

IWYP Publications (2016-19)

LEAD PI	TITLE	YEAR
Anthony Hall	Gardiner, L.-J., Joynson, R., Omony, J., Rusholme-Pilcher, R., Olohan, L., Lang, D., et al. (2018). Epigenomic variation across a polyploid wheat diversity collection. <i>Genome Research</i> 2018. 28: 1319-1332	2018
Anthony Hall	Gardiner LJ, Joynson R, Omony J, et al. Hidden variation in polyploid wheat drives local adaptation. <i>Genome Res.</i> 2018;28(9):1319-1332.	2018
Anthony Hall	Coast O, Shah S, Ivakov A, Gaju O, Wilson PB, Posch BC, Bryant CJ, Negrini ACA, Evans JR, Condon AG, Silva-Pérez V, MP, Pogson BJ, Millar AH, Furbank RT & Atkin OK. (2019) Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. <i>Plant Cell & Environment</i>	2019
Anthony Hall	Evans JR and Clarke VC. (2019) The nitrogen cost of photosynthesis. <i>J Experimental Botany</i> 70, 7-15	2019
Anthony Hall	Gardiner, L.-J., Brabbs, T., Akhunov, A., Jordan, K., Budak, H., Richmond, T., Singh, S., Catchpole, L., Akhunov, E., Hall, A. (2019). Integrating genomic resources to present full gene and putative promoter capture probe sets for bread wheat. <i>GigaScience</i> . doi.org/10.1093/gigascience/giz018	2019
Barry Pogson	Coast, O, Shah, S, Ivakov, A, et al. Predicting dark respiration rates of wheat leaves from hyperspectral reflectance. <i>Plant Cell Environ.</i> 2019. https://doi.org/10.1111/pce.13544	2019
Christine Raines	Driever SM, Simkin AJ, Alotaibi S, Fisk SJ, Madgwick PJ, Sparks CA, Jones HD, Lawson T, Parry MAJ, Raines CA. (2017). Increased SBPase activity improves photosynthesis and grain yield in wheat grown in greenhouse conditions. <i>Phil. Trans. R. Soc. B.</i>	2017
Christine Raines	Alotaibi, S. S., Sparks, C. A., Parry, M., Simkin, A. J., & Raines, C. A. (2018). Identification of Leaf Promoters for Use in Transgenic Wheat. <i>Plants (Basel, Switzerland)</i> , 7(2), 27. doi:10.3390/plants7020027	2018
Christine Raines	Simkin AJ, Lopez-Calcagno PE, Raines CA. (2019). Feeding the world: Improving photosynthetic efficiency for sustainable crop production. <i>J Exp Bot.</i> (doi.org/10.1093/jxb/ery445).	2019
Erik Murchie	Jauregui I, Rothwell SA, Taylor SH, Parry MAJ, Carmo-Silva E, Dodd IC. 2018. Whole plant chamber to examine sensitivity of cereal gas exchange to changes in evaporative demand. <i>Plant Methods</i> 14: 97.	2018
Andrew Merchant	Salter, W. T., M. E. Gilbert, and T. N. Buckley. 2018. Time-Dependent Bias in Instantaneous Ceptometry Caused by Row Orientation. <i>Plant Phenome J.</i> 1:180004. doi:10.2135/tppj2018.07.0004	2018
Andrew Merchant	William T Salter, Andrew Merchant, Richard A Richards, Richard Trethowan, Thomas N Buckley. Rate of photosynthetic acclimation to fluctuating light varies widely among genotypes of wheat. <i>bioRxiv</i> 435834; doi: https://doi.org/10.1101/435834	2018
Andrew Merchant	William T. Salter, Matthew E. Gilbert and Thomas N. Buckley (2018). A multiplexed gas exchange system for increased throughput of photosynthetic capacity measurements. <i>Plant Methods</i> 2018 14:80 https://doi.org/10.1186/s13007-018-0347-y	2018
Andrew Merchant	Salter W. T, Merchant A, Buckley T. N., (2018) PARbars: cheap, easy to build ceptometers for continuous measurement of light interception in plant canopies. <i>Journal of Visualized Experiments</i>	2019
Andrew Merchant	Salter W. T, Merchant A, Richards, RA Trethowan R, Buckley T. N. (2019) Rate of photosynthetic acclimation to fluctuating light varies widely among genotypes of wheat. <i>Journal of Experimental Botany</i>	2019
Arnold Bloom	Bloom, A. J. and Kameritsch, P. (2017), Relative association of Rubisco with manganese and magnesium as a regulatory mechanism in plants. <i>Physiol Plantarum</i> , 161: 545-559. doi:10.1111/ppl.12616	2017
Arnold Bloom	Bloom, A. J. and K. M. Lancaster (2018) Manganese binding to Rubisco could drive a photorespiratory pathway that increases the energy efficiency of photosynthesis. <i>Nature Plants</i> 4:414-422, DOI:10.1038/s41477-018-0191-0	2018
Arnold Bloom	Bloom, A.J. (2019) Metal Regulation of metabolism. <i>Current Opinion in Chemical Biology</i> . Vol 49 33-38	2019
Matthew Reynolds	IPPN Abstracts 2016, 4th International Plant Phenotyping Symposium. December 12-15, 2016 CDMX, Mexico: International Maize and Wheat Improvement Center (CIMMYT). http://hdl.handle.net/10883/17932	2016
Matthew Reynolds	Tattaris M, Reynolds MP, Chapman SC. A Direct Comparison of Remote Sensing Approaches for High-Throughput Phenotyping in Plant Breeding. <i>Front Plant Sci.</i> 2016; 7:1131. Published 2016 Aug 3. doi:10.3389/fpls.2016.01131	2016

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Matthew Reynolds	Reynolds M. et al, (2017). Proceedings of the 3rd International TRIGO (Wheat) Yield Potential Workshop 2017. CENEB, CIMMYT, Cd. Obregón, Sonora, Mexico, 22-23rd March 2017. Mexico, CDMX: CIMMYT.	2017
Matthew Reynolds	Reynolds M.P.; Pask A.J.D.; Hoppitt W.J.E.; Sonder K.; Sukumaran S.; Molero G.; Saint Pierre C.; Payne T.; Singh R.; Braun H.; Gonzalez F.; Barma N.; Hakim A.; He Z.; Fan Z.; Novoselovic D.; Maghraby M.; Gad K.; ElHusseiny Galal; Hagraas A.; Mohamed M.; Morad A.; Kumar U.; Singh G.; Naik R.; Kalappanavar I.; Biradar S.a; Sakuru Ve.; Chatrath R.; Sharma I.; Panchabhaki K.; Sohu V.; Mavi G.; Mishra V.; Balasubramaniam A.; Jalal-Kamali M.; Khodarahmi M.; Dastfal M.; Tabib-Ghaffari S.; Jafarby J.; Nikzad A.; Moghaddam H.; Ghogh H.; Mehraban A.; Solís-Moya E.; Camacho-Casas M.; Figueroa-López P.; Moreno J.; Alvarado-Padilla J.; Borbón-Gracia A.; Torres A.; Quiche N.; Upadhyay S.; Pandey D.; Imtiaz M.; Rehman M.; Hussain M.; Hussain M.; Ud-Din R.; Qamar M.; Kundi S.; Mujahid M.Y.; Ahmad G.; Khan A.; Sial M.; Mustatea P.; von Well E.; Ncala M.; de Groot S.; Hussein A.; Tahir I.; Idris A.; Elamein H.; Joshi A. (2017). Strategic crossing of biomass and harvest index—source and sink—achieves genetic gains in wheat. <i>Euphytica</i> 213: 257. https://doi.org/10.1007/s10681-017-2040-z Print ISSN: 0014-2336. Online ISSN: 1573-5060	2017
Matthew Reynolds	Sukumaran S, Lopes M, Dreisigacker S, Reynolds M (2017) Genetic analysis of multi-environmental spring wheat trials identifies genomic regions for locus-specific trade-offs for grain weight and grain number. <i>Theor Appl Genet</i> 1–14. doi: 10.1007/s00122-017-3037-7	2017
Matthew Reynolds	Sukumaran S, Reynolds MP, Sansaloni CP (2018) Genome-wide association analyses identify QTL hotspots for yield and component traits in durum wheat grown under yield potential, drought, and heat stress environments. <i>Front Plant Sci</i> 9:81. doi: 10.3389/fpls.2018.00081	2017
Matthew Reynolds	Molero, G., Joynson, R., Pinera-Chavez, F. J., Gardiner, L., Rivera-Amado, C., Hall, A. and Reynolds, M. P. (2018), Elucidating the genetic basis of biomass accumulation and radiation use efficiency in spring wheat and its role in yield potential. <i>Plant Biotechnol J</i> . Accepted Author Manuscript. doi:10.1111/pbi.13052	2018
Stuart Roy	Gilliham, M., Able, J.A., Roy, S.J. (2016) Translating knowledge in abiotic stress tolerance to breeding programs. <i>The Plant Journal</i> DOI:10.1111/tpj.13456	2016
Stuart Roy	Schilling, R.K., Tester, M., Marschner, P., Plett, D.C., Roy, S.J. (2016) AVP1: one protein, many roles. <i>Trends in Plant Science</i> http://dx.doi.org/10.1016/j.tplants.2016.11.012	2016
Stuart Roy	Regmi KC, Li L, Gaxiola RA. Alternate Modes of Photosynthate Transport in the Alternating Generations of <i>Physcomitrella patens</i> . <i>Front Plant Sci</i> . 2017; 8:1956. Published 2017 Nov 13. doi:10.3389/fpls.2017.01956	2017
Md. Ali Babar	Chunlian Li, Chunxin Li, Brett F Caver, Robert Bowden, Zhenqi Su, Zhonghua Wang, and Guihua Bai. 2017. Mapping of quantitative trait loci for leaf rust resistance in the wheat population Ning7840 x Clark. <i>Plant Disease</i> https://doi.org/10.1094/PDIS-12-16-1743-RE	2017
Md. Ali Babar	Liu N, Bai G, Lin M, Xu X, Zheng W. Genome-wide Association Analysis of Powdery Mildew Resistance in U.S. Winter Wheat. <i>Sci Rep</i> . 2017;7(1):11743. Published 2017 Sep 18. doi:10.1038/s41598-017-11230-z	2017
Md. Ali Babar	Quantitative Trait Loci for Slow-Rusting Resistance to Leaf Rust in Doubled-Haploid Wheat Population C13227 × Lakin Yue Lu, Robert L. Bowden, Guorong Zhang, Xiangyang Xu, Allan K. Fritz, and Guihua Bai <i>Phytopathology</i> 2017 107:11, 1372-1380	2017
Md. Ali Babar	M. Shao, G. Bai, T. W. Rife, J. Poland, M. Lin, S. Liu, H. Chen, T. Kumssa, A. Fritz, H. Trick, Y. Li, G. Zhang. 2018. QTL mapping of pre-harvest sprouting resistance in a white wheat cultivar Danby. <i>Theor. Appl. Genet.</i> 131:1683-1697	2018
Md. Ali Babar	Zhenqi Su, Sujuan Jin, Dadong Zhang, Guihua Bai. 2018. Development and validation of diagnostic markers for Fhb1 region, a major QTL for Fusarium head blight resistance in wheat. <i>Theor Appl Genet</i> https://doi.org/10.1007/s00122-018-3159-6	2018
Simon Griffiths	Laura E. Dixon, Ildiko Karsai, Tibor Kiss, Nikolai M. Adamski, Zhenshan Liu, Yiliang Ding, Vincent Allard, Scott A. Boden, Simon Griffiths. 2019. VERNALIZATION1 controls developmental responses of winter wheat under high ambient temperatures. <i>Development</i> 2019 146: dev172684 doi: 10.1242/dev.172684	2019
Cristobal Uauy	Simmonds J, Scott P, Brinton J, Mestre TC, Bush M, Del Blanco A, Dubcovsky J, Uauy C (2016) A splice acceptor site mutation in TaGW2-A1 increases thousand grain weight in tetraploid and hexaploid wheat through wider and longer grains <i>Theoretical and Applied Genetics</i> 129:1099–1112.	2016
Cristobal Uauy	Krasileva KV, Vasquez-Gross H, Howell T, Bailey P, Paraiso F, Clissold L, Simmonds J, Ramirez-Gonzalez RH, Wang X, Borrill P, Fosker C, Ayling S, Phillips A, Uauy C, Dubcovsky J (2017) Uncovering hidden variation in the young polyploid wheat genomes. <i>PNAS</i> . doi: 10.1073/pnas.1619268114.	2017
Cristobal Uauy	Uauy C 2017. Wheat genomics comes of age. <i>Current Opinion Plant Biology</i> . 36:142	2017
Cristobal Uauy	Uauy C, Wulff B, Dubcovsky J. 2017. Combining Traditional Mutagenesis with New High-Throughput Sequencing and Genome Editing to Reveal Hidden Variation in Polyploid Wheat. <i>Annual Review in Genetics</i> . 51: doi.org/10.1146/annurev-genet-120116-024533	2017
Cristobal Uauy	Mo, Y., Howell, T., Vasquez-Gross, H. et al. <i>Mol Genet Genomics</i> (2018) 293: 463. https://doi.org/10.1007/s00438-017-1401-6	2018
Cristobal Uauy	Wang, W., Simmonds, J., Pan, Q. et al. <i>Theor Appl Genet</i> (2018) 131: 2463. https://doi.org/10.1007/s00122-018-3166-7	2018
Cristobal Uauy	Watson A, Ghosh S et al 2018. Speed breeding is a powerful tool to accelerate crop research and breeding. <i>Nature Plants</i> 4:23-29	2018

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Cristobal Uauy	Brinton, J, Uauy, C (2019) A reductionist approach to dissecting grain weight and yield in wheat. <i>J Integr Plant Biol</i> 61: 337– 358	2019
Eduard Akhunov	Wang W, Pan Q, He F, Akhunova A, Chao S, Trick HN, Akhunov E, Transgenerational CRISPR-Cas9 activity facilitates multiplex gene editing in allopolyploid wheat. <i>The CRISPR Journal</i> , 2018, 1, 65-74.	2018
Eduard Akhunov	Wang, W., Simmonds, J., Pan, Q. et al. <i>Theor Appl Genet</i> (2018) 131: 2463. https://doi.org/10.1007/s00122-018-3166-7	2018
Jorge Dubcovsky	Debernardi JM, Lin H, Chuck G, Faris JD, Dubcovsky J. microRNA172 plays a crucial role in wheat spike morphogenesis and grain threshability. <i>Development</i> . 2017;144(11):1966-1975.	2017
Jorge Dubcovsky	Blake, N. K., A. C. Varella, B. Bicego, J. M. Martin, J. P. Cook, H.-Y. Heo, R. Acharya, J. D. Sherman, D. Nash, L. E. Talbert. 2018. Maturity traits related to climate adaptation impact quality characteristics in hard red spring wheat. <i>Crop Sci</i> . 58:1954-1963	2018
Jorge Dubcovsky	El-Feki, W.M., P.F. Byrne, S.D. Reid, and S.D. Haley. 2018. Mapping quantitative trait loci for agronomic traits in winter wheat under different soil moisture levels. <i>Agronomy</i> 8: 133. doi:10.3390/agronomy8080133	2018
Jorge Dubcovsky	Gardiner, L.-J., T. Brabbs, A. Akhunova, K. Jordan, H. Budak, T. Richmond, S. Singh, L. Catchpole, E. Akhunov, A. Hall. 2018. Integrating genomic resources to present full gene and promoter capture probe sets for bread wheat. <i>bioRxiv</i> . 363663. doi:10.1101/363663	2018
Jorge Dubcovsky	Gizaw, S.A., J.G.V. Godoy, K. Garland-Campbell, A.H. Carter. 2018. Using spectral reflectance as proxy phenotypes for genome-wide association studies of yield and yield stability in Pacific Northwest winter wheat. <i>Crop Science</i> 58:1232-1241. doi:10.2135/cropsci2017.11.0710	2018
Jorge Dubcovsky	Huang, M., N. Mheni, G. Brown-Guedira, A. McKendry, C. Griffey, D. Van Sanford, J. Costa, C Sneller. 2018. Genetic analysis of heading date in winter and spring wheat. <i>Euphytica</i> , 214: 128. doi:10.1007/s10681-018-2199-y	2018
Jorge Dubcovsky	Kippes, N., M. Guedira, L. Lin, G.L. Brown-Guedira and J. Dubcovsky. 2018. Single nucleotide polymorphisms in a regulatory site of VRN-A1 first intron are associated with differences in vernalization requirement in winter wheat. <i>Molecular Genetics and Genomics</i> . doi:10.1007/s0043	2018
Jorge Dubcovsky	Lozada, D.N., Mason, R.E., Sukumaran, S., Dreisigacker, S. 2018 Validation of grain yield QTL from soft winter wheat using a CIMMYT spring wheat panel. <i>Crop Science</i> . doi:10.2135/cropsci2018.04.0232	2018
Jorge Dubcovsky	Mo, J., T. Howell, H. Vasquez-Gross, L.A. de Haro, J. Dubcovsky, S. Pearce. 2018. Mapping causal mutations by exome sequencing in a wheat TILLING population: a tall mutant case study. <i>Mol. Genet. Genom.</i> 293: 463-477. doi:10.1007/s00438-017-1401-6	2018
Jorge Dubcovsky	Mo, Y., Vanzetti, L.S., Hale, I. et al. 2018. Identification and characterization of Rht25, a locus on chromosome arm 6AS affecting wheat plant height, heading time, and spike development. <i>Theor Appl Genet</i> (2018) 131: 2021. https://doi.org/10.1007/s00122-018-3130-6	2018
Jorge Dubcovsky	Shaw LM, Lyu B, Turner R, et al. FLOWERING LOCUS T2 regulates spike development and fertility in temperate cereals. <i>J Exp Bot.</i> 2018;70(1):193-204.	2018
Jorge Dubcovsky	Zhang, J., S.A. Gizaw, E. Bossolini, J. Hegarty, T. Howell, A.H. Carter, E. Akhunov, J. Dubcovsky. 2018. Identification and validation of QTL for grain yield and plant water status under contrasting water treatments in fall-sown spring wheats. <i>Theor. Appl. Genet.</i> 131: 1741–1759. doi:10.1007/s00122-018-3111-9	2018
Scott Boden	Dixon, L. E., Greenwood, J. R., Bencivenga, S., Zhang, P., Cockram, J., Mellers, G., Ramm, K., Cavanagh, C., Swain, S. M., ... Boden, S. A. (2018). TEOSINTE BRANCHED1 Regulates Inflorescence Architecture and Development in Bread Wheat (<i>Triticum aestivum</i>). <i>The Plant cell</i> , 30(3), 563-581.	2018
Scott Boden	Gauley, A, Boden, SA (2019) Genetic pathways controlling inflorescence architecture and development in wheat and barley. <i>J Integr Plant Biol</i> 61: 296– 309	2019
Scott Sydenham	“Chasing wheat yields in Challenging environments –ARC a proud member of IWYP” published in June 2017 issue of SA Grain Magazine (Dr Scott Sydenham).	2017
Wanlong Li	Li W, Yang B. 2017. Translational genomics of grain size regulation in wheat. <i>Theoretical Applied Genetics</i> .130:1765-1771	2017
Jesse Poland	Juliana, P., Singh, R. P., Singh, P. K., Poland, J. A., Bergstrom, G. C., HuertaEspino, J., Bhavani, S., Crossa, J., & Sorrells, M. E. (2018). Genome wide association mapping for resistance to leaf rust, stripe rust and tan spot in wheat reveals potential candidate genes. <i>Theoretical and Applied Genetics</i> , 131, 1405–1422. https://doi.org/10.1007/s00122-018-3086-6	2018
Stephen Baenziger	Belamkar V, Guttieri MJ, Hussain W, et al. Genomic Selection in Preliminary Yield Trials in a Winter Wheat Breeding Program. G3 (Bethesda). 2018;8(8):2735-2747. Published 2018 Jun 26. doi:10.1534/g3.118.200415	2018
Stephen Baenziger	Bhatta, M., Morgounov, A., Belamkar, V., Poland, J., & Baenziger, P. S. (2018). Unlocking the novel genetic diversity and population structure of synthetic Hexaploid wheat. <i>BMC genomics</i> , 19(1), 591. doi:10.1186/s12864-018-4969-2	2018