

Detailed Curriculum Vitae (Last Updated Sept., 2022)

Name: Harold N. Trick

Title: Professor of Plant Pathology

Address: Department of Plant Pathology
3729 Throckmorton Plant Sciences Center
Kansas State University, Manhattan, KS 66506-5502
(785) 532-1426 (785) 532-5692 (FAX)
HNT@ksu.edu

Education:

Ph.D. Biology, Florida State University (FSU), Tallahassee, FL, 1995

M.A. Biology, SUNY, Binghamton, NY, 1989,

B.S. Biochemistry, State University of New York (SUNY), Binghamton, NY, 1985

Employment:

2010-present Professor. Department of Plant Pathology, Kansas State University, Manhattan, KS. Plant tissue culture, transformation and molecular biology of wheat, soybean and maize.

2004-2010 Associate Professor. Department of Plant Pathology, Kansas State University, Manhattan, KS. Plant tissue culture, transformation and molecular biology of wheat, soybean and maize.

1998-2004 Assistant Professor. Department of Plant Pathology, Kansas State University, Manhattan, KS. Plant tissue culture, transformation and molecular biology of wheat, soybean and maize.

1995-1998 Postdoctoral fellow, OARDC, Department of Horticulture and Crop Sciences, The Ohio State University, Wooster, OH. Plant tissue culture, transformation, and molecular biology. Supervisor: John J. Finer

1990-1995 Doctoral student, Department of Biological Sciences, FSU, Tallahassee, FL.

1989-1990 Research technician, Department of Biological Sciences, SUNY-Binghamton, Binghamton, NY. Cytochemistry, biochemistry, and ultrastructure of red algae. Supervisor: Curt M. Pueschel

1987-1989 Master's student, Department of Biological Sciences, SUNY-Binghamton, Binghamton, NY.

Professional Memberships:

2016 Gamma Sigma Delta

2010-2018 American Society of Plant Biologists

1994-present Society for In Vitro Biology (SIVB)

2000-2008 International Association for Plant Tissue Culture

1999-2003, 2017- American Phytopathological Society

Awards:

2015 Society for In Vitro Biology Fellow Award

2019 Society for In Vitro Biology Distinguished Scientist Award

2020 Society for In Vitro Biology Distinguished Service Award

National and International Service:

SBIR Grant Panel 2022

Vice chair, GDER, USW&BSI 2020-2023
 Session Convener, 2020 SIVB, Congress on In Vitro Biology-San Diego, CA
 Session Convener, 2019 SIVB, Congress on In Vitro Biology-Tampa, FL
 Long Range Planning Committee, Society of In Vitro Biology 2019-
 Secretary, Society of In Vitro Biology, 2018-2020
 Secretary, Society of In Vitro Biology, 2016-2018
 Program Chair, 2016 World Congress on In Vitro Biology
 Panel Review manager, Small Business Innovation Research Program (SBIR):
 Multifactorial Plant Health Promotion Using BPF1 Phase I and II, 2013
 competition
 Plant Biotechnology Section Chair, Society for In Vitro Biology (SIVB), 2012-2014
 Panel Review manager, Small Business Innovation Research Program (SBIR):
 Multifactorial Plant Health Promotion Using BPF1 Phase I and Phase II, 2012
 competition
 Panel Review member, Small Business Innovation Research Program (SBIR), 2011
 competition
 Grant Panel Review member, CREES-Tropical and Subtropical Agriculture Research
 (TSTAR), 2011
 Planning Committee, World Congress on In Vitro Biology (SIVB) Meeting,
 Bellevue, WA, June 3–7, 2012
 Planning Committee 2011, Society for In Vitro Biology (SIVB) Meeting, Raleigh,
 NC, June 4–8, 2011
 Associate Editor for *In Vitro Cell. Dev. Biol.-Plant* 2011-present
 Associate Editor for *Plant Cell Tissue and Organ Culture*, 2006-2009
 Planning Committee 2007, Society for In Vitro Biology (SIVB) Meeting,
 Indianapolis, IN June 9–13, 2007
 Plant Planning Committee 2007, SIVB, Congress on In Vitro Biology
 Reviewing editor for *In Vitro Cell. Dev. Biol.-Plant* 1998-2007
 Plant Program Chair 2003, SIVB, Congress on In Vitro Biology
 Grant Panel Review member, CREES-Tropical and Subtropical Agriculture Research
 (TSTAR), 2006
 Grant Panel Review member, CREES-TSTAR, 2005
 Grant Panel Review member, Arthropod and Nematode Gateways to Genomics, 2005
 Grant Panel Review member, CREES-TSTAR, 2004
 Plant Program Co-chair 2002, SIVB, Congress on In Vitro Biology
 Plant Planning Committee 2000-2004, SIVB, Congress on In Vitro Biology
 Plant Program Co-chair 2000, SIVB, Congress on In Vitro Biology

Consulting:

2014-2018 Heartland Plant Innovation, LLC

State, University, and Departmental Service:

2003- KSU Institution Biosafety Committee
2017 Plant Virology faculty search committee, chair
2017 Greenhouse technician search committee
2006-2018, 2022- KSU Institution Biosafety Committee, Chair
2015-2016 MPMI faculty search committee, chair

2014-	5 yr review committee of the Associate Director for Research and Technology Transfer, K-State Research and Extension
2013-2014	Appendix M Committee
2010-2013	Professional Science Master's in Biotechnology, ad hoc committee
2006	Horticulture Faculty Search Committee (Biotech/Crop Improvement)
2003-2006	KSU Institution Biosafety Committee
2005-	Tissue Culture and Growth Chamber Committee, Chair
2003-2005	Plant Biotechnology Action Team, Chair
2003-2007	State of Kansas Biotech Dialogue Group
2003-2008	Sponsored Grants Committee
2003-	Departmental Safety Committee

Courses Taught:

1999	spring semester, Plant Path 911: Plant Tissue Culture and Regeneration
2001	spring semester, Plant path 911: Plant Tissue Culture and Regeneration
2003	spring semester, Plant Path 911: Plant Tissue Culture and Regeneration
2005	spring semester, Plant Path 911: Plant Tissue Culture and Regeneration
2007	spring semester, Plant Path 610: Biotechnology
2007-present	fall semesters, Agronomy/Plant Path 610: Biotechnology

Student/Post-doc Advisement and visiting scientist:

Graduate students (major or co-advisor):

Sophie Filbert, MS, PlantPath	2021-
Monica Navia, PhD, PlantPath	2014-2020
Jordan Brungardt, PhD, PlantPath	2014-2020
Joseph Hong, M.S. PlantPath	2013-2015
Kerri Neugebauer, PhD, PlantPath (co-advised with J. Fellers)	2011-2016
Jessica Rupp, PhD, PlantPath (co-advised with J. Fellers)	2010- 2015
Chad Brady, MS, PlantPath	2010- 2013
Jung Hoon-Lee, Ph.D., Agron (co-advised w/ W. Schapaugh)	2008
Vanesa Segovia, PhD PlantPath (co-advised with J. Fellers)	2004- 2010
Luisa Cruz, MS, PlantPath (co-advised with J. Fellers)	2007-2009
Serena McCoy, M.S. PlantPath	2003
Martin Steinau, Ph.D. Genetics (co-advised w/ S.H. Hulbert)	2002
Wojciech Ornatowski, Ph.D. Agron (co-advised w/ W. Schapaugh)	2002

Post-docs:

Dr. Veerendra Sharma	2021-
Dr. Monica Navia	2020 to 2021
Dr. Yueying Chen	2017 to 2018
Dr. Bin Tian	2012 to 2020
Dr. Jung-Hoon Lee	2008 to 2012
Dr. Jairui Li	2005 to 2013
Dr. Zhiwu Li	2002 to 2005
Dr. Venkatappa Thara	2002
Dr. Vasant Janakiraman	1999-2003

Dr. Srimi Krishnamoorthy	2000-2001
<u>Undergraduate students</u>	
Jamie Knight	2022-
Troy Dewy	2016-
Harley Leatherman	2017-
Tara Renaut	2015-2018
Alec Maly	2015-2017
Rachel Peterson	2014-2018
Rachel Rusk	2012-2014
Joseph Hong	2012-2013
Andrew Dillon	2012
Nathen Vogt	2011-2013
Kerri Neugebaur	2011
Shae Pelowkoski	2010-2011
Dana Gude	2008-2010
Janae Skeleton	2008-2009
Larmie Garrison	2005-2009
Candice Lehr	2003-2005
Sarah Meyer	2002-2005
Dominika Ornatowski	2002-2003
Elizabeth Pritz	2001-2002
<u>Visiting Scientists</u>	
Dr. Ashraf Hussein (Eygpt)	May - Dec 2008
Dr. Lutful Hussan (Bangladesh)	May - Aug 2006
Ufuk Ackay (Turkey)	Jan to Jul 2005
Leandro Vieira Astarita (Brazil)	Nov '12 – March '13
Eliane Santarém (Brazil)	Dec '12 – Feb '13

Patents:

- Fellers, J.P., **Trick, H.N.**, Cruz, L., Rupp, J. 2020. Plant Germplasm Resistant to RNA Viruses (RNAi silencing of TaEIF4G). Issued 2/28/2020. U.S. Patent #10,633,671
- Trick, H.N.**, Fritz, A.K., Talukder, S. 2020. Expression of thermostable starch synthase genes improves the yield in heat stress. Issued 2/11/20. U.S. Patent #10,557,144.
- Fellers, J.P., **Trick, H.N.**, Cruz, L., Rupp, J. 2018. Plant Germplasm Resistant to RNA Viruses (RNAi silencing of TaEIF4E2). Issued March 6, 2018. U.S. Patent #9,909,139 B2.
- Bai G, Su Z, Tian B, Amand PS, **Trick HN.** 2017. Genes and Markers for Increasing Resistance to Fusarium Head Blight Disease and Uses Thereof. PCT Patent Application No. PCT/US17/25454
- Chen Ming-Shen, Lui, Xuming, and **Trick, H.N.** 2017. *Mayetiola destructor* susceptibility gene one (*MDS-I*) and its application in pest management, U.S. Patent #9,587,248 on March 7, 2017.
- Trick, H.N.**, Li, J., Todd, T.C., 2016. Composition and methods for Controlling Plant Parasitic Nematodes, International Application. U.S. Patent # 9,297,022.

Scofield, S.R., Gillespie, M.E., Brandt, A.S., **Trick, H.N.** Dahleen; Lynn S. 2016. A Transgene Construct to Improve Fusarium Head Blight Resistance in Wheat and Barley. 11/29/2016 U.S. Patent #9,506,081

Trick, H.N., Roe, J.L., Todd, T.C., Herman, M.A., 2010. Composition and methods for Controlling Plant Parasitic Nematodes. Issued September 28, 2010. U.S. Patent # 7,803,984.

Finer, J.J. and **Trick, H.N.** 1997. Method for transforming plant tissue by sonication. Issued December 2, 1997. U.S. Patent # 5,693,512.

Publication List:

Wei Wang, Zitong Yu, Fei He, Guihua Bai, Harold N. Trick, Alina Akhunova, and Eduard Akhunov. 2022. Multiplexed promoter and gene editing in wheat using the virus-based guide RNA delivery system. *Plant Biotechnology* doi.org/10.1111/pbi.13910 (*published online 8-7-2022*)

Monica Navia-Urrutia, Gloria Mosquera, Rebekah Ellsworth, Mark Farman, Harold N. Trick, and Barbara Valent. 2022. Effector genes in *Magnaporthe oryzae* Triticum as Potential Targets for Incorporating Blast Resistance in Wheat. *Plant Disease* DOI: 10.1094/PDIS-10-21-2209-RE (*published online 5-6-2022*)

Hui Chen, Zhenqi Su, Bin Tian, Yang Liu, Yuhui Pang, Volodymyr Kavetskyi, Harold N. Trick and Guihua Bai. 2022. Development and optimization of a *Barley stripe mosaic virus* (BSMV)-mediated gene editing system to improve Fusarium head blight (FHB) resistance in wheat. *Plant Biotechnology Journal* Jun; 20(6):1018-1020. doi: 10.1111/pbi.13819. Epub 2022 Apr 8.

Guifang Lin, Hui Chen, Bin Tian, Sunish K. Sehgal, Jingzhong Xie, Juliana Philomin, Narinder Singh, Nidhi Rawat, Sandesh Shresth, Duane Wilson, Hannah Shult, Vijay K Tiwari, Ravi P Singh, Mary Guttieri, Harold N. Trick, Robert Bowden, Jesse Poland, Guihua Bai, Bikram Gill, Sanzhen Liu. 2022. Cloning of the Broadly Effective Wheat Leaf Rust Resistance Gene *Lr42* Transferred from *Aegilops tauschii*" (reference number: NCOMMS-20-07811A) *Nature Communications: 13, 3044. DOI: 10.1038/s41467-022-30784-*

Mingxia Zhao, Zhao Peng, Yang Qin, Ling Zhang, Bin Tian, Yueying Chen, Yan Liu, Guifang Lin, a Huakun Zheng, Cheng He, Kaiwen Lv, Harold N Trick, Yunjun Liu, Myeong-Je Cho, Sunghun Park, Hairong Wei, Jun Zheng, Frank F. White, and Sanzhen Liu. 2022. Bacterium-Enabled Transient Gene Activation by Artificial Transcription Factor for Resolving Gene Regulation in Maize. *Plant Cell* (submitted 2/02/21) (online at in bioRxiv-<https://doi.org/10.1101/2021.02.05.429970>)

Wang, Wei; Tian, Bin; Pan, Qianli; Chen, Yueying ; He, Fei ; Bai, Guihua; Akhunova, Alina; Trick, Harold; Akhunov, Eduard. 2021. Expanding the range of editable targets in the wheat genome using the variants of the Cas12a and Cas9 nucleases. *Plant Biotechnology Journal*. <https://doi.org/10.1111/pbi.13669>

Lina M. Aguirre-Rojas, and Charles Michael Smith, Lawrent L. Buschman, Brian McCornack, William T. Schapaugh, Erin D. Scully, Kun Yan

- Zhu, Harold N. Trick. 2021. Inheritance of antibiosis resistance to the *Dectes* stem borer, *Dectes texanus*, in soybean PI165673. *Agronomy*. *Agronomy* 2021, 11, 738. <https://doi.org/10.3390/agronomy11040738>
- Lina M. Aguirre-Rojas, and Charles Michael Smith, Lawrent L. Buschman, Brian McCornack, William T. Schapaugh, Erin D. Scully, Kun Yan Zhu, Harold N. Trick. 2021. Comparative analyses of transcriptional responses of *Dectes texanus* LeConte (Coleoptera: Cerambycidae) larvae fed on three different host plants and artificial diet. *Scientific Reports*, 11:11448. <https://doi.org/10.1038/s41598-021-90932-x>.
- John E. McLaughlin, Noura Al Darwish, Jeffrey Garcia-Sanchez, Neerja Tyagi, Harold N. Trick, Susan McCormick, Ruth Dill-Macky, Nilgun E. Tumer. 2020. Overexpression of a non-specific lipid transfer protein enhances resistance of wheat to *Fusarium graminearum* infection. *Phytopathology*. **Published Online:** 25 Aug 2020 <https://doi.org/10.1094/PHYTO-04-20-0153-R>.
- Shubing Liu, Guihua Bai, Meng Lin, Mingcheng Luo, Dadong Zhang, Feng Jin, Bin Tian, Harold N Trick, Liuling Yan. 2020. Identification of candidate chromosome region of *Sbwm1* for *Soil-borne wheat mosaic virus* resistance in wheat. *Scientific Reports* **10**, 8119. <https://doi.org/10.1038/s41598-020-64993-3>
- Jordan Brungardt, Revathi Gonvind, and Harold N. Trick. 2020. A Simplified Method for Producing Laboratory Grade Recombinant TEV Protease from *E. coli*. *Protein Expression and Purification*. **174**, October 2020, 105662 (available online May 5, 2020) <https://doi.org/10.1016/j.pep.2020.105662>
- Yuye Wu, Tingting Guo, Qi Mu, Jinyu Wang, Xin Li, Yun Wu, Bin Tian, Ming Li Wang Guihua Bai, Ramasamy Perumal, Harold N. Trick, Scott R. Bean, Ismail M. Dweikat, Mitchell R. Tuinstra, Geoffrey Morris, Tesfaye T. Tesso, Jianming Yu, and Xianran Li. 2019. Allelochemicals targeted to balance competing selection forces in African agroecosystems. *Nature Plants* 5:1229–1236
- Jessica L. Shoup Rupp, Luisa Cruz, Harold N. Trick, and John P. Fellers. 2019. RNAi mediated silencing of endogenous wheat genes *eIF(iso)4E-2* and *eIF4G* induce resistance to multiple RNA viruses in transgenic wheat. *Crop Science* 59:2642-2651.
- Wei Wang, Quanli Pan, Bin Tian, Fei He, Yueying Chen, Alina Akhunova, Guihua Bai, Harold N. Trick, Eduard Akhunov. 2019. Gene editing of the wheat homologs of TONNEAU1-recruiting motif encoding gene affects grain shape and weight in wheat. *Plant Journal* 100: 251-264.
- Tian B, Li J, Vodkin LO, Todd TC, Finer JJ, and Trick HN. 2019. Host-derived gene silencing of parasite fitness genes improves resistance to soybean cyst nematodes in transgenic soybean with deep sequencing analysis. *Theoretical and Applied Genetics* 132:2651-2662.

- Jordan Brungardt, Timothy C. Todd, Thomas R. Oakley, and Harold N. Trick. 2019. Assessment of Soybean Cyst Nematode Bioassay Interference by Various Insecticides/miticides under Greenhouse Conditions *Plant Health Progress* 20 (2), 74-76
- Zhenqi Su, Amy Bernardo, Bin Tian, Shan Wang, Hongxiang Ma, Shibin Cai, Dongtao Liu, Dadong Zhang, Tao Li, Harold Trick, Paul St Amand, Jianming Yu, Guihua Bai. 2019. A deletion mutation in *TaHRC* confers *Fhb1* resistance to Fusarium head blight in wheat. *Nature Genetics* 51: 1099-1105
- Sujon Sarowar, Syeda Alam, Ragiba Makandar, Hyeonju Lee, Harold N. Trick, Yanhong Dong, and Jyoti Shah. 2019. Targeting the pattern-triggered immunity pathway for enhancing resistance to *Fusarium graminearum* *Molecular Plant Pathology* 20(5): 626-640.
- Wei Wang, James Simmonds, Qianli Pan, Dwight Davidson, Fei He, Abdulhamit Battal, Alina Akhunova, Harold Trick, Cristobal Uauy, Eduard Akhunov. 2018. T Gene editing and mutagenesis reveal inter-cultivar differences and additivity in the contribution of *TaGW2* homoeologues to grain size and weight in wheat. *Theoretical and Applied Genetics* 131 (11): 2463–2475.
- Kerri A. Neugebauer, Myron Bruce, Tim Todd, Harold N. Trick, and John P. Fellers. 2018. Wheat differential gene expression induced by different races of *Puccinia triticina*. *PLOS One* June 7 1-15. (<https://doi.org/10.1371/journal.pone.0198350>)
- Guorong Zhang, Mingqin Shao, Guihua Bai, Trevor Rife, Jesse Poland, Meng Lin, Tadele Kumssa, Allan Fritz, Harold Trick and Shubing Li. 2018. QTL mapping of pre-harvest sprouting resistance in a white wheat cultivar Danby. *Theoretical and Applied Genetics* 131(8):1683-1697. doi: 10.1007/s00122-018-3107-5
- Bin Tian, Mónica Navia-Urrutia, Yueying Chen, Jordan Brungardt, and Harold N. Trick (2018) “Biolistic Transformation of Wheat” in *Transgenic Plants: Methods and Protocols*, Methods in Molecular Biology, Kumar et al. (ed.) Springer. pp 117-130.
- Wei Wang, Qianli Pan, Fei He, Alina Akhunova, Shiaoman Chao, Harold Trick, Eduard Akhunov. 2018. Transgenerational CRISPR/Cas9 activity facilitates multiplex gene editing in allopolyploid wheat. *The CRISPR Journal* 1(1) 65-74.
- Bin Tian, Shyamal K. Talukder, Jianming Fu, Allan K. Fritz, and Harold N. Trick. 2018. Expression of a rice soluble starch synthase gene improved the grain yield in heat stress conditions in wheat. *In Vitro Cell. Dev. Biol.-Plant.* 54(3), 216-227.
- Bin Tian, Shichen Wang, Timothy C. Todd, Charles D. Johnson, Guiliang Tang, Harold N Trick. 2017. Genome-wide identification of soybean microRNA responsive to soybean cyst nematodes infection by deep sequencing. *BMC Genomics*. 18:572 doi 10.1186/s12864-017-3963-4.
- Nidhi Rawat, Michael O. Pumphrey, Sixin Liu, Xiaofei Zhang, Vijay K. Tiwari, Kaori Ando, Harold N. Trick, William W. Bockus, Eduard Akhunov, James A. Anderson, and Bikram S. Gill. 2016. The *Fhb1* gene of wheat encodes a chimeric lectin with agglutinin domains and a pore-forming toxin-like domain. *Nature Genetics* 48, 1576–1580.

- Bin Tian, Jiarui Li, Thomas R. Oakley, Timothy C. Todd, Harold N. Trick. 2016. Host-derived artificial microRNA as an alternative method to improve the soybean resistance to soybean cyst nematode. *Genes* 7(12), 122; doi:10.3390/genes7120122.
- Gongjun Shi, Zengcui Zhang, Timothy L. Friesen, Dina Raats, Tzion Fahima, Robert S. Brueggeman, Shunwen Lu, Harold N. Trick, Zhaohui Liu, Wun Chao, Zeev Frenkel, Steven S. Xu, Jack B. Rasmussen, Justin D. Faris. 2016. The hijacking of a disease resistance pathway by a wheat fungal pathogen leads to disease. *Science Advances* 2(10): DOI: 10.1126/sciadv.1600822.
- Jessica L. Shoup Rupp, Luisa F. Cruz, Harold N. Trick and John P. Fellers. 2016. RNAi mediated, stable resistance to *Triticum mosaic virus* in wheat. *Crop Science*. (56): 602-610 doi: 10.2135/cropsci2015.09.0577.
- Segovia, V., Bruce, M., Shoup Rupp, J., Huang, L., Bakkeren, G., **Trick, H.N.**, and Fellers, J.P. 2016. Two small secreted proteins from *Puccinia triticina* induce reduction of β -glucuronidase transient expression in wheat isolines containing *Lr9*, *Lr24*, and *Lr26*. *Canadian Journal of Plant Pathology* DOI: 10.1080/07060661.2016.1150884.
- Zhengzhi Zhang, Wanlong Li, Wei Wang, Huilan Zhu, Ghana S. Challa, Calli Bi, and **Harold N. Trick**. 2015. W3 is a new wax locus that is essential for biosynthesis of β -diketone, development of glaucousness, and reduction of cuticle permeability in common wheat. *PLOS One* DOI: 10.1371/journal.pone.0140524.
- Shubing Liu, Sunish K Sehgal, Meng Lin, Jiarui Li, **Harold N. Trick**, Bikram S Gill and Guihua Bai. 2015 Independent mis-splicing mutations in TaPHS1 causing loss of pre-harvest sprouting (PHS) resistance during wheat domestication. *New Phytologist* published online: 10 AUG 2015 doi: 10.1111/nph.13489.
- Ragiba Makandar, Vamsi J. Nalam, Zulkarnain Chowdhury, Sujon Sarowar, Guy Klossner, Hyeonju Lee, Dehlia McAfee, **Harold N. Trick**, Enrico Gobbato, Jane E. Parker, and Jyoti Shah. 2015. The combined action of ENHANCED DISEASE SUSCEPTIBILITY1 and PHYTOALEXIN DEFICIENT4 and *SENESCENCE-ASSOCIATED101* promotes salicylic acid-mediated defenses to limit *Fusarium graminearum* infection in *Arabidopsis thaliana*. *Mol. Plant-Microbe Interact.* 28 (8): 943-953; <http://dx.doi.org/10.1094/MPMI-04-15-0079-R>.
- Vamsi J. Nalam, Syeda Alam, Jantana Keereetawee, Barney Venables, Dehlia Burdan, Hyeonju Lee, **Harold N. Trick**, Sujon Sarowar, Ragiba Makandar, and Jyoti Shah. 2015. Facilitation of *Fusarium graminearum* infection by 9-lipoxygenases in *Arabidopsis* and wheat. *Mol. Plant-Microbe Interact.* 28(10): 1142–1152; <http://dx.doi.org/10.1094/MPMI-04-15-0096-R>
- Cruz, Luisa F., Shoup Rupp, Jessica L., **Trick, Harold N.** and Fellers, John P. 2014 Stable Resistance to Wheat streak mosaic virus in Wheat mediated by RNAi. *In Vitro Cellular & Developmental Biology - Plant* 50 (6): 665-67.
- Liu, X.M, Khajuria, C., Li, J., **Trick, H.N.**, Li, Huang, Gill, B.S., Reeck, G.R., Antony, G., White, F.F., Chen, M.S. 2013. Wheat Mds-1 encodes a heat-shock protein and governs susceptibility towards the Hessian fly gall midge. *Nature Communication* 4: 2070.

- <http://www.nature.com/ncomms/2013/130624/ncomms3070/full/ncomms3070.html>.
- Saintenac, Cyrille, Zhang, Wenjun, Salcedo, Andres, Rouse, Matt, Trick, Harold N., Akhunov, Eduard, Dubcovsky, Jorge. 2013. Identification of wheat gene Sr35 that confers resistance to Ug99 stem rust race group. *Science*: 341(6147): 783-786.
- Liu, Shubing, Sehgal, Sunish K., Li, Jiarui, Lin, Meng, **Trick, Harold N.**, Yu, Jianming, Gill, Bikram S. and Bai, Guihua. 2013. Cloning and Characterization of a TaMFT-Like Gene for Pre-harvest Sprouting Resistance in Wheat. *Genetics* 195: 263-273.
- Lin Z., Li X., Shannon L.M., Yeh C.T., Wang M.L., Bai G., Peng Z., Li J, Trick H.N., Clemente T.E., Doebley J., Schnable P.S., Tuinstra M.R., Tesso T.T., White F., Yu J. 2012. Parallel domestication of the *Shattering1* genes in cereals. *Nature Genetics* 44(6): 720-4.
- Wu, Y., Li, X., Xiang, W., Zhu, C., Lin, Z, Wu, Y., Li, J., Bai, G., Ming, L., Wang M.L., **Trick, H.N.**, Bean S.R., Tuinstra, M.R., Tesso, T.T., and Yu, J. 2012. Presence of Tannins in Sorghum Grains Is Conditioned by Different Natural Alleles of *Tan1*. *PNAS* 109(26): 10281-10286.
- Brady, C.R, Li, J. Todd, T.C., Oakley, T.R., and **Trick, H.N.** 2012. Compatibility of foliar insecticides and *Heterodera glycines* bioassays. *Plant Health Progress* April 9, 2012. (doi:10.1094/PHP-2012-0409-01-BR).
- Makandar, R., Nalam, V., Hyeonju Lee, H., **Trick, H.N.**, Dong, Y. and Shah, J. 2012. Salicylic acid regulates basal resistance to *Fusarium* head blight in wheat. *Mol. Plant-Microbe Interact.* 25(3): 431-439.
- Lee, J., Welti, R., Schapaugh, W.T., Roth, M., Li, J. and **Trick, H.N.** 2012. Enhanced seed viability and lipid compositional changes during natural aging by suppressing phospholipase D α in soybean seed. *Plant Biotechnology Journal* 10: 164-173.
- Li, J. Todd, T.C., and **Trick, H.N.** 2011. Biotechnological application of functional genomics towards plant-parasitic nematode control. *Plant Biotechnology Journal* 9: 936-944.
- Krishnan, H.B, Jang, S., Kim, S., Kerley, Wonseok, K. M.S. Oliver, M., and **Trick, H.N.** 2011. Biofortification of soybean meal: Immunological properties of the 27kDa γ -zein. *Journal of Agricultural and Food Chemistry* 59: 1223-1228.
- Lee, J., Welti, R., Schapaugh, W.T., and **Trick, H.N.** 2011. Phospholipid and triacylglycerol profiles modified by *PLD* suppression in soybean seed. *Plant Biotechnology Journal* 9: 359-372.
- Li, J. Todd, T.C., Oakley, T.R., Lee, J., and **Trick, H.N.** 2010. Host derived suppression of nematode reproductive and fitness genes decreases fecundity of soybean cyst nematodes. *Planta* 232:775-785.
- Smith, S.M., Steinau, M. **Trick, H.N.**, and Hulbert, S.H. 2010. Recombinant *Rp1* genes confer necrotic or nonspecific resistance phenotypes. *Molecular Genetics and Genomics* 283: 591-602.

- Li, J. Todd, T.C., and **Trick, H.N.** 2010. Rapid *in planta* evaluation of root expressed transgenes in chimeric soybean plants. *Plant Cell Reports*. 29: 113-123.
- Widholm, J.M., Finer J.J., Vodkin L.O., **Trick H.N.**, LaFayette P., Li J. and Parrott W. (2010) Soybean. In: Kempken F, Jung C (eds) Genetic modification of plants - agriculture, horticulture & forestry. Springer Verlag, Berlin, Heidelberg, New York, im Druck 64: 473-498.
- Oh, M.M., **Trick H.N.**, and Rajashekar, C.B. 2009. Secondary metabolism and antioxidants are involved in environmental adaptation and stress tolerance in lettuce. *Journal of Plant Physiology* 166(2): 180-91.
- Fu, J., Momčilović, I., Clemente, T.E., Nersesian, N., **Trick H.N.**, and Ristic, Z. 2008. Heterologous expression of a plastid EF-Tu reduces protein thermal aggregation and enhances CO₂ fixation in wheat (*Triticum aestivum*) following heat stress. *Plant Mol Biol*. 68(3): 277-88.
- Ayella, A.K., **Trick H.N.** and Wang, W. 2007. Enhancing lignan biosynthesis by over-expressing pinoresinol lariciresinol reductase in transgenic wheat. *Molecular Nutrition & Food Research* 51: 1518–1526.
- Magalhaes, J.V., Liu, J., Guimarães, C.T., Lana, U.G.P., Alves, V.M.C., Wang, Y.H., Schaffert, R.E., Hoekenga, O.A., Piñeros, M.A., Shaff, J.E., Klein, P.E., Carneiro, N.P., Coelho, C.M., **Trick, H.N.**, Kochian, L.V. 2007. A member of the multidrug and toxic compound extrusion ‘MATE’ family is a major gene that confers aluminum tolerance in sorghum. *Nature Genetics* 39 (9): 1156-1161.
- Steeves, R.M., Todd, T.C., and **Trick, H.N.** 2006. Transgenic soybeans expressing siRNAs specific to a major sperm protein gene suppress *Heterodera glycines* reproduction. *Functional Plant Biology*. 33: 991-999.
- Makandar, R., Essig, J.S., Schapaugh, M.A., **Trick, H.N.** and Shah, J. 2006. Genetically engineered resistance to Fusarium head blight in wheat by expression of *Arabidopsis* NPR1. *Mol. Plant-Microbe Interact*. 19(2): 123-129.
- Simons, K.J., Fellers, J.P., **Trick, H.N.**, Zhang, Z., Tai, Y.S., Gill, B.S., Faris, J.D. 2005. Molecular characterization of the major wheat domestication gene Q. *Genetics* 172: 547-555.
- Zhao, B., Lin, X., Poland, J., **Trick, H.N.**, Leach, J.E., and Hulbert, S.H. 2005. A Maize Resistance Gene Functions against Bacterial Streak Disease in Rice, *PNAS* 2005 102: 15383-15388.
- Li, Z. and **Trick, H.N.** 2005. Transgenic soybean producing phenylalanine-free zein protein. *National PKU News*. 17(1): 3-4.
- Li, Z. and **Trick, H.N.** 2005. Rapid method for high-quality RNA isolation from seed endosperm containing high levels of starch. *Biotechniques* 38 (6): 872-876.
- Li, Z., Meyer S., Essig J.S., Liu, Y., Schapaugh, M.A., Muthukrishnan, S., Hainline, B.E., **Trick, H.N.** 2005. High-level expression of maize γ -zein protein in transgenic soybean (*Glycine max*). *Molecular Breeding* 16: 11-20.
- Zhao, B., Ardales, E.Y., Raymundo, A., **Trick, H.N.**, Leach, J.E., and Hulbert, S.H. 2004. The *avrXo1* gene from the rice pathogen *Xanthomonas oryzae* pv.

- oryzicola* confers a nonhost defense reaction on maize with resistance gene *Rxo1*. *MPMI* 17 (7): 771-779.
- Ayliffe, M.A., Steinau, M., Park, R.F., Rooke, L., Pacheco, M.G., Hulbert, S.H., **Trick, H.N.**, Pryor, A.J. 2004. Aberrant mRNA processing prevents functional transfer of the maize *Rp1-D* rust resistance gene to wheat and barley. *MPMI* 17 (8): 853-864.
- Essig, J.S., Main, M.L., and **Trick, H.N.** 2004. Genetically Engineered Crop Plants Part II: Risks and Regulations. *AIB Technical Bulletin* 26(3): 1-8.
- Ornatowski, W., Jayaraj, J., Schapaugh, W.P., Muthukrishnan, S., Todd, T.C., and **Trick, H.N.** 2004. Introduction and constitutive expression of a tobacco hornworm (*Manduca sexta*) chitinase gene in soybean. *In Vitro Cell. Dev. Biol.-Plant* 40(3): 260-265.
- Anand, A., Muthukrishnan, S., **Trick, H.N.**, Gill, B.S. 2003. Molecular evidence for transgene silencing in wheat. *Plant Biotechnology Journal* 1: 241-251.
- Huang, L., Brooks, S.A., Li, W., Fellers, J.P., **Trick, H.N.** Gill, B.S. 2003. Map-based cloning of a rust-resistance gene from bread wheat's large polyploid genome. *Genetics* 164: 655-664.
- Anand, A., Zhou, T., **Trick, H.N.**, Gill, B.S., Bockus, W.W., Muthukrishnan, S. 2003. Greenhouse and field testing of transgenic wheat against *Fusarium graminearum*. *Journal of Experimental Botany*. 54 (384): 1101-1111.
- Trick, H.N.** 2003. Researchers collaborate to produce natural high protein diet for PKU. *National PKU News*. 14 (3): 3. (research news article).
- Bowden, R.L., **Trick, H.N.** 2002. Genetically Modified Crops Part I. Methodology and Applications. *AIB Technical Bulletin* 24 (11): 1-8.
- Jeoung, J.M., Krishnaveni, S., Muthukrishnan, S., Liang, G.H., **Trick, H.N.** 2002. Optimization of Sorghum Transformation Parameters Using Genes for Green Fluorescent Protein and β -glucuronidase as Visual Markers. *Hereditas* 137: 20-28.
- Webb, C.A., Richter, T.E., Collins, N.C., Nicolas, M., **Trick, H.N.**, Pryor, T. and Hulbert, S.H. 2002. Genetic and molecular characterization of maize *rp3* rust resistance locus. *Genetics* 162:381-394.
- Janakiraman, V., Steinau, M., McCoy, S.B., **Trick, H.N.** 2002. Recent advances in wheat transformation. *In Vitro Cell. Dev. Biol.-Plant* 38:404-414.
- Dinkins, R.D., Reddy, M.S.S., Meurer, C.A., Yan, B., **Trick, H.N.**, Thibaud-Nissen, F., Finer J.J., Parrott, W.A., Collins, G.B. 2001. Increased Sulfur Amino Acids in Soybean Plants Overexpressing the Maize 15 kDa Zein Protein. *In Vitro Cell. Dev. Biol.-Plant* 37: 742-747.
- Yu, T.T., Skinner, D.Z., Liang, G.H., **Trick, H. N.**, Huang, B. and Muthukrishnan, S. 2001. *Agrobacterium*-mediated transformation of creeping bentgrass using GFP as a reporter gene. *Hereditas* 133(3): 229-234.

- Muthukrishnan, S., G. H. Liang, **H. N. Trick**, and B. S. Gill. 2001. Pathogenesis-related proteins and their genes in cereals. *Plant Cell, Tissue and Organ Culture* 64: 93-114.
- Meurer, C.A., Dinkins, R.D., Redmond, C.T., McAllister, K.P., Tucker, D.T., Walker, D.R., Parrott, W. A., **Trick, H.N.**, Essig, J.S., Franz, H.M., Finer, J.J., Collins, G.B. 2001. Embryogenic Response of Multiple Soybean [*Glycine max* (L.) Merrill] Cultivars Across Three Locations. *In Vitro Cell. Dev. Biol.-Plant* 37:62-67.
- Gill, B.S., Li, W.L., Anand, A., Fellers, J.P., **Trick, H.N.**, Muthukrishnan, S., Liu, D.J., Chen, P.D. 2000. Analysis of genes induced in wheat spikes upon infection with *Fusarium graminearum* and their manipulation to improve wheat plant resistance to *Fusarium* head scab disease. *Proceedings of the International Symposium of Wheat Improvement for Scab Resistance*. May 5-11, 2000 Suzhou and Namjing, China 136-139.
- Trick, H.N.**, Finer, J.J. 1999. Initiation and transformation of embryogenic cultures of Ohio buckeye (*Aesculus glabra*). *In Vitro Cell. Dev. Biol.-Plant* 35:57-60.
- Trick, H.N.**, Finer, J.J. 1998. Sonication Assisted *Agrobacterium*-mediated Transformation of soybean (*Glycine max* [L.] Merr.) embryogenic suspension tissue cultures. *Plant Cell Reports* 17:482-488.
- Santarém, E.R., **Trick, H.N.**, Essig, J.S., Finer, J.J. 1998. Sonication Assisted *Agrobacterium*-mediated transformation of soybean immature cotyledons: optimization of transient expression. *Plant Cell Reports* 17:752-759.
- Trick, H.N.** Finer, J.J. 1997. SAAT: Sonication Assisted *Agrobacterium*-mediated Transformation. *Transgenic Research* 6 (5): 329-334.
- Trick, H.N.**, Dinkins, R.D., Santarém, E.R., Di, R., Samoylov, V., Meurer, C., Parrott, W.A., Finer, J.J., Collins, G.B. 1997. Recent advances in soybean transformation. *Plant Tissue Culture and Biotechnology*. 3 (1): 1-26.
- Trick, H.N.**, Bates, G.W. 1996. Bromodeoxyuridine combined with UV light and gamma irradiation promotes the production of asymmetric somatic hybrid calli. *Plant Cell Reports* 15: 986-990.
- Trick, H.N.**, Bates G.W. 1995. Electrofusion of plant protoplasts and selection and screening for somatic hybrids of *Nicotiana*, in Methods in Molecular Biology, vol. 55: "Plant Cell Electroporation and Electrofusion Protocols", (Jac Nickoloff, ed.) Humana Press, Totowa, NJ, pp.165-179.
- Trick, H.**, Zelcer, A., Bates, G.W. 1994. Chromosome elimination in asymmetric hybrids: effect of gamma dose and time in culture. *TAG* 88: 965-972.
- Pueschel C.M., Eichelberger, H.H., **Trick, H.N.** 1992. Specialized calciferous cells in the marine alga *Rhodogorgon carriebowensis* and their implications for models of red algal calcification. *Protoplasma* 166: 89-98.
- Pueschel, C.M., **Trick, H.N.**, Norris, J.N. 1992. Fine structure of the phylogenetically important marine alga *Rhodogorgon carriebowensis* (Rhodophyta, Batrachospermales?) *Protoplasma* 166: 78-88.

- Trick, H. N.**, Pueschel, C.M. 1991. Cytochemical evidence for homology of the outer cap layer of red algal pit plugs. *Phycologia* 30: 196-204.
- Pueschel, C.M., **Trick, H.N.** 1991. Unusual morphological and cytochemical features of pit plugs in *Clathromorphum circumscriptum* (Rhodophyta, Corallinales). *Br. Phycol. J.* 26: 335-342.
- Trick, H.N.**, Pueschel, C.M. 1990. Cytochemistry of pit plugs in *Bossiella californica* (Corallinales, Rhodophyta). *Phycologia* 29 (4): 403-409.