

Resume

Yin, TongMing

R&D Staff Scientist
Environmental Sciences Division
Oak Ridge National Laboratory (ORNL)
P.O. Box 2008, Mail Stop 6422
Oak, Ridge, TN 37831-6422
Phone (work): 865/241-8319
E-mail: yintm@ornl.gov

Education

1997 Ph.D., Genetics and molecular biology, Nanjing Forestry University, China
1992 B.S., Forestry, Nanjing Forestry University, China

Professional Training

- **Genetic mapping and QTL analysis.** Rice Institute of China(1994)
- **Lab work for Ph.D dissertation.** Genetics Institute, China Academy of Sciences (1995-1996)
- **Molecular Cloning.** Institute of Developmental Biology, China Academy of Sciences (1996)
- **Mapping and QTL analysis in Forest trees.** College of Forestry, University of Washington, USA (1996)
- **Sequencing and differential displaying.** Institute of Botany, Chinese Academy of Sciences (1997)
- **Genetic data analysis.** State University of North Carolina, USA (2000)

Professional Appointments

- 2005. 8- R&D Staff Scientist, Oak Ridge National Laboratory
- 2005.6 Professor, Nanjing Forestry University, China
- 2004-2005 Research associate, University of Tennessee
- 2002-2004 Postdoctoral Research Associate, Oak Ridge National Laboratory
- 2000-2002 Postdoctoral Research Associate, the Swedish University of Agricultural Sciences, Sweden.
- 2001 Visiting Scientist, INRA, Bordeaux, France
- 1997-2000 Lecturer, Associate Professor, Nanjing Forestry University, China.

Academic Honors

UT-BATTLE Director's Award for outstanding team accomplishment, 2007.

- UT-BATTLE Award for outstanding Science and Technology Development, 2007
- The Outstanding Young Researcher for the New Century, issued by Educational Department of China, 2004.
- Jubilee Award, awarded by International Science Foundation of Sweden, 2003;
- The first prize for scientific Book (compose one of the chapters), issued by Science of Technology Department of China, 2003;
- Excellent Young Professor, issued by the Fok Ying Tung Education Foundation, Funded by Fok Ying Tung, HongKong, 2002;
- Excellent Faculty, awarded by Nanjing Forestry University, China, 1998;
- The Second Prize for Scientific Paper, Awarded by Forestry Association of China, 2000;
- The Best Scientific Paper Award, by Biotechnology Association of Jiansu Province, China, 1999;
- The Best Scientific Paper Award, by Biotechnology Association of Jiansu Province, China, 1996;

Invited seminars and conference Presentation

- Consensus map construction and genome assembly in poplars. The Fourth International Poplar Symposium, Nanjing, China, 2006.
- Genetic markers and chromosome assembly from genome sequence. Plant Sciences Department, University of Tennessee, Knoxville, Tennessee, 2006;
- Consensus map construction and Genome assembly for poplar. Botanical Institution, China Academy of Sciences, Peiking, 2004;
- Poster on 2004 IUFRO Conference: Forest Genetics and Tree Breeding in the Age of Genomics. Charleston, South Carolina, USA.
- Poster on the 12th New Phytologist Symposium on functional genomics of environmental adaptation in Populus, Gatlinburg, Tennessee, USA
- History and progress of the genomics studies in the model system of perennial plant species. Keynote speaker on the Chinese Academy Science Symposium, Wuhan, China, 2003;
- Genetic map construction and QTL detection in forestry trees. Botany Department, University of Tennessee, Knoxville, Tennessee, 2003;
- Molecular breeding in forest trees, Forestry physiology and Genetics Department, Swedish University of Agriculture for Sciences, Umea, Sweden, 2001;
- QTL analyzing and marker aided selection in forest trees. The National Academic Institution, Lubiljana, Slovenia, 1999;

Review Activities

Proceedings of National Academy of Sciences

New Phytologist

Canadian Journal of Forest Research

Acta Academica Sinica

Scientia Silvae Sinicae

Academics and Research

- PI of LDRD Project “Linkage Disequilibrium as an Analytical Tool for Gene Discovery”, Oak Ridge National Lab, Department of Energy. 2007
- PI of project “Mapping and QTL detection in Poplar.” Funded by National Science Foundation of China.
- PI of project “Marssonina black dot disease resistant gene detection in poplar.” Funded by the International Science Foundation of Sweden
- PI of project “Differential Displaying and cloning of MLSD gene in poplar.” Funded by Fok Ying Tung Education Foundation, Hongkong.
- PI of project “Comparative genetic map construction in Masson pine.” Funded by National Science Foundation of China.
- Co-PI of Project “Genome-enabled Detection of Mortality in a Temperate Deciduous Forest”
Funding agency: ORNL Director’s R&D Fund
Funding amount: \$250k/year
Funding period: FY2006-FY2007
- Co-PI of Project “Genetic Control of Litter Chemistry and Decomposition”
Funding agency: DOE/BER .2003-2007
- Participant in Bioenergy Science Center(BESC), PI on project 1.1.2
Funding agency: DOE
Funding amount: \$125M
Funding period: FY2008-2013
- Participant on project “Community Genetics, Heritability & Evolution: Consequences of Extended Phenotypes”
Funding agency: NSF/FIBR
Funding amount: \$1,000k/year
Funding period: FY2004-2009
- Participant on project “Accelerated Domestication of *Populus*”
Funding agency: DOE/BER
Funding amount: \$350k/year
Funding period: FY2003-2007
- Co-PI of project in pending “Genetic Control of Litter Chemistry and Decomposition”
Funding agency: DOE/BER
Funding amount: \$385k/year
Funding period: FY2007-2009

Publications

Journal Articles

T.M. Yin, S.P. DiFazio, L.E. Gunter, X. Zhang, M.M. Sewell, S. Woolbright, G..J. Allan,

- C.T. Kelleher, C.J. Douglas, M.-X. Wang, G.A. Tuskan. Genome structure and emerging evidence of an incipient sex chromosome in *Populus*, **Genome Research**, 18: 422-430, 2008.
- F Martin, A Aerts, D Ahrén, A Brun, F Duchaussoy, J Gibon, A Kohler, E Lindquist, V Pereda, A Salamov, HJ Shapiro, J Wuyts, D Blaudez, M Buée, P Brokstein, B Canbäck, D Cohen, PE Courty, PM Coutinho, EGJ Danchin, C Delaruelle, JC Detter, A Deveau, S DiFazio, S Duplessis, L Fraissinet-Tachet, E Lucic, P Frey-Klett, C Fourrey, I Feussner, G Gay, J Grimwood, PJ Hoegger, P Jain, S Kilaru, J Labbé, YC Lin, V Legué, F Le Tacon, R Marmeisse, D Melayah, B Montanini, M Muratet1, U Nehls, H Niculita-Hirzel, MP Oudot-Le Secq, M Peter, H Quesneville, B Rajashekar, M Reich, N Rouhier, J Schmutz, **T.M Yin**, M Chalot, B Henrissat, U Kües, S Lucas, Y Van de Peer, G Podila1, A Polle, PJ Pukkila, PM Richardson, P Rouzé, IR Sanders, JE Stajich, A Tunlid, G Tuskan, IV Grigoriev. The genome sequence of the basidiomycete fungus *Laccaria bicolor* provides insights into the *mycorrhizal symbiosis*, **Nature**, 452:88-93, 2008.
- Kelleher C, Chiu R, Shin H, Bosdet IE, Krzywinski MI, Fjell CD, Wilkin J, **Yin TM**, DiFazio SP, Ali J, Asano JK, Chan S, Cloutier A, Girn N, Leach S, Lee D, Mathewson CA, Olson T, O'Connor K, Prabhu A-L, Smailus DE, Stott JM, Tsai M, Wye NH, Yang GS, Zhuang J, Holt RA, Putnam NH, Vrebalov J, Giovannoni JJ, Grimwood J, Schmutz J, Rokhsar D, Jones SJM, Marra MA, Tuskan GA, Bohlmann J, Ellis BE, Ritland K, Douglas CJ, Schein JE (2007) A physical map of the highly heterozygous *Populus* genome: integration with the genome sequence and genetic map and analysis of haplotype variation. *The Plant Journal* 50: 1063-1078. A physical map of the highly heterozygous *Populus* genome: integration with the genome sequence and genetic map. **Plant Journal**. 50(6):1063-78, 2007
- Shuxian Li, **Tongming Yin**. Map and Analysis of Microsatellites in Genome of *Populus*: the First Sequenced Perennial Plant. **SCIENCE IN CHINA SERIES C-LIFE SCIENCES**, 50 (5) , 690-699, 2007
- Tuskan GA, DiFazio S, Jansson S, Bohlmann J, Grigoriev I, Hellsten U, Putnam N, Ralph S, Rombauts S, A. Salamov, J. Schein, L. Sterck, A. Aerts, R. R. Bhalerao, R. P. Bhalerao, D. Blaudez, W. Boerjan, A. Brun, A. Brunner, V. Busov, M. Campbell, J. Carlson, M. Chalot, J. Chapman, G.-L. Chen, D. Cooper, P. M. Coutinho, J. Couturier, S. Covert, Q. Cronk, R. Cunningham, J. Davis, S. Degroove, A. Déjardin, C. dePamphilis, J. Detter, B. Dirks, I. Dubchak, S. Duplessis, J. Ehling, B. Ellis, K. Gendler, D. Goodstein, M. Gribskov, J. Grimwood, A. Groover, L. Gunter, B. Hamberger, B. Heinze, Y. Helariutta, B. Henrissat, D. Holligan, R. Holt, W. Huang, N. Islam-Faridi, S. Jones, M. Jones-Rhoades, R. Jorgensen, C. Joshi, J. Kangasjärvi, J. Karlsson, C. Kelleher, R. Kirkpatrick, M. Kirst, A. Kohler, U. Kalluri, F. Larimer, J. Leebens-Mack, J.-C. Leplé, P. Locascio, Y. Lou, S. Lucas, F. Martin, B. Montanini, C. Napoli, D. R. Nelson, C. Nelson, K. Nieminen, O. Nilsson, V. Pereda, G. Peter, R. Philippe, G. Pilate, A. Poliakov, J. Razumovskaya, P. Richardson, C. Rinaldi, K. Ritland, P. Rouzé, D. Ryaboy, J. Schmutz, J. Schrader, B. Segerman, H. Shin, A. Siddiqui, F. Sterky, A. Terry, C.-J. Tsai, E. Uberbacher, P. Unneberg, J. Vahala, K. Wall, S. Wessler, G. Yang, **T.M. Yin**, C. Douglas, M. Marra, G. Sandberg, Y. Van de Peer, and D. Rokhsar (2006) The genome of black cottonwood, *Populus trichocarpa* (Torr. & Gray ex Brayshaw). **Science** 313: 1596-1604, 2006
- Wullschleger S.D, **Yin T.M.**, Difazio, S.P., Tschaplinski T.J., Gunter L.E., Davis M.F.,

- Tuskan G.A. Phenotypic variation in growth and biomass distribution for two advanced-generation pedigrees of hybrid poplar (*Populus spp.*). **CANADIAN JOURNAL OF FOREST RESEARCH-REVUE CANADIENNE DE RECHERCHE FORESTIERE** 35 (8): 1779-1789 AUG,2005
- Yin T.-M.**, S. Difazio, L. Gunter, G.A. Tuskan.
Mapping the Rust Resistant Loci *MXC3* and *MER* in *P. trichocarpa* and Assessing the Intermarker Linkage Disequilibrium in *MXC3* Region. **NEW PHYTOLOGIST** 164 (1): 95-105 OCT 2004
- Yin T.-M.**, S. P. Difazio, L. E. Gunter, D. Riemenschneider, and G.A. Tuskan.
Large-scale Heterospecific Segregation Distortion in *Populus* Revealed by a Dense Genetic Map. **THEORETICAL AND APPLIED GENETICS** 109 (3): 451-463 AUG 2004
- GA. Tuskan, LE Gunter, ZK. Yang, **TM Yin**, MM. Sewell and SP. DiFazio.
Characterization of Microsatellites Revealed by Genomic Sequencing of *Populus trichocarpa*. **CAN. J. FOR. RES.** 34(1): 85-93 (2004).
- Yin Tongming**, Li Dong, Chen Ying, Huang Minren, Wang Mingxiu
Establishment the protocol of Single Strand Conformation Polymorphism (SSCP) for mapping Expressed Sequence Tag (EST) in forest trees, **Acta Silvae Sinica**, 40(6):105-109. Nov 2004
- Yin T.M.**, Zhu QH, Huang MR, Wang MX.
History and progress of the genomics studies in the model system of perennial plant species. **ACTA PHYTOTAXONOMICA SINICA** 42 (5): 464-479 SEP 2004
- Ma C.-X. , M. Lin, R. C. Littell, **T.M. Yin** and R. Wu,
A likelihood approach for mapping growth trajectories using dominant markers in a phase-unknown full-sib family. **THEOR APPL GENET** 108 (4): 699-705 FEB2004
- Yin T.-M.**, Wang XR, Andersson B, Lerceteau E.
Nearly complete genetic maps of *Pinus sylvestris* L. (Scots pine) constructed by AFLP marker analysis in a full-sib family. **THEOR APPL GENET** 106 (6): 1075-1083 APR 2003
- Li Shuxian, **Tongming Yin**, Zou Huiyu, Ding Yulong, Huang Mingren.
Study on the genology in bamboos by the SSR primers derived from Rice, **Acta Silvae Sinica**, 38(3):42-48, 2003
- Li Shuxian, Chen Zhiyin, Yongbao Shen, **Tongming Yin**, Jisen Shi.
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- Wu RL, Ma CX, Yang MCK, Chang M, Littlell RC, Santra U, Wu SS, Yin TM, Huang MR, Wang MX. Quantitative trait loci for growth trajectories in *Populus* **GENET RES** 81 (1): 51-64 FEB 2003
- Yin T.-M.**, Zhang XY, Huang MR, Wang MX, Zeng ZB and Wu RL.
Molecular linkage maps of the *Populus* genome. **GENOME** 45 (3): 541-555 JUN 2002
- Wu RL, Ma CX, Chang MR, Littlell RC, Wu SS, **Yin TM**, Huang MR, Wang MX. A logistic mixture model for characterizing genetic determinants causing differentiation in growth trajectories. **GENET RES** 79 (3): 235-245 JUN 2002
- Zhang B, Huang MR, Han ZM, **Tongming Yin**, Pan HX, Zhu LH, Wang MX.
Identification of Markers linked to resistance locus of Marssonina Leaf Spot in poplars by Bulk Segregant Analysis (BSA), **Sinica Heridatas**: 24(5): 543-547, 2002
- Zhu QH, Pan HX, Zhuge Q, **Yin TM**, Zou HY, Huang MR. Analysis of genetic structure

- of natural populations of *Castanopsis fargesii* by RAPDs. **ACTA BOT SIN** 44 (11): 1321-1326 NOV 2002
- Xu LA, Li XJ, Pan HX, Zou HY, **Yin TM**, Huang MR.
Study on population genetic structure in *Castanopsis fargesii* with microsatellite markers. **ACTA BOT SIN** 43 (4): 409-412 APR 2001
- Yin T.-M**, Huang MR, Wang MX, Zhu LH, Zeng ZB, Wu RL.
Preliminary interspecific genetic maps of the *Populus* genome constructed from RAPD markers. **GENOME** 44 (4): 602-609 AUG 2001
- Tongming Yin**, Li SX, Zheng AB, Wang MX.
The effect of Tetramethyl ammonium chloride on PCR amplification.
Plant Resources and Environment 10(2):11-13,2001
- Zhang Xinye, **Yin Tongming**, Huang Minren, Wang Mingxiu.
Mapping in *Populus deltoides* × *P. euroamericana* by RAPD markers.
Sinica Hereditas 4:55-61,2000.
- Han ZM, **Yin TM**, Li CD, Huang MR, Wu RL.
Host effect on genetic variation of *Marssonina brunnea* pathogenic to poplars
THEOR APPL GENET 100 (3-4): 614-620 FEB 2000
- Rongling Wu, **Yin Tongming**, Huang Minren, Wang Mingxiu.
Application of marker-assisted selection to tree breeding. **Scientia Silvae Sinicae** 36(1):103-113, 2000
- Yin Tongming**, Shen Yongbao, Huang Minren.
Molecular breeding in forest trees. **Jiangsu Forest Science and Technology**, 12(1): 10-14,2000.
- Luo Guangzou, **Yin Tongming**, Shi Jisen, Huang Minren.
Study on genetic differentiation in genus *Lilidendrom*.
Plant Resources and Environment 9(2):9-13,2000.
- Yi Nengjun, Han Zhenmin, **Yin Tongming**, Cao Hanyang, Huang Minren.
Genetic variation in a disease resistant seed orchard of *Pinus elliottii* Engelm.
Scientia Silvae Sinicae, 36(1): 50-55, 2000.
- Yin T.-M**, Huang MR, Wang MX, Zhu LH, He P, Zhai WX.
Genetic mapping in a *Populus adenopoda* × *P-alba* F1 family
ACTA BOT SIN 41 (9): 956-961 SEP 1999
- Yin Tongming**, Han Zhenmin, Huang Minren, Wang Minxiu, Li Shuxian.
Some key factors in the optimization of RAPD protocol in conifers (in Chinese)
The Bulletin of Nanjing Forestry University, 23(4)7 -12, 1999
- Yin Tongming**, Han Zhenmin, Huang Minren.
A method to extract highly pure DNA from vegetation tissues of conifers.
The Bulletin of Nanjing Forestry University,22(4):87-90 ,1998
- Yin T.-M**, Sun Y, Yi NJ, Huang MR.
Genome fingerprinting analysis in *Populus deltoides*. **ACTA BOT SIN** 40 (8): 778-780 1998
- Han Zhenmin, **Yin Tongming**, Huang Minren, Li Chuandao.
Differentiation of *Massoniana brunnea* as revealed by RAPD analysis. *Acta Phytopathologica Sinica*, 28(4): 347-352, 1998.
- Yi Nengjun, **Yin Tongming**, Huang Minren, Zhu Lihuang.

Problems of QTL analysis in outbred tree species.

Progress in Biotechnology,18(3): 19-25, 1998

Yin Tongming, Wang Mingxiu.

Mapping study in poplar and pine, **Journal of Nanjing Forestry University**, 12(1):21-22,1998

Yin TM, Zhu LH, Huang MR, Wang MX.

Construction a genetic map in Masson Pine by RAPD and the megagametophytes from a single tree. **ACTA BOT SIN** 39(7): 607-612,1997

Yin Tongming, Huang Minren.

The AFLP technique and its applications in plant breeding. **Progress in Biotechnology** 17(1): 6-12 ,1997

Yin Tongming, Zhu Lihuang, Huang Minren.

Using dominant markers and F1 pedigree to construct linkage maps in forest trees, **Progress in Biotechnology**,16(4):12-168 ,1996

Yin Tongming, Huang Minren.

Genetic mapping and QTL analyzing in forest trees. **World Forestry Research** 8(3): 6-12,1995

Book Chapter

Book Title: Forest Genetics and Breeding, published by the Forestry Press of China, March, 2001, ISBN7-2759-9.

Manuscript in Reviewing:

T.M. Yin, X.Y. Zhang, L. Gunter, S.X. Li, S. Wullschleger, M.R. Huang, G.A. Tuskan. SSR primers resource developed from the mapped sequence scaffolds of *Nisqually-1* genome. Submitted to New Phytologist

Xiaohan Yang , Udaya C. Kalluri , Sara Jawdy , Lee E. Gunter , **Tongming Yin**, Timothy J. Tschaplinski , David Weston , Stan D. Wullschleger , Priya Ranjan, Gerald A. Tuskan. Comparative Analysis of F-Box Proteins in *Arabidopsis*, Poplar and Rice Suggests Differential Proteolytic Pathway Mediated through F-Box Protein between Woody Perennial and Herbaceous Annual Plants. Submit to Trends in Genetics.

H. Li, T. Liu, RC Littell, **T.M. Yin**, S. Wullschleger, GA. Tuskan, R. Wu. Multiallelic epistatic model for an outbred cross and mapping algorithm for interactive quantitative trait loci. Submit to Genetica.

Song Wu, Hongying Li, Tian Liu, Ramon C Littell, **Tongming Yin**, Stan Wullschleger, Gerald A. Tuskan, Rongling Wu. Identification Of QTLs Associated With Biomass Production In Hybrid Poplar. II. Relationship Among QTLs For Crown Architecture And Stem Growth. Submit to Genetics

Mitchell M. Sewell, Lee E. Gunter, Timothy J. Tschaplinski, **Tongming Yin**, Stephen P. DiFazio¹ and Gerald A. Tuskan. Identification Of QTLs Associated With Biomass Production In Hybrid Poplar. I. Heterosis And The Stability Of QTLs Across Contrasting Environments. Submit to Tree Genetics and Genomics.

Mitchell M. Sewell, Lee E. Gunter, Timothy J. Tschaplinski, **Tongming Yin** and Gerald A. Tuskan. Identification Of QTLs Associated With Biomass Production In Hybrid Poplar. II. Relationship Among QTLs For Crown Architecture And Stem Growth. Submit to Tree Genetics and Genomics.