List of publications produced by Wheat Génoplante program and Breedwheat project

Comparative mapping of the wheat 5B short chromosome arm distal region with rice, relative to a crossability locus. Lamoureux D, Boeuf C, regad F, Garsmeur O, Charmet G, Sourdille P, Lagoda P, Bernard M (2002). Theoretical and Applied Genetics, 105(5):759-765

Mapping of quantitative trait loci for field resistance to Fusarium head blight in an European winter wheat. Gervais L, Dedryver F, Morlais JY, Bodusseau V, Negre S, Bilous M, Groos C, Trottet M (2003). Theoretical and Applied Genetics, 106 (6):961-970

Colocation between a gene encoding the bZip factor SPA and an eQTL for a high-molecular-weight glutenin subunit in wheat (Triticum aestivum). Guillaumie S, Charmet G, Linossier L, Torney V, Robert N, Ravel C (2004). Genome, 47(4):705-13

Differential protein expression assessed by two-dimensional gel electrophoresis for two wheat varieties grown at four nitrogen levels. Bahrman N, Le Gouis J, Negroni L, Amilhat L, Leroy P, Lainé A-L, Jaminon O (2004). Proteomics, 4:709-719

Genetic analysis of grain protein content, grain hardness and dough rheology in a hard×hard bread wheat progeny. Groos C, Bervas E, Charmet G (2004). Journal of Cereal Science, 40(2):93-100

Microsatellite-based deletion bin system for the establishment of genetic-physical map relationships in wheat (Triticum aestivum L.). Sourdille P, Singh S, Cadalen T, Brown-Guedira GL, Gay G, Qi L, Gill BS, Dufour P, Murigneux A, Bernard M (2004). Funct Integr Genomics, 4(1):12-25

Study of simple sequence repeat (SSR) markers from wheat expressed sequence tags (ESTs). Nicot N, Chiquet V, Gandon B, Amilhat L, Legeai F, Leroy P, Bernard M, Sourdille P (2004). Theor Appl Genet, 109(4):800-5

Wheat leaf proteome analysis using sequence data of proteins separated by two dimensional electrophoresis. Bahrman N, Negroni L, Jaminon O, Le Gouis J (2004). Proteomics, 4:2672-2684

Differential change in root protein patterns of two wheat varieties under high and low nitrogen nutrition levels. Bahrman N, Gouy A, Devienne-Barret F, Vedele F, Hirel B, Le Gouis J (2005). Plant Science, 68:81-87

Genetic analysis of durable resistance to yellow rust in bread wheat. Mallard S, Gaudet D, Aldeia A, Abelard C, Besnard AL, Sourdille P, Dedryver F (2005). Theoretical and Applied Genetics, 110(8):1401-9

Partial sequences of nitrogen metabolism genes in hexaploid wheat. Boisson M, Mondon K, Torney V, Nicot N, Lainé A-L, Bahrman N, Gouy A, Daniel-Vedele F, Hirel B, Sourdille P, Dardevet M, Ravel C, Le Gouis J (2005). Theoretical and Applied Genetics, 110:932-940

Genetic analysis of dry matter and nitrogen accumulation and protein composition in wheat kernels. Charmet G, Robert N, Branlard G, Linossier L, Martre P, Triboï E (2005). Theor Appl Genet, 111(3):540-50

A simplified conceptual model of carbon and nitrogen functioning for QTL analysis of winter wheat adaptation to nitrogen deficiency. Laperche A, Devienne-Barret F, Maury O, Le Gouis J, Ney B (2006). Theoretical and Applied Genetics 113:1131-1146

Estimation of genetic parameters of a DH wheat population grown at different N stress levels characterized by probe genotypes. Laperche A, Brancourt-Hulmel M, Heumez E, Gardet O, Le Gouis J (2006). Theor Appl Genet, 112(5):797-807

Identification of Glu-B1-1 as a candidate gene for the quantity of high-molecular-weight glutenin in bread wheat (Triticum aestivum L.) by means of an association study. Ravel C, Praud S, Murigneux A, Linossier L, Dardevet M, Balfourier F, Dufour P, Brunel D, Charmet G (2006). Theor Appl Genet, 112(4):738-43

Single-nucleotide polymorphism frequency in a set of selected lines of bread wheat (Triticum aestivum L.). Ravel C, Praud S, Murigneux A, Canaguier A, Sapet F, Samson D, Balfourier F, Dufour P, Chalhoub B, Brunel D, Beckert M, Charmet G (2006). Genome, 49(9):1131-9

Single nucleotide polymorphism, genetic mapping, and expression of genes coding for the DOF wheat prolamin-box binding factor. Ravel C, Nagy IJ, Pierre M, Sourdille P, Derdevet M, Balfourier F, Pont Caroline, Gaincola S, Praud S, Charmet G (2006). Functional & Integrative Genomics, 6(4), 310-321

Types and Rates of Sequence Evolution at the High-Molecular-Weight Glutenin Locus in Hexaploid Wheat and Its Ancestral Genomes. Gu YQ, Salse J, Coleman-Derr D, Dupin A, Crossman C, Lazo GR, Huo N, Belcram H, Ravel C, Charmet G, Charles M, Anderson OD, Chalhoub B (2006). Genetics, 174 (3), 1493-1504

Unravelling environmental and genetic relationships between grain yield and nitrogen concentration for wheat. Triboi E, Martre P, Girousse C, Ravel C, Triboi-Blondel AM (2006). Europ. J. Agronomy, 25:108-118

Genetic analysis of bread-making quality scores in bread wheat using a recombinant inbred line population. Groos C, Bervas E, Chanliaud E, Charmet G (2007). Theor Appl Genet, 115(3):313-23

Using genotype x nitrogen interaction variables to evaluate the QTL involved in wheat tolerance to nitrogen constraint. Laperche A1, Brancourt-Hulmel M, Heumez E, Gardet O, Hanocq E, Devienne-Barret F, Le Gouis J (2007). Theor Appl Genet, 115(3):399-415

A process-based model to simulate nitrogen distribution in wheat (Triticum aestivum) during grain-filling. Bertheloot, J., Andrieu, B., Fournier, C., Martre, P. (2008). Functional Plant Biology, 35(10):781-796

Dynamics of light nitrogen distribution during grain filling within wheat canopy. Bertheloot J, Martre P, Andrieu B (2008). Plant Physiol, 148(3):1707-20

BAC-derived markers for assaying the stem rust resistance gene, Sr2, in wheat breeding programs. Mc Neil MD, Kota R, Paux E, Dunn D, McLean R, Feuillet C, Li D, Kong X, Lagudah E, Zhang JC, Jia JZ, Speilmeyer W, Bellgard M, Appels R (2008). Molecular Breeding, 22(1):15-24

New insights into the origin of the B genome of hexaploid wheat: Evolutionary relationships at the *SPA* genomic region with the S genome of the diploid relative *Aegilops speltoides*. Salse J, Chagué V, Bolot S, Magdelenat G, Huneau C, Pont C, Belcram H, Couloux A, Gardais S, Evrard A, Segurens B, Charles M, Ravel C, Samain S, Charmet G, Boudet N, Chalhoub B (2008). BMC Genomics, 9:555

Modelling nitrogen stress with probe genotypes to assess genetic parameters and genetic determinism of winter wheat tolerance to nitrogen constraint. Laperche A, Le Gouis J, Hanocq E, Brancourt-Hulmel M (2008). Euphytica, 161:259-271

High level of conservation between genes coding for the GAMYB transcription factor in barley (Hordeum vulgare L.) and bread wheat (Triticum aestivum L.) collections. Haseneyer G, Ravel C, Dardevet M, Balfourier F, Sourdille P, Charmet G, Brunel D, Sauer S, Geiger HH, Graner A, Stracke S (2008). Theor. Appl. Genet, 117:321-331

Identification and location of Stb9, a gene for resistance to Septoria tritici blotch in wheat cultivars Courtot and Tonic. Chartrain L, Sourdille P, Bernard M, Brown JKM (2009). Plant Pathology, 58(3):547-555

Genomics in cereals: from genome-wide conserved orthologous set (COS) sequences to candidate genes for trait dissection. Quraishi UM1, Abrouk M, Bolot S, Pont C, Throude M, Guilhot N, Confolent C, Bortolini F, Praud S, Murigneux A, Charmet G, Salse J (2009). Funct Integr Genomics, 9(4):473-84

Analysis of diversity and linkage disequilibrium along chromosome 3B of bread wheat (Triticum aestivum L.). Horvath A, Didier A, Koenig J, Exbrayat F, Charmet G, Balfourier F (2009). Theor. Appl. Genet, 119:1523-1537

A highly conserved gene island of three genes on chromosome 3B of hexaploid wheat: diverse gene function and genomic structure maintained in a tightly linked block. Breen J, Wicker T, Kong X, Zhang J, Ma W, Paux E, Feuillet C, Appels R, Bellgard M (2010). BMC Plant Biology, 10:98

Genetic diversity and linkage disequilibrium studies on a 3.1-Mb genomic region of chromosome 3B in European and Asian bread wheat (Triticum aestivum L.) populations. Hao CY, Perretant MR, Choulet F, Wang LF, Paux E, Sourdille P, Zhang XY, Feuillet C, Balfourier F (2010)**.** Theor Appl Genet, 121(7):1209-25

Insertion site-based polymorphism markers open new perspectives for genome saturation and marker-assisted selection in wheat. Paux E, Faure S, Choulet F, Roger D, Gauthier V, Martinant JP, Sourdille P, Balfourier F, Le Paslier MC, Chauveau A, Cakir M, Gandon B, Feuillet C (2010). Plant Biotechnol Journal, 8(2):196-210

Megabase level sequencing reveals contrasted organization and evolution patterns of the wheat gene andtransposable element spaces. Choulet F, Wicker T, Rustenholz C, Paux E, Salse J, Leroy P, Schlub S, Le Paslier MC, Magdelenat G, Gonthier C, Couloux A, Budak H, Breen J,Pumphrey M, Liu S, Kong X, Jia J, Gut M, Brunel D, Anderson JA, Gill BS, Appels R, Keller B, Feuillet C (2010)**.** Plant Cell, 22(6):1686-701

Sowing date and nitrogen fertilisation effects on dry matter and nitrogen dynamics for durum wheat: An experimental and simulation study. Ferrise R, Triossi A, Stratanovitch P, Bindi M, Martre P (2010)**.** Field Crops Research, 117(2-3):245-257

wDBTF: an integrated database resource for studying wheat transcription factor families. Romeuf I, Tessier D, Dardevet M, Branlard G, Charmet G, Grand Ravel C (2010)**.** BMC Genomics, 11(185):15

Cross-genome map based dissection of a nitrogen use efficiency ortho-metaQTL in bread wheat unravels concerted cereal genome evolution. Quraishi UM, Abrouk M, Murat F, Pont C, Bolot S, Confolent C, Touret L, Charmet G, Murigneux A, Guerreiro L, Lafarge S, Le Gouis J, Feuillet C, Salse J (2011). Plant Journal, 65:745-756

Deciphering the genetics of flowering time by an association study on candidate genes in bread wheat (Triticum aestivum L.). Rousset M, Bonnin I, Remoué C, Falque M, Rhoné B, Veyrieras JB, Madur D, Murigneux A, Balfourier F, Le Gouis J, Santoni S, Goldringer I (2011). Theor Appl Genet, 123(6):907-26

Variation in crossover rates across a 3-Mb contig of bread wheat (Triticum aestivum) reveals the presence of a meiotic recombination hotspot. Saintenac C, Faure S, Remay A, Choulet F, Ravel C, Paux E, Balfourier F, Feuillet C, Sourdille P (2011). Chromosoma, 120(2):185-98

Use of a global wheat core collection for association analysis of flour and dough quality traits. Bordes J, Ravel C, Le Gouis J, Lapierre A, Charmet G, Balfourier F (2011). Journal of Cereal Science, 54:137-147

Genome-wide association analysis to identify chromosomal regions determining components of earliness in wheat. Le Gouis J, Bordes J, Ravel C, Heumez E, Faure S, Praud S, Galic N, Remoué C, Balfourier F, Allard V, Rousset M (2012)**.** Theoretical and Applied Genetics, 124:597-611

The quantitative response of wheat vernalization to environmental variables indicates that vernalization is not a response to cold temperature. Allard V, Veisz O, Koszegi B, Rousset M, Le Gouis J, Martre P (2012). Journal of Experimental Botany, 63:847-857

A multi-environmental study of recent breeding progress on nitrogen use efficiency in wheat (Triticum aestivum L.). Cormier F, Faure S, Dubreuil P, Heumez E, Beauchêne K, Lafarge S, Praud S, Le Gouis J (2013). Theoretical and Applied Genetics, 126:3035-3048

A genome-wide identification of chromosomal regions determining nitrogen use efficiency components in wheat (Triticum aestivum L.). Cormier F, Le Gouis J, Dubreuil P, Lafarge S, Praud S (2014). Theoretical and Applied Genetics, 127:2679-2693

Bridging the gap between ideotype and genotype: challenges and prospects for modelling as exemplified by the case of adapting wheat (Triticum aestivum L.) phenology to climate change in France . Gouache D, Bogard M, Pegard M, Thepot S, Garcia C, Hourcade D, Paux E, Oury FX, Rousset M, Deswarte JC, Le Bris X (2015)**.** Field Crops Research Special issue "Challenges for modeling genotype by environment by management interactions of crops"

Detection of natural variants of NAM-A1 in bread wheat. Cormier F, Throude M, Ravel C, Le Gouis J, Leveugle M, Lafarge S, Exbrayat F, Duranton N, Praud S (2015).Agronomy, 5:143-151

Proteomic Approach to Identify Nuclear Proteins in Wheat Grain. Bancel E, Bonnot T, Davanture M, Branlard G, Zivy M, Martre P (2015)**.** Journal of Proteome Research, 14(10):4432-4439

Nuclear proteome of developing wheat (Triticum aestivum L.) grain. Bonnot T, Bancel E, Chambon C, Boudet J, Branlard G, Martre P (2015). Frontiers in Plant Science, 28(6) :905