone.0066379

O'Rourke JA, Iniguez LP, Bucciarelli B, Roessler J, Schmutz J, McClean PE, Jackson SA, Hernandez G, Graham MA, Stupar RM, Vance CP (2013) A re-sequencing based assessment of genomic heterogeneity and fast neutron-induced deletions in a common bean cultivar. *Front. Plant Sci.* 4: 210.

O'Sullivan, D. J. and P. Halami. (2013) 'Genomics of Probiotics and Prebiotics'. In: Otles, S. (ed), *Probiotics and Prebiotics in Food, Nutrition and Health*, CRC Press, Taylor & Francis Group, Boca Raton, FL pp. 440-457.

Oliver RE, Tinker NA, Lazo GR, Chao S, Jellen EN, Carson ML, Rines HW, Obert DE, Lutz JD, Shackelford I, Korol AB, Wight CP, Gardner KM, Hattori J, Beattie AD, Bjørnstad Å, Bonman JM, Jannink JL, Sorrells ME, Brown-Guedira GL, Mitchell Fetch JW, Harrison SA, Howarth CJ, Ibrahim A, Kolb FL, McMullen MS, Murphy JP, Ohm HW, Rossnagel BG, Yan W, Miclaus KJ, Hiller J, Maughan PJ, Redman Hulse RR, Anderson JM, Islamovic E, Jackson EW. SNP discovery and chromosome anchoring provide the first physically-anchored hexaploid oat map and reveal synteny with model species. *PLoS One.* 2013;8(3):e58068. doi: 10.1371/journal.pone.0058068. Epub 2013 Mar 22.

Olson, M.S., N. Levsen, R. Soolanayakanahally, R. Guy, W. Schroeder, S. Keller, and P. Tiffin. 2013. The adaptive potential of the dominant boreal forest tree *Populus balsamifera* L. to phenology requirements in a warmer global climate. *Molecular Ecology* 22:1214-1230. DOI:10.1111/mec.12067

Osborn MJ, Starker CG, McElroy AN, Webber BR, Riddle MJ, Xia L, Defeo AP, Gabriel R, Schmidt M, Von Kalle C, Carlson DF, Maeder ML, Joung JK, Wagner JE, Voytas DF, Blazar BR, Tolar J. (2013) TALEN-based Gene Correction for Epidermolysis Bullosa. *Mol Ther.* doi:10.1038/mt.2013.56. [Epub ahead of print]

Paape T, Bataillon T, Zhou P, Kono T, Briskine R, Young ND, Tiffin P (2013) Selection, genome wide fitness effects, and evolutionary rates in the model legume *Medicago truncatula*. *Molecular Ecology* 22(13): 3525-3538. doi: 10.1111/mec.12329.

Pardey, Philip G. and Jason M. Beddow. 2013. "Agricultural Innovation: The United States in a Changing Global Reality," Chicago, IL: The Chicago Council on Global Affairs, Global Agricultural Development Initiative.

Pardey, Philip G.; Bonwoo Koo; Jennifer Drew; Jeffrey Horwich and Carol Nottenburg. 2013. "Patents: The Evolving Landscape of IP Rights of Plant Varietal Rights in the United States, 1930-2008." *Nature Biotechnology*, 31(1), 25-29.

Pardey, Philip G.; Connie Chan-Kang; Steven Dehmer; Jason M. Beddow; Terrance M. Hurley; Xudong Rao and Julian Alston. 2013. "Investments in and the Economic Returns to Food and Agricultural R&D Worldwide," N. K. van Alfen, forthcoming *Encyclopedia of Agriculture and Food Systems*. Elsevier.

Pardey, Philip G.; Jason M. Beddow; Darren J. Kriticos; Terrance M. Hurley; Robert F. Park; Etienne Duveiller; Robert W. Sutherst; Jeremy J. Burdon and Dave Hodson. 2013. "Agriculture: Right-Sizing Stem-Rust Research." *Science*, 340(6129), 147-48.

Pardey, Philip G.; Julian M. Alston and Connie Chan-Kang. 2013. "Public Agricultural R&D over the Past Half Century: An Emerging New World Order." *Agricultural Economics*, Early view.

Pardey, Philip G.; Julian M. Alston and Connie Chan-Kang. 2013. "Public Food and Agricultural Research in the United States: The Rise and Decline of Public Investments, and Policies for Renewal," AGree background report. Washington, DC: AGree, 46.

Pardey, Philip G.; Julian M. Alston and Connie Chan-Kang. 2013. "What Can Be Done to Reinvigorate U.S. Agricultural Research?" *Giannini Foundation of Agricultural Economics Update*, 16(6), 9-12.

Pardey, Philip G.; Julian M. Alston and Connie Chan-Kang. 2013. "What Can Be Done to Reinvigorate U.S. Agricultural Research?," *InStePP Brief*. St. Paul, MN: University of Minnesota, International Science & Technology Practice Policy center.

Pardey, Philip G.; Julian M. Alston and Connie Chan-Kang. 2013. "What Can Be Done to Reinvigorate U.S. Agricultural Research?," *OreCal Issues Brief*. Corvallis, Oregon & Davis, California: Oregon State University, Center for Agricultural and Environmental Policy University of California Agricultural Issues Center.

Pena, Pedro V.; Glasker, Steven; Srienc, Friedrich (Mar 10, 2013) Genome-wide overexpression screen for sodium acetate resistance in *Saccharomyces cerevisiae*. *JOURNAL OF BIOTECHNOLOGY*:164:1 Pg: 26-33. DOI: 10.1016/j.jbiotec.2012.12.005

Perez, J.D., Udeshi, N.D., Shabanowitz, J., Ciordia, S., Juarez, S., Scott, C.L., Olszewski, N.E., Hunt, D.F., and Garcia, J.A. (2013). O-GlcNAc modification of the coat protein of the potyvirus Plum pox virus enhances viral infection. *Virology* 442: 122-131.

Petersen JL, Cleary K, Mickelson JR, McCue ME. Evidence for Subpopulation Structure and Population Differentiation in the American Quarter Horse. *Journal of Heredity* (accepted for publication).

Petersen, JL, Mickelson, JR, Cothran, EG, AK, Andersson, LS, Axelsson, J, Bailey, E, Bannasch, D, Binns, MM, Borges, AS, Brama, P, de Câmara Machado, A, Distl, O, Felicetti, M, Fox-Clipsham, L, Graves, KT, Guérin, G, Haase, B, Hasegawa, T, Hemmann, K, Hill, EW, Leeb, T, Lindgren, G, Lohi, H, Lopes, MS, McGivney, BA, Mikko, S, Orr, N, Penedo, MCT, Piercy, RJ, Raekallio, M, Rieder, S, Røed, KH, Silvestrelli, M, Swinburne, J, Tozaki, T, Vaudin, M, Wade, CM, McCue, ME. Genetic diversity in the modern horse illustrated from genome-wide SNP data. *PLoS One* 8(1): e54997. doi:10.1371/journal.pone.0054997.

Petersen, JL, Mickelson, JR, Rendahl, AK, Valberg, SJ, Andersson, LS, Axelsson, J, Bailey, E, Bannasch, D, Binns, MM, Borges, AS, Brama, P, de Câmara Machado, A, Capomaccio, S, Cappelli, K, Cothran, EG, Distl, O, Fox-Clipsham, L, Graves, KT, Guérin, G, Haase, B, Hasegawa, T, Hemmann, K, Hill, EW, Leeb, T, Lindgren, G, Lohi, H, Lopes, MS, McGivney, BA, Mikko, S, Orr, N, Penedo, MCT, Piercy, RJ, Raekallio, M, Rieder, S, Røed, KH, Swinburne, J, Tozaki, T, Vaudin, M, Wade, CM, McCue, ME. Genome-wide analysis reveals selection for important traits in domestic horse breeds. *PLoS Genetics* 9(1): e1003211, doi:10.1371/journal.pgen.1003211.

"Phillips, R.L. 2013. Borlaug Memoir, National Academy Press (on-line).

"

Phillips, R.L. 2013. Norman Ernest Borlaug. In: *Biographical Memoirs of Fellows of the Royal Society*. Vol. 59, pp. 59-72, Royal Society Press, London (also on-line)

R. J. Kazlauskas "Biology evolves to fight chemistry" *Chem. Biol.* 2012, 19, 435-437; more... <http://dx.doi.org/10.1016/j.chembiol.2012.04.004>.

R. J. Kazlauskas, U. T. Bornscheuer "Enzyme catalytic promiscuity: expanding the catalytic action of enzymes to new reactions" in *Comprehensive Chirality*, H. Yamamoto, E. Carreira, Eds. 2012, vol. 7, 465-480; more... <http://dx.doi.org/10.1016/B978-0-08-095167-6.00729-1>

Raju, R., Chau, D., C. Verfaillie, Hu, W-S. The road to regenerative liver therapies: the triumphs, trials and tribulations. *Biotechnol. Adv.* (in press)

Raju, R., Sharma, S. and Hu, W-S. Stem cell culture processes. In: "Stem cell in regenerative medicine - science, regulation, and business strategies". Eds. Alain A. Vertes, Nasib Qureshi, Arnold I. Caplan, Lee Babiss., Wiley (Accepted).

Raju, R., Verfaillie, C.M., Hu, W-S. (2013) Cell based liver support systems: status and prospect. *Curr. Opin. Chem. Eng.*, 2: 26-31. <http://dx.doi.org/10.1016/j.coche.2013.01.004>

Ran, Q., B. D. Badgley, N. Dillon, G. M. Dunny, and M. J. Sadowsky. 2013. Occurrence, Genetic Diversity, and Persistence of Enterococci in a Lake Superior Watershed. *Appl. Environ. Microbiol.* 79:3067-3075.

Reece-Hoyes JS, Pons C, Diallo A, Mori A, Shrestha S, Kadreppa S, Nelson J, Diprima S, Dricot A, Lajoie BR, Ribeiro PS, Weirauch MT, Hill DE, Hughes TR, Myers CL, Walhout AJ. Extensive Rewiring and Complex Evolutionary Dynamics in a *C. elegans* Multiparameter Transcription Factor Network. *Mol Cell.* 2013, 51:116. doi:10.1016/j.molcel.2013.05.018

Richard A. Williams, Richard B. Greaves, Mark Read, Jon Timmis, Paul S. Andrews, Vipin Kumar: In silico investigation into dendritic cell regulation of CD8Treg mediated killing of Th1 cells in murine experimental autoimmune encephalomyelitis. *BMC Bioinformatics* 14(S-6): S9 (2013)

Richard B. Greaves, Mark Read, Jon Timmis, Paul S. Andrews, James A. Butler, Björn-Ole Gerckens, Vipin Kumar: In silico investigation of novel biological pathways: The role of CD200 in regulation of T cell priming in experimental autoimmune encephalomyelitis. *Biosystems* 112(2): 107-121 (2013)

Rodrigues, A.F., Formas-Liveira, A.S., Bandeira, V., Alves, P.M., Hu, W-S. and Coroadinha, A.S., Metabolic pathways recruited in the production of a recombinant enveloped virus: mining targets for process and cell engineering. *Metabolic Eng.* (accepted)1

Roe MR, Cohen JD, and Hegeman AD Targeted deuteration of polyphenolics for their qualitative and quantitative metabolomic analysis in plant-derived extracts, Sriram G. Ed. *Methods in Molecular Biology Series*, accepted December 2012. (2013)

Rosenzweig, N., et al., Rhizosphere bacterial communities associated with long-lived perennial prairie plants vary in diversity, composition, and structure. *Can J Microbiol*, 2013. 59: p. 494-502.

Ryu, J.-Y., J. Seo, S. Park, J.-H. Ahn, Y. Chong, M. J. Sadowsky, and H.-G. Hur. 2013. Characterization of an isoeugenol monooxygenase (Iem) from *Pseudomonas nitroreducens* Jin1 that transforms isoeugenol to vanillin. *Biosci. Biotech. Biochem.* 77: 289-294.

Samac, D. A., Halfman, B., Jensen, B., Brietenbach, F., Behnken, L., Willbur, J., Undersander, D., Blonde, G., and Lamb, J.F.S. 2013. Evaluating Headline fungicide on alfalfa production and sensitivity of pathogens to pyraclostrobin. *Plant Health Prog.* doi:10.1094/PHP-2013-0917-01-RS.

Samac, D. A., Lamb, J. F. S., Kinkel, L. L., and Hanson, L. 2013. Effect of wheel traffic and green manure treatments on forage yield and crown rot in alfalfa (*Medicago sativa*). *Plant Soil* 372:349-359.

Schmitz, C., et al., Fruit texture phenotypes of the RosBREED U.S. apple reference germplasm set. *HortSci*, 2013. 48: p. 296-303.

Schnable PS, Springer NM. 2013. Progress Toward Understanding Heterosis in Crop Plants. *Annu Rev Plant Biol.* 64:71-88.

Schubert M, Ermini L, Der Sarkissian C, Jónsson H, Ginolhac A, Schaefer R, Martin MD, Fernández R, Kircher M, McCue ME, Willerslev E, Orlando L. Characterizing ancient genomes: from sequence reads to SNP detection, phylogenomics, and metagenomic analyses. *Nature Protocols* (submitted).

Schweiger, W., B. Steiner, C. Ametz, G. Siegwart, G. Wiesenberger, F. Berthiller, M. Lemmens, H. Jia, G. Adam, G. Muehlbauer, D. Kreil and H. Buerstmayr. 2013. Transcriptomic characterization of two major *Fusarium* resistance QTL, *Fhb1* and *Qfhs.ifa-5A*, identify novel candidate genes. *Mol. Plant Path.* 14:772-785.

Sekhon RS, Briskine R, Hirsch CN, Myers CL, Springer NM, Buell CR, de Leon N, Kaeppler SM. 2013. Maize Gene Atlas Developed by RNA Sequencing and Comparative Evaluation of Transcriptomes Based on RNA Sequencing and Microarrays. *PLoS One* 8(4):e61005.

Seo, J., J.Y. Ryu, J. Han, J. H. Ahn, M. J. Sadowsky, H.G. Hur HG, and Y. Chong. 2013. Amino acid substitutions in naphthalene dioxygenase from *Pseudomonas* sp. strain NCIB 9816-4 result in regio- and stereo-specific hydroxylation of flavanone and isoflavanone. *Appl Microbiol Biotechnol.* 97:693-704.

Shan Q, Wang Y, Chen K, Liang Z, Li J, Zhang Y, Zhang K, Liu J, Voytas DF, Zheng X, Zhang Y, Gao C. (2013) Rapid and efficient gene modification in rice and *Brachypodium* using TALENs. *Mol Plant.* 2013 Jan 22.

"Shi, H., Shen, Q., Qi, Y., Yan, H., Nie, H., Chen, Y., Zhao, T., Katagiri, F. and Tang, D. (2013) "BR-Signaling KinaSE1 physically associates with Flagellin Sensing2 and regulates plant innate immunity in *Arabidopsis*." *Plant Cell* 25, 1143-1157.

<http://www.plantcell.org/content/25/3/1143.long> "

Shu, C., Chatterjee, A., Hu, W-S and Ramkrishna, D. *PlosOne* Role of intracellular stochasticity in biofilm growth. Insights from population balance modeling. *Plos Comp. Biol.* (Accepted).

Shyam Boriah, Ankush Khandelwal, Vipin Kumar, Varun Mithal, Karsten Steinhäuser: Change Detection from Temporal Sequences of Class Labels: Application to Land Cover Change Mapping. *SDM* 2013: 650-658

Sinigalliano, C. D., J. Ervin; L. C. Van De Werfhorst, B. Badgley, E. Ballesté, J. Bartkowiak, A. B. Boehm, M. Byappanahalli, K. D. Goodwin, M. Gourmelon, J. Griffith, P. A. Holden, J. Jay, B. Layton, C. Lee, J. Lee, W. G, Meijer, R. Noble, M. Raith, H. Ryu, M. J. Sadowsky, A. Schriewer, D. Wang, D. Wanless, R. Whitman, S. Wuertz, and J. W. Santo Domingo. 2013. Multi-Laboratory Evaluations of the Performance of *Catellibacterium marimammalium* PCR Assays Developed to Target Gull Fecal Sources. *Water Res.* doi:p11: S0043-1354(13)00552-6. 0.1016/j.watres.2013.02.059

Slotte T, Hazzouri KM, Ågren JA, Koenig D, Maumus F, Guo YL, Steige K, Platts AE, Escobar JS, Newman LK, Wang W, Mandáková T, Vello E, Smith LM, Henz SR, Steffen J, Takuno S, Brandvain Y, Coop G, Andolfatto P, Hu TT, Blanchette M, Clark RM, Quesneville H, Nordborg M, Gaut BS, Lysak MA, Jenkins J, Grimwood J, Chapman J, Prochnik S, Shu S, Rokhsar D, Schmutz J, Weigel D, Wright SI. *The Capsella*

rubella genome and the genomic consequences of rapid mating system evolution. *Nat Genet.* 2013 Jul;45(7):831-5. doi: 10.1038/ng.2669.

Smith AG, Eberle CA, Moss NG, Anderson NO, Clasen BM, and Hegeman AD (2013) The transmitting tissue of *Nicotiana tabacum* is not essential to pollen tube growth, and its ablation can reverse prezygotic interspecific barriers, *Plant Reprod.* (Epub ahead of print, PMID: 23963740)

Smith MI, Yatsunencko T, Manary MJ, Trehan I, Mkakosya R, Cheng J, Kau AL, Rich SS, Concannon P, Mychaleckyj JC, Liu J, Houpt E, Li JV, Holmes E, Nicholson J, Knights D, Ursell LK, Knight R, Gordon JI. Gut Microbiomes of Malawian Twin Pairs Discordant for Kwashiorkor. *Science* 339, 548--554 (2013).

Smith TC, Gebreyes WA, Abley MJ, Harper AL, Forshey BM, Male MJ, Martin HW, Molla BZ, Sreevatsan S, Thakur S, Thiruvengadam M, Davies PR. Methicillin-resistant *Staphylococcus aureus* in pigs and farm workers on conventional and antibiotic-free swine farms in the USA. *PLoS One.* 2013 May 7;8(5):e63704. doi: 10.1371/journal.pone.0063704. Print 2013. PubMed PMID: 23667659; PubMed Central PMCID: PMC3646818.

Smith, A.G., C.A. Eberle, N.O. Anderson, B.M. Clasen, A.D. Hegeman. 2013. The transmitting tissue of *Nicotiana tabacum* is not essential to pollen tube growth, and its ablation can reverse prezygotic interspecific barriers. *Plant Reprod* 26:339-350.

Smith, K.P., A. Budde, R. Dill-Macky, D.C. Rasmusson, E. Schiefelbein, J.J. Wiersma, J.V. Wiersma, B.J. Steffenson. 2013. Registration of 'Quest' Spring Malting Barley with Improved Resistance to Fusarium Head Blight. *J. Plant Reg.* 7:125-129 doi:10.3198/jpr2012.03.0200crc, Published: January 25, 2013.

Snell-Rood, E. C. 2013. Evolutionary causes and consequences of behavioural plasticity. *Animal Behaviour.*

Snell-Rood, E. C., A. Troth, A. P. Moczek. 2013. DNA methylation as a mechanism of nutritional plasticity: limited support from horned beetles. *Journal of Experimental Zoology B* 320B: 22-34.

Snell-Rood, E. C., and N. Wick. 2013. Anthropogenic environments exert variable selection on cranial capacity in mammals. *Proceedings of the Royal Society B*

Snell-Rood, E. C., G. Davidowitz, and D. R. Papaj. 2013. Plasticity in learning causes immediate and trans-generational changes in energy allocation. *Integrative and Comparative Biology.*

Song SJ, Lauber C, Costello EK, Lozupone CA, Humphrey G, Berg-Lyons D, Caporaso JG, Knights D, Clemente JC, Nakielny S, Gordon JI, Fierer N, Knight R. Cohabiting family members share microbiota with one another and with their dogs. *eLife* 2 (2013).

Sorge US, Kurnick S, Sreevatsan S. Detection of *Mycobacterium avium* subspecies paratuberculosis in the saliva of dairy cows: a pilot study. *Vet Microbiol.* 2013 Jun 28;164(3-4):383-6. doi: 10.1016/j.vetmic.2013.02.021. Epub 2013 Feb 28. PubMed PMID: 23517764.

Souza C, Davis WC, Eckstein TM, Sreevatsan S, Weiss DJ. Mannosylated lipoarabinomannans from mycobacterium avium subsp. Paratuberculosis alters the inflammatory response by bovine macrophages and suppresses killing of mycobacterium avium subsp. Avium organisms. PLoS One. 2013 Sep 30;8(9):e75924. doi: 10.1371/journal.pone.0075924. PubMed PMID: 24098744; PubMed Central PMCID: PMC3786972.

Springer NM. 2013. Epigenetics and crop improvement. Trends in Genetics 29(4):241-247.

Staley C, Unno T, Gould TJ, Jarvis B, Phillips J, Cotner JB, Sadowsky. 2013. MJ. Application of Illumina Next-Generation Sequencing to Characterize the Bacterial Community of the Upper Mississippi River. J. Appl. Microbiol. 2013 Aug 8. doi: 10.1111/jam.12323.

Stanton-Geddes J, Paape T, Epstein B, Briskine R, Yoder J, Epstein B, Briskine R, Yoder J, Mudge J, Bharti A K, Farmer AD, Zhou P, Denny R, May GD, Erlandson S, Yakub M, Sugawara M, Sadowsky, MJ, Young, ND and P Tiffin. 2013 Candidate Genes and Genetic Architecture of Symbiotic and Agronomic Traits Revealed by Whole-Genome, Sequence-Based Association Genetics in Medicago truncatula. PLoS ONE 8(5): e65688. doi:10.1371/journal.pone.0065688

Stanton-Geddes J, Yoder J, Briskine R, Young ND, Tiffin P (2013) Estimating heritability with whole-genome data. Methods in Ecology and Evolution: doi: 10.1111/2041-210X.12129.

Stanton-Geddes, J., R.G. Shaw, and P. Tiffin. 2013. Insights from population genetics for range limits of a widely-distributed annual plant. American Journal of Botany 100: 744-753. DOI: 10.3732/ajb.1200468

Stec AO, Bhaskar PB, Bolon YT, Nolan R, Shoemaker RC, Vance CP, Stupar RM. (2013) Genomic heterogeneity and structural variation in soybean near isogenic lines. Front Plant Sci 4: 104.

Stessman HAF, Baughn LB, Sarver A, Xia T, Deshpande R, Mansoor A, Walsh SA, Sunderland JJ, Dolloff NG, Linden MA, Zhan F, Janz S, Myers CL, and Van Ness BG. Profiling bortezomib resistance identifies secondary therapies in a mouse myeloma model. Molecular Cancer Therapeutics. 2013. doi:10.1158/1535-7163.MCT-12-1151

Strong, L.C., T. Gould, L. Kasinkas, A. Aksan, and L.P. Wackett (2013) Biodegradation in produced waters: Chemistry, microbiology and engineering. J. Environ. Eng. (in press).

Stupar RM, Specht JE (2013) Insights from the Soybean (Glycine max and G. soja) Genome: Past, Present and Future. Adv Agron 118: 177–204.

Subramanian, K., Owens, D.J., Raju, R., Firpo, M., O'Brien, T.D., Verfaillie, C.M. and Hu, W-S. (2013) Spheroid culture for enhanced differentiation of human embryonic stem cells to hepatocyte-like cells. Stem Cell Dev. (accepted)

Sugawara M, Epstein B, Badgley B, Unno T, Xu L, Reese J, Gyaneshwar P, Denny R, Mudge J, Bharti AK, Farmer AD, May GD, Woodward JE, Médigue C, Vallenet D, Lajus A, Rouy Z, Martinez-Vaz B, Tiffin P, Young ND, Sadowsky MJ (2013) Comparative genomics of the core and accessory genomes of 48

Sinorhizobium strains spanning five genospecies. *Genome Biology* 14(2):R17. doi:10.1186/gb-2013-14-2-r17.

Sugawara, M., and M. J. Sadowsky. 2013. Influence of elevated atmospheric carbon dioxide on transcriptional responses of *Bradyrhizobium japonicum* in the soybean rhizoplane. *Microbes and Environments*. In Press.

Summers Z. M., Gralnick J. A, and D. R. Bond. 2013. Cultivation of an obligate Fe(II)-oxidizing lithoautotrophic bacterium using electrodes. *mBio*. 2013 Jan 29;4(1):e00420-12.

Sun X, Perera S, Haas N, Lefebvre PA, Silflow CD (2013) Using an RSP3 reporter gene system to investigate molecular regulation of hydrogenase expression in *Chlamydomonas reinhardtii*. *Algal Research* 2:341-351.

T.J. Heisel, C.Y. Li, K.M. Grey, S.I. Gibson (2013). Mutations in HISTONE ACETYLTRANSFERASE1 affect sugar response and gene expression in *Arabidopsis*. *Front Plant Sci*, 4:245.

Tam LW, Ranum PT, Lefebvre PA. CDKL5 regulates flagellar length and localizes to the base of the flagella in *Chlamydomonas*. *Mol Biol Cell*. 2013 Mar;24(5):588-600. doi: 10.1091/mbc.E12-10-0718. Epub 2013 Jan 2. PubMed PMID: 23283985; PubMed Central PMCID: PMC3583663.

Teixeira, R, Rendahl AK, Anderson, S, Sigler, D, Buchanan, B, Coleman, B, Mickelson, JR, McCue, ME. Role of coat color genotypes in melanoma risk and severity in gray Quarter Horses. *Journal of Veterinary Internal Medicine* published online: 22 July 2013 DOI:10.1111/jvim.12133.

Teravest, M.A., M.A. Rosenbaum, N.J. Kotloski, J.A. Gralnick and L.T. Angenent. 2013. Oxygen allows *Shewanella oneidensis* MR-1 to overcome mediator washout in a continuously-fed bioelectrochemical system. *Biotechnol Bioeng*. [Epub ahead of print]

Tesfaye M., Silverstein K.A.T., Nallu S., Wang L., Botanga C.J., Gomez S.K., Costa L.M., Harrison M.J., Samac D.A., Glazebrook J., Katagiri F., Gutierrez-Marcos J.F., and VandenBosch K.A. Spatio-temporal expression patterns of *Arabidopsis thaliana* and *Medicago truncatula* Defensin-Like Genes. *PLoS ONE* 8(3): e58992. doi:10.1371/journal.pone.0058992. (2013)

Tesfaye, M., Silverstein, K. A. T., Nalu S., Wang. L., Botanga, C. J., Gomez, S. K., Costa, L. M., Harrison, M. J., Samac, D. A., Glazebrook, J., Katagiri, F., Gutierrez-Marcos, J. F., and VandenBosch, K. A. (2013) "Spatio-temporal expression patterns of *Arabidopsis thaliana* and *Medicago truncatula* defensin-like genes" *PLoS ONE* 8, e58992.

Tivendale ND, Ross JJ, Cohen JD The shifting paradigms of auxin biosynthesis. *Trends in Plant Science* (10.1016/j.tplants.2013.09.012)

Tong, H.-W., B.R. Mutlu, L.P. Wackett and A. Aksan. (2013) Silica/PVA biocatalytic nanofibers. *Materials Lett*. 111:234-237.

Tong, H.-W., B.R. Mutlu, L.P. Wackett, and A. Aksan (2013) Manufacturing of bioreactive nanofibers for bioremediation. *Biotech. Bioeng.* (in review).

Torrecilla, JAV, Ray, EE, Barney, BM, *Azotobacter vinelandii* siderophore can provide nitrogen to support the culture of the green algae *Neochloris oleoabundans* and *Scenedesmus* sp. BA032. *FEMS Microbiology Letters* (2013), Under Revision (Corresponding aut)

Traini, A., et al., Genome microscale heterogeneity among wild potatoes revealed by Diversity Arrays Technology marker sequences. *International Journal of Genomics*, 2013. 2013: p. 25721

Truman, W., Sreekanta, S., Lu, Y., Bethke, G., Tsuda, K., Katagiri, F., and Glazebrook, J. The CALMODULIN-BINDING PROTEIN60 Family Includes Both Negative and Positive Regulators of Plant Immunity. *Plant Physiology* in press for December 20

Truman, W., Sreekanta, S., Lu, Y., Bethke, G., Tsuda, K., Katagiri, F., and Glazebrook, J. (2013) "The Calmodulin Binding Protein 60 Family Includes Both Negative and Positive Regulators of Plant Immunity." *Plant Physiol* doi: <http://dx.doi.org/10.1104/pp.113>

Tsilo, T.J., G. Nygard, K. Khan, S. Simsek, G.A. Hareland, S. Chao, and J.A. Anderson. 2013. Molecular genetic mapping of QTL associated with flour water absorption and farinograph related traits in bread wheat. *Euphytica* 194:293-302.

Tsilo, T.J., G.A. Hareland, J.-B. Ohm, and J.A. Anderson. 2013. Polymeric proteins and their association with grain yield in hard red spring wheat lines. *Euphytica* 194:187-196.

Tsuda, K., Mine, A., Bethke, G., Igarashi, D., Botanga, C. J., Tsuda, Y., Glazebrook, J., Sato, M., and Katagiri, F. (2013) "Dual regulation of gene expression mediated by extended MAPK activation and salicylic acid contributes to robust innate immunity in *Arabidopsis*." *PLoS Genet*, in press.

Turner, M.K., L.R. DeHaan, Y. Jin and J.A. Anderson. 2013. Wheatgrass–wheat partial amphiploids as a novel source of stem rust and *Fusarium* head blight resistance. *Crop Sci.* 53:1994-2005.

U. T. Bornscheuer, G. Huisman, R. J. Kazlauskas, S. Lutz, J. Moore, K. Robins "Engineering the third wave of biocatalysis" *Nature*, 2012, 485, 185-194;more... <http://dx.doi.org/10.1038/nature11117>.

U. T. Bornscheuer, R. J. Kazlauskas "Enzymatic catalytic promiscuity and the design of new enzyme catalyzed reactions" in *Enzyme Catalysis in Organic Synthesis*, 3rd ed. K. Drauz, H. Gröger, O. May, Eds., 2012, pp 1695-1733; more... <http://dx.doi.org/10.1002/9783527639861.ch41>

Vanja Paunić, Michael Steinbach, Abeer Madbouly, and Vipin Kumar. 2013. Evaluation of Label Dependency for the Prediction of HLA Genes. In *Proceedings of the International Conference on Bioinformatics, Computational Biology and Biomedical Informatics (BCB'13)*. ACM, New York, NY, USA, Pages 296 , 10 pages. DOI=10.1145/2506583.2506632 <http://doi.acm.org/10.1145/2506583.2506632>

Vikas Sharma, Harish Dureja, Vipin Kumar: Computation of models for prediction of blood brain barrier permeability using molecular descriptors. *J. Comput. Meth. in Science and Engineering* 13(3-4): 379-392 (2013)

Vishwanathan, N., Le, H., Jacob, N.M., Tsao, Y-S, Ng, S-W, Loo, B., Liu, Z., Kantardjieff, A., and Hu, W-S. Transcriptome dynamics of transgene amplification in chinese hamster ovary cells. *Biotechnol. Bioeng.* (in press)

Volzing K, Borrero J, Sadowsky MJ, Kaznessis YN. 2013. Antimicrobial Peptides Targeting Gram-negative Pathogens, Produced and Delivered by Lactic Acid Bacteria. *ACS Synth Biol.* PMID: 23808914

Voytas DF. (2013 Apr 29) Plant genome engineering with sequence-specific nucleases. *Annu Rev Plant Biol.* 64:327-50. doi: 10.1146/annurev-arplant-042811-105552. Epub 2013 Mar 1.

Wackett, L.P. and C.M. Wilmot (2013) Hydrocarbon biosynthesis in microorganisms. In (M.E. Himmel, Ed.) *Direct Microbial Conversion of Biomass to Advanced Biofuels.* Elsevier, New York (in press).

Wagih O, Usaj M, Baryshnikova A, VanderSluis B, Kuzmin E, Costanzo M, Myers CL, Andrews BJ, Boone CM, Parts L: SGAtools: one-stop analysis and visualization of array-based genetic interaction screens. *Nucleic Acids Research.* 2013 doi:10.1093/nar/gkt400

Walker, J.D., Brooks, D.C., Hammond, K., Fall, B.A., Peifer, R.W., Schnell, R., and Schottel, J.L. (2013). Practice makes perfect? Assessing the effectiveness of online practice exams in blended learning biology classes. In A. Picciano, C. Dziuban & C. Graham, eds., *Research Perspectives in Blended Learning.* New York: Routledge.

Wang H, Hu YC, Markoulaki S, Welstead GG, Cheng AW, Shivalila CS, Pyntikova T, Dadon DB, Voytas DF, Bogdanove AJ, Page DC, Jaenisch R. 2013 May 12. TALEN-mediated editing of the mouse Y chromosome. *Nat Biotechnol.* doi: 10.1038/nbt.2595. [Epub ahead of print]

Waters AJ, Bilinski P, Eichten SR, Vaughn MW, Ross-Ibarra J, Gehring M, Springer NM. 2013. Comprehensive analysis of imprinted genes in maize reveals limited conservation with other species and allelic variation for imprinting. *Proc Natl Acad Sci USA* PMID: 24218619.

Wei, J, Timler, JG, Knutson, CM, Barney, BM, Branched-chain 2-keto acid decarboxylases derived from *Psychrobacter*. *FEMS Microbiology Letters* (2013), 346, pages 105-112. (Corresponding author)

Weingarden, A. R., M. J. Hamilton, M. J. Sadowsky, and A. Khoruts. 2013. Resolution of Severe *Clostridium difficile* Infection Following Sequential Fecal Microbiota Transplantation. *J. Clin. Gastroenterol.* PMID: 23632358

Wendt T, Holm PB, Starker CG, Christian M, Voytas DF, Brinch-Pedersen H, Holme IB (May 2013) TAL effector nucleases induce mutations at a pre-selected location in the genome of primary barley transformants. *Plant Molecular Biology* DOI 10.1007/s11103-013-0078-4

Wilson MB, Marla Spivak M, Hegeman AD, Rendahl A, and Cohen JD (2013) Metabolomics Reveals the Origins of Antimicrobial Plant Resins Collected by Honey Bees, *PLOS One*, 8(10): e77512. doi:10.1371/journal.pone.0077512

Wolf TM, Sreevatsan S, Travis D, Mugisha L, Singer RS. The risk of tuberculosis transmission to free-ranging great apes. *Am J Primatol*. 2013 Sep 5. doi: 10.1002/ajp.22197. [Epub ahead of print] PubMed PMID: 24008978.

Wongphatcharachai M, Wang P, Enomoto S, Webby RJ, Gramer MR, Amonsin A, Sreevatsan S. Neutralizing DNA aptamers against swine influenza H3N2 viruses. *J Clin Microbiol*. 2013 Jan;51(1):46-54. doi: 10.1128/JCM.02118-12. Epub 2012 Oct 17. PubMed PMID: 23077124; PubMed Central PMCID: PMC3536225.

Xi C. Chen, Karsten Steinhaeuser, Shyam Boriah, Snigdhasu Chatterjee, Vipin Kumar: Contextual Time Series Change Detection. *SDM* 2013: 503-511

Xu, J., Hillyer, J.F., Coulibaly, B., Sacko, M., Dao, A., Niare, O., Riehle, M.M., Traore, S.F., and Vernick, K.D. (2013). Wild *Anopheles funestus* mosquito genotypes are permissive for infection with the rodent malaria parasite, *Plasmodium berghei*. *PLoS ONE* 8, e61181.

Yerramsetty V, Roe MR, Cohen JD, Hegeman AD, Ismail B (2013) Development of a Simple, Fast and Accurate Method for the Direct Quantification of Selective Estrogen Receptor Modulators using Stable Isotope Dilution Mass Spectrometry, *J Agric Food Chem*, 61(29): 7028–7037.

Yiping Qi, Yong Zhang, Feng Zhang, Joshua A. Baller, Spencer C. Cleland, Yungil Ryu, Colby G. Starker, and Daniel F. Voytas. (2013) Increasing frequencies of site-specific mutagenesis and gene targeting in *Arabidopsis* by manipulating DNA repair pathways. *Genome Res*.

Yoder J. B., R. Briskine, J. Mudge, A. Farmer, T. Paape, K. Steele, G. D. Weiblen, A. K. Bharti, P. Zhou, G. D. May, N. Young, and P. Tiffin. 2013. Whole-genome phylogeny of *Medicago* (Fabaceae). *Systematic Biology* 62: 424-438. doi:10.1093/sysbio/syt009

Yu H, Karampelias M, Robert S, Peer WA, Swarup R, Ye S, Ge L, Cohen JD, Murphy A, Friml J, Estelle M ROOT ULTRAVIOLET B-SENSITIVE1/WEAK AUXIN RESPONSE3 is essential for polar auxin transport in *Arabidopsis*. *Plant Physiology* 162:965-976 (2013)

Yu, L., and D. J. O'Sullivan. (2013) Production of a hyperthermophilic β -galactosidase by a synthetically designed *Lactococcus lactis*. Abstracts of 113th ASM annual meeting, Denver CO.

Yu, L., and D. J. O'Sullivan. (2013) Production of galacto-oligosaccharides using a hyperthermophilic β -galactosidase in permeabilized whole cells of *Lactococcus lactis*. *J. Dairy Science* in press.

Zhang Y, Zhang F, Li X, Baller JA, Qi Y, Starker CG, Bogdanove AJ, Voytas DF. (2013 Jan) Transcription activator-like effector nucleases enable efficient plant genome engineering. *Plant Physiol*. 161(1):20-7. doi: 10.1104/pp.112.205179.

Zhengzhang Chen, Alok N. Choudhary, John Jenkins, Vipin Kumar, Anatoli V. Melechko, Jinfeng Rao, Nagiza F. Samatova, Fredrick H. M. Semazzi: Automatic Detection and Correction of Multi-class Classification Errors Using System Whole-part Relationships. SDM 2013: 494-502