MOLLY JAHN

molly.jahn@wisc.edu
https:/jahnresearchgroup.cals.wisc.edu/
Professor, Dept. of Agronomy, University of Wisconsin-Madison
Faculty Affiliate, Nelson Institute Center for Sustainability and the Global Environment,
Faculty Affiliate, Global Health Institute
Guest Scientist, U.S. Department of Energy Los Alamos National Laboratory
Adjunct Senior Research Scientist, Columbia University
Former Deputy and Acting Under Secretary, Research, Education and Economics, USDA
12th Dean of the College of Agricultural and Life Sciences, University of Wisconsin-Madison and
Director of the Wisconsin Experiment Station 2006-2011

Taryn Otto, Executive Assistant +1 (608) 663-5173
353 Moore Hall, 1575 Linden Drive, Madison, WI 53706

EDUCATION

1988	Ph.D.	Cornell University Plant Breeding with a minor in Plant Pathology Special Committee Co-chairs: M. H. Dickson and H. M. Munger
1983	M.S.	Massachusetts Institute of Technology Course 7 Biology Thesis Supervisor: Frank Solomon
1980	B.A.	Swarthmore College with Distinction in Biology

PROFESSIONAL EXPERIENCE

11/1/17-10/31/22	Director of Strategic Outreach, NASA Harvest Consortium (25% time)
11/1-17-present	Guest Scientist, Los Alamos National Laboratory, Los Alamos, NM
10/16-10/17	Principal Investigator, UW-US National Geospatial Intelligence Agency Cooperative Research and Development Agreement
10/1/13-10/1/16	Discovery Fellow, Wisconsin Institutes of Discovery
6/1/12- 9/30/17	Joint Faculty subcontracted at 25% US Department of Energy Oak Ridge National Laboratory
2011-2014	Special Advisor to the Provost for Sustainability Sciences
2006-2011	Dean, College of Agricultural and Life Sciences, University of Wisconsin Director, Wisconsin State Agricultural Experiment Station Professor, Departments of Agronomy and Genetics, UW-Madison
1/1/10-5/31/2010	Acting Under Secretary, Research, Education and Economics, U.S. Department of Agriculture (Dean on leave)
11/9/09-5/31/2010	Deputy Under Secretary, Research, Education and Economics, U.S. Department of Agriculture (Dean on leave)
2003-2008	Professor, Departments of Plant Breeding & Genetics and Plant Biology, Cornell University, Ithaca, NY
2001-2003	Associate Professor, Departments of Plant Breeding and Plant Biology, Cornell University. Member of the Graduate Fields of Plant Breeding and Plant Biology
1997-2003	Associate Professor, Department of Plant Breeding, Cornell University

1991-1996	Assistant Professor, Department of Plant Breeding & Biometry, Cornell University
1989-1990	Research Associate, Plant Molecular Biology Program, Boyce Thompson Institute, Ithaca, NY. Principal Investigator: S.H. Howell
1988-1989	Postdoctoral Fellow, Department of Plant Pathology, University of California-Berkeley. Principal Investigators: T.J. Morris and A.O. Jackson
1983-1988	Graduate Fellow, Department of Plant Breeding and Biometry, Cornell University
1981-1983	Research Specialist, Center for Cancer Research, Biology Department, M.I.T., Cambridge, MA. Supervisor: Dr. Phillip A. Sharp
1980-81, 1983	Graduate Fellow, Biology Department, M.I.T., Cambridge, MA
1979-80, summers	Head Course Assistant in Physiology, Marine Biological Lab, Woods Hole, MA. Supervisor: Dr. Kensal Van Holde
1980, summer	Teacher, Woods Hole Children's School of Science
1977-1980	Research Assistant in Genetics, Swarthmore College, Swarthmore, PA

Selected HONORS AND AWARDS

2017 Milwaukee Public High School Excellence in Education Award

2017 All America Selections Winner 'Honeybaby F_1' Squash Variety

2017 All America Selections Winner 'Sugaretti F_1' Squash Variety

2016 University of Sydney Commencement Speaker

2015 Honorary Doctor of Science Degree, Swarthmore College

2014 Doctor of Science *Honoris Causa*, Anglia Ruskin University

2014 Saveur Award for 'Honeynut' Squash with Michael Mazourek

2013 Rothamsted Fellow, United Kingdom

2012 Fellow, Wisconsin Academy of Arts, Science and Letters

2012 USDA Secretary's Honor Award, the highest award conferred by the USDA

2011 Potato Association of America Outstanding Extension Award as part of Healthy Grown Potato Project team

2011 Wisconsin Potato and Vegetable Growers Association Industry Appreciation Award

2011 Service to Industry Award, the highest honor accorded by the Wisconsin State Cranberry Growers Association

2011 MGA Green Thumb Award 'Salt and Pepper' Cucumber

2011 Wisconsin Agricultural Research Station Award

2011 Friend of Agriculture Award, Association for Women in Agriculture

2011 UW Madison Department of Entomology Chair's Recognition Award

2009 Outstanding Scientist, Vegetable Breeding Award of Excellence, American Society of Horticultural Science

2008 Wisconsin Dairy Communicator of the Year, WI Dairy Business Association

2007 Outstanding Research Paper Award, Potato Association of America

2007 Named Madison Magazine "Eco Heroine," September Issue

2006 Fellow, American Association for the Advancement of Science

2002 National Garden Bureau Gold Medal, All America Selections, for a winter squash variety, Bush Delicata, licensed to Seminis Vegetable Seeds

1996 Young Faculty Teaching Excellence Award, College of Agriculture and Life Sciences, Cornell University

Selected NATIONAL/INTERNATIONAL PROFESSIONAL ACTIVITIES

Channel Editor, PLoS ONE *Plant Science, Food Security and Food Systems*, appointed as one of five global experts selected to open and curate scholarship in this space and provide active editorial leadership for the top open access trans-disciplinary research journal. April 15, 2019-present.

Chapter Lead Author, "Unleashing strategic latency: Disruptive technologies in a revisionist global order and implications for Special Operations Forces," SOCOM, Naval Postgraduate School and Global Center for Security Research, Lawrence Livermore Lab, April 30, 2019 to present

Managing Director, Security Focus Area, Global Center for Climate Resilience 2019-present http://www.globalccr.org/board-of-directors/

Member, SERVIR Grant Proposal Selection Panel, NASA, 2018-2019

Member, Advisory Board to the UN Assistant Secretary General and Special Representative to the Secretary General for Disaster Risk Reduction, The Honorable Mami Mizatori, Geneva, Switzerland 2018-present

Member, USDA Grant Proposal Selection Panel, Food and Agriculture Cyberinformatics Tools (FACT) Program, 2018-2019.

Member, Expert Group for the Global Assessment Report on Disaster Risk for the UN International Strategy for Disaster Risk Reduction, Lead Author for Chapter on Systemic Risk, Geneva Switzerland 2017-present

Outreach Lead, US NASA Earth Observations for Food Security and Agriculture Consortium, "Harvest," November, 2017-2022

Appointed Member, Queensland Alliance for Agriculture and Food Innovation, 2019-present; Chair of the Review Committee commissioned by the University of Queensland

Standing Member, National Centres of Excellence Selection Committee, an initiative of Canada's research granting agencies, Government of Canada, Member, Monitoring Subcommittee 2018-present

Member, Selection Panel, Interdisciplinary Research Hubs to Address Intractable Challenges, Global Challenge Research Fund, Research Councils of the UK, United Kingdom, January, 2018

Advisory Board Member, Climate-KIC (European research funder), 2017-present

Scientific Advisory Board Member, Institute for Future Environments, Queensland University of Technology 2017-present

Member and USG Special Government Employee, US NASA Applied Sciences Advisory Committee authorized by the Federal Advisory Committee Act 2016-present

Principal Investigator, US National Geospatial Intelligence Agency Cooperative Research and Development Agreement, Food Security, Food Systems and National Security Interests, 2016-2017

Member, International Life Sciences Institute Research Foundation Board of Directors, 2016 - 2022

Member of the Board of the Consortium of the International Agricultural Research Centers, 2015-2016

Member, Thematic Group on Data for Sustainable Development, Sustainable Development Solutions Network, a global initiative for the United Nations, 2015- present

Science Advisory Board, Conservation International, 2014-2019

Science Board, Santa Fe Institute, 2014-2017

Member of the Steering Group and Lead Author, UK-US Taskforce on Extreme Weather and Global Food System Resilience, The Global Food Security Programme, 2014 – 2015

Australian Observer to the G20 Meeting of Agricultural Chief Scientists, Brisbane, Australia 19-20 June 2014

Scientific Advisory Committee, Qatar National Research Foundation, 2013-2015

Member, External Advisory Board of the USAID Feed the Future Innovation Lab for Collaborative Research on Sorghum and Millet, Kansas State University, 2013-2016

Member, Executive Advisory Board, Tom Lovejoy, Chair, Global Environment and Natural Resources Institute, George Mason University, 2013-2016

Member, Laboratory Director's Science Advisory Committee, Oak Ridge National Laboratory, 2014-2018

Chair, Scientific Advisory Committee, Energy and Environmental Sciences Directorates, Department of Energy Oak Ridge National Laboratory 2011-2018

Chair, Authorship Team, Germplasm Policy Brief for the Crop Science Society of America Science Policy Committee, 2012-2013

Steering Committee, Agricultural Modeling Intercomparison & Improvement Project 2012-present

Drafting Team, Report to the President on Agricultural Preparedness and The Agriculture Research Enterprise, Executive Office of the President Office of Science and Technology Policy, President's Council of Advisors on Science and Technology March-December, 2012

Advisor, First Green Partners, 2012-2014

Review Team Australia National Sustainable Agriculture Flagship, CSIRO, Australia 27 May – 1 June, 2-2012

Member, Advisory Board, Iowa State University Plant Sciences Institute, 2012-2014

Rothamsted Research, UK Farm Platform Strategy Group, 2012-2015

UK Biomolecular and Biotechnology Scientific Research Council Crop Science Review Team December, 2012

U.S. Commissioner, Joint Commission on Sustainable Agriculture and Climate Change funded by the Climate Change, Agriculture and Food Security Program of the CGIAR, Sir John

Beddington, Chair, February, 2011-March, 2012

Member, U.S. National Research Council/National Academies of Science Board on Agriculture and Natural Resources, 2011-present

Co-editor in chief, *BMC Agriculture and Food Security* an open source journal, 2012-2015

Member, National Issues Task Force, American Society for Horticultural Sciences, 2011-present

Member, Crop Science Society of America Science Policy Committee, 2011-2014

Technical Lead, Wisconsin Animal Agriculture Sustainability Initiative, 2011-2014

Review Board, Rothamsted, Research, Institute for UK BBSRC, Harpenden, UK, September, 2011

Judge, Sustainability Award Program, Innovation Center for U.S. Dairy, 2011-2015

Member of the Board, Charles Valentine Riley Memorial Foundation, 2010-2014

Member, External Advisory Board, NSF IGERT Food Systems and Poverty Reduction, Cornell University, 2009-2012

Panelist, USDA Specialty Crops Research Initiative Inaugural Panel, August, 2008

Member, National Advisory Council, Marshfield Clinic, Marshfield, WI, 2007-2013

Member *Ex Officio*, Board of Directors, World Dairy Expo, 2006-2011

Member, Board of Directors, Asian Vegetable Research and Development Center, Tainan, Taiwan, 2006-2009; Chair of the Nominating Committee; Member of the Executive Committee

USAID Scientific Liaison Officer, Asian Vegetable Research and Development Center, Taiwan, 2003-2006

The Plant Cell Editorial Board 2003-2006
Chair, Plant-Microbe Subcommittee, 2004-2006
Executive Advisory Committee, 2004-2006

WWF/Mars, Inc./NEPAD Neglected Crops of Africa, June, 2011-2012

Member, Science Review Panel for Sustainability, Mars, Inc. Science Advisory Council, 2010-2011

Member, Technical Advisory Committee, Global Knowledge Initiative, 2011

NRSP-6 Technical Committee, USDA Potato Germplasm Bank 2006-2010

Panel Member, Review of USDA-ARS NP301 Program in Plant Genetics and Genomics 5 year Accomplishment Report 2000-2005, September 15-16, 2005

McKnight Foundation, Minneapolis, MN. Oversight Committee, Collaborative Crop Research Program, 1993-2003

USDA Cucurbit Crop Germplasm Committee, 1993-2006

USDA *Capsicum* Crop Germplasm Committee, 1998-2006, Co-Chair 2000-2006

New York Statewide Integrated Pest Management Vegetable Group, 1997-2006

Genomics and Proteomics, Genome Quebec/FRSQ, Canada, Review Panel, January 10-11, 2005

National Science Foundation Plant Genome Program, 2003-4

USDA NRI Functional Genomics of Crop Plants Review Panel, October 4-5, 2004

Expert Panelist, USDA Office of the Secretary, Application of Plant Gene Discovery to Host-Pathogen Interactions, Washington, DC, August 2003

Harris-Moran Seed Co., November 2000

Institute of Vegetables and Flowers, Chinese Academy of Agricultural Sciences, Beijing China, September 2000

Agricultural Biotechnology for Sustainable Productivity Program, Cairo, Egypt, May 2000

Consultant, *Capsicum* Improvement, Kalsec, Inc., 2004–2006, Kalamazoo, MI

Expert Witness, Hale and Dorr, LLP, October, 2001-2002

Keygene, Wageningen, The Netherlands, October 1998

USAID Agricultural Biotechnology for Sustainable Productivity. Evaluation of cucurbit breeding collaboration and biosafety procedures. Ministry of Agriculture, Egypt October, 1997

Seminis Vegetable Seeds, Inc., Vegetable improvement strategies, September, 1997-2000

McKnight Foundation. Site Visits of Grantees, Zimbabwe and Ethiopia, Collaborative Crop Research Program, April, 1997, Minneapolis, MN

Member, Delegation to China, Interdisciplinary approaches to biological control of vegetable pests. USDA-CAAS, October, 1996

Agri-Technologies Inc., Strategies to limit commercial crop production losses to disease, Six Mile Run, NC, July, 1995-1999, 2001, 2004

Winrock International Institute for Agricultural Development, AR. Agribiotechnology in Indonesia: Review of the National Biotechnology Program on Virus Protection and Resistance. Jakarta, Bogor and Lembang, Indonesia, May, 1992

Steering Committee (1994-1997), USDA Solanaceae Genome Database (Solgenes)

Chair, National Squash Breeders Group, 1992, 1994

Selected consultancies

Lloyd's of London, Emerging Risk in Global Supply Chains 2019

Porter Novelli Food 3000 event, Copenhagen, August 11-14, 2017

Centra Technologies, September 2016-September 2017

Science Advisory Board Member, Hortigenetics (East-West Seed), 2014- present

Key Opinion Leader Board for Sustainability, The Dannon Company, September, 2012-2017

Advisor, Peak Ridge Capital LLC, Madison, WI 2007-present

Summary of Accomplishments as the 12th Dean of the University of Wisconsin College of Agricultural and Life Sciences and Director of the Wisconsin Agricultural Experiment Station 2006-2011

As dean, Jahn oversaw 19 academic departments in the life sciences, agriculture and food, health, energy, and environmental sciences. During her tenure, extramural funding in the college nearly doubled, enrollments increased, donor support increased, and funding for several major college facilities was secured including the US DOE Great Lakes Bioenergy Research Center and Wisconsin

Bioenergy Initiative (~$165M from 2006-2011 with a renewal of $125M in 2012). New facilities included the Arlington Integrated Dairy Research Center ($5.1M), major renovations at the Marshfield Research Station, the Wisconsin Energy Institute for Sustainable and Renewable Energy Research ($58M), a new Biochemistry building, and major renovations to the Food Science facility, and fund raising efforts initiated for the College Dairy Plant and Meat and Muscle Lab. Jahn also founded the Wisconsin Bioenergy Initiative and obtained state support, launched the Rural Youth Scholarship Fund to address specific financial challenges faced by outstanding scholars with rural backgrounds in the State of Wisconsin, actively built strong relationships with the UW System comprehensive universities with strengths in agriculture and life sciences, developed strong relationships with the College of Menominee Nation and the Wisconsin Technical Colleges, and initiated a relationship with Vincent High School, an urban high school in Milwaukee with the intention to become an "Ag High." While serving as dean, Jahn undertook extensive outreach in the state with farm groups, Tribes and historically underserved populations, educators, business leaders and legislators. In addition, she held the first carbon neutral Big Ten football game (10/25/08) followed by a carbon neutral Big 10 Football Season (2009), and founded the Wisconsin Animal Agriculture Sustainability Initiative. Jahn initiated significant curricular and administrative improvements including partnerships that resulted in the launch of a cross-college Environmental Sciences major and reform of the college degrees to facilitate cross-college majors. She balanced the budget from nearly a $1M structural deficit, leaving the college with a budget in the black and approximately 70 new faculty hires while building upon resources obtained for the university related to the DOE GLBRC award. From November, 2009-May, 2010, Jahn provided interim leadership as Deputy and Acting Under Secretary of Research, Education and Economics at the U.S. Department of Agriculture under an Interagency Personnel Agreement while on a brief formal leave from the deanship.

Founder and Director, National Prize for agricultural innovation in cooperation with the White House and USDA, supported by the Howard G. Buffett Foundation October, 2013-2014 $215,000 in prizes

SELECTED FELLOWSHIPS, LECTURESHIPS, RESIDENCIES

US National Academies Joint Science/Documentary Film Makers Retreat, Woods Hole, MA October, 2017

Lillian Martin Fellowship, The Oxford Martin School, University of Oxford, January-May, 2015

Panelist "Cybersecurity, human behavior and terrorism" 29 August 2017 Los Alamos Nat Lab

Wisconsin Academy Fellows Forum, Wisconsin Academy of Sciences, Arts and Letters, October, 16 2014

Weston Roundtable Lecture, Nelson Institute, University of Wisconsin-Madison, September, 2014

Tel Aviv University, Visiting Faculty, Food Security Course, Manna Institute, Tel Aviv University, Tel Aviv, Israel, July, 2014

Fellow, Institute of Advanced Studies, University of Warwick, UK, March 3-7, 2014

Honors Examiner, Swarthmore College, Swarthmore, PA 2012

Adjunct Professor, Vegetable Breeding Center, Seoul National University, Seoul, Korea, 2011- 2012

M.E. John Lectureship in Rural Sociology, Penn State University, PA, April, 2011

Distinguished Lecture in Genetics, Swarthmore College, Swarthmore, PA, November, 2010

Frazier-Zaumeyer Distinguished Lectureship, Bean Improvement Cooperative, October 2007

Guest Lecturer, Szeged University, Szeged and the Central Food Institute, Agricultural Biotechnology Center, Budapest, Hungary, May 2005

Faculty, "Use of Molecular Markers in Plant Breeding," International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM)/IRTA, Cabrils, Spain, January, 2005

Bernard Lowenstein Lectureship, New Mexico State University, February, 2004

Lectureship, IVF/CAAS, Beijing and Department of Horticulture, Nanjing Agricultural University, China, January 2004

Faculty, Wageningen University Autumnschool, Wageningen, Netherlands, October, 2002

Swedish University of Agricultural Science, Opponent in Plant Molecular Biology/Plant Virology, Uppsala, Sweden, November 1999

Nusbaum Lectureship, North Carolina State University, April, 1999

Life Sciences Research Foundation Postdoctoral Fellowship, 1988-91

Awarded N.S.F. Postdoctoral Fellowship in Plant Biology, 1988

American Women in Science Foundation Award, 1986

Margaret E. Werly Graduate Fellowship, 1986-87; H. S. Denison Graduate Fellowship, 1985-86; A. D. White Supplemental Stipend, Cornell University, 1983-85

National Science Foundation Predoctoral Fellowship, 1980-81, 1983-85

Midwest Scholar, Swarthmore College, 1976-80

Selected MEETINGS AND WORKSHOPS ORGANIZED

Food Systems and National Security: The Science in Strategy co-organized with the U.S. Army War College and the Wilson Center, May 23, 2019

Roundtable on food system vulnerability co-organized with Michael Puma, Columbia University, in the Thomson Reuters Board Room, Times Sq., January 30- February 1, 2019

Report Launch, *Is the U.S. Government at risk of failure?* Panel at the Senior Executives Association Summit for the Presidential Rank Awards December 15, 2018

Navigating risk at the food/water/energy climate nexus Trento Italy supported by Climate-KIC July 6-12, 2018, approximately 60 people traveled to formalize a consortium on Knowledge Systems for Sustainability administered by the Joint Institute for Strategic Energy Analysis, US DOE National Renewable Energy Laboratory.

Report Launch, "Global Food System Stability and Risk: At the Nexus of Defense and Development." Hosted by Thomson Reuters, April 18, 2018, Washington DC.

DARPA Workshop *Food System Stability and Security,* co-organized with Hakim Weatherspoon, ISAT Study Group, March, 2018.

Food system stability and national security, USDA Economic Research Service, December, 2017

US NASA/USDA Economic Research Service, NASA Food Security and Agriculture Consortium Initiation Workshop December, 2017

Worldwide Human Geography Data Working Group Webinar *Global Mapping of Food Insecurity* July 19, 2017

Predicting Multiple Breadbasket Failure at the USDA Economic Research Service for the US National Geospatial Intelligence Agency, April 18, 2017

Chair of the Adjudication Team for the Policy Decision-making Exercise *Food Chain Reaction: A Global Food Security Game*, developed by Cargill, Mars, the World Wildlife Fund, the Center for American Progress, and the CNA Corporation, November 2015

Moderator, *Climate Change: An Investment Perspective on Risk and Mitigation*, a seminar with visiting guest Mr. Tom Steyer, Oxford Martin School, University of Oxford, May 21, 2015

Multiple Breadbasket Failure Initiative Meeting, The Frederick S. Pardee Center for the Study of Longer-Range Future, Boston University, Boston, MA November 5-6, 2014

Member of the Steering Group for the *Taskforce on Resilience of the Global Food Supply Chain to Extreme Events*, UK Science and Innovation Network/Global Food Security Programme, Willis Tower, Chicago, October 20-23, 2014

Coping with Monsoon Variability in the Agricultural Systems of South Asia: Project Design Workshop, sponsored by CIMMYT and held at George Mason University, Fairfax, VA, October 15-16, 2014

Member of the Steering Committee, *2014 Future Earth Forum,* SUNY Global Center, New York, NY, September 24, 2014

Risk and Resilience: Shared Opportunities for Science and Capital, Rockefeller Bellagio Conference Center, August 25-29, 2014

CIMMYT – ORNL Summit, CIMMYT, Mexico, May 19-23, 2014

Organizer, Official Side Event, *Visualizing the World's Food Systems* held in conjunction with the Group on Earth Observations Xth Ministerial Plenary, sponsored by the United States of America and Australia & the Commonwealth Scientific and Industrial Research Organisation (CSIRO), The Open Geospatial Consortium and the GEOGLAM Community of Practice, 14 January 2014

Workshops, *Visualizing the World's Food Systems*, World Bank New York Office, New York City, October 31, 2013; Washington, DC March 12, 2014

Theory and Knowledge Systems for Sustainability, workshop for the Knowledge Systems for Sustainability Collaborative co-sponsored by the Santa Fe Institute and the International Institute for Applied Systems Analysis, Santa Fe, NM, October 22-24, 2013

Navigating New Risk Landscapes and Opportunities in Global Food Systems, Tällberg, Sweden, June 11-13, 2013

Knowledge Systems for Sustainability/Chesapeake Bay Program/Oak Ridge National Laboratory Summit, Annapolis, MD, May 2-3, 2013

Knowledge Systems for Sustainability Partnership Meeting, The Oak Ridge National Laboratory, Oak Ridge, TN, November 26-28 2012

Knowledge Systems for Sustainable Landscape Management, hosted by the International Food Policy Research Institute June 11, 2012; hosted by USAID, June 12-13, 2012

Sustainable agriculture and food security, under the auspices of Sir John Beddington to convene global donors for the CCAFS Commission recommendations, London, UK, March 28, 2012

National Initiative for Sustainable Agriculture, co-organized with UW colleagues, Denver, CO, March 15-16, 2012; Rosement, IL, November 9-10, 2011

Sustainable Agriculture and Climate Change, a side event in conjunction with the Annual Agriculture and Rural Development Day, The World Bank, Washington, DC, February 23, 2012

Information Infrastructure for Sustainability Sciences, hosted at the Joint Institute for Global Change Research/DOE PNNL/UMD February 21-22, 2012; George Mason University, Fairfax, VA, March 21-22, 2011

Roundtable, AAAS/Charles V. Riley Memorial Foundation Roundtable: *Exemplary collaborations in agricultural research*, Washington, DC, March 15, 2011

Information Resources for Sustainability, National Council of Science and the Environment, Washington, DC, March 19, 2010

USDA Science Leadership Retreat at the National Agricultural Library, Beltsville, MD, January 25, 2010

Opportunities in Africa, Applied Sustainability Center, with colleagues at the University of Arkansas, Unilever HQ, Rogers, AR, July 17, 2009

Wisconsin Agricultural Outlook Forum in conjunction with the Wisconsin Farm Bureau, Madison, WI, January, 2008-11, 2009

The Role of Biotechnology in a Sustainable Food Supply, Agricultural Sustainability and Rural Prosperity Workshop Series, Rogers, AR, November 19, 2008

Molecular biology for agricultural research applications, Bamako, Mali with USAID and AVRDC, August 27-31, 2007

Organic Seed Partnership Project Meeting in conjunction with the Organic Seed Alliance National Meeting, Edgefield, OR, January 13, 2006

Organizing Committee and Plant-Microbe Interactions Chair, Plant Genetics, ASPB, Snowbird, UT, October, 2005

Organizing Committee, *Seeds and Breeds: A conference to reinvigorate public breeding seeds and animals for a healthy 21st century agriculture*, Ames, IA, September 11-14, 2005

Organizer, Solanaceae Workshop, Plant & Animal Genome VI-XI, San Diego, CA, 1997-2003, 2005

Chair, Resistance to pests and diseases of pepper, Xth Eucarpia Symposium on the Breeding of Eggplant and Pepper, Avignon, France September 7-12, 1998,

Capsicum Genome Mapping Workshop at Plant Genome IV, San Diego, CA, January, 1996

Cucumis Genome Mapping Workshop at Cucurbitaceae 94, South Padre Island, TX, November, 1994

Squash Breeders' National Working Group Meeting at Cucurbitaceae 94, South Padre Island, TX, November, 1994

Squash Breeders' National Working Group Meeting, Raleigh, NC, September, 1992

Symposium on Genetics and Breeding for Resistance to Viral Diseases, Ithaca, NY, March, 1989

SELECTED INVITED ACADEMIC AND OUTREACH PRESENTATIONS (since 2006 excluding USDA assignments)

Panelist, "Dealing with surprise in complex systems" at the 12th Annual Conference of the Strategic Multilayer Assessment: The evolving anatomy of conflict in a dynamically changing world, Joint Base Andrews, 21-22 May 2019

Panelist, Are declines in U.S. federal workforce capabilities putting out government at risk of failure? Senior Executive Association Annual Presidential Rank Award Summit, Washington, DC, December 12, 2018

Speaker, Wisconsin Science Festival, Madison, WI, October 13, 2018

Distinguished Lecture, Queensland University of Technology, Brisbane, Australia, June 11, 2018

Keynote Speaker, Global food system stability and risk: a report sponsored by Thomson Reuters and NASA, April 18, 2018

The NDAA 18 study (Title X, Subtitle F, Section 1075). Workshop on food security for the Defense Advanced Research Projects Agency, Arlington, VA, March 12, 2018

Keynote, Genome Editing in Agriculture, The World Bank Annual Meeting, Tyson's Corners, VA, March 5, 2018

Food security, risks and resilience in global food systems, Annual Meeting of the International Society for Disease Surveillance Workshop, Orlando, FL, January 30, 2018

Closing plenary address, 3rd International Conference on Global Food Security, Cape Town, South Africa, December 2017

Keynote, National New Zealand Complexity Institute Annual Meeting, University of Auckland, October 26, 2017

Distinguished Lecture: Queensland University of Technology, November 2017

Distinguished Lecture: Frontiers in Geoscience, Los Alamos National Lab, August 28, 2017

Panelist "Cybersecurity, human behavior and terrorism" Los Alamos National Laboratory, 29 August 2017

Panelist, Geneva Association/SCOR Association, Paris, March 8-9, 2017

Keynote Public Lecture, Society of Industrial and Applied Mathematics (SIAM) Conference on Mathematics of Planet Earth, September 30 – October 2, 2016

Plenary Keynote Speaker, European Society of Agronomy Congress, Edinburgh, Scotland September 2016

Grand Challenge Lecture, Institute for Future Environments, Queensland University of Technology, Brisbane, Australia, October 23, 2015

Keynote Speaker, Global and Local Impacts of Climate Change on Agriculture, Door County Climate Change Forum, Stone Harbor, WI, May 9, 2015

Speaker and Organizer, National Academy of Sciences' Roundtable on Public Interfaces of the Life Sciences, Washington, DC, May 5, 2015

Speaker, University of Warwick workshop on Evidence Based Decision Support for Food Security, Coventry, UK, April 17, 2015

Speaker, Food Security Roundtables, Lloyd's of London, January and March, 2015

Keynote, Food for Tomorrow, a New York Times Conference, Pocantico, NY, November 12, 2014

Speaker, MIT Technology Review EmTech Conference, Cambridge, MA, September 23, 2014

Keynote, Forum on Food4Growth, Brisbane, Australia, June 17, 2014

RD Watt Lecture, Charles Perkins Centre, University of Sydney, Australia, April 16, 2014

Lecture, DC Smith Distinguished Lecture Series, University of Wisconsin-Madison, March 12, 2014

Plenary keynote, 16th Annual Farmer Cooperative Conference, Minneapolis, MN November 7-8, 2013

Opening keynote, Smarter Agriculture: A Dialogue on Critical Data for Agriculture, Purdue meeting in Potomac, MD October 10-11, 2013

Opening plenary keynote, Agriculture Research Towards Sustainable Development Goals, Uppsala, Sweden September 25-26, 2013

Opening plenary keynote, Monsanto Scientific Fellows Colloquium, St. Louis, MO June 20, 2013

Pioneer Plant Breeding Symposium Lecture, University of California Davis, April 12, 2013

American Museum of Natural History Event for the opening of the exhibit The Global Kitchen January 10, 2013

Concluding Panel, Soils Week, Institute of Advanced Sustainability Studies, Potsdam, November 18-22, 2012

Opening keynote, 11th Annual Quivira Coalition meeting, Albuquerque, NM November, 2012

Distinguished Lecture George Bush Presidential Library, Texas A&M University November 12-13, 2012

Baker Lecture in Plant Breeding, Iowa State University June 28, 2012

Keynote, Environmental Working Group, International Association of Actuaries, LA, CA May, 2012

Kansas State University, April 11, 2012

Workshop Lead Speaker USAID Feed the Future, CSSA-SSSA-ASA Annual Meeting, San Antonio, TX October 16-20, 2011

Keynote, Workshop on Crop Breeding and Management of Agricultural Environment for Coping with Climate Change, Taiwan Agricultural Research Institute, Taichung, Taiwan, hosted by TARI and National Taiwan University, August 31, 2011

Speaker, Mad (Food) Symposium, Copenhagen, Denmark August 27, 2011

Keynote, Korean Breeding Society July 7, 2011 Muju, Korea

Keynote Plenary and Workshop Speaker, Sustainable Food Lab Summit June 29, 2011

Keynote Plenary, University of Leeds Africa College June 24, 2011

Panel Moderator, U.S. Dairy Sustainability Council, Innovation Center for U.S. Dairy, Chicago, IL, May, 2011

Speaker, Organic Agriculture and Organic Production Systems, Economic Research Service/USDA, Washington, DC March 17, 2011

Keynote, DOE Great Lakes Bioenergy Research Center Retreat, Sustainability Research Area, Kellogg Biological Station, Hickory Corners, MI February 7, 2011

Speaker, Inaugural seminar in series at the Woodrow Wilson Center for International Scholars and George Mason University on Managing the Planet, Washington, DC January 19, 2011

Speaker, Feed the Future Research Workshop, USAID, BIFAD, USDA, Purdue University, January 11-13, 2011

Briefing, Participatory Plant Breeding, USDA National Institute for Food and Agriculture, Washington, DC, January 5, 2011

Colloquium Speaker, Crop Science Society of America, Long Beach, CA, Oct. 31, 2010

Plenary Speaker, University Industry Consortium St. Louis, MO, Oct. 19, 2010

Keynote, University of Nebraska Life Sciences Faculty Retreat, Lincoln, NE, Sept. 24, 2010.

Panelist, Diary Sustainability and the Fluid Milk LCA, DMI Board Meeting, Chicago, IL, Sept. 20, 2010

Keynote, Association for the Improvement of Industrial Crops, Ft. Collins, CO, Sept. 19, 2010

Keynote, The future of agriculture, Biannual national meeting of the National Agricultural Statistical Service, Milwaukee, WI Sept. 17, 2010

Keynote, Corn and Beans Field Day, Arlington Ag Research Station, August 25, 2010

Commencement Address, Chicago High School for Agricultural Sciences, June, 2010

Panelist, View from the Top, Association of University Technology Managers, Madison, WI, July 28, 2009

Keynote Speaker, Sustainability and Sustainable Agriculture, Tomato Breeders Roundtable, Sacramento, CA June 29, 2009

Keynote, Seed Biotechnologies: Filling the Gap between the Public and Private Sector, Sacramento, CA, May 11-12, 2009

Seminar, USDA, Sustainability and Science for Sustainable Agriculture, Washington, DC, March 3, 2009

Keynote Speaker, Family Dairies USA Cooperative Annual Meeting, Madison, WI, February 14, 2009

Speaker, ASTA/ASRF/NCCPB Seed Summit, Chicago, IL, September 25-26, 2008

Speaker, Small Business Economic Development Breakfast, Madison, WI, May, 2008

Speaker, Columbia County Economic Development Corporation, Lodi, WI, May, 2008

Keynote Speaker, Organic Farming Research Foundation Benefit, Natural Products Expo, Anaheim,

CA, March, 2008

Keynote, Federation of Environmental Technologists Environment Conference, Milwaukee, WI, March, 2008

Speaker, Governor's Conference on Economic Development, Madison, WI, February, 2008

Speaker, Wisconsin University-Industry Potato Educational Meeting, Stevens Point, WI, February, 2008

Speaker, Wisconsin Arborists Association Conference, Middleton, WI, February, 2008

Presenter, Conversations in Science Series, Madison, WI, January, 2008

Keynote, Local Food Summit and Midwest Value-Added Conference, Eau Claire, WI, January, 2008

Plenary Speaker, 4th Solanaceae Congress, September, 2007, Jeju Island, Korea

Keynote, Wisconsin Cranberry School, Stevens Point, WI, January, 2007

Keynote, VitaPlus Dairy Summit, Waukesha, WI, December, 2007

Keynote, Wisconsin Farm Bureau Annual Meeting, Middleton, WI, Dec., 2007

Speaker, Grow Wisconsin Livestock Meeting, Madison, WI, December, 2007

Keynote, Federation of Co-Ops Annual Meeting, Minneapolis, MN, November, 2007

Presenter, University of Wisconsin-Madison, Wednesday Night at the Lab, Madison, WI, November, 2007

Speaker, Solanaceae Genome Workshop, Jeju, Korea, September, 2007

Keynote, Investing in Agriculture, Pewaukee, WI August, 2007

Colloquium Speaker, Organic Seed Partnership, American Society for Horticultural Science, July, 2007

Invited Speaker, Virus resistant tomatoes for West Africa, American Society for Horticultural Science, July, 2007

Plant Biology, Michigan State University, January, 2007

Keynote, International Pepper Meeting, Palm Springs, CA, May, 2006

Invited Speaker, Iowa State Plant Breeding Symposium, Ames, IA, May, 2006

Speaker, University-Industry Relations in Agricultural Biotechnology National Conference, Washington, DC, May 1, 2006

Seminar and visiting scientist, Max Planck Institute for Plant Breeding Research, Cologne, Germany, January, 2006

Postdoctoral and Senior Research Associates

Buddhika Jayahama (2017-2019) currently faculty at the US Air Force Academy
Travis Andrews (2016-2018)
Sarah Collier (2011-2017)
David Zaks (2011-2016)
Chad Kramer (2007-2009)
Shanna Moore Fellman (2003-2008)

Kede Liu (2000-2003)
Han Suk Kim (2002)
Byoung Cheorl Kang (1999-2006)
Laurie Landry (1999-2002)
Tim Porch (2001)
Kevin Livingstone (1999-2000)
Rebecca Grube (1999-2000)
Elaine Radwanski (1995-1997)
William Wintermantel (1994)
Marcia Fisher Marston (1994)
John F. Murphy (1991-1994)
Raj Nagarajan (1993-1994)
James Prince (1991-1992)

International Visiting Scholars, Honorary Fellows and Sabbatical Guests

Bill Oemichen, Former chief, WI State Disaster Preparedness, Honorary Fellow
Eva Wieltzien, ICRISAT Bamako (ret), Honorary Fellow
Fred Rattunde, ICRISAT Bamako (ret), Honorary Fellow
Tom Remington, CIP Malawi (ret), Honorary Fellow
Maryam Golnaroghi, Geneva Association, Honorary Fellow
Stanley Wood, BM Gates Foundation, Honorary Fellow
Roman Hohl, Zurich, Honorary Fellow
LT COL Jen Snow, US SOCOM SOFWERX, Honorary Fellow
Mr. Matthew A. Rose, US Department of Defense, Honorary Fellow
Mr. Mike Gremillion, US Air Force, Honorary Fellow
Jon Meiman, MD, Honorary Fellow
LT COL Max Brosig, Wisconsin Army National Guard, Honorary Fellow
Jin-Feng Chen- Tang Fellow, Nanjing Agricultural University
Felix Guzman, CIAT/IPGRI, Cali, Colombia
Ana Garces, IRTA, Zaragosa, Spain
Hanxia Li, Huazhong Agricultural University 2002-4
Suhyoung Park, Korea, 2004
KT Kim, Korean Rural Development Authority, 2003-4
Nurit Katzir, Volcani Institute, Israel, sabbatical leave 2001-2
Mahmoud Lofti, University of Tehran, Iran 2001-2002
Ilan Paran, Volcani Institute, Israel, sabbatical leave 1999-2000
Marisol Arnedo, IRTA, Spain
Eun Young Yoo, Seoul National University
Syed Monowar Hossain, Ministry of Agriculture, Bangladesh
Baojian Huang, Nanjing Agricultural University
Qingzhong Xue, Zheijiang Agricultural University

Graduate Students for Whom I Served as Major Advisor

Sarah Collier	PhD, May, 2011
Jason Cavatorta	PhD, May, 2010
Kari Perez	PhD August, 2009
Jeff Gordon	PhD August, 2009

Guilia Stellari	PhD August, 2009
Michael Mazourek	PhD May, 2008
Charles Stewart	PhD August, 2006
Inhwa Yeam	PhD August, 2006
Winnie Liu	MS August, 2006
Molly Cadle-Davidson	PhD August, 2005
James Frantz	PhD May 2003
Tim Porch	PhD August 2001
Troy Thorup	PhD August 2000
Rebecca Grube	PhD August 1999
Kevin Livingstone	PhD May 1999
Yiping Zhang	PhD January 1997
Marcie Fisher (Marston)	PhD May 1995
James Blauth	PhD August 1994
Paul Zamudia	MS May, 2011
Alfredo Bolanos	MS January 1994
Raphael Gilbert	MS August 1992

Graduate Minors

Tim Lindstrom	PhD candidate
Tyler Lark	PhD 2017
Erica Arcebal	MS 2016
Yong Fei Zhang	PhD 2007
Ling Bai	PhD 2007
Anjali Inyer	PhD 2006
Jennifer Lewis	PhD 2005
Gilda Rauscher	PhD 2005
Katy Martin Rainey	MS-PhD 2005
Ahmed Wally	PhD 2004
Chun Suk Jung	PhD 2004
Shanna Moore	PhD 2004
Carlos Mauricio La Rota	PhD 2004
Min-Jea Kim	PhD 2003
Antonio Alfonso	PhD 2003
Chih-Wei Tung	MS 2002
Clint Nesbitt	PhD 2002
Han Suk Kim	PhD 2002
Nicole Donofrio	PhD 2002
Gustavo Fermin-Munoz	PhD 2002
Fevziye Celebi	PhD 2001
Nathaniel Mitkowski	MS-PhD 2001
Tito Zuniga	PhD 2000
Aigars Brant	PhD 1999
Abdou Mbaye	PhD 1999
Jianping Ren	PhD 1999
Lara Palevitz	PhD 1999
Anton Callaway	PhD 1998
Joanne Conner	PhD 1997

Chad Williams	MS 1997
Suzanne Emery	MS 1997
Patrick Conner	PhD 1996
Yourha Kang	PhD 1999
Ali Alan	MS/PhD 1995
Richard Nyankanya	MS 1995
Zhengqiang Ma	PhD 1994
Tim Metz	PhD 1994
Winthrop Phippen	MS 1994
Darlene Hagens	MS 1992

AD HOC REVIEWER

Grants Programs

USDA Inaugural Food and Agriculture Cyberinformatics and Tools Panel, 2019
NASA/USAID SERVIR Panel 2019
Swedish Agricultural University, SLU, Quality and Impact Assessment Panel May, 2017
UK Joint Research Council Panel: Grand Challenges, 2017
Specialty Crops Research Initiative Panel, USDA
NSF Plant Genome, Integrative Biology Program
USDA NRI/CGP Plant Genome, Genetic Mechanisms, Plant Pathology, Managed Ecosystems
USDA Special Grants Program for Tropical and Subtropical Agriculture, Pacific Basin Administrative Group
USDA/ARS South Atlantic Area Regional Program
USDA Crop Germplasm Committee/National Plant Germplasm System
The Consortium for Plant Biotechnology Research, Inc.
Bush Foundation, St. Paul, MN
Levehulm Trust, UK
The John T. and Catherine D. MacArthur Foundation, Chicago, IL
External and Internal Hatch Reviewer
Natural Science and Engineering Research Council of Canada
U.S.-Israel Binational Agricultural Research and Development Program
Israeli Ministry of Agriculture
The Israel Science Foundation

Journals

PLoS ONE
The Plant Cell
PNAS
Genetics
Genome
Journal of the American Society for Horticultural Science
Phytopathology
Molecular Plant-Microbe Interactions
Plant Disease
Crop Protection
Euphytica
Genetic Resources and Crop Evolution
Plant Journal
HortScience
BBA
Theoretical and Applied Genetics
Crop Science
Molecular Breeding
J. Experimental Botany
Molecular Genetics and Genomics
Briefings in Bioinformatics

PROFESSIONAL ASSOCIATIONS AND SOCIETIES

AAAS
American Phytopathological Society
Crop Science Society of America
American Society for Horticultural Science
Sigma Xi
American Society for Plant Biology

TEACHING AND TRAINING

Courses Taught (excluding independent study)

Agron 365	Systems Thinking Fall 2020
Agron 375	Systems Thinking Fall 2018, 2019
Agron 375/Nelson Institute Capstone	Systems Thinking Fall, 2017
Guest Lecturer	Environmental Health, Entomology 200, Spring, Fall 2017
Agron 375	A Systems View of Life Fall 2016
Agron 299/699	Independent Study/ Special problems in support of Agricultural Innovation Prize Spring 2014
Gen/Hort/Ag957	Plant Breeding for 21st century Agricultural Systems 2012, 2013
Guest Lecturer	Global Health Spring, 2011, Fall, 2012, Fall, 2013
PlBr 606	Advanced Plant Genetics 3 credits Spring, 1992-99, 2000, 2004-5
PlBr 225	Plant Genetics 2 credits Spring 2002-3
PlBr 201	Plants, Genes and Global Agriculture Spring 2001
BioPl 744	Lab Rotation course Fall 2000-2003
BioPL 743	Journal Club 1 credit; Spring 2003 Current Developments in Plant Secondary Metabolism

PUBLICATIONS

Peer Reviewed Publications

Guzmán, F.A., S. Moore, M.C. de Vicenti and M.M. **Jahn**. 2019. Microsatellites to enhance characterization, conservation and breeding value of *Capsicum* germplasm. Genetic Resources and Crop Evolution. Published online 4 July 2019. DOI: 10.1007/s10722-019-00801-w.

Egan, A., Fellman, S.M., G.M. Stellari, B.-C. Kang and M.M. **Jahn**. 2019. Tandem gene duplication and recombination at the *AT3* locus in the Solanaceae, a gene essential for capsaicinoid biosynthesis in *Capsicum*. PLoS ONE 14(1): e0210510. DOI: 10.1371/journal.pone.0210510.

Paustian, K, S.M. Collier, J. Baldock, R. Burgess, J. Creque, M. DeLonge, J. Dungait, B. Ellert, S. Frank, T. Goddard, B. Govaerts, M. Grundy, M. Henning, C. Izuarralde, M. Madaras, B. McConkey, E. Porzig, C. Rice, R. Searle, N. Seavy, R. Skalsky, W. Mulhern and M.M. **Jahn**. 2019. Quantifying soil carbon measurement for agricultural soils management: From the present status to a global soil information system. Accepted Carbon Management.

Jayamaha, B., J. Matisek, K. Petit and M.M. **Jahn.** 2019. Smoke and Mirrors in the Middle East: Iranian and Saudi logics of regional interventions. Accepted Middle East Quarterly.

Ziemke, J. B. Jayamaha and M.M. **Jahn**. 2019. Crisis-Mapping and crowdsourcing in complex emergencies. In: Encyclopedia of Crisis Analysis, Oxford University Press (in press).

Jayamaha, B., J. Matisek, W. Reno, M.M. **Jahn**. 2018. Changing weather patterns, climate change and civil war dynamics: Institutions and conflicts in the Sahel. J. Diplomacy and International Relations 20(1):70-87.

Matisek, J., T Robison, B. Jayahama and M.M. **Jahn**. 2019. Extending the 'American Century': The

need for revisiting the social contract. Georgetown J Int Affairs (in press).
Venkatesh, J., J. An, W.-H. Kang, M.M. **Jahn**, B.-C. Kang. 2018. Fine mapping of the dominant potyvirus resistance gene, *Pvr7* reveals a relationship with *Pvr 4* in *Capsicum annuum*. Phytopathology 108(1):142-148. DOI: 10.1094/PHYTO-07-17-0231-R.
Perez, K., J.S. Froikin-Gordon, I.K. Adbourhamane, V. Levasseur, A.A. Alfari, M. Armel, O. Bonsu, B. Habsatou, F. Assogba-Komlan, A.A. Mbaye, M. Noussourou, L.C. Otoidobiga, L. Ouedraogo, T. Kon, M. Rojas, K.T. Gamby, R.L. Gilbertson, F. Shotkoski, and M. M. **Jahn**. 2017. Connecting smallholder vegetable producers to improved seed in West Africa. Agriculture and Food Security 6:42-56. DOI: 10.1186/s40066-017-0118-4.
Lal, R., R.H. Mohtar, A.T. Assi, R. Ray, H. Baybil and M.M. **Jahn**. 2017. Soils at the center of the food-energy-water nexus. Curr Sustainable/Renewable Energy Repts 4(3):117-129. DOI: 10.1007/s40518-017-0082-4.
Lunt, T., A.W. Jones, W.S. Mulhern, D.P.M. LeZaks, M.M. **Jahn**. 2016. Vulnerabilities to agricultural production shocks: An extreme, plausible scenario for assessment of risk for the insurance sector. Climate Risk Management. 13:1-9. DOI: 10.1016/j.crm.2016.05.001
Holdsworth, W.L., K.E. LaPlant, D.C. Bell, M.M. **Jahn** and M. Mazourek. 2016. Cultivar-based introgression mapping reveals wild species-derived *Pm-0*, the major powdery mildew resistance locus in squash. PLoS ONE 11(12): e0167715. DOI: 10.1371/journal.pone.0167715.
Venkatesh, J., M.M. **Jahn**, B.-C. Kang. 2016. Genome-wide analysis and evolution of the Pto-like protein kinase (PLPK) gene family in pepper. PLoS ONE 11(8):e0161545. DOI: 10.1371/journal.pone.0161545.
LaPlant, K.E., L.E. Wyatt, G. Moriarty, M. Fink-Brodnick, M.M. **Jahn** and M. Mazourek. 2016. Powdery Mildew Resistant pumpkin inbred lines. HortScience 51(10):1297-1300. DOI: 10.21273/HORTSCI10866-16.
Rakotondrafara, A.M., E. Arcibal, K.M. Gold, S. Flaherty, J. Jiang, M. M. **Jahn**. 2016. A mutant eIF4E confers differential resistance to Potato virus Y strains and is inherited in a dominant manner in the potato varieties 'Atlantic' and 'Russet Norkotah'. American Journal of Potato Research. 93(1):64-71. DOI 10.1007/s12230-015-9489-x.
Moffor, R.O., J. Nelson, M. **Jahn** and J. Nelson. 2015. Findings from the Caring International Research Collaborative: Using caring science to assess and support food sustainability systems for women living with HIV/AIDS in a village in Cameroon. Interdisciplinary J. of Partnership Studies. 1(1). DOI: 10.24926/ijps.v1i1.94.
Liu, W.Y., J.H. Kang, H.S. Jeong, H.J. Choi, H.B. Yang, K.T. Kim, D. Choi, G.J. Choi, M.M. **Jahn**, B.C. Kang. 2014. Combined use of bulked segregant analysis and microarrays reveals SNP markers pinpointing a major QTL for resistance to *Phytophthora capsici* in pepper. Theor. Appl. Genet. 127(11):2503-13. DOI: 10.1007/s00122-014-2394-8.
Park, S.W., J.K. Jung, E.A. Choi, J.K. Kwon, J.H. Kang, M.M. **Jahn** and B.C. Kang. 2014. An EST-based linkage map reveals chromosomal translocation in *Capsicum*. Molecular Breeding. 34(3):963-975. DOI: 10.1007/s11032-014-0089-0.
Neufeldt, H., M.M. **Jahn** (co-first authors), B.M. Campbell, J.R. Beddington, F. DeClerck, J. Gulledge, J. Hellin, M. Herrero, A. Jarvis, D. LeZaks, H. Meinke, T. Rosenstock, M. Scholes, R. Scholes, S. Vermeulen, E. Wollenberg and R. Zougmore. 2013. Beyond climate-smart agriculture: toward safe operating spaces for global food systems. Agriculture & Food Security. 2:12-18. DOI: 10.1186/2048-7010-2-12.
Lee, J.M., I. Yeam and M.M. **Jahn**. 2013. Allelic relationships at the *pvr1* locus in *Capsicum*. Euphytica. 194(3):147-424. DOI: 10.1007/s10681-013-0967-2.
Wyatt, L.E., A.R. Dunn, M. Falise, S. Reiners, M.M**. Jahn**, C.D. Smart and M. Mazourek. 2013. Red

harvest yield and fruit characteristics of *Phytophthora capsici*-resistant bell pepper inbred lines in New York. HortTechnology 23:356-363. DOI: 10.21273/HORTTECH.23.3.356.

J. R. Beddington, M. Asaduzzaman, M. E. Clark, A. Fernandez Bremauntz, M. D. Guillou, M. M. **Jahn**, E. Lin, T. Mamo, C. Negra, C. A. Nobre, R. J. Scholes, R. Sharma, N. Van Bo, J. Wakhungu. 2012. The role for scientists in tackling food insecurity and climate change. Agriculture & Food Security, 1:10. DOI: 10.1186/2048-7010-1-10.

Perez, K., I. Yeam, B.C. Kang, D.R. Ripoll, J. Kim, J.F. Murphy, M.M. **Jahn**. 2012. *Tobacco etch virus* infectivity in *Capsicum* spp. is determined by a maximum of three amino acids in the viral avirulence determinant VPg. Molecular Plant-Microbe Interactions 25:1562-1573. DOI: 10.1094/MPMI-04-12-0091-R.

Beddington J. R, M. Asaduzzaman, M. E. Clark, A. Fernandez Bremauntz, M. D. Guillou, D. J. B. Howlett, M. M. **Jahn**, E. Lin, T. Mamo, C. Negra, C. A. Nobre, R. J. Scholes, N. Van Bo, J. Wakhungu. 2012. What Next for Agriculture After Durban? Science 335:6066, 289–290. DOI: 10.1126/science.1217941.

Cavatorta, J., G. Moriarty, M. Glos, M. Henning, M. Kreitinger, M. Mazourek, H. Munger, M. M. **Jahn**. 2012. "Salt and Pepper": A disease-resistant cucumber inbred, HortScience 47, 427–428. DOI: 10.21273/HORTSCI.47.3.427.

Cavatorta, J., K.W. Perez, S.M. Gray, J. Van Eck, I. Yeam and M.M. **Jahn**. 2011. Engineering resistance to plant viral disease using a modified potato gene. Plant Biotechnology Journal 9(9):1014-1021. DOI: 10.1111/j.1467-7652.2011.00622.x. Epub 2011 Jun 12.

Miller, J.K., E.M. Herman, M.M. **Jahn** and K.J. Bradford. 2010. Strategic research, education and policy goals for seed science and crop improvement. Plant Science 179:645-652. DOI: 10.1016/j.plantsci.2010.08.006.

Stellari, G.M., M. Mazourek and M. M. **Jahn**. 2010. Contrasting modes for loss of pungency between cultivated and wild species of *Capsicum*. Heredity 104:460-471. DOI: 10.1038/hdy.2009.131.

Mazourek, M., A. Pujar, Y. Borovsky, I. Paran, L. Mueller and M. M. **Jahn**. 2009. A dynamic interface for capsaicinoid systems biology. Plant Physiology 150:1806-1821. DOI: 10.1104/pp.109.136549.

Mazourek, M., E.T. Cirulli, S. M. Collier, L. G. Landry, B-C. Kang, E. A. Quirin, J. M. Bradeen, P. Moffett and M. M. **Jahn.** 2009. The fractionated orthology of *Bs2* and *Rx*/*Gpa2* supports shared synteny of disease resistance in the Solanaceae. Genetics 182:1351-1364 www.genetics.org/cgi/rapidpdf/genetics.109.101022v1.pdf

Mazourek, M., G. Moriarty, M. Glos, M. Fink, M. Kreitinger, E. Henderson, G. Palmer, A. Chikering, D. Rumore, D. Kean, J. Myers, J. Murphy, C. Kramer and M.M. **Jahn**. 2009. Peacework: a cucumber mosaic virus-resistant early red bell pepper for organic systems. HortScience 44:1464-1467. DOI: 10.21273/HORTSCI.44.5.1464.

Wu, F., N.T. Eannetta, Y. Xu, R. Durrett, M. Mazourek, M.M. **Jahn** and S.D. Tanksley. 2009. A COSII genetic map of the pepper genome provides a detailed picture of synteny with tomato and new insights into recent chromosome evolution in the Genus *Capsicum*. Theor. Appl. Genet. 118: 1279–1293. DOI: 10.1007/s00122-009-0980-y.

Yang, H.B., W.Y. Liu, W.H. Kang, M.M. **Jahn** and B.C. Kang. 2009. Development of SNP markers linked to the *L* locus in *Capsicum* spp. by a comparative genetic analysis. Molecular Breeding 24:433-446. DOI: 10.1007/s11032-009-9304-9.

Zhuang, Y., J.-F. Chen and M.M. **Jahn**. 2009. Expression and sequence variation of the cucumber *Por* gene in the synthesized allotetraploid *Cucumis* x *hytivus*. Mol. Biol. Rep. On-line http://www.springerlink.com/content/l44q323851431471/fulltext.pdf

Cavatorta, J.R., A.E. Savage, I. Yeam, S.M. Gray and M.M. **Jahn**. 2008. Positive Darwinian

selection at single amino acid sites conferring plant virus resistance. Journal of Molecular Evolution. 67:551-559. DOI: 10.1007/s00239-008-9172-7.

Yeam, I., J.R. Cavatorta, D.R. Ripoll, B.C. Kang and M.M. **Jahn**. 2007. Functional dissection of naturally occurring amino acid substitutions in eIF4E that confers recessive potyvirus resistance in plants. Plant Cell 19(9):2913-2928. DOI: 10.1105/tpc.107.050997.

Cavatorta, J., G. Moriarty, M. Henning, M. Glos, M. Kreitinger, H.M. Munger and M.M. **Jahn**. 2007. Marketmore 97: A monoecious slicing cucumber inbred with multiple disease and insect resistances. HortScience 42:707-709. DOI: 10.21273/HORTSCI.42.3.707.

Garces-Claver, A., S. Moore Fellman, R. Gil-Ortenga, M.M. **Jahn**, M. Arnedo-Andres. 2007. Identification, validation and survey of a single nucleotide polymorphism (SNP) associated with pungency in *Capsicum* spp. Theor. Appl. Genet. 115:907-916. DOI: 10.1007/s00122-007-0617-y.

Kang B.C., I. Yeam, H. Li, K.W. Perez, and M.M. **Jahn**. 2007. Ectopic expression of a recessive resistance gene generates dominant potyvirus resistance in plants. Plant Biotech. J. 5:526-36**.** DOI: 10.1111/j.1467-7652.2007.00262.x.

Porch T.G., R. Bernsten, J.C. Rosas, M.M. **Jahn**. 2007. Climate change and the potential economic benefits of heat tolerant bean varieties for farmers in Atlántida, Honduras. Journal of Agriculture of the University of Puerto Rico 91(3-4):133-148. DOI: 10113/17497.

Stewart C., M. Mazourek, G. Stellari, M. O'Connell and M.M. **Jahn**. 2007. Genetic control of pungency in *C. chinense* via the *Pun1* locus. J. Exp. Bot. 58(5):979-991. DOI: 10.1093/jxb/erl243.

Ben Chaim, A., Y. Borovsky, M. Falise, M. Mazourek, B.C. Kang, I. Paran, I. and M.M. **Jahn**. 2006. QTL analysis for capsaicinoid content in *Capsicum*. Theor. Appl. Genet. 113:1481-1490. DOI: 10.1007/s00122-006-0395-y.

Brown, C.R., T.S. Kim, Z. Ganga, K. Haynes, D. DeJong, M.M. **Jahn**, I. Paran and W.P. DeJong. 2006. Segregation of total carotenoid in high level potato germplasm and its relationship to beta-carotene hydroxylase polymorphism. Am. J. Pot. Res. 83:365-372. DOI: 10.1007/BF02872013.

Cadle-Davidson, M.M. and M.M. **Jahn**. 2006. Differential gene expression in *Phaseolus vulgaris I* locus NILs challenged with *Bean common mosaic virus*. Theor. Appl. Genet. 112:1452-1457. DOI: 10.1007/s00122-006-0247-9.

Cadle-Davidson, M.M. and M.M. **Jahn**. 2006. Patterns of accumulation of *Bean common mosaic virus* in *Phaseolus vulgaris* genotypes nearly isogenic for the *I* locus. Ann. of Appl Biol. 148:179-185. DOI: 10.1111/j.1744-7348.2006.00059.x.

Chen, J. F., G. Ren, X.D. Luo, J. Staub and M.M. **Jahn**. 2006. Inheritance of aspartate aminotransferase (AAT) in *Cucumis* species as revealed by interspecific hybridization. Can. J. Bot. 84:1503-1507. DOI: 10.1139/b06-095.

Liu, K., H. Jiang, S.L. Moore, C.B. Watkins and M.M. **Jahn**. 2006. Isolation and characterization of a lipid transfer protein expressed in ripening fruit of *Capsicum chinense*. Planta 223:672-683. DOI: 10.1007/s00425-005-0120-0.

Lou, Q.F., J.F. Chen, L.Z. Chen, J.N. Wolokau, B.C. Kang and M.M. **Jahn**. 2006. Identification of an AFLP marker linked to a locus controlling gynoecy in cucumber and its conversion to a SCAR marker useful in plant breeding. L. Acta Horticulturae Sinica 31(2):256-261. DOI: 10.17660/ActaHortic.2007.763.10.

Luo, X.D., L.F. Dai, S.B. Wang, J.N. Wolukau, M.M. **Jahn**, and J.F. Chen. 2006. Male gamete development and early tapetal degeneration in cytoplasmic male-sterile pepper investigated by meiotic, anatomical and ultrastructural analyses. Plant Breeding 125:395-399. DOI: 10.1111/j.1439-0523.2006.01238.

Perez, K., I. Yeam, M.M. **Jahn** and B.C. Kang. 2006. Megaprimer-mediated domain swapping for construction of chimeric viruses. J. Virol. Methods 135:254-262. DOI: 10.1016/j.jviromet.2006.03.020.

Cadle-Davidson, M.M. and M.M. **Jahn**. 2005. Resistance conferred against bean common mosaic virus by the incompletely dominant *I* locus of *Phaseolus vulgaris* is active at the single cell level. Arch. of Virol. 150:2601-2608. DOI: 10.1007/s00705-005-0592-z.

Henning, M.J., H.M. Munger and M.M. **Jahn**. 2005. 'Hannah's Choice F_1': A new muskmelon hybrid with resistance to powdery mildew, Fusarium race 2 and potyviruses. HortScience 40:492-493. DOI: 10.21273/HORTSCI.40.2.492.

Henning, M.J, H.M. Munger and M.M. **Jahn**. 2005. 'PMR Delicious 51': An improved open-pollinated melon with resistance to powdery mildew. HortScience 40:261-262. DOI: 10.21273/HORTSCI.40.1.261.

Kang, B.-C., I. Yeam, J.D. Frantz, J.F. Murphy and M.M. **Jahn**. 2005. The *pvr1* locus in pepper encodes a translation initiation factor eIF4E that interacts with *Tobacco etch virus* VPg. Plant J. 42:392-405. DOI: 10.1111/j.1365-313X.2005.02381.x.

Kang, B.-C., I. Yeam and M.M. **Jahn**. 2005. Genetics of resistance to plant viruses. Ann. Rev. Phytopathology 42:581-621. DOI: 10.1146/annurev.py.28.090190.001143.

Liu, K., B.C. Kang, H. Jiang, S.L. Moore, C.B. Watkins, T.L. Setter and M.M. **Jahn**. 2005. A GH3-like gene isolated from *Capsicum chinense* L. pepper fruit is regulated by auxin and ethylene. Plant Molecular Biology 58(4):447-464. DOI: 10.1007/s11103-005-6505-4.

Qian, C.T., M.M. **Jahn**, J.E. Staub, X.-D. Luo and J.F. Chen. 2005. Meiotic chromosome behavior in an allotriploid derived from an amphidiploid x diploid mating in *Cucumis*. Plant Breeding 124:272-276. DOI: 10.1111/j.1439-0523.2005.01066.x

Stewart, C.S., B.C. Kang, K. Liu, M. Mazourek, E.Y. Yoo, S.L. Moore, B.D. Kim, I. Paran and M.M. **Jahn**. 2005. The *Pun1* gene in pepper encodes a putative acyltransferase. Plant J. 42:675-688. DOI: 10.1111/j.1365-313X.2005.02410.x.

Yeam, I., B.C. Kang, J.D. Frantz and M.M. **Jahn**. 2005. Allele-specific CAPS markers based on point mutations in resistance alleles at the *pvr1* locus encoding eIF4E in *Capsicum*. Theor. Appl. Genet. 112:178-186. DOI: 10.1007/s00122-005-0120-2.

Quirin, E.A., E. Ogundiwin, J.P. Prince, M. Mazourek, M.O. Briggs, T.S. Chlanda, K.-T. Kim, M. Falise, B.C. Kang and M. M. **Jahn**. 2005. Development of sequence characterized amplified region (SCAR) primers for the detection of *Phyto.5.2*, a major QTL for resistance to *Phytophthora capsici* Leon. in pepper. Theor. Appl. Genet. 110:605-612. DOI: 10.1007/s00122-004-1874-7.

Paran, I., J. Rouppe van der Voort, V. Lefebvre, M.M. **Jahn**, L. Landry, R. van Wijk, H. Verbakel, B. Tanyolac, C. Caranta, A. Ben Chaim, K.D. Livingstone, A. Palloix and J. Peleman. 2004. An integrated genetic map of pepper. Molecular Breeding 13:251-261. DOI: 10.1023/B:MOLB.0000022526.30914.31.

Alba, R., Z. Fei, P. Payton, Y. Liu, S.L. Moore, P. Debbie, J.S. Gordon, J.K.C. Rose, G. Martin, S.D. Tanksley, M. Bouzayen, M.M. **Jahn** and J. Giovannoni. 2004. ESTs, cDNA microarrays and gene expression profiling: tools for dissecting plant physiology and development. Plant J. 39:697-714. DOI: 10.1111/j.1365-313X.2004.02178.x.

Chen, J., X. Luo, C. Qian, M.M. **Jahn**, J.E. Staub, F. Zhuang, Q. Lou and G. Ren. 2004. *Cucumis* monosomic alien addition lines: morphological, cytological and RAPD analysis. Theor. Appl. Genet. 108:1343-1348. DOI: 10.1007/s00122-003-1546-z.

Frantz, J.D., J. Gardner, M.P. Hoffmann and M.M. **Jahn**. 2004. Greenhouse screening of *Capsicum* accessions for resistance to green peach aphid (*Myzus persicae)* HortScience 39:1332-1335. DOI: 10.21273/HORTSCI.39.6.1332.

Frantz, J.D., J. Gardner, M.P. Hoffmann and M.M. **Jahn**. 2004. Greenhouse screening of *Capsicum* accessions for resistance to European corn borer *(Ostrinia nubilalis)* HortScience 39:1336-1338. DOI: 10.21273/HORTSCI.39.6.1336.

Frantz, J.D and M.M. **Jahn**. 2004. Five independent loci each control monogenic resistance to gummy stem blight in melon (*Cucumis melo* L.). Theor. Appl. Genet. 108:1033-1038. DOI: 10.1007/s00122-003-1519-2.

Naylor, R.L., W.P. Falcon, R.M. Goodman, M.M. **Jahn**, T. Sengooba, H. Tefera and R.J. Nelson. 2004. Biotechnology in the developing world: a case for increased investments in orphan crops. Food Policy 29:15-44. DOI: 10.1016/j.foodpol.2004.01.002.

Griffiths, P.D., M.M. **Jahn** and M.H. Dickson. 2004. Cornell 501: A white mold resistant snap bean breeding line. HortScience 39:1507-1508. DOI: 10.21273/HORTSCI.39.6.1507.

Nelson, R.J., R. Naylor and M.M. **Jahn**. 2004. The role of genomics research in improvement of "orphan" crops. Crop Science 44:1901-1904. DOI: 10.2135/cropsci2004.1901.

Porch, T.G., M.H. Dickson, M.C. Long, D.R. Viands and M.M. **Jahn**. 2004. General combining ability effects for reproductive heat tolerance in snap bean. J. Agric. Univ. Puerto Rico 88(3-4):161-164.

Rose, J.K.C., S. Bashir, J.J. Giovannoni, M.M. **Jahn** and R.S. Saravanan. 2004. Tackling the plant proteome: practical approaches, hurdles and experimental tools. Plant J 39:715-733. DOI: 10.1111/j.1365-313X.2004.02182.x.

Blum, E., M. Mazourek, M.A. O'Connell, J. Curry, T. Thorup, K. Liu, M.M. **Jahn** and I. Paran. 2003. Molecular mapping of capsaicinoid biosynthesis genes and QTL analysis for capsaicinoid content in *Capsicum*. Theor. Appl. Genet. 108:79-86. DOI: 10.1007/s00122-003-1405-y.

Aluru, M.R., M. Mazourek, L.G. Landry, J. Curry, M.M. **Jahn**, and M.A. O'Connell. 2003. Differential expression of fatty acid synthase genes, *Acl*, *Fat* and *Kas*, in *Capsicum* fruit. J. Exp. Bot 54:1655-1664. DOI: 10.1093/jxb/erg176.

Lotfi, M., A.R. Alan, M.J. Henning, M.M. **Jahn** and E.D. Earle. 2003. Production of haploid and doubled haploid plants of melon (*Cucumis melo* L) for use in breeding for multiple virus resistance. Plant Cell Rept. 21:1121-1128. DOI: 10.1007/s00299-003-0636-3.

Chen, J.-F., X.D. Luo, J.E. Staub, M.M. **Jahn**, C.-T. Qian, F.-Y. Zhuang and G. Ren. 2003. An allotriploid derived from a amphidiploid × diploid mating in *Cucumis*. Euphytica 131:235-241. DOI: 10.1023/A:1023966529997.

Brown, R.N., A. Bolanos, J. Myers and M.M. **Jahn**. 2003. Inheritance of resistance to four cucurbit viruses in *Cucurbita moschata*. Euphytica 129:253-258. DOI: 10.1023/A:1022224327064.

Blum, E., K. Liu, M. Mazourek, E-Y. Yoo, M.M. **Jahn** and I. Paran. 2002. Molecular mapping of the *C* locus for presence of pungency in *Capsicum*. Genome 45:702-705. DOI:10.1139/g02-031.

Welsh, R., B. Hubbell, D.E. Erwin and M.M. **Jahn**. 2002. GM crops and the pesticide paradigm. Nature Biotechnology 20:548. DOI: 10.1038/nbt0602-548.

Celebi-Toprak, FR., S.A. Slack and M.M. **Jahn**. 2002. A new gene, *Ny $_{tbr}$*, for hypersensitivity to *Potato virus Y* from *Solanum tuberosum* maps to chromosome IV. Theor Appl Genet 104:669-674. DOI: 10.1007/s001220100749.

Porch, T.G. and M.M. **Jahn**. 2001. Effects of high temperature stress on microsporogenesis in heat-sensitive and heat-tolerant genotypes of *Phaseolus vulgaris*. Plant Cell and Environment 24:723-731. DOI: 10.1046/j.1365-3040.2001.00716.x.

Ben Chaim, A., I. Paran, R.C. Grube, M.M. **Jahn**, R. van Wijk and J. Peleman. 2001. QTL mapping of fruit-related traits in pepper (*Capsicum annuum*). Theor. Appl. Genet. 102:1016-1028. DOI: 10.1007/s001220000461.

Ben Chaim, A., R.C. Grube, M. Lapidot, M.M. **Jahn** and I. Paran. 2001. Identification of quantitative trait loci associated with resistance to cucumber mosaic virus in *Capsicum annuum*. Theor. Appl. Genet. 102:1213-1220. DOI: 10.1007/s001220100581.

Livingstone, K.D., G. Churchill and M.M. **Jahn**. 2000. Linkage mapping in populations with karyotypic rearrangements. J. Hered. 91:423-428. DOI: 10.1093/jhered/91.6.423.

Thorup, T.A., B. Tanyolac, K.D. Livingstone, S. Popovsky, I. Paran and M.M. **Jahn**. 2000. Candidate gene analysis of organ pigmentation loci in the Solanaceae. Proc. Nat. Acad. Sci. USA 97:11192-11197. DOI: 10.1073/pnas.97.21.11192.

Collmer, C.W., M.F. Marston and M.M. **Jahn**. 2000. The *I* Gene of bean: A dosage-dependent allele conferring extreme resistance, hypersensitive resistance, or spreading vascular necrosis in response to the potyvirus *Bean common mosaic virus*. Molecular Plant-Microbe Interactions 13:1266-1270. DOI: 10.1094/MPMI.2000.13.11.1266.

Anagnostou, K., M.M. **Jahn** and R. Perl-Treves. 2000. Inheritance and linkage analysis of resistance to zucchini yellow mosaic virus, watermelon mosaic virus, papaya ringspot virus and powdery mildew resistance in *Cucumis melo* L. Euphytica 116:265-270. DOI: 10.1007/BF00223299.

Grube, R.C., Y. Zhang, J.F. Murphy, F. Loaiza-Figueroa, R. Provvidenti and M.M. **Jahn**. 2000. A new source of resistance to *Cucumber mosaic virus* in *Capsicum frutescens*. Plant Disease 84:885-891. DOI: 10.1094/PDIS.2000.84.8.885.

Grube, R.C., J.R. Blauth, M. Arnedo, C. Caranta and M.M. **Jahn**. 2000. Identification and comparative mapping of a dominant potyvirus resistance gene cluster in *Capsicum*. Theor. Appl. Genet. 101:852-859. DOI: 10.1007/s001220051552.

Jahn, M.M., I. Paran, K. Hoffmann, E.R. Radwanski, K.D. Livingstone, R.C. Grube, E. Aftergroot, M. Lapidot and J. Moyer. 2000. Genetic mapping of the *Tsw* locus for resistance to tomato spotted wilt tospovirus in *Capsicum* and its relationship to the *Sw-5* allele for resistance to the same pathogen in tomato. Molecular Plant-Microbe Interactions 13:673-682. DOI: 10.1094/MPMI.2000.13.6.673.

Grube, R.C., E.R. Radwanski and M.M. **Jahn**. 2000. Comparative genetics of disease resistance within the Solanaceae. Genetics 155:873-887.

Zuniga, T., J.P. Jantz, T.A. Zitter and M.M. **Jahn**. 1999. Monogenic dominant resistance to gummy stem blight in two melon (*Cucumis melo* L.) accessions. Plant Disease 83:1105-1107.

Livingstone, K.D., V. Lackney, J.R. Blauth, R. Van Wijk and M.M. **Jahn**. 1999. Genome mapping in *Capsicum* and the evolution of genome structure in the Solanaceae. Genetics 152:1183-1202.

Silberstein, L., I. Kovalski, R. Huang, K. Anagnostou, M.M. **Jahn** and R. Perl-Treves. 1999. Molecular variation in melon (*Cucumis melo* L.) as revealed by RFLP and RAPD markers. Scientia Horticulturae 79:101-111.

Murphy, J.F., J.R. Blauth, K.D. Livingstone, V.K. Lackney and M.M. **Jahn**. 1998. Genetic mapping of the *pvr1* Locus in *Capsicum* spp. and evidence that distinct potyvirus resistance loci control responses that differ at the whole plant and cellular levels. Molecular Plant Microbe Interactions 11:943-951.

Kyle, M.M. and A. Palloix. 1997. Proposed revision of nomenclature for potyvirus resistance genes in *Capsicum*. Euphytica 97:183-188.

Prince, J.P., Y. Zhang, E.R. Radwanski and M.M. **Kyle**. 1997. A high-yielding and versatile DNA extraction protocol for *Capsicum*. HortScience 32:937-939.

Zhang, Y., M.M. **Kyle**, K. Anagnostou and T.A. Zitter. 1997. Screening melon (*Cucumis melo)* for resistance to Gummy Stem Blight in the greenhouse and field. HortScience 32:117-121.

Collmer, C.W., M.F. Marston, S.M. Albert, S. Bajaj, H.A. Maville, S.E. Ruuska, E.J. Vesely and M.M. **Kyle**. 1996. The nucleotide sequence of the coat protein gene and 3' untranslated region of azuki mosaic potyvirus, a member of the bean common mosaic subgroup. Mol. Plant-

Microbe Int. 9:758-761.
Valkonen, J.P.T., M.M. **Kyle** and S. Slack. 1996. Comparison of resistance to potyviruses within Solanaceae: infection of potatoes with tobacco etch potyvirus and peppers with potato A and Y potyviruses. Ann. Appl. Biol. 129:25-38.
Hoffmann, M.P., R.W. Robinson, M.M. **Kyle** and J.J. Kirkwyland. 1996. Defoliation and infestation of *Cucurbita pepo* genotypes by diabroticite beetles. HortScience 31:439-442.
Fisher, M.L. and M.M. **Kyle**. 1996. Inheritance of resistance to potyviruses in *Phaseolus vulgaris* L. IV. Inheritance, linkage relations, and environmental effects of systemic resistance to four potyviruses. Theor. Appl. Genet. 92:204-208.
Munger, H.M., Y. Zhang, S.L. Fenton and M.M. **Kyle**. 1995. Leaf blower adapted for large scale inoculation of plants with mechanically-transmitted viruses. HortScience 30:1266-1267.
Murphy, J.F. and M.M. **Kyle**. 1995. Alleviation of restricted systemic movement of pepper mottle potyvirus in *Capsicum annuum* cv. 'Avelar' by coinfection with a cucumovirus. Phytopathology 85:561-566.
Prince, J.P., V.K. Lackney, C. Angeles, J.R. Blauth and M.M. **Kyle**. 1995. A survey of DNA polymorphism within the genus *Capsicum* and the fingerprinting of pepper cultivars. Genome 38:224-231.
Fisher, M.L. and M.M. **Kyle**. 1994. Inheritance of resistance to potyviruses in *Phaseolus vulgaris* L. III. Cosegregation of phenotypically similar dominant resistance to nine potyviruses. Theor. Appl. Genet. 89:818-823.
Murphy, J.F. and M.M. **Kyle**. 1994. Isolation and viral infection of *Capsicum* leaf protoplasts. Plant Cell Rept. 13:397-400.
Gilbert, R.Z., M.M. **Kyle**, H.M. Munger and S.M. Gray. 1994. Inheritance of resistance to watermelon mosaic virus in *Cucumis melo*. HortScience 29:107-110.
Kyle, M.M. and R. Provvidenti. 1993. Inheritance of resistance to potyviruses in *Phaseolus vulgaris* L. II. Linkage relations and utility of a dominant gene for lethal systemic necrosis to soybean mosaic virus. Theor. Appl. Genet. 86:189-196.
Valyasevi, R., M.M. **Kyle**, P. Christie and K. Steinkrauss. 1990. Plasmids of *Bacillus popilliae*. J. Invertebrate Pathol. 56:286-288.
Kyle, M.M. and M.H. Dickson. 1988. Linkage of hypersensitivity to five viruses with the *B* Locus in *Phaseolus vulgaris* L. J. Hered. 79:308-311.
Kyle, M.M. and R. Provvidenti. 1987. Inheritance of resistance to potato y viruses in *Phaseolus vulgaris* L. I. Two independent genes for resistance to watermelon mosaic virus 2. Theor. Appl. Genet. 74:595-600.
Miller, M.D. and F. Solomon. 1984. Kinetics and intermediates of marginal band reformation: Evidence for peripheral determinants of microtubule organization. J. Cell Biol. 99:70-75s.

Submitted

Gardeazabal, A, T. Lunt, M.M. **Jahn**, N. Verhulst, J. Hellin and B. Govaerts. Knowledge management for innovation in agrifood and health systems: a conceptual framework. Submitted to Knowledge Management Research and Practice.
Rakontondrafara, A., P. Gutierrez Sanchez, L. Babujee, H. Jaramillo Mesa, M. Gannon, D. Halterman, M.M. **Jahn** and J. Jiang. Overexpression of a modified eIF4E regulates Potato virus Y resistance at the transcriptional level in potato. Submitted to Molecular Plant Microbe Interactions.

In Final Preparation

Collier, S.M., C. Smeale, S.M. Green, A. Inman, H. Kendall, T. Bearder, D.W. Hopkins, M.M. **Jahn** and J.A.J. Dungait. Effect of farm management on soil health: Case studies from Southwest, England. In preparation for Soil Use and Management.

Books

Popp, J., **Jahn**, M.M., Matlock, M. and N.P. Kemper, eds. 2012. *The Role of Biotechnology in a Sustainable Food Supply.* Cambridge University Press, New York, NY.

Kyle, M.M., ed. 1993. *Resistance to Viral Diseases of Vegetables: Genetics and Breeding* Timber Press, Portland OR.

Soil Organic Carbon Quantification Initiative Website

Our research group with support from the TomKat Educational Foundation led a community effort to assess the status of research and its relevance for carbon management in agricultural soils. Eleven white papers were produced and are maintained on our website as open white papers. https://jahnresearchgroup.cals.wisc.edu/research-2/soils-initiative/

Book Chapters

Toregas, C., J. Santos, M.M. **Jahn**, W. Oemichen, B. Rimestad, W.K. Hutchison and B. Jayahama. 2019. Cybersecurity and its cascading effect on societal systems," Chapter 4.2 In: Global Assessment Report 19, in press.

Jahn, M.M., S. Williams, K. Dunlop, F. Gaupp, M. Obersteiner. 2019. "Systemic risk, the Sendai framework and the 2030 Agenda." Chapter 2 In: Global Assessment Report on Disaster Risk Reduction 19, UNISDR.

Hartemink, A., A. Raster and M.M. **Jahn**. 2012. The evaluation and reporting of soils in sustainable agriculture and food systems. Issues in Environmental Science and Technology No. 35 Soils and Food Security (R.E. Hester and R.M. Harrison, eds.). Published by the Royal Society of Chemistry. www.rsc.org.

Cavatorta, JR; Gray, SM; M.M. **Jahn**. 2012 Biotechnology and the control of viral diseases of crops In: Role of Biotechnology in a Sustainable Food Supply, Eds. J.S. Popp, M.M. **Jahn**, M.D. Matlock and N.P. Kemper. pp 77-89. Cambridge University Press, UK

Cavatorta, J.R., S.M. Gray and M.M. **Jahn**. 2011. Transgenic resistance in plants. In: Proceedings, Biotechnology and Sustainability, Cambridge University Press

Paran, I., A. Ben Chaim and M.M. **Jahn**. 2005. *Capsicum*: Evolution, Domestication, Genetics and Genomics. In: Vegetable Crops Series.

Jahn, M.M., H.M. Munger and J.M. McCreight. 2002. Breeding cucurbit crops for powdery mildew resistance. In: Powdery Mildews: A compendium. APS Press.

Tanksley, S.D., J.P. Prince and M.M. **Kyle**. 1993. Linkage map of pepper (*Capsicum annuum*) (2N = 24). In: Genetic Maps, Sixth Edition. O'Brian, ed. Cold Spring Harbor Laboratory Press.

Kyle, M.M. and R. Provvidenti. 1993. Genetics of broad spectrum viral resistance in bean and pea. pp. 153-166. In: Resistance to Viral Diseases of Vegetables: Genetics and Breeding. M.M. Kyle, ed. Timber Press, Portland OR.

McCouch, S.M., P. Ronald and M.M. **Kyle**. 1993. Biotechnology and Crop Improvement for Sustainable Agricultural Systems. pp. 157-191. In: Crop Improvement for Sustainable Agricultural Systems. M.B. Callaway and F. Forella, eds. University of Nebraska Press.

Superak, T.H., B.T. Scully, M.M. **Kyle** and H.M. Munger. 1993. Interspecific Transfer of Viral Resistance. pp. 217-236. In: Resistance to Viral Diseases of Vegetables: Genetics and

Breeding. M.M. Kyle, ed. Timber Press, Portland OR.

Munger, H.M., M.M. **Kyle** and R.W. Robinson. 1992. Cucurbits. pp.42-56. In: Historical Review of Traditional Crop Breeding Practices. Group of National Experts on Safety in Biotechnology Working Group. Directorate for Science Technology and Industry/Committee for Scientific and Technological Policy. Paris: Organization for Economic Cooperation and Development. DSTI/STP/BS (92)5/REV1.

Op-ed

Jahn, M.M., G.F. Treverton and D.A. Bray 2019. America is facing a government workforce crisis far great than the shutdown—and it's putting our nation in danger. TIME Op-ed January 23, 2019. http://time.com/5511721/government-shutdown-federal-workers/.

Selected Peer-Reviewed Reports

"Evolving risks in global food supply" Prepared for Lloyd's of London by a research team led by Duncan Swift and Molly **Jahn**. Lloyd's Emerging Risks Report 2019: Understanding Risk. https://www.lloyds.com/news-and-risk-insight/risk-reports/library/understanding-risk/evolving-risks-in-global-food-supply

Jahn, M.M., W. Oemichen, G.F. Treverton, S. David, M.A. Rose, M.A. Brosig, B. Jayamaha, W.K. Hutchison, B. Rimestad. 2019. Cyber Risk and security implications in smart agriculture and food systems. In review as Thomson Reuters Research Report.

Brosig, COL M., COL P. Frawley, A. Hill, M.M. **Jahn**, COL M. Marsicek, A. Paris, M. Rose, COL A. Shambaljamts, N. Thomas. 2019. Implications of climate change for the U.S. Army. US Army War College Occasional Paper published 23 May 2019.

Jahn, M.M., G.F. Treverton, D.A. Bray, B. Jayamaha, W. Valdes, B. Carnes, W. Hutchison, W.S. Mulhern. 2018. "Are declines in U.S. federal workforce capabilities putting our government at risk of failure?" Senior Executive Association (Washington, DC) occasional paper. https://cdn.ymaws.com/seniorexecs.org/resource/resmgr/government_at_the_risk_of_fa.pdf

Jahn, M.M., B. Jayamaha, W.S. Mulhern, D.E. Ross, M.A. Rose, G.F. Treverton. 2018. "Global Food System Stability and Risk: At the Nexus of Defense and Development." Thomson Reuters Research Report. https://www.thomsonreuters.com/content/dam/ewp-m/documents/thomsonreuters/en/pdf/reports/globalfoodsystemstabilityandrisk.pdf

Golnaraghi, M., P. Nunn, R. Muir-Wood, J. Guin, D. Whitaker, J. Slingo, G. Asrar, I. Branagan, G. Lemcke, C. Souch, M. Jean, A. Allman, M.M**. Jahn**, D.N. Bresch, P. Khalil and M. Beck. 2018. "Managing physical climate risk: leveraging innovations in catastrophe risk modeling." Geneva Association. https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/ga_risk_modelling_18112018.pdf

Janetos, A., Justice, C., **Jahn,** M., Obersteiner, M., Glauber, J., Mulhern, W. "The Risks of Multiple Breadbasket Failures in the 21st Century: A Science Research Agenda." 2017. Pardee Center Research Report, The Frederick S. Pardee Center for the Study of the Longer-Range Future, Boston University.

"Food System Shock: The Insurance Impacts of Acute Disruption to the Global Food Supply." 2015. Emerging Risk Report, Lloyd's of London. (Prepared for Lloyd's by a research team led by

Aled Jones and Molly **Jahn)**.

"Extreme weather and resilience of the global food system." 2015. Final Project Report from the UK-US Taskforce on Extreme Weather and Global Food System Resilience. The Global Food Security Programme. (M. **Jahn**, one of the lead authors).

"Solutions for Sustainable Agriculture and Food Systems". Technical Report for the Post-2015 Development Agenda. Sustainable Development Solutions Network, a global initiative for the United Nations. Prepared by the Thematic Group on Sustainable Agriculture and Food Systems of the Sustainable Development Solutions Network, 18 September 2013. (M. **Jahn**, working group member).

"UN Global Compact Sustainable Agriculture Business Principles." Sustainable Agriculture Team, United Nations Global Compact Office. July 2013. (M. **Jahn**, working group member).

"Report to the President on Agricultural Preparedness & the Agriculture Research Enterprise," by the President's Council of Advisors on Science and Technology. 2012. (M. **Jahn**, working group member).

Beddington J, Asaduzzaman M, Clark M, Fernández A, Guillou M, **Jahn** M, Erda L, Mamo T, Van Bo N, Nobre CA, Scholes R, Sharma R, Wakhungu J. 2012. Achieving food security in the face of climate change. Final report from the Commission on Sustainable Agriculture and Climate Change. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available online at: www.ccafs.cgiar.org/commission.

PLANT VARIETY PROTECTION CERTIFICATES

Bugle, powdery mildew resistant Butternut squash awarded September, 2001. Molly Jahn and George Moriarty

Cornell's Bush Delicata, powdery mildew resistant winter *Cucurbita pepo* awarded May, 2002. Molly Jahn and George Moriarty

MAJOR VARIETIES RELEASED AND LICENSED

>60 total licenses currently in force

Cornell Open-Pollinated and Hybrid Squash Varieties

Cucurbita pepo

Sugaretti F1 with Seeds by Design (2017)
Honeybaby F1 with Seeds by Design (2017)
Sweet REBA winter squash (acorn type) (2005)
Romulus PM Zucchini (2005)
Success PM (2004)
Celebration F1 (2004)
Cornell's Bush Delicata (2002) All America Selection
Harlequin F1 (2002)
3 inbred PMR pumpkin parent lines used in 3 hybrid pumpkin varieties
One parent of three commercial hybrid summer squash varieties

Cucurbita moschata

Parents of two leading commercial hybrids
Oro Verde NY07-131C-N (2009)
Little John NY-05-130 (2009)
Bright Eyes (NY07-140A) (2009)

Bugle (2002)
Honeynut (NY07-134A)

Melon Varieties
Farmer's Daughter (2009)
PMR Delicious 51 (2005)
Hannah's Choice F1 (2005)

Cucumber Varieties
Silver Slicer (2009)
Salt and Pepper NY08-7107 (2009)
Platinum NY06-873 (2008)
Greenfinger NY 08-143 (2006)
Poinsett 2000 with Henry Munger
Marketmore 97 with Henry Munger
Poinsett 97 with Henry Munger

Pepper Varieties
Phytophthora-resistant inbreds--multiple types (2013)
King Crimson (2009)
CU Early NY06-368 (2008)
Peacework (2007)

U.S. PATENTS

Patent No. 8,933,298 "Mutated elF4E sequences from potato which impart resistance to *Potato Virus Y*." (Jan. 13, 2015; Margaret Jahn, Jason Cavatorta, Inhwa Yeam, inventors).

Patent No. 7,772,462 "Recessive plant viral resistance results from mutations in translation initiation factor eIF4E." (Aug 10, 2010; Margaret Jahn, inventor).
Canadian Patent No. 2,741,285 issued December 12, 2017.

Past/present selected MAJOR EXTERNAL GRANT AWARDS

My research program is currently or has recently been supported by grants, contracts, cooperative agreements and/or gifts from the U.S. Department of Agriculture, NASA, Oak Ridge National Laboratory, National Geospatial Intelligence Agency, Skoll Global Threats Fund, CIMMYT, TomKat Foundation, Australia CSIRO, Thomson Reuters, Bayer, and anonymous individuals.

Co-Project Director USDA-AFRI CAP $10 million 2/15/13-2/14/19
Climate Change Mitigation and Adaptation in Dairy Production Systems of the Great Lakes Region,

U Wisconsin Administrative Lead, US Dept of Energy Bioenergy Research Center, Great Lakes Bioenergy Research Center, renewed in 2011 for $125M $125 million 2006-2011

USDA IFAFS Plant Genome $2.25 million 9/01-9/05
Harnessing investments in model systems for crop improvement-Project Director
Subcontracts to USDA ARS, NOFA-NY, Oregon Tilth, Alcorn State U., Cal State Fresno

NSF Plant Genome as CoPI, $360k 9/02-9/06
Potato functional genomics, Barbara Baker, PI

USAID
Agricultural Biotechnology Support Project 1-PI on subcontract $1 million 9/93-2/04
Agricultural Biotechnology Support Project 2-PI on subcontract about $800k 7/04-7/08

USDA Organic Research and Education Initiative $894,000 10/04-9/08
The Organic Seed Partnership-Project Director
Subcontracts to USDA ARS, NOFA-NY, Oregon State, UC Davis, NMSU, Alcorn State U., West Virginia State U.,

NSF Metabolic Biochemistry $550,000 8/05-7/08
AT3, a putative acyltransferase essential for capsaicin biosynthesis

Selected scholarly publications about our work

Goldman, I. 2011. Dedication. Plant Breeding Reviews.

Peters, Scott J. 2010. Democracy and higher education. Michigan State University Press.

Mendum, R. M. 2009. The Scientific Seed: Collaborative plant breeding and the enhancement of biodiversity. A PhD Dissertation in Rural Sociology and Women's Studies. Pennsylvania State University.

Mendum, R. and Glenna, LL. 2010. Socioeconomic obstacles to establishing a participatory plant breeding program for organic growers in the United States. Sustainability 2:73-91.

Ervin, DE, LL Glenna and RA Jussaume Jr. 2010. Are biotechnology and sustainable agriculture compatible? Renewable Agriculture and Food Systems. 25: 143–157