Charles Neal Stewart, Jr.
Ivan Racheff Chair of Excellence of Plant Molecular Genetics
Professor of Plant Science
2021

Public CV

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https://ag.tennessee.edu/racheff

Google Scholar Profile: https://scholar.google.com/citations?user=PLeQmrcAAAAJ&hl=en

ORCID: 0000-0003-3026-9193

Education

1993 Ph.D. Biology (Plant Physiology), Virginia Polytechnic Institute and State University
1990 M.S. Biology (Ecology), Virginia Polytechnic Institute and State University
1988 M.A. Education, Appalachian State University
1984 B.S. Horticulture, B.S. Agricultural Education, North Carolina State University

Professional appointments and affiliations

Current:

2002- Ivan Racheff Chair of Excellence Professor in Plant Molecular Genetics, Department of Plant Sciences, University of Tennessee
2018- Co-director, Center for Agricultural Synthetic Biology
2009- Adjunct Professor, University of Tennessee Department of Food Science
2004- Core Faculty Member, Genome Science and Technology, University of Tennessee
1996- Adjunct Senior Research Scientist and Professor, University of Georgia Department of Crop and Soil Science
2017- Member, Genome Project-Write (GP-Write), Center of Excellence for Engineering Biology, New York

Past:

2009-2020 Co-founder and co-director, Tennessee Plant Research Center
2007-2017 BioEnergy Science Center, Oak Ridge National Laboratory
2011-2014 Senior Bioscientist, Oak Ridge National Laboratory

2005-2009 Cofounder and Director of Technology Development, MycoGenomix, LLC
2001-2004 Adjunct Professor, University of Tennessee Department of Entomology and Plant Pathology
2000-2002 Associate Professor of Biology, University of North Carolina, Greensboro
1998-2002 Adjunct Associate Professor, UNCG Department of Nutrition
1997-2002 Adjunct Associate Professor, Crop Science, North Carolina State University
1995-2000 Assistant Professor of Biology, University of North Carolina, Greensboro
1993-1995 Postdoctoral Associate, University of Georgia, Laboratory of Wayne Parrott, Department of Crop and Soil Science

Awards and Honors

- SIVB Fellow, elected 2019, Society for In Vitro Biology
- Extraordinary Contributions to Responsible Conduct of Research Award, UTK, 2018
- Nominee, University of Tennessee President's Award (Discover) 2017, 2018, 2020
- UTK Quest Scholar of the Week: March 25 2016
- National Academies committee member (2014-2016) co-authoring Genetically Engineered Crops: Experiences and Prospects (2016)
- AAAS Fellow, elected 2015, American Association for the Advancement of Science
- Energy Innovation on the Hill, one of six ARPA-E project invited to present the project on Capitol Hill, 2015
- Top Reviewer for Plant Science (Elsevier) 2012
- Alumni Distinguished Speaker (Department of Biology, Virginia Tech) 2006
- Who's Who in Fluorescence 2006-2010
- Nominee: Esquire Magazine's Best and Brightest 2005
- UNC-Greensboro Research Excellence Award (top junior faculty research), 1999
- Best BioTechniques Cover of 1997
- Eugene P. Odum Award: Best Student Paper Presented in Ecology, Ecological Society of America, Southeastern Chapter, 1992.
- Member: Omicron Delta Kappa, The National Leadership Fraternity (since 1992)
- Chief Justice of the Graduate Honor System, VPI & SU 1990-1993

Current editorships

2020- Plant Cell Reports, Editor-in-Chief
2013- Plant Biotechnology Journal, Associate Editor

Invited seminars and lectures at institutions and companies

Alpena Community College (Michigan Community College Biologists) 2007
Aquarium of the Pacific 2016
Auckland University 2000
Arizona State University 1997
BASF Plant Sciences 2000, 2013, 2019
Bayer CropSciences 2012; 2018
BIOTENZ (New Zealand) 2000

Bennett College, 1999
Brigham Young University 2014
CalTech/ Jet Propulsion Lab (NASA) 2001
Canterbury University (New Zealand) 2000
Cargill Biotechnology Unit 1997
Carson-Newman College 2008
Chinese Academy of Sciences, Institute of Botany (Beijing) 2004
Clemson University, 2000
Cone Memorial Hospital (Greensboro) 1998, 2001
CORMA, SCCL (Company) (Barcelona) 2010
Dow AgroSciences (Indianapolis) 1999
Duke University 1998
East Carolina University 2011
East Tennessee State University 1993, 2008
ECORC-CEF Ag and Agrifood, Ottawa, Canada 2000
ExxonMobil, 2020
French Embassy—Congressional representatives 2005
Inari Agriculture, Boston, 2017
International Atomic Energy Association (Vienna) 2011
Krakow Technical University (Poland) 2013
Lewis and Clark College (Portland, Oregon), 2004
Life Technologies 2012
Lincoln University (New Zealand) 2000
Matthaei Botanical Garden (University of Michigan), 2000
MIT 2001, 2002 (Knight Journalism Fellowship Workshop presenter)
MIT Lincoln Labs 2016
Monsanto Company (St. Louis) 2005, 2008, 2009
National Science Bowl (Washington D.C.) 2005
NC A&T State University 1997
NC State University 1996, 2001
NC Student Association of Science: keynote address 1997
Ohio University 2001
Penn State University 2017
Polish Academy of Sciences, Institute of Bioorganic Chemistry, Poznan, Poland 2013
Professional Engineers of North Carolina 2001
Rutgers University 2000, 2001
Saint Ambrose University 2013
Syngenta (Novartis) Biotechnology Inc. 1997, 2012
Tennessee Tech University 2005
Texas A&M University 2010
ThermoFisher (LIFE) 2014
Virginia Tech 1996, 2002, 2006 (Distinguished Alumni Speaker, 2006)
Universitat Internacional de Catalunya (Barcelona) 2009
University of California-Davis 2011

University of California-Irvine 2001
University of California-Santa Cruz 2003
University of Florida 2000
University of Georgia 1994
University of Hawaii Law School 2017
University of Hawaii-Manoa (CTAHR) 2006, 2012, 2017
University of Hawaii Maui College 2017
University of Illinois 2009
University of Kentucky 2005; 2010
University of Kuopio (University of Eastern Finland) 2007
University of Life Sciences in Posnan (Poland) 2013
University of Maryland 2019
University of Massachusetts (Amherst) 2009
University of Minnesota 2000
University of Montana 2009
University of North Carolina-Greensboro 2019
University of Vermont 2004
USDA-ARS, Albany, CA 1999
Wake Forest University 1999
Warsaw Life Science University (Poland) 2013
Western Carolina University 1999
York University (Toronto, Canada) 2001

Invited speaker in national and international conferences, symposia and workshops

2021 American Physical Society, Nashville, Tenn., March 19.
2021 DOE Genome Sciences Conference, Washington, DC, Feb 22
2020 Symposium on Weedy and Invasive Species: 2025 and Beyond, Lahaina, Hawaii, Mar 1
2020 DOE Genome Sciences Conference, Washington, DC, Feb 25
2019 Protoplast Technology for Genome Editing, SIVB Conference, Tampa June 10
2019 Frontiers in In Vitro and Synthetic Biology, SIVB Conference, Tampa, June 9
2019 Biological Sensors, SIVB Conference, Tampa June 9
2019 Gordon Research Conference, Chloroplast Biotechnology, Ventura, Calif. Jan 9
2018 Plant Synthetic Biology, Bioengineering, and Biotechnology, Clearwater, Nov 28
2018 ARPA-E TERRA/ROOTS conference, San Francisco, Oct 10
2018 Genome Project-write meeting, Boston, May 1
2017 Plant Genomics & Gene Editing Congress, Philadelphia, Nov 3
2017 Gordon Research Conference, Plant Metabolic Engineering, Waterville Valley, NH July 12
2017 Plant Biology 2017, Honolulu, Hawaii, June 26
2017 Genome Project-write Meeting, New York, May 9.
2017 Council of Engineering and Scientific Society Executives, Austin, Texas, Feb 20.
2016 Forum of Society Leaders on Genetically Engineered Crops-National Academy of Science, Washington, D.C. Dec 7.
2016 Applied Synthetic Biology for National Security Workshop--MIT Lincoln Lab/Office of

Naval Research, Arlington, Virginia, Dec 5
2016 REDDIT NAS GE Crops—Ask Me Anything Science September 19
2016 American Society of Plant Biologists, Austin, Texas, July 10-13.
2015 Transformation-Enabled Genomic Research in Crop Plants, Clearwater, Florida Nov. 15-18.
2015 Switchgrass III, Knoxville, Sept 30-Oct 2.
2015 Life Science Tennessee, Nashville, Sept 28.
2015 Cereal Engineering Consortium Workshop, Cambridge, Mass., June 8 & 9 2015.
2015 International Plant and Animal Genome Conference, San Diego, Jan 13 2015.
2014 Synthetic Biology Congress, London, October 20-21, 2014.
2014 CIBB 2014, Second International Congress of Biotechnology and Biodiversity, Guayaquil, Ecuador, June 9-12, 2014.
2014 Synthetic Biology Workshop, 36th Symposium on Biotechnology for Fuels and Chemicals, Clearwater Beach, Florida, April 28-May 1 2014.
2013 National Academies Keck Futures Initiative: The Future of Advanced Nuclear Technologies, Irvine California November 14-17 2013.
2013 EuroBiotech Congress 2013, Krakow, Poland, October 7-10, 2013.
2013 Perennial grasses workshop. International Plant and Animal Genome Conference, San Diego, January 14 2013.
2013 Life Technologies workshop. International Plant and Animal Genome Conference, San Diego, January 15 2013.
2012 Research integrity workshop. Annual Congress of the Society for In Vitro Biology, Belleview, WA, June 5, 2012.
2012 American Association of Agricultural Education, Asheville, NC, May 17 2012.
2012 International Conference on Molecular Ecology, Vienna, Austria, Feb 4-7, 2012.
2011 ARPA-E Tool Development for Transformational Biotechnology Advances Workshop, Arlington, VA, October 6-7.
2011 The Science of Gene Flow in Agriculture and its Role in Co-existence. Washington, DC, September 7-8.
2011 Transgenes Going Wild? Risk Assessment of Transgene Introgression from Crops into Wild Relatives. Lorentz Center, Leiden University, The Netherlands, July 11-15, 2011.
2011 International Conference on Plant Gene Discovery, Vienna, Austria, Feb 23-26, 2011.
2011 International Conference on Plant Transformation Technologies II, Vienna, Austria, Feb 19-22, 2011.
2010 International Biotechnology Symposium and Exhibition; Biotechnology for the Sustainability of Human Society. Rimini, Italy, September 14-18, 2010.
2010 Biosensors symposium, Annual Congress of the Society for In Vitro Biology, St. Louis, June 2010.
2010 Biofuels symposium, International Association of Plant Biotechnology Meeting, St. Louis, June 2010.
2009 Biofuels: Science and Innovation for Sustainable Development, San Francisco, June 29-30 2009.
2009 Biofuels symposium, Annual Congress of the Society for In Vitro Biology, Charleston, SC, June 10 2009.

2009 Transgene flow and containment symposium, Annual Congress of the Society for In Vitro Biology, Charleston, SC, June 9 2009.

2009 Research ethics. Research Ethics and Mentoring in Weed Science. Annual Meeting of the Weed Science Society of America, Orlando, February 10, 2009.

2008 China-US Workshop: Bioenergy Consequences for Global Environmental Change. Beijing, October 15-18.

2008 Weeds of agricultural importance: Bridging the gap between evolutionary ecology and crop science. Athens, GA Sept 11-13, 2008

2008 Workshop on Regulation, Annual Congress of the Society for In Vitro Biology, Tucson, June 16 2008.

2008 Plants and People--Mutual Dependence in the 21st Century: PhD Symposium of the Zürich-Basel Plant Science Center-- ETH Zurich June 6 2008.

2008 Evolution of Weediness and Invasiveness: Molecular Genetics Approaches, USDA-NRI- and WSSA-sponsored symposium and workshop at the annual Weed Science Society of America Meeting Chicago, Feb 7, 2008.

2008 The Biology and Business of Biofuels. January 28-30 2008, La Jolla, California.

2007 Symposium for Agricultural Biotechnology Risk Analysis Research (AGRA) Workshop, at College Park, Maryland on December 5-6, 2007

2007 Lecturer, University of Kuopio, Finland. Intensive short course for graduate students: Ecological Risk Assessment of GM Plants**,** May 7-9, 2007.

2007 International Conference on Plant Transformation Technologies, (Plenary lecture) Vienna, Austria, February 4-7 2007.

2006 Mechanisms and Genetics of Glyphosate Resistance, Milwaukee, Dec 12 2006.

2006 Enabling Science Workshops for Explosive Detection: BioScience and BioTechnology, Oak Ridge, TN Jan 25-26 2006.

2006 Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 16 2006.

2005 Scientific Meeting on Crop Gene Flow and the Occurrence and Consequence of Gene Introgression between Crops and their Sexually Compatible Relatives. Kansas City, December 13-14.

2005 Symposium for Agricultural Biotechnology Risk Analysis Research, Riverdale, MD November 29-December 1 2005.

2005 National Agricultural Biotechnology Council Meeting and Symposium, Nashville, TN, June 28 2005.

2005 Workshop on Fluorescent Markers, Annual Congress of the Society for In Vitro Biology, Baltimore, June 5 2005.

2005 Weed Genomics: symposium at the Annual Weed Science Society of America meeting, Honolulu Feb 10, 2005.

2004 Australian Weeds Conference, Wagga Wagga, Australia, Charles Sturt University, September 5-7, 2004.

2004 Conference on Calcium-Regulated Photoproteins and Green-Fluorescent Protein, Friday Harbor Lab, Washington, August 31-September 3, 2004

2004 US EPA Development of Strategic Monitoring Programs for Ecological Impact from Plant-Incorporated Protectants (PIPs) Conference. August 3-5, 2004, Arlington, VA.

2004 DHS HSARPA Strategies for the Detection of Low Vapor Pressure Chemicals Workshop, April 6-7, 2004, Arlington, VA.

2003 GM Crop Environmental Risk Assessment Modeling Workshop II, Colorado Springs, October 9 & 10 2003

2003 International Joint Monte Verità Conference on Biodiversity Implications of Genetically Modified Plants, Ascona Switzerland, September 7-12 2003.

2003 Stakeholder workshop on the Future Directions and Research Priorities for the USDA Biotechnology Risk Assessment Research Grants Program: Washington, D.C. June 9-11.

2003 European Science Foundation Conference: Introgression from Genetically Modified Plants into Wild Relatives and its Consequences. Universiteit van Amsterdam, The Netherlands Jan 21-24.

2002 Knight Science Journalism Fellowships, Cells and Genes Workshop, Whitehead Institute, MIT, Dec. 6.

2002 When Media, Science and Public Policy Collide: The Case of Food and Biotechnology, Sponsored by the Pew Charitable Trust, John F. Kennedy School of Government, Harvard University. Nov 21.

2002 International Association for Food Protection Symposium on Agroterrorism, San Diego July.

2002 SPIE's 16th Annual International Symposium on Aerospace/Defense Sensing, Simulation, and Controls, Orlando, Florida, April.

2002 Thirteenth Crucifer Genetics Workshop, Davis, California, March

2002 Scientific Methods Workshop: Ecological and Agronomic Consequences of Gene Flow from Transgenic Crops to Wild Relatives**,** March, Columbus, Ohio, March

2001 Knight Science Journalism Fellowships, Cells and Genes Workshop, Whitehead Institute, MIT, Dec 7.

2001 Defense Threat Reduction Agency Vegetative Effects Environmental Sensing Workshop Alexandria, Virginia, October.

2001 European Science Foundation Workshop: Interspecific gene flow from oilseed rape to weedy species. Rennes, France, June.

2001 American Bar Association Fourth Biotechnology Roundtable. Washington, D.C., May.

2000 Royal Commission on Genetic Modification, Wellington, New Zealand, invited witness. November.

2000 European Science Foundation Workshop: The Environmental Implications of Genetically Modified Plants with Insect Resistance Genes, Berne, Switzerland, September.

2000 Eleventh International Symposium of Bioluminescence and Chemiluminescence, Alisomar, CA September (Keynote).

2000 National Academy of Sciences Workshop: Ecological Monitoring of Genetically Modified Crops, Washington, July.

1999 Nature Biotechnology Agbiotech 1999 Conference, London, November.

1999 Second International Symposium on Green Fluorescent Protein, San Diego, May.

1999 Gene Flow and Agriculture: Relevance for Transgenic Crops, Staffordshire, UK, April.

1999 Workshop on Ecological Effects of Pest Resistance Genes in Managed Ecosystems. Washington, February.

1998 VII International Congress of Ecology, Symposium on the Ecology of Genetically Modified Organisms, Florence, Italy, July
1998 International Symposium on Plant Molecular Biology, Lucknow, India, December.
1997 International Symposium on Green Fluorescent Protein, New Brunswick, New Jersey, October.
1997 Commercialisation of Transgenic Plants, Canberra, Australia, March.

Symposium chair/co-chair

- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 16 2019.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 16 2018.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 17 2017.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 12 2016.
- Transformation-Enabled Genomic Research in Crop Plants, Clearwater, Florida Nov. 15-18 2015.
- Switchgrass III, Knoxville, Sept 30-Oct 2 2015.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 13 2015.
- Synthetic Promoters, World Forum on Biology, Savannah, GA, June 4, 2014.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 14 2014.
- Genetic Improvement of Bioenergy Crops, 2013 In Vitro Biology Meeting, June 19, 2013, Providence, RI.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 15 2013.
- International Conference on Molecular Ecology, Vienna, Austria, Feb 4-7, 2012.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 17 2012.
- GE Crop Redux: Impact of Crop Biotechnology on Economy, Environment and Society, SIVB, Raleigh, NC June 7 2011
- International Conference on Plant Gene Discovery, Vienna, Austria, Feb 23-26, 2011.
- International Conference on Plant Transformation Technologies II, Vienna, Austria, Feb 19-22, 2011.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 14 2011.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 13 2010.
- China-US Workshop on Biotechnology of Bioenergy Plants, Knoxville, November 16-17, 2009.
- Risk Assessment and Transgene Containment in Transgenic Crops. World Congress on

In Vitro Biology, Charleston, SC, June 9, 2009.

- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 13 2009.
- Evolution of weediness and invasiveness: molecular genetics approaches, USDA-NRI- and WSSA-sponsored symposium and workshop, Chicago, Feb, 2008.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 15 2008.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 16 2007.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 17 2006.
- Weed Genomics: symposium at the Annual Weed Science Society of America meeting, Honolulu Feb 10, 2005.
- Symposium of Genomics and Biotechnology of Woody Plants: UT biotech building dedication, Knoxville, TN October 2003.
- Bt transgenic crops, World Congress on In Vitro Biology, San Diego, June, 2000.
- UNCG/Novartis Biochemistry and Biotechnology Symposium, Greensboro, April 2000.

Symposium/conference organizing committee

- Plant Synthetic Biology, Bioengineering and Biotechnology: Clearwater Beach, Florida, November, 2018
- Plant Synthetic Biology, Bioengineering and Biotechnology: Miami, Florida, December 2016
- Publications ethics workshop. World Forum on Biology, Savannah, GA, June 3, 2014.
- Research integrity workshop. Annual Congress of the Society for In Vitro Biology, Belleview, WA, June 5, 2012.
- Research Ethics and Mentoring in Weed Science. Annual Meeting of the Weed Science Society of America, Orlando, February 10, 2009.
- Gene flow among crops and their wild relatives - implications for biotech risk assessment. St. Louis, December 2007.
- International Conference on Plant Transformation Technologies, February 2006, Vienna Austria (International Organizing Committee)
- National Agricultural Biotechnology Council Meeting and Symposium, June 2005, Nashville.
- Eloise S. Cofer Family and Community Issues Forum: Biotechnology, Food, and the Consumer. Oct. 2000 RTP, NC.
- Second International Symposium on Green Fluorescent Protein, San Diego, May, 1999.
- Fifth Biennial Conference on the Molecular and Cellular Biology of the Soybean, Athens, GA, 1994.

University teaching experience

UT

Plant Sciences 605 Plant Genomics (Spring semesters, 2003-2010)

Plant Sciences 501, 525 Research Ethics for the Life Sciences (Fall semesters 2007-present)
First Year Studies 129 Genetically Engineered Food: Friend or Foe? Freshman Seminar (2007)
Plant Sciences 353 Plant Biotechnology, Genetics, and Breeding (2008, 2010)
Plant Sciences 452 and 552, Plant Biotechnology and Genetics (2012- present)
RCR training workshops, UTIA (2016-present)

UNCG
Bio 111 Principles of Biology (1996-1998)
Bio 424 Plant Physiology and Biotechnology (1996--2001)
Bio 596 Molecular Biological Approaches in Research (1996-2000)
Freshman seminar on biotechnology (1999)
Bio 105 Concepts of Biology: Risks and Benefits of Biotechnology, Web-based and traditional sections (2000)

Professional Societies
American Association for the Advancement of Science (Elected Fellow)
American Society of Plant Biologists (Member, Science Policy Committee 2015-2019)
Society for In Vitro Biology (Elected Fellow)

Professional Service and Training
Regulatory service: US EPA FIFRA Scientific Advisory Panel and section author Oct. 19, 2000: Bt/GMO ecological effects (Monarch butterfly and gene flow); • US EPA FIFRA Scientific Advisory Panel and section author Oct. 5, 2004: Viral coat protein genes, Arlington, VA.

Grant panels: USDA Biotechnology Risk Assessment Grants Program, 1999 • USDA NBIAP Special grant for Information Systems for Biotechnology, 2000. (Chair) • USDA CSREES Special Grant for Tropical and Subtropical Agricultural Research Program (TSTAR) – Pacific, 2006; 2009. • KTDRC Proposal Evaluation Committee 2007-2011. • AAAS: Missouri Life Sciences Trust Fund 2008 •AAAS: King Abdulaziz City for Science & Technology 2008, 2009, 2010 (completed project review 2013) • USDA Biotechnology Risk Assessment Grants Program, 2014 • USDA NIFA Biotechnology Risk Assessment Grants Program, 2015, panel manager • USDA NIFA Biotechnology Risk Assessment Grants Program, 2016, panel manager • USDA ARS NP 301, 2016, retrospective review panelist• Science Foundation Ireland, 2018

Proposal reviewer: USDA NIFA Biotechnology Risk Assessment Panel (2014) • USDA-NRI (1996-2006) • USDA SBIR (2004-2005, 2008-2012) • USDA Biotech Risk Assessment Grants Program (1995-2004) •NASA (1999-2001) • NSF (1998- current) •Consortium for Plant Biotechnology Research (2001- 2003) • NSERC (Canada; 1999, 2005) • Vanderbilt University Discovery Grant Program (2004) • Kentucky Science and Engineering Foundation R&D Excellence Grants Program (2005) • South Caucasus Cooperative Research Program (SCCRP) of the U.S. Civilian Research and Development

Foundation (CRDF) (2005; 2010) • USAID BBI (2006) • SEEDS, Ohio State University OARDC (2006; 2010) • Kentucky Tobacco Research and Development Center (2007) • NC Biotechnology Center Biotechnology Research Grants (2008) • DOE GTL Program (2009) • US Army Engineer Research and Development Center (2009) • Maryland Technology Transfer Fund (2009) • Danish Council for Strategic Research Peer Review College (2009-). Army Research Office (2010) •New Eurasian Foundation (2011, 2013, 2014) •Kentucky Agricultural Experiment Station Hatch Grant (2012) •US PTO Patents for Humanity (2013) •BeIPD-COFUND Postdoc Fellowship, University of Liège Research Council (2013, 2015) • Science Foundation of Ireland (2014; 2015)• National Science Center, Poland (2015) • Austrian Science Fund (2016) • USDA Hatch Program (2017) • NSF ad hoc reviewer • AGreen Skills (France) (2017) • Canadian Pulse Science Research Center (2017) • MESRF Megagrant Competition (2017; 2019) • EUR-ANR Graduate School Competition (2017) • National Science Centre Poland (2018, 2020) • United Arab Emirates University (2018) • USDA NIFA (2019) • ANR (French National Research Agency) (2019) • NSF ad hoc reviewer (2020) • KAUST Competitive Grants Competition (2020)

Current graduate students advised—degree goal

- Shamira Sultana—PhD
- Alex Pfotenhauer—PhD (Food Science)
- Paolo Tagaloguin—MS (Fulbright Scholar)
- Nikki Reuter—MS Food Science
- Robert Sears—PhD
- Jessica Stockdale—MS
- Tyler Newton—MS

Current postdocs, research scientists, visiting scientists

- Mitra Mazarei 2007- (research scientist)
- Alessandro Occhialini 2017-2019, postdoc; 2019- research assistant professor (Food Science)
- Yongil Yang 2017- (research scientist)
- Mary-Anne Nguyen 2018-
- Ramona Persad 2018-
- Li Li 2018-
- Subramanyam Kondeti 2019-
- Jun Hu 2020-
- Gizem Dimlioglu 2020-
- Tayebeh Kakeshpour 2020-
- Aytug Tuncel 2020-
- Nancy Wahl 2020-
- Yaping Xu 2020-
- Reena Sharma 2021-

- Vivek Shrestha 2021-
- Tayler Schimel 2021-

Current technical/admin staff

- Reginald Millwood 1999-
- Holly Brabazon 2018-
- Sheri Burnette 2018- (CASB business manager)
- Cassie Halvorsen 2019- (administrative specialist)
- Lana Howe 2020-
- Caitlin Barnes 2020-
- Lance Hamilton 2020-
- Jordan Reed 2020-
- Eric Stuart 2020-
- Eric Chaffin 2020-
- Ben Wolfe 2019-

MS graduates, year of graduation, current position

- Staci M. Leffel, 1998, UNCG, Meso-Scale Diagnostics.
- Brian K. Harper, 1999, UNCG, research scientist, Syngenta Agribusiness Biotechnology Research, Inc.
- Derrick A. Pulliam, 1999, UNCG, research scientist, Alcami Corporation
- Matthew D. Halfhill, 2000, UNCG, associate professor, St. Ambrose University
- Tanya Chalk, 2002, UNCG, research scientist, Syngenta Agribusiness Biotechnology Research, Inc.
- Kevin Markham, 2002, UNCG, research scientist, Syngenta Agribusiness Biotechnology Research, Inc.
- Mitra Kooshki, 2002, UNCG, research scientist, Wake Forest Medical School
- Laura C. Hudson, 2003, UT, assistant professor, Pfeiffer University.
- Nrupali Patel, 2003. UT. Lecturer, Rutger University
- H.S. Moon, 2006. UT. Research Scientist, Bayer CropSciences
- Kellie Burris, 2006, UT. postdoc, NCSU
- Blake Joyce, 2008 UT, postdoc, University of Arizona
- Christy Rose, 2009, UT, physician assistant
- Jason Burris, 2010, postdoc, NCSU
- Reggie Millwood, 2011, PhD student, research associate, UT
- Amy Yancey, 2011, development officer, University of Virginia
- Hollis Rice, 2013, research associate, UT
- Kristen Higginbotham, 2013 (FST), food technologist, West Liberty Foods
- Michael Fethe, 2013, research scientist, Novozymes, Salem, Virginia
- Holly Baxter, 2014,
- Mat Halter, 2014, research scientist, Dupont Tate & Lyle
- Thomas Lane, 2014 (GST) bioinformaticist, startup company

- Gracie Collins, 2016, technician, CIBUS
- Joshua Grant, 2017, staff scientist, ORNL
- Chelsea Johnson, 2017, research technician, iRepertoire, Inc., Huntsville, Alabama
- Shamira Sultana, 2018, MS, currently a PhD student, UT
- Jessica Layton, 2020, MS

PhD graduates, year of graduation, current position

- Harry A. Richards, IV, 2002, Research Assistant Professor, UT
- Matthew D. Halfhill (co-advised), 2003, associate professor, St. Ambrose University
- Jason Abercrombie, 2007, teacher, Webb School
- Joshua Yuan (co-advised) 2007, professor, Texas A&M University
- Brian Leckie, 2008, Assistant Professor, Tennessee Tech
- Murali Rao, 2008, statistician and research scientist, Land O'Lakes
- Kellie Burris (FST program), 2011, postdoc, NCSU
- Hong S. Moon 2011, research scientist, Bayer CropSciences
- Jingyu Lin, 2011, statistician, Knoxville.
- Blake Joyce, 2013, bioinformaticist, CyVerse, Tucson, Arizona
- Charleson Poovaiah, 2013, biotechnologist, Scion Research, New Zealand
- Wenzhi Xu—PhD (Suchuan Agriculture University 2012-2014), research scientist, China
- Wegi Aberra Wuddineh, 2015, postdoc, USDA-ARS
- Jason Burris, 2016, postdoc, NCSU
- Jonathan Willis, 2016, postdoc, USDA-ARS, Albany, Calif.
- Caroline Rempe, 2016 (GST), Alberquerque
- Cristiano Piasecki, 2019 (Brazil), postdoc, UT
- Reggie Millwood, 2019, research scientist, UT

Past postdocs

- Dean Chamberlain, 1998-2000, research scientist, KBI BioPharma Inc..
- Leena Sharma Tripathi, 2000, research scientist, IITA, Nigeria
- Elizabeth Tomlin, 1998-2000, lecturer, UNCG
- Vipaporn Phuntumart, 2001-2002, associate professor, Bowling Green State University
- Nathalie Vallee 1998-2003 pharmaceutical sales, France
- Vinitha Cardoza 2000-2003, research scientist, BASF
- Harry Richards, 2002-2005, research assistant professor, UT
- Chhandak Basu 2003-2005, associate professor, California State University-Northridge
- Matt Halfhill 2003-2005, associate professor, St. Ambrose University
- Irina Teplova 2003-2005, research scientist, New Jersey College of Medicine
- Mentewab Ayalew 1999-2005, associate professor, Spelman College
- Hani Al-Ahmad 2006, summers 2007, 2008, 2009, 2011, 2012, 2013 assistant professor,

An-Najah National University, Palestine.

- Dilip Panthee 2005-2007, associate professor, North Carolina State University
- Ghazala Nasim (visiting scientist), professor, University of the Punjab) 2007; deceased 2013.
- Bing He 2008 (visiting scientist).
- Jason Abercrombie 2008-2009, teacher, Webb School, Knoxville
- Jun Hu 2008-2010, research scientist, NYU
- Shuangyan Chen 2009-2010, Chinese Academy of Science, Institute of Botany, Beijing
- Wei Wei 2009-2010, Chinese Academy of Science, Institute of Botany, Beijing
- Romesh K. Salgotra 2010, associate professor, Sher-e-Kashmir University of Agricultural Sciences and Technology-Jammu, India
- Murali Rao, 2009-2010, statistician and research scientist, Land O'Lakes
- Dave Mann 2008-2011, (postdoc 2008, research scientist 2009-2011), research scientist, Corteva.
- Szabolcs Rudnoy, postdoc, Eotvos Lorand University (Budapest, Hungary) 2011
- Gisele Schoene 2010-2012, out of science
- Charles Kwit 2009- (research scientist 2009-2011; research assistant professor 2011-2013), assistant professor, UTK
- Sangmin Chung 2012- 2013 visiting professor, Dongguk University, Seoul, South Korea
- Madhugiri Rao 2011-2014, regulatory officer, USDA APHIS-PPQ
- Muthukumar Balasubramaniam 2009-2014, research scientist, University of Illinois
- Lisa Worthen Alexander 2011-2014, research geneticist, USDA-ARS
- Yi Sang 2012-2015, assistant professor Lanzhou University, China
- Rongjian Ye 2012-2015, research scientist in China
- Kellie Burris 2011-2016, postdoc NCSU
- Jingyu Lin 2012-2016, statistician, private sector
- Scott Lenaghan 2013-2016, assistant professor, UT, Department of Food Science
- Catherine Hatcher 2014-2016, research scientist, University of Florida
- Christine Ondzighi-Assoume 2014-2016, assistant professor, Tennessee State University
- Priya Ranjan 2010-2015 (postdoc and research scientist) research assistant professor, Department of Plant Sciences, UTK
- Wusheng Liu 2008-2015 (postdoc) assistant professor, NCSU
- Yanhui Peng 2008-2014 (postdoc), staff member, CDC
- Jonathan Mielenz 2014- 2016 (visiting scholar), retired
- Taniya Dhillon 2015-2016, in India
- Caroline Rempe 2016, Alberquerque
- Elizabeth Dlugosz 2014-2016
- Kyunghee Kim 2016-2017, in Korea
- Agnieszka Piatek 2016-2017, Research scientist, Ryvu Therapeutics
- Madhumita DasGupta 2016-2017, in India
- Heidi Schindel 2017-2018, postdoc, ORNL
- Taylor Frazier-Douglas 2016-2018, research scientist, Elo Life Systems, RTP, NC

- John Noto 2018, assistant professor, Roane State Community College
- Yichong Sophie Fan 2019, staff scientist, ORNL
- Fei Li 2019-2020,
- Junhyung Lee 2018-2020, postdoc. ORNL
- Stephen Rigoulot 2018-2020, scientist, Syngenta
- Cristiano Piasecki 2019-2020, independent consultant

Visiting graduate students

- Sari Himanen, University of Kuopio, Finland, 2007, postdoc, Univ. Kuopio
- Vanessa Cardinali, Escola Superior de Agricultura, Brazil, 2008
- Marion Dubosquielle, 2013 summer, National Agronomic Engineering Post Graduate School, Toulouse, France
- Asjad Ali, 2013, Dongguk University, Seoul, South Korea
- Gaia Pigna (University of Milan), 2016, research scientist, Ferraro Group, Italy
- Cristiano Piasecki (University of Brazil) 2018-2019

Past technical staff, current position

- Steve Mabon 1995-2000, research scientist, NIH
- Leslie Ireland 1998-2000, research scientist, Wake Forest Medical School
- Sheila Branch, 1998-2001, not in science
- Dandan Zhang 2008, PhD student, Harvard University
- Keith Gwathmey 2009
- Kalyani Telu 2009, research associate, ORNL
- Michelle Hassler (administrative specialist) 2009-2010, teacher
- Laura Good Abercrombie 2003-2012, no longer in science.
- Derek Green 2010-2012, law school student, University of Alabama
- Basmah Kadambalath 2012 (administrative specialist), student, UTK
- Jasmine John 2012-2013
- Johnathan Branson 2011-2013, independent contractor
- Jason Burris 2002-2013, PhD student, UT
- Audrey Hill 2013- 2014, student
- Ellen Haynes 2010-2014, no longer in science
- Gracie Collins 2013-2014, research technician, CIBUS
- Sara Allen 2011-2015, research technician, BioPet Vet Lab
- John Alexander 2013-2015
- Mary Rudis 2005-2015, retired
- Gaia Pigna 2014-2016, PhD, University of Milan, research associate Ferraro Group
- Jennifer Hinds 2010- 2016 (administrative specialist); 2017 (research coordinator)
- Marcus Laxton 2013-2017, greenhouse associate in Seattle
- Ben Wolfe 2013- 2017
- Alex Pfotenhauer 2017, MS student, UT
- Ellie Terry-Emert 2015-2017, medical scribe, Vanderbilt University

- Zachary Mebane 2017-2018
- Holly Baxter 2010-2018
- Francisco Palacios 2017-2019, technician, UT
- Chandler Douglas 2017-2019, grant panel coordinator, UNC
- Victoria Brooks 2017-2019 (administrative specialist), medical laboratory scientist
- Kerry Meier 2019
- Rebekah Rogers 2018-2020
- Tyler Newton 2019, masters student, UT
- Andrew Lail 2019-2020
- Bethany Haga 2019-2020
- Magen Poindexter 2018-2020, technician, UTK
- Manuel Schmid 2018-2020, Research assistant, Inari Agriculture.
- Tayler Schimel 2018-2020, postdoc, UT
- Yuanhua Shao 2017-2020
- Mariah Seaberry 2019-2020, technician, UTK

Patents

Issued

Method of stimulating an immune response by administration of host organisms that express intimin alone or as a fusion protein with one or more other antigens. U.S. Patent 6,261,561 issued July 17, 2001. Inventors: C. Neal Stewart, Jr., Marian L. McKee, Alison D. O'Brien, and Marian R. Wachtel.

Plants and plant cells expressing histidine tagged intimin. U.S. Patent 6,406,885 issued June 18, 2002. Inventors: C. Neal Stewart, Jr., Marian L. McKee, Alison D. O'Brien, and Marian R. Wachtel.

Method of stimulating an immune response by administration of host organisms that express intimin alone or as a fusion protein with one or more other antigens. U.S. Patent 6,881,411 issued April 19, 2005. Inventors: C. Neal Stewart, Jr., Marian L. McKee, Alison D. O'Brien, and Marian R. Wachtel.

Cabbage proteinase inhibitor gene confers resistance against plant pests. U.S. Patent 6,927,322 issued August 9 2005. Inventors: C. Neal Stewart, Jr. and Roxanne M. Broadway.

Antibiotic resistance conferred by a plant ABC transporter gene when expressed in transgenic plants. U S Patent 7,973,213 B2 issued July 5 2011. Inventors: C. Neal Stewart, Jr., and Mentewab Ayalew. US Patent applied for April 29, 2005, US SN60/676,476; August 30, 2005, US SN60/712,456; PCT International Application PCT/US2006/16447 filed April 28 2006, Accepted for examination June 27 2008; US SN11/912,713 filed October 26 2007.)

Switchgrass promoter (PvUBI2) and uses thereof. US Patent No. 8,604,276 issued December 10 2013. Inventors: C. Neal Stewart, Jr.; David D.G. Mann.
U.S. provisional patent applied for June 9, 2009. US SN 61/185,469; regular filing June 9, 2010, US SN 12/797,248.

Inducible plant promoters and uses thereof. US Patent 9,157,087 B2 issued October 13 2015. Inventors: C. Neal Stewart, Jr., Mitra Mazarei, and Wusheng Liu.
US provisional patent applied for June 28 2012; converted 3/11/2013 US 13/794,255.

SCN plants and the methods for making the same. Inventors: Tarek Hewezi, C. Neal Stewart Jr., et al.; PCT/US2015/067989 filed 12/30/2015. World Intellectual Property Organization publication July 7, 2016, WO 2016/109619. US Patent application published Dec 28, 2017: US 2017/0369900 A1. US Patent 10,457,956 issued October 19 2019.

Pending: 4 patents pending

Grants and Contracts
$40.7 million as PI (total); $2.0 million per year since 2002; $4.0 million per year during the past 3 years; $15.5M currently active as PI.

Current:

2021	Increased soybean yield potential through enhanced root architecture and biochemistry. Tennessee Soybean Promotion Board PI: Neal Stewart; co-PIs, Mitra Mazarei and Tarek Hewezi. $35,000.
2021	Gene editing and engineering pipeline. Tennessee Soybean Promotion Board PI: Neal Stewart. $35,000.
2020-2022	Center for Bioenergy Innovation, DOE Bioenergy Research Center (ORNL, prime), $125M, C.N Stewart, PI, Switchgrass sustainability, $760,000.
2020-2022	APT interproject collaboration (Phytosensors 2.0 option) plus-up. DARPA BTO $741,302. PI: Neal Stewart, coPI: Scott Lenaghan.
2020-2022	Biology Institute Innovation, NSF. $200,000 Andrew Hanson, PI Univ Florida; CoPIs: John Morgan, Purdue Univ, Scott Lenaghan and Neal Stewart, UT.
2020-2021	SPOT: Signatures in plants over targets, DARPA BTO, $930,231. PI: Neal Stewart, coPIs: Scott Lenaghan, Jennifer DeBruyn, Amy Mundorff, and Dawnie Steadman. Award number: D20AC00007.

2018-2022 Phytosensors 2.0. DARPA BTO Advanced Plant Technologies Program, PI: C.N. Stewart; CoPIs: (UTIA) S.C. Lenaghan, F. Chen, (UTK) T. Burch-Smith, (NNSA) J. DiBenedetto, (MIT) C. Voigt, A. Belcher. Total award: $7.5M; to UTIA: $4.5M; to Stewart: $2M. Award project number HR0011-18-2-0049

2017-2022 SyPro Poplar, Univ Cal-Davis lead (Eduardo Blumwald) $5.5M total; C.N.Stewart, Jr., co-PI, total to Stewart, $1,479,259; grant number DE-SC0018347.

2017-2020 Center for Bioenergy Innovation, DOE Bioenergy Research Center (ORNL, prime), $55M, C.N Stewart, PI, Swtichgrass sustainability, $1,067,000.

2019-2022 Tracking the long-distance transport of wind-dispersed pollen from GE switchgrass and hemp using UASs (drones) and a LES model. NIFA BRAG $500,000, PI David Schmale et al., Virginia Tech, coPI: Neal Stewart ($200,000).

Publications

Books

1. Stewart, C.N., Jr. 2003. (Ed.) Transgenic Plants: Current Innovations and Future Trends. Horizon Scientific Press. Wymondham, UK: 297 pp.

2. Stewart, C.N., Jr. 2004. Genecally Modified Planet: Environmental Impacts of Genetically Engineered Plants. Oxford University Press, New York: 240 pp.

3. Stewart, C.N., Jr. (Ed.) 2008. Plant Biotechnology and Genetics: Principles, Techniques and Applications, John Wiley & Sons, Hoboken, New Jersey: 374 pp.

4. Stewart, C.N., Jr. (Ed.) 2009. Weedy and Invasive Plant Genomics, Blackwell Publishing, Ames Iowa: 288 pp.

5. Stewart, C.N., Jr., A. Touraev, V. Citovsky, T. Tzfira (Eds). 2011. Plant Transformation Technologies. Wiley-Blackwell Scientific Publishing, Ames Iowa: 279 pp.

6. Stewart, C.N., Jr. 2011. Research Ethics for Scientists: A Companion for Students. Wiley-Blackwell Scientific Publishing, Chichester, UK: 210 pp.

7. Stewart, C.N., Jr. (Ed.) 2016 Plant Biotechnology and Genetics: Principles, Techniques and Applications, Second Edition, John Wiley & Sons, Hoboken, New Jersey: 406 pp.

8. National Academies of Sciences, Engineering, and Medicine (Committee on Genetically

Engineered Crops). 2016. Genetically Engineered Crops: Experiences and Prospects. The National Academies Press, Washington, D.C.

9. Wei, W, and C.N. Stewart, Jr. 2021. Gene Flow: monitoring, modelling and mitigation. CABI publishing, in progress.

Journal Articles

1. Stewart, C.N., Jr., and E.T. Nilsen. 1992. *Drosera rotundifolia* growth and nutrition in a natural population with special reference to the significance of insectivory. Canadian Journal of Botany 70:1409-1416.

2. Stewart, C.N., Jr., and E.T. Nilsen. 1993. Association of edaphic factors and vegetation in several isolated Appalachian peat bogs. Bulletin of the Torrey Botanical Club 120:128-135.

3. Stewart, C.N., Jr., and E.T. Nilsen. 1993. Responses of *Drosera capensis* and *D. binata* var. *multifida* (Droseraceae) to manipulations of insect availability and soil nutrient levels. New Zealand Journal of Botany 31:385-390.

4. Stewart, C.N., Jr., and L.E. Via. 1993. A rapid CTAB DNA isolation technique useful for RAPD fingerprinting and other PCR applications. BioTechniques 14:748-751.

5. Parrott, W.A., J.N. All, M.J. Adang, M.A. Bailey, H.R. Boerma, and C.N. Stewart, Jr. 1994. Recovery and evaluation of soybean (*Glycine max* [L.] Merr.) plants transgenic for a *Bacillus thuringiensis* var. *kurstaki* insecticidal gene. In Vitro Cellular and Developmental Biology-Plant 30:144-149.

6. Stewart, C.N., Jr. 1994**.** A soybean DNA isolation procedure using fresh tissue. Soybean Genetics Newsletter 21:243-244.

7. Stewart, C.N., Jr., and E.T. Nilsen. 1995. Phenotypic plasticity and genetic variation of *Vaccinium macrocarpon* (American cranberry) I. Reaction norms of clones from central and marginal populations in a common garden. International Journal of Plant Sciences 156:687-697.

8. Stewart, C.N., Jr., and E.T. Nilsen. 1995. Phenotypic plasticity and genetic variation of *Vaccinium macrocarpon* (American cranberry) II. Reaction norms and spatial clonal patterns in two marginal populations. International Journal of Plant Sciences 156:698-708.

9. Stewart, C.N., Jr. and D.M. Porter. 1995. RAPD profiling in biological conservation: an application to estimating clonal variation in rare and endangered *Iliamna* in Virginia. Biological Conservation 74:135-142.

10. Stewart, C.N., Jr. 1996. Monitoring transgenic plants with *in vivo* markers. Nature Biotechnology 14:682.

11. Stewart, C.N., Jr. 1996. Transgene flow and persistence may be monitored using *in vivo* markers such as GFP. Biosafety Volume 2, (BY96003), September 2nd 1996. http://www.bioline.org.br/request?by96003

12. Stewart, C.N., Jr., M.J. Adang, J.N. All, H.R. Boerma, G. Cardineau, D. Tucker, and W.A. Parrott. 1996. Genetic transformation, recovery, and characterization of transgenic soybean for synthetic *Bacillus thuringiensis cryIAc*. Plant Physiology 112:121-129.

13. Stewart, C.N., Jr., M.J. Adang, J.N. All, P.L Raymer, S. Ramachandran, and W.A. Parrott. 1996. Insect control and dosage effects in transgenic canola, *Brassica napus* L. (Brassicaceae), containing a synthetic *Bacillus thuringiensis cryIAc* gene. Plant Physiology 112:115-120.

14. Stewart, C.N., Jr., and L. Excoffier. 1996. Assessing population genetic structure and variability with RAPD data: application to the American cranberry. Journal of Evolutionary Biology 9:153-171.

15. Stewart, C.N., Jr., G. Rosson, B.W. Shirley, and D.M. Porter. 1996. Population genetic variation of rare and endangered *Iliamna* (Malvaceae) in Virginia. Biological Journal of the Linnean Society 58:357-369.

16. Stewart, C.N., Jr., J.N. All, P.L Raymer, S. Ramachandran. 1997. Increased fitness of transgenic insecticidal rapeseed under insect selection pressure. Molecular Ecology 6:773-779.

17. Leffel, S.M., S.A. Mabon, and C.N. Stewart, Jr. 1997. Applications of green fluorescent protein in plants. BioTechniques 23: 912-918 (with accompanying journal cover photo).

18. Stewart, C.N., Jr., and C.S. Prakash. 1998. Chloroplast-transgenic plants are not a gene flow panacea. Nature Biotechnology 16:401.

19. Ramachandran, S., G.D. Buntin, J.N. All, P.L. Raymer, and C.N. Stewart, Jr. 1998. Movement and survival of diamondback moth, *Plutella xylostella* (Lepidoptera: Plutellidae) larvae in mixtures of non-transgenic and transgenic canola containing a *Bacillus thuringiensis cryIA(c)* gene. Environmental Entomology 27:649-656.

20. Ramachandran, S., G.D. Buntin, J.N. All, P.L. Raymer, and C.N. Stewart, Jr. 1998. Greenhouse and field evaluations of transgenic canola against diamondback moth, *Plutella xylostella* and corn earworm, *Helicoverpa zea*. Entomologia Experimentalis et Applicata 88:17-24.

21. Ramachandran, S., G.D. Buntin, J.N. All, B.E. Tabashnik, P.L. Raymer M.J. Adang, D.A. Pulliam, and C.N. Stewart, Jr. 1998. Survival, fitness, and oviposition of resistant diamondback moth (Lepidoptera: Plutellidae) on transgenic canola producing a *Bacillus thuringiensis* toxin. Journal of Economic Entomology 91:1239-1244.

22. Chamberlain, D. and C.N. Stewart, Jr., 1999. Transplastomics and transgene escape. Nature Biotechnology 17:330-331.

23. All, J., H.R. Boerma, W. Parrott, C.N. Stewart, Jr., P. Raymer, B. Rector, S. Ramachandran, D. Walker, and M. Treacy. 1999. Interactions in entomology: utilization and management of new genetic techniques for insect control in southern field crops. Journal of Entomological Science. 34:2-7.

24. Harper, B.K., S.A. Mabon, S.M. Leffel, M.D. Halfhill, H.A. Richards, K.A. Moyer, and C.N. Stewart, Jr. 1999. Green fluorescent protein in transgenic plants indicates the presence and expression of a second gene. Nature Biotechnology 17:1125-1129.

25. Ramachandran, S., G.D. Buntin, J.N. All, P.L. Raymer and C.N. Stewart, Jr. 2000. Intraspecific competition of an insect-resistant transgenic canola in seed mixtures. Agronomy Journal 92:368-374.

26. Harper, B.K., and C.N. Stewart, Jr. 2000. Patterns of green fluorescent protein in transgenic plants. Plant Molecular Biology Reporter 18: 141a-141i.

27. Stewart, C.N., Jr., H.A. Richards, M.D. Halfhill. 2000. Transgenic plants and biosafety: science, misconceptions and public perceptions. BioTechniques 29:832-843.

28. Stewart, C.N., Jr., and S.K. Wheaton. 2001. GM crop data—agronomy and ecology in tandem. Nature Biotechnology 19:3.

29. Pulliam, D.A., D.L. Williams, R.M. Broadway, and C.N. Stewart, Jr. 2001. Isolation and characterization of a serine proteinase inhibitor cDNA from cabbage and its antibiosis in transgenic tobacco plants. Plant Cell Biotechnology and Molecular Biology 2: 19-32.

30. Stewart, C.N., Jr. 2001. The utility of green fluorescent protein in transgenic plants. Plant Cell Reports 20:376-382.

31. Halfhill, M.D., H.A. Richards, S.A. Mabon, and C.N. Stewart, Jr. 2001. Expression of GFP and Bt transgenes in *Brassica napus* and hybridization with *Brassica rapa*. Theoretical and Applied Genetics 103:659–667.

32. Hudson, L.C., D. Chamberlain, and C.N. Stewart, Jr. 2001. GFP-tagged pollen to monitor gene flow of transgenic plants. Molecular Ecology Notes 1:321-324.

33. Halfhill, M.D., R.J. Millwood, P.L. Raymer, C.N. Stewart, Jr. 2002. Bt-transgenic oilseed rape hybridization with its weedy relative, *Brassica rapa*. Environmental Biosafety Research 1:19-28.

34. Tomlin, E.S., S.R. Branch, D. Chamberlain, H. Gabe, M.S. Wright, and C.N. Stewart, Jr. 2002. Screening of soybean, *Glycine max* (L.) Merrill, lines for somatic embryo induction and maturation capability from immature cotyledons. In Vitro Cellular and Developmental Biology-Plant 38:543-548.

35. Cardoza, V. and C. N. Stewart, Jr. 2003. Increased *Agrobacterium*-mediated transformation and rooting efficiencies in canola (*Brassica napus* L.) from hypocotyl segment explants. Plant Cell Reports 21: 599-604.

36. Millwood, R. J., M. D. Halfhill, D. Harkins, R. Russotti, and C. N. Stewart, Jr. 2003. Instrumentation and methodology for quantifying GFP fluorescence in intact plant organs. BioTechniques 34: 638-643.

37. Mueller, T.C., J. E. Massey, R.M. Hayes, C.L. Main, and C.N. Stewart, Jr. 2003. Shikimate accumulates in both glyphosate-sensitive and glyphosate-resistant horseweed (*Conyza canadensis* L. Cronq.) Journal of Agricultural and Food Chemistry 51:680-684.

38. Stewart, C.N., Jr. 2003. Press before paper—when media and science collide. Nature Biotechnology 21: 353-354.
; Poppy. 2003. Tritrophic choice experiments with Bt plants, the diamondback moth (*Plutella xylostella*) and the parasitoid *Cotesia plutellae.* Transgenic Research 12: 351-361.

40. Kooshki, M., A. Mentewab, and C.N. Stewart, Jr. 2003. Pathogen inducible reporting in transgenic tobacco using a GFP construct. Plant Science 165: 213-219.

41. Richards, H.A., C.-T. Han, R.G. Hopkins, M.L. Failla, W.W. Ward, and C.N. Stewart, Jr. 2003. Safety assessment of green fluorescent protein orally administered to weaned rats. Journal of Nutrition. 133:1909-1912.

42. Warwick, S.I., M.J. Simard, A. Légère, L. Braun, H.J. Beckie, P. Mason, B. Zhu, and C.N. Stewart, Jr. 2003. Hybridization between *Brassica napus* L. and its wild relatives: *B. rapa* L., *Raphanus raphanistrum* L., *Sinapis arvensis* L., and *Erucastrum gallicum* (Willd.) O.E. Schulz. Theoretical and Applied Genetics 107:528-539.

43. Richards, H.A., M.D. Halfhill, R.J. Millwood, and C.N. Stewart, Jr. 2003. Quantitative GFP fluorescence as an indicator of recombinant protein synthesis in transgenic plants. Plant Cell Reports 22:117-121.

44. Halfhill, M.D., R.J. Millwood, A.K. Weissinger, S.I. Warwick, and C.N. Stewart, Jr. 2003. Additive transgene expression and genetic introgression in multiple GFP transgenic crop x weed hybrid generations. Theoretical and Applied Genetics 107:1533-1540.

45. Stewart, C.N., Jr. M.D. Halfhill and S.I. Warwick. 2003. Transgene introgression from genetically modified crops to their wild relatives. Nature Reviews Genetics 4: 806-817.

46. Halfhill, M.D., R.J. Millwood, T.W. Rufty, A.K. Weissinger, C.N. Stewart, Jr. 2003. Spatial and temporal patterns of green fluorescent protein (GFP) fluorescence during leaf canopy development in transgenic oilseed rape, *Brassica napus* L. Plant Cell Reports 22:338-343.

47. Mason, P, L. Braun, S. I. Warwick, B. Zhu, and C. N. Stewart, Jr. 2003. Transgenic Bt-producing *Brassica napus*: *Plutella xylostella* selection pressure and fitness of weedy relatives. Environmental Biosafety Research 2:263-276.

48. Zhu, B., J.R. Lawrence, S. Warwick, P. Mason, L. Braun, M. Halfhill, C.N. Stewart, Jr. 2004. Stable *Bacillus thuringiensis* (Bt) toxin content in interspecific F_1 and BC populations of wild *Brassica rapa* after Bt gene transfer. Molecular Ecology 13:237-241.

49. Zhu, B., J.R. Lawrence, S. Warwick, P. Mason, L. Braun, M. Halfhill, C.N. Stewart, Jr. 2004. Inheritance of GFP-Bt transgenes from *Brassica napus* in backcrosses with three wild *B. rapa* accessions. Environmental Biosafety Research 3:45-54.

50. Schuler, T.H., I. Denholm, S.J. Clark, C.N. Stewart, and G.M. Poppy. 2004. Effects of Bt plants on the development and survival of the parasitoid *Cotesia plutellae* (Hymenoptera: Braconidae) in susceptible and Bt-resistant larvae of the diamondback moth, *Plutella xylostella* (Lepidoptera: Plutellidae). Journal of Insect Physiology 50:435-440.

51. Hudson, L.C. and C.N. Stewart, Jr. 2004. Effects of pollen-synthesized green fluorescent protein on pollen grain fitness. Sexual Plant Reproduction 17:49-53.

52. Halfhill, M.D., B. Zhu, S.I. Warwick, P.L. Raymer, R.J. Millwood, A.K. Weissinger, C. N. Stewart, Jr. 2004 Hybridization and backcrossing between transgenic oilseed rape and two related weed species under field conditions. Environmental Biosafety Research 3:73-81.

53. Basu, C., M.D. Halfhill, T.C. Mueller, and C.N. Stewart, Jr. 2004. Weed genomics: new tools to understand weed biology. Trends in Plant Science 9:391-398 (with accompanying journal cover).

54. Saxena. D., C.N. Stewart, I. Altosaar, Q. Shu, G. Stotzky. 2004. Larvicidal Cry proteins from *Bacillus thuringiensis* are released in root exudates of transgenic *B. thuringiensis* corn potato and rice but not of *B. thuringiensis* canola, cotton, and tobacco. Plant Physiology and Biochemistry 42:383-387.

55. Cardoza, V. and C. N. Stewart, Jr. 2004. *Brassica* biotechnology: progress in cellular and molecular biology. In Vitro Cellular and Developmental Biology-Plant 40:542-551.

56. Patel, N., V. Cardoza, E. Christensen, B. Rekapalli, A. Mentewab and C. N. Stewart Jr. 2004. Differential gene expression of *Chlamydomonas reinhardtii* in response to 2,4,6-trinitrotoluene (TNT) using microarray analysis. Plant Science 167:1109-1122.

57. Mentewab, A., V. Cardoza, C. N. Stewart, Jr. 2005. Genomic analysis of the response of *Arabidopsis thaliana* to trinitrotoluene as revealed by cDNA microarrays. Plant Science 168:1409-1424.

58. Schuler, T.H., A.J. Clark, S.J. Clark, G.M. Poppy, C.N. Stewart, Jr. and I. Denholm. 2005. Laboratory studies of the effects of reduced prey choice caused by Bt plants on a predatory insect. Bulletin of Entomological Research 95:243-247.

59. Stewart, C.N., Jr. 2005. Monitoring the presence and expression of transgenes in living plants. Trends in Plant Science 10:390-396.

60. Halfhill, M.D., H.S. Moon, J.P Sutherland, G.M Poppy, S.I Warwick, T.W. Rufty, A.K. 9Weissinger, P.L. Raymer, and C.N. Stewart, Jr. 2005. Growth, productivity, and competitiveness of introgressed weedy *Brassica rapa* hybrids selected for the presence of Bt *cry1Ac* and *gfp* transgenes. Molecular Ecology 14: 3177-3189.

61. Mentewab, A. and C. N. Stewart, Jr. 2005. Overexpression of an *Arabidopsis thaliana* ABC transporter confers kanamycin resistance to transgenic plants. Nature Biotechnology 23:1177-1180.

62. Stewart, C.N., Jr., R.J. Millwood, M.D. Halfhill, M. Ayalew, V. Cardoza, M. Kooshki, G.A.Capelle, K.R. Kyle, D. Piaseki, G. McCrum, J. Di Benedetto. 2005. Laser-induced fluorescence imaging and spectroscopy of GFP transgenic plants. Journal of Fluorescence 15: 697-705.

63. Stewart, C.N., Jr. 2005. Plant functional genomics: beyond the parts list. Trends in Plant Science 10:561-562.

64. Wei, W., T.H. Schuler, S.J. Clark, C.N. Stewart, Jr., and G. M. Poppy. 2005. Age-related increase in levels of insecticidal protein in the progenies of transgenic oilseed rape and its efficacy against a susceptible strain of diamondback moth. Annals of Applied Biology 147:227-235.

65. Markham, K., T. Chalk, and C.N. Stewart, Jr. 2006. Evaluation of protein-based defenses against phytophagous insects in ferns and mosses. International Journal of Plant Science 167:111-117.

66. Yuan, J.S., A. Reed, F. Chen, C.N. Stewart, Jr. 2006. Statistical analysis of real-time PCR data. BMC Bioinformatics 7:85 (highly accessed).

67. Stewart, C.N., Jr. 2006. Go with the glow: fluorescent proteins to light transgenic organisms. Trends in Biotechnology 24:155-162 (with accompanying journal cover).

68. Ferry, N., E.A. Mulligan, C.N. Stewart, B.E. Tabashnik, G.R. Port, and A.M.R. Gatehouse. 2006. Prey-mediated effects of transgenic canola on a beneficial, non-target, carabid beetle. Transgenic Research 15:501-514.

69. Shen, B, C. N. Stewart, Jr.Y. Le, M. Zhang, Z. Tang, X. Mi, W. Wei, K. Ma. 2006 Correlated expression of *gfp* and *Bt cry1Ac* gene facilitates quantification of transgenic hybridization between *Brassica*s. Plant Biology 8:723-730.

70. Moon. H.S., L. Hudson, M.D. Halfhill, R.J. Millwood, and C.N. Stewart, Jr. 2006. Expression of green fluorescent protein (GFP) in pollen of oilseed rape (*Brassica napus* L.) and its utility for assessing pollen movement in the field. Biotechnology Journal 1:1147-1152.

71. Halfhill, M.D., L.L. Good, C. Basu, J. Burris, C.L. Main, T.C. Mueller, and C. N. Stewart, Jr. 2007. Transformation and segregation of GFP fluorescence and glyphosate resistance in horseweed (*Conyza canadensis*) hybrids. Plant Cell Reports.26: 303-311.

72. Stewart, C.N., Jr. 2007. Biofuels and biocontainment. Nature Biotechnology 25:283-284.

73. Darbani, B., A. Eimanifar, C, N. Stewart, Jr., W. Camargo. 2007. Methods to produce marker-free transgenic plants. Biotechnology Journal 2:83-90.

74. Yuan, J.S., P.J. Tranel, and C.N. Stewart, Jr. 2007. Non-target site herbicide resistance: a family business. Trends in Plant Science 12:6-13.

75. Luo, K., H. Duan, D. Zhao, X. Zheng, W. Deng, Y. Chen, C.N. Stewart, Jr., Y. Wu, X. Jiang, A. He, R. McAvoy, Y. Pei, and Y. Li. 2007. "GM-gene-deletor": fused loxP-FRT recognition sequences dramatically improves efficiency of FLP or Cre recombinase on transgene excision from pollen and seed of tobacco plants. Plant Biotechnology Journal 5:263-274.

76. Moon. H.S., M.D. Halfhill, L.L. Good, P.L. Raymer and C.N. Stewart, Jr. 2007. Characterization of directly transformed weedy *Brassica rapa* and introgressed *B. rapa* with Bt *cry1Ac* and *gfp* genes. Plant Cell Reports 26:1001-1010.

77. Panthee, D.R.., J.S. Yuan, D.L. Wright, J.J. Marois, D. Mailhot and C.N. Stewart Jr. 2007. Gene expression analysis in soybean in response to the causal agent of Asian soybean rust (*Phakopsora pachyrhizi* Sydow) in an early growth stage. Functional and Integrative Genomics 7: 291-301.

78. Le, Y.-T., Stewart, C. N., Jr., H. Shi, W. Wei, X.-C. Mi, K.-P.Ma. 2007. Expression of Bt *cry1Ac* in transgenic oilseed rape in China and transgenic performance of intraspecific hybrids against *Helicoverpa armigera* larvae. Annals of Applied Biology 150: 141-147.

79. Darbani, B., C.N. Stewart, Jr., A. Razban, and S. Noeparvar. 2007. Coat protein gene sequence analysis of PVX & PVY: conserved regions to design a gene silencing cassette.

Pakistan Journal of Biological Sciences 10: 3330-3340.

80. Yuan, J.S. J. Burris, N.R. Stewart, A. Mentewab, C. N. Stewart Jr. 2007. Statistical tools for transgene copy number estimation based on real-time PCR. BMC Bioinformatics. 8(Suppl 2)**:**S6 doi:10.1186/1471-2105-8-S7-S6; http://www.biomedcentral.com/1471-2105/8/S7/S6 (highly accessed).

81. Darbani, B., M. Toorchi, S. Farajnia, S.A. Mohammadi, and C.N. Stewart, Jr. 2007. K26 antigen from *L. infantum* Mon1: sequence-based function-localization analysis. Pakistan Journal of Medical Science 37: 251-253.

82. Yancey, A. and C. N. Stewart, Jr. 2007. Are university researchers at risk for patent infringement? Nature Biotechnology 25:1225-1228.

83. Himanen, S., A. Nissinen, S. Auriola G.M. Poppy, C.N. Stewart, Jr., J.K. Holopainen, and A.-M. Nerg. 2008. Constitutive and herbivore-inducible glucosinolate concentrations of oilseed rape (*Brassica napus)* leaves are not affected by *Bt Cry1Ac* insertion but change under elevated atmospheric CO_2 and O_3. Planta 227: 427-437.

84. Yuan, J.S., D. W. Galbraith, S.Y. Dai, P. Griffin, and C.N. Stewart, Jr. 2008. Plant systems biology comes of age. Trends in Plant Science 13: 165-171.

85. Mazarei, M., H. Al-Ahmad, M.R. Rudis, C.N. Stewart, Jr. 2008. Protoplast isolation and transient gene expression in switchgrass, *Panicum virgatum* L. Biotechnology Journal 3: 354-359.

86. Yuan, J., D. Wang, and C.N. Stewart, Jr. 2008. Statistical methods for efficiency adjusted real-time PCR analysis. Biotechnology Journal 3:112-123.

87. Wei, W, T.H. Schuler, S.J. Clark, C.N. Stewart, Jr. and G.M. Poppy. 2008. Movement of transgenic plant-expressed Bt Cry1Ac proteins through high trophic levels. Journal of Applied Entomology 132: 1-11.

88. Stewart, C.N., Jr. and L.E. Edwards. 2008. How to teach research ethics. The Scientist 22(6): 27.

89. Burris, K., A. Mentewab, S. Ripp, and C.N. Stewart, Jr. 2008. An *Arabidopsis thaliana* ABC transporter that confers kanamycin resistance in transgenic plants does not endow resistance to *Escherichia coli*. Microbial Biotechnology 1:191-195.

90. Mazarei, M., I. Teplova, M. R. Hajimorad and C. N. Stewart, Jr. 2008. Pathogen phytosensing: plants to report plant pathogens, Sensors 8: 2628-2641.

91. Darbani, B., C.N. Stewart, Jr., and S. Noeparvar. 2008. DNA delivery methods to

produce transgenic plants. Turkish Journal of Biology 7: 385-402.

92. Yuan, J.S., K.H. Tiller, H. Al-Ahmad, N.R. Stewart, C.N. Stewart, Jr. 2008. Plants to power: bioenergy to fuel the future. Trends in Plant Science 13: 421-429.

93. Himanen, S., A. Nissinen, W.-X. Dong, A.-M. Nerg, C.N. Stewart, Jr., G.M. Poppy, and J.K. Holopainen. 2008. Interactions of elevated carbon dioxide and temperature with aphid feeding on transgenic oilseed rape: Are *Bacillus thuringiensis* (Bt) plants more susceptible to nontarget herbivores in future climate? Global Change Biology 14: 1437-1454.

94. Abercrombie, J.M., M.D. Halfhill, P. Ranjan, M.R. Rao, A. Saxton, J.S. Yuan, and C.N. Stewart, Jr. 2008. Transcriptional responses of *Arabidopsis thaliana* to As(V) stress. BMC Plant Biology 8: 87 (http://www.biomedcentral.com/1471-2229/8/87).

95. Darbani, B., S. Farajnia, S. Noeparvar, C. N. Stewart, Jr., S.A. Mohammadi, S. Zakerbastanabad. 2008. Plant transformation: needs and future of transgenes. Biotechnology 7: 403-412.

96. Stewart, C.N., Jr. 2008. Pharming in crop communities. Nature Biotechnology 26:1222-1223.

97. Himanen, S., A.-M. Nerg A. Nissinen, D. M. Pinto, C.N. Stewart, Jr., G.M. Poppy, and J.K. Holopainen, 2009. Effects of elevated carbon dioxide and ozone on volatile terpenoid emissions and multitrophic communication of transgenic insecticidal oilseed rape (*Brassica napus*). New Phytologist 181: 174-186.

98. Panthee, D.R.., J.J. Marois, D.L. Wright, D. Narváez, J.S. Yuan, and C.N. Stewart Jr. 2009. Differential expression of genes in soybean in response to the causal agent of Asian soybean rust, (*Phakopsora pachyrhizi* Sydow), is soybean growth stage-specific. Theoretical and Applied Genetics 118: 359-370.

99. Himanen S.J., A.M. Nerg, A. Nissinen, C.N. Stewart, Jr., G.M. Poppy and J.K. Holopainen. 2009. Elevated atmospheric ozone increases concentration of insecticidal *Bacillus thuringiensis* (Bt) Cry1Ac protein concentrations in Bt *Brassica napus* and reduces feeding of a Bt target herbivore on the non-transgenic parent. Environmental Pollution 157: 181-185.

100. Yuan, J.S., S. Himanen, J.K. Holopainen, F. Chen, and C.N. Stewart, Jr. 2009. Smelling climate change: plant volatile organic compounds in changing environments. Trends in Ecology and Evolution 24: 323-331.

101. Di, K., C.N. Stewart, Jr., W. Wei, B. Shen, Z.-X. Tang, K.-P. Ma. 2009. Fitness and maternal effects in hybrids formed between transgenic oilseed rape (*Brassica napus* L.) and wild brown mustard [*B. juncea* (L.) Czern et. Coss.] in the field. Pest Management Science 65:753-760.

102. Stewart, C.N., Jr., P.J. Tranel, D.P. Horvath, J.V. Anderson, L.H. Rieseberg, J.H. Westwood, C.A. Mallory-Smith, M.L. Zapiola, K.M. Dlugosch. 2009. Evolution of weediness and invasiveness: charting the course for weed genomics. Weed Science 57: 451-462.

103. Abercrombie, L.G. and 101 other authors. 2009. Permanent genetic resources added to Molecular Ecology Resources database 1 January 2009- 30 April 2009. Molecular Ecology Resources 9: 1375-1379.

104. Cutulle, M.A., J.S. McElroy, R.W. Millwood, J.C. Sorochan, C.N. Stewart, Jr. 2009. Selection of bioassay method influences detection of annual bluegrass resistance to mitotic-inhibiting herbicides. Crop Science. 49: 1088-1095.

105. Rao, M.R., M.D. Halfhill, L.G Abercrombie, P. Ranjan, J.M. Abercrombie, J.S. Gouffon, A.M. Saxton, and C.N. Stewart, Jr. 2009. Phytoremediation and phytosensing of chemical contaminants, RDX and TNT: identification of the required target genes. Functional and Integrative Genomics 9:537-547.

106. Stewart, C.N., Jr. and T. Tschaplinski. 2009. Session 1: Advances in bioenergy feedstocks and plant science. Applied Biochemistry and Biotechnology 153: 1-3.

107. Zhou, X., Z. Su, R.D. Sammons, Y. Peng, P.J. Tranel, C.N. Stewart, Jr., J.S. Yuan. 2009. Novel software package for cross-platform transcriptome analysis (CPTRA). BMC Bioinformatics **10** (Suppl 11)**:** S16 http://www.biomedcentral.com/qc/1471-2105/10/S11/S16/

108. Xu, Z, D. Zhang, J. Hu, X. Zhou, X. Ye, K.L. Reichel, N.R. Stewart, R.D. Syrenne, X. Yang, P. Gao, W. Shi, C. Doeppke, R. W. Sykes, J.N. Burris, J. Bozell, Max Z.-M.. Cheng, D.G. Hayes, N. Labbe, M. Davis, C.N. Stewart, Jr., J.S. Yuan. 2009. Comparative genome analysis of lignin biosynthesis gene families across the plant kingdom. BMC Bioinformatics **10** (Suppl 11)**:** S3 http://www.biomedcentral.com/1471-2105/10/S11/S3 (highly accessed).

109. Chen, F., H. Al-Ahmad, B. Joyce, N. Zhao, T. G. Köllner, J. Degenhardt, C. N. Stewart, Jr. 2009. Within-plant distribution and emission of sesquiterpenes from *Copaifera officinalis*. Plant Physiology and Biochemistry, 47: 1017-1023.

110. Rose, C.W., R.J. Millwood, H.S. Moon, M.R. Rao, M.D. Halfhill, P.L. Raymer, S.I. Warwick, H. Al-Ahmad, J. Gressel, and C.N. Stewart, Jr. 2009. Genetic load and transgenic mitigating genes in transgenic *Brassica rapa* (field mustard) × *Brassica napus* (oilseed rape) hybrid populations. BMC Biotechnology 9: 93 http://www.biomedcentral.com/1472-6750/9/93/

111. Mann, D.J.G., N. Labbé, R. Sykes, K. Reichel, L. Kline, I.M. Swamidoss, J.N. Burris, M. Davis, C.N. Stewart, Jr. 2009. Rapid assessment of lignin content and structure in switchgrass (*Panicum virgatum* L.) grown under different environmental conditions. BioEnergy Research 2: 246-256.

112. Burris, J.N., D.J.G. Mann, B.L. Joyce, C.N. Stewart, Jr. 2009. An improved tissue culture system for embyrogenic callus production and plant regeneration in switchgrass (*Panicum virgatum* L.). BioEnergy Research 2: 267-274.

113. Stewart, C.N., Jr., L. Shugart, G.-S. Liu, J. Zhuang, Y. Ma, G.A. Tuskan, R. Meilan, R.W. Gentry, G.S. Sayler. 2010. China-U.S. workshop on biotechnology of bioenergy plants. Ecotoxicology 19: 1-3.

114. Moon, H.S., Y. Li., C.N. Stewart, Jr. 2010. Keeping the genie in the bottle: transgene biocontainment by excision in pollen. Trends in Biotechnology, 28: 3-8.(with accompanying journal cover)

115. Moon, H.S., J.M. Abercrombie, A.P. Kausch, C.N Stewart, Jr. 2010. Sustainable use of biotechnology for bioenergy feedstocks. Environmental Management 46:531-538.

116. Himanen, S.J., A.-M. Nerg, G.M. Poppy, C.N. Stewart, Jr., J.K. Holopainen. 2010. Abiotic stress and transgenics: implications for reproductive success and crop-wild gene flow in *Brassica*s. Basic and Applied Ecology 11: 513-521.

117. Yuan, J.S., L.G. Abercrombie, Y. Cao, M.D. Halfhill, X. Zhou, Y. Peng, J. Hu, M.R. Rao, G.R. Heck, T.J. Larosa, R. D. Sammons, R. N. Trigiano, X. Wang, P. Ranjan, D. H. Johnson, P. A. Wadl, B.E. Scheffler, T.A Rinehart, R.N. Trigiano, C. N. Stewart, Jr. 2010. Functional genomics analysis of horseweed (*Conyza canadensis*) with special reference to the evolution of non-target-site glyphosate resistance. Weed Science. 58: 109-117.

118. Kausch, A.P., J. Hague, M. Oliver, Y. Li. H. Daniell, P. Maschia, L.S. Watrud, and C.N. Stewart, Jr. 2010. Transgenic biofuel feedstocks and strategies for bioconfinement. Biofuels 1:163-176.

119. Kang, B.-G., X. Ye, L.D. Osburn, C.N. Stewart, Jr., Z-M. Cheng. 2010. Transgenic hybrid aspen overexpressing the *Atwbc19* gene encoding an ATP binding cassette transporter confers resistance to four aminoglycoside antibiotics. Plant Cell Reports 29:643-650.

120. Yancey, A., C. N. Stewart, Jr. 2010. Patent reform in the US: What's at stake for the pharmaceutical industry? Expert Opinion on Therapeutic Patents 5:603-608.

120a. Yancey, A., C. N. Stewart, Jr. 2010. Patent reform in the US: What's at stake for the pharmaceutical industry? *Reprinted in* Intellectual Property Magazine, August 2010, pp 26-29.

121. Peng, Y., L.L.G. Abercrombie, J.S. Yuan, C.W. Riggins, R.D. Sammons, P.J. Tranel, and C.N. Stewart, Jr. 2010. Characterization of the horseweed *Conyza canadensis* transcriptome using GS-FLX 454 pyrosequencing and its application for expression analysis of candidate non-target herbicide-resistance genes. Pest Management Science 66: 1053-1062.

122. Riggins, C.W., Y. Peng, C. N. Stewart, Jr., and P. J. Tranel. 2010. Characterization of *de novo* waterhemp (*Amaranthus tuberculatus*) transcriptome using GS-FLX 454 pyrosequencing and its application for studies of herbicide target-site genes. Pest Management Science 66: 1042-1052.

123. Gajoti, T.E., V. Haciyev, A. Javanshir, H. Nosrati, A.R. Haghighi, A. Eimanifar, C. N. Stewart, Jr. 2010. Vegetation analysis in Sutan-Chay basin in Arasbaran. American Journal of Agricultural and Biological Sciences 5:357-362.

124. Rao, M.R., H.S. Moon, T.M.H. Schenk, D. Becker, M. Mazarei and C.N. Stewart Jr. 2010. FLP/FRT recombination from yeast: application of a two gene cassette scheme as an inducible system in plants. Sensors 10: 8526-8535; doi:10.3390/s100908526.

125. Xia L., S.C. Lenaghan, M. Zhang, Y. Wu, X. Zhao, J. N. Burris, C. N. Stewart, Jr. 2011. Characterization of English ivy (*Hedera helix*) adhesion force and imaging using atomic force microscopy. Journal of Nanoparticle Research 13:1029-1037.

126. Burris, K.P., P. M. Davidson, C.N. Stewart, Jr. and F. M. Harte. 2011 Antimicrobial activity of Yerba Mate (*Ilex paraguariensis*) aqueous extracts against *Escherichia coli* O157:H7 and *Staphylococcus aureus*. Journal of Food Science 76: M456-M462.

127. Vasudev, M., T.-C. Wu, M. Datta, M.A. Stroscio, S. Guthrie, M. Reed, K.P. Burris, C. N. Stewart, Jr. 2011. Optoelectric signatures of DNA-based hybrid nanostructures. IEEE Transactions on Nanotechnology 10: 35-43.

128. Jiang, H., W. Wei, X. Song, C.N. Stewart, Jr., G. Zhou, Z. Jiang. Q Zhu, S. Yu, S. Peng, 2011. Hyperspectral studies of transgenic oilseed rape. International Journal of Remote Sensing 32: 1095-1103.

129. Abercrombie, J.M., M. Stewart, M.R. Rao, M.E. Essington, and C.N. Stewart, Jr. 2011. Aluminum accumulation in *Pteris cretica* and heavy metal uptake in vegetation growing on an abandoned aluminum smelter site in Knoxville, TN USA. International Journal of Environment and Pollution. 45: 310-326.

130. Moon, H.S., S. Eda, A.M. Saxton, D. Ow, C.N. Stewart, Jr. 2011. An efficient and rapid transgenic pollen screening and detection method using flow cytometry. Biotechnology Journal 6:118-123.

131. Leckie, B.L., C.N. Stewart, Jr. 2011. Agroinfiltration as a technique for rapid assays for expressing candidate insect resistance transgenes in plants. Plant Cell Reports 30:325-334.

132. Lei, L., C.N. Stewart, Jr, Z-X. Tang, and W. Wei. 2011. Dynamic expression of green fluorescent protein and *Bacillus thuringiensis* Cry1Ac endotoxin in interspecific hybrids and successive backcross generations (BC_1 and BC_2) between transgenic *Brassica napus* crop and

wild *Brassica juncea*. Annals of Applied Biology 159: 212-219.

133. Mazarei, M. W. Liu, H. Al-Ahmad, P.R. Arelli, V.R. Pantalone, C.N. Stewart, Jr. 2011. Gene expression profiling of resistant and susceptible soybean lines infected with soybean cyst nematode. Theoretical and Applied Genetics 123: 1193-1206.

134. Mazarei, M., H. Al-Ahmad, M.R. Rudis, B. L. Joyce, C.N. Stewart, Jr. 2011. Switchgrass (*Panicum virgatum* L.) cell suspension cultures: establishment, characterization, and application. Plant Science 6: 712-715.

135. Moon, H.S., L.L. Abercrombie, S. Eda, R. Blanvillain, J.G. Thomson, D.W. Ow, C.N. Stewart, Jr. 2011. Transgene excision in pollen using a codon optimized serine resolvase CinH-*RS2* site-specific recombination system. Plant Molecular Biology 75:621-631.

136. Kwit, C. H.S. Moon, S.I. Warwick, C.N. Stewart, Jr. 2011. Transgene introgression in crop relatives: molecular evidence and mitigation strategies. Trends in Biotechnology 29: 284-293.

137. Mann, D.J.G., Z. R. King, W. Liu, B.L. Joyce, R.J. Percifield, J.S. Hawkins, P.R. LaFayette, B.J. Artelt, J.N. Burris, M. Mazarei, J.L. Bennetzen, W.A. Parrott, C.N. Stewart, Jr. 2011. Switchgrass (*Panicum virgatum* L.) polyubiquitin gene (*PvUbi1* and *PvUbi2*) promoters for use in plant transformation. BMC Biotechnology 11:74 http://www.biomedcentral.com/1472-6750/11/74/ (highly accessed).

138. Salgotra, R.K**.,** R. J. Millwood, S. Agarwal, C. N. Stewart, Jr, 2011. High-throughput functional marker assay for detection of *Xa/xa* and *fgr* genes in rice (*Oryza sativa* L.). Electrophoresis 32: 2216-2222.

139. Stewart, C.N., Jr. and G.-S. Liu. 2011. Bioenergy plants in the United States and China. Plant Science 181: 621-622.

140. Yuan, J.S., Y. Qu, S. Li, and C.N. Stewart Jr. 2011. US-China collaborative biofuel research: towards a global solution for petroleum replacement. Biofuels 2:487-489.

141. Yuan, J.S., X. Wang, and C.N. Stewart Jr. 2011. Biomass feedstock: diversity as a solution. Biofuels 2: 491-493.

142. Darbani, B., S. Farajnia, M. Toorchi, S. Zakerbostanabad, S. Neopavar, C.N. Stewart, Jr. 2011. DNA-delivery methods to produce transgenic plants. Biotechnology 10: 323-340.

143. Liu, W., M. Mazarei, M.R. Rudis, M.H. Fethe, and C.N. Stewart, Jr. 2011. Rapid in vivo analysis of synthetic promoters for pathogen phytosensing. BMC Biotechnology, 11:108 http://www.biomedcentral.com/1472-6750/11/108

144. Shen, H., X. He, C.R. Poovaiah, W.A. Wuddineh, J. Ma, D.G.J. Mann, H. Wang, L. Jackson, Y. Tang, C.N. Stewart, Jr., F. Chen, and R.A. Dixon. 2012. Functional characterization of the switchgrass *(Panicum virgatum)* R2R3-MYB transcription factor *PvMYB4* for improvement of lignocellulosic feedstocks. New Phytologist 193: 121-136.

145. Mann, D.G.J., P.R. LaFayette, L. L. Abercrombie, Z.R. King, M. Mazarei, M.C. Halter, C.R. Poovaiah, H. Baxter, H. Shen, R.A. Dixon, W.A. Parrott, C.N. Stewart, Jr. 2012. Gateway-compatible vectors for high-throughput gene functional analysis in switchgrass (*Panicum virgatum* L.) and other monocot species. Plant Biotechnology Journal 10:226-236.

146. Joyce, B. and C.N. Stewart, Jr. 2012. Designing the perfect plant feedstock for biofuel production: using the whole buffalo to diversify fuel and products. Biotechnology Advances 30: 1011-1022.

147. Kwit, C. and C.N. Stewart, Jr. 2012. Gene flow matters in switchgrass (*Panicum virgatum* L.), a potential widespread biofuel feedstock. Ecological Applications 22: 3-7.

148. Resnick, D.B., and C.N. Stewart, Jr. 2012. Misconduct versus honest error and scientific disagreement. Accountability in Research 19:56-63.

149. Fu, C., R. Sunkar, C. Zhou, H. Shen, J. Zhang, J. Matts, J. Wolf, D. G.J. Mann, C. N. Stewart, Jr., Y. Tang, Z.-Y. Wang. 2012. Overexpression of miR156 in switchgrass (*Panicum virgatum* L.) results in various morphological alterations and leads to improved biomass production. Plant Biotechnology Journal 10:443-452.

150. Salgotra, R.K. B.B. Gupta, R.J. Millwood, M. Balasubramaniam, and C.N Stewart, Jr. 2012. Introgression of bacterial leaf blight resistance and aroma genes using functional marker-assisted selection in rice (*Oryza sativa* L.). Euphytica 187: 313-323.

151. Burris, K.P., P.M Davidson, C.N. Stewart, Jr., S. Zivanovic, F.M. Harte. 2012. Aqueous extracts of yerbe mate (*Ilex paraguariensis*) as a natural antimicrobial agent against *Escherichia coli* O157:H7 in a microbiological medium and pH 6.0 apple juice. Journal of Food Protection 75: 753-757.

152. Burris, K.P., and C.N Stewart, Jr. 2012. Fluorescent nanoparticles: sensing pathogens and toxins in foods and crops. Trends in Food Science and Technology 28:143-152.

153. Liu, Y., Z. Tang, H. Darmency, C. N. Stewart, Jr., K. Di, W. Wei, K. Ma. 2012. The effects of seed size on hybrids formed between oilseed rape (*Brassica napus*) and wild brown mustard (*Brassica juncea*). PLoS One 7(6): e39705

154. Sun, G., C.N. Stewart, Jr., P. Xiao, B. Zhang. 2012. MicroRNA expression analysis in the cellulosic biofuel crop switchgrass (*Panicum virgatum*) under abiotic stress. PLoS One 7(3): e32017. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0032017

155. Burris, K.P., F.M. Harte, P.M Davidson, C.N. Stewart, Jr., S. Zivanovic. 2012. Composition and bioactive properties of yerbe mate (*Ilex paraguariensis* A. St.-Hil.): a review. Chilean Journal of Agricultural Research 72: 268-274.

156. Zhao, N., J.-L. Ferrer, H.S. Moon, J. Kapteyn, X. Zhuang, M. Hasebe, C.N. Stewart Jr., D.R. Gang, and F. Chen. 2012. A SABATH methyltransferase from the moss *Physcomitrella patens* catalyzes S-methylation of thiols and has a role in detoxification. Phytochemistry 81: 31-41.

157. Mann, D.G.J., L.L. Abercrombie, M.R. Rudis, R.J. Millwood, J.R. Dunlap, C.N. Stewart, Jr. 2012. Very bright orange fluorescent plants: endoplasmic reticulum targeting of orange fluorescent proteins as visual reporters in transgenic plants. BMC Biotechnology 12: 17.

158. Johnson, M.T.J., Z. Tian, E.J. Carpenter, R. Bruskiewich, J.N. Burris, C.T. Carrigan, M.W. Chase, N.D. Clarke, S. Covshoff, C.W. dePamphilis, P.P. Edger, F. Goh, S. Graham, S. Greiner, J.M. Hibberd, I. Jordon-Thaden, T.M. Kutchan, J. Leebens-Mack, M. Melkonian, N. Miles, H. Myburg, J.C. Pires, M. Rolf, R.F. Sage, D. Soltis, P. Soltis, D. Stevenson, C.N. Stewart, Jr, B..Surek, C.J.M. Thomsen, J.C. Villarreal, X. Wu, Y. Zhang, M.K. Deyholos, G.K.-S. Wong. 2012. Evaluating methods of isolating total RNA and predicting the success of sequencing phylogenetically diverse plant transcriptomes. PLoS ONE 7(11):e50226. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0050226

159. Burris, J.N., S. Lenaghan, M.J. Zhang, C.N. Stewart, Jr. 2012. Nanoparticle biofabrication using English ivy (*Hedera helix*). Journal of Nanobiotechnology 10:41. http://www.jnanobiotechnology.com/content/10/1/41

160. Liu, W., M. Mazarei, M.R. Rudis, M.H. Fethe, Y. Peng, R.J. Millwood, G. Schoene, J.N. Burris and C.N. Stewart, Jr. 2013. Bacterial pathogen phytosensing in transgenic tobacco and *Arabidopsis* plants. Plant Biotechnology Journal 11:43-52.

161. Nageswara-Rao, M., C.N. Stewart, Jr., C. Kwit. 2013. Genetic diversity and structure of natural and agronomic switchgrass (*Panicum virgatum* L.) populations. Genetic Resources and Crop Evolution 60: 1057-1068.

162. Yi, S., L. Xia, S.C. Lenaghan, L. Sun, Y. Huang, J.N. Burris, C.N. Stewart, Jr., and M.J. Zhang. 2013. Biosynthesis of gold nanoparticles using English ivy (*Hedera helix*). Journal of Nanoscience and Nanotechnology 13:1649-1659.

163. Lenaghan, S.C., Y. Li, H. Zhang, J.N. Burris, C.N. Stewart, Jr., L.E. Parker, and M.J. Zhang. 2013. Monitoring the environmental impact of TiO_2 nanoparticles using a plant-based sensor-network. IEEE Transactions on Nanotoxicology 12: 182-189.

164. Hardin, C.F. C. Fu, H. Hisano, X. Xaio, H. Shen, C.N. Stewart, Jr., W. Parrott, R.A. Dixon, Z-Y. Wang. 2013. Standardization of switchgrass sample collection for cell wall and biomass

trait analysis. BioEnergy Research 6: 755-762.
http://link.springer.com/content/pdf/10.1007%2Fs12155-012-9292-1.pdf

165. Huang, Y., S.C. Lenaghan, L. Xia, Z. Xu, J.N. Burris, C.N. Stewart Jr., M.J. Zhang. 2013. Characterization of physicochemical properties of ivy nanoparticles for cosmetic applications. Journal of Nanobiotechnology 11:3. http://www.jnanobiotechnology.com/content/11/1/3

166. Okada, M., B.D. Hanson, K.J. Hembree, W.T. Lanini, Y. Peng, A. Shrestha, C.N. Stewart, Jr., S.D. Wright, and M. Jasieniuk. 2013. Evolution and spread of glyphosate resistance in *Conyza canadensis* in California. Evolutionary Applications 6: 761-777.

167. Yau, Y.Y. and C.N. Stewart, Jr. 2013. Less is more: strategies to remove marker genes from transgenic plants. BMC Biotechnology 13:36. http://www.biomedcentral.com/1472-6750/13/36

168. Shen, H., C. R. Poovaiah, A. Ziebell, T.J. Tschaplinski, S. Pattathil, E. Gjersing, N. Engle, R. Katahira, Y. Pu, R. Sykes, F. Chen, A.J. Ragauskas, J.R. Mielenz, M.G. Hahn, M. Davis, C.N. Stewart, Jr., R.A. Dixon. 2013. Enhanced characteristics of genetically modified switchgrass (*Panicum virgatum* L.) for high biofuel production. Biotechnology for Biofuels 6:71. http://www.biotechnologyforbiofuels.com/content/6/1/71/abstract

169. Sang, Y., R.J. Millwood, C.N. Stewart Jr. 2013 Gene use restriction technologies for transgenic plant bioconfinement. Plant Biotechnology Journal 11:649-658.

170. Nagaswara-Rao, M., J. Soneji, C. Kwit, C.N. Stewart, Jr. 2013. Advances in biotechnology and genomics of switchgrass. Biotechnology for Biofuels 6:77. http://www.biotechnologyforbiofuels.com/content/6/1/77/abstract

171. Rice, J.H., R.E. Mundell, R.J. Millwood, O.D. Chambers, C.N. Stewart. Jr., H.M. Davies, 2013. Assessing the bioconfinement potential of a *Nicotiana* hybrid platform for use in plant molecular farming applications. BMC Biotechnology 13:63. http://www.biomedcentral.com/1472-6750/13/63

172. Lenaghan, S., J.N. Burris, K. Chourey, Y. Huang, L. Xia, B. Lady, R. Sharma, C. Pan, Z. LeJeune, S. Foister, R.L. Hettich, C.N. Stewart, Jr. and M. Zhang. 2013. Identification of the chemical nature of nanoparticles secreted by English ivy (*Hedera helix*). Journal of the Royal Society Interface 10 (87): 20130392.

173. Burris, K.P., T-C. Wu, M. Vasudev, M.A. Stroscio, R.J. Millwood, and C.N. Stewart, Jr., 2013. Mega-nano detection of foodborne pathogens and transgenes using molecular beacon and semiconductor quantum dot technologies. IEEE Transactions in NanoBioscience 12: 233-238.

174. Nageswara-Rao, M., C. Kwit, S. Agarwal, M.T. Patton, J.A. Skeen, J.S. Yuan, R.M. Manshardt. C.N. Stewart Jr. 2013. Sensitivity of a real-time PCR method for the detection of transgenes in a mixture of transgenic and non-transgenic seeds of papaya (*Carica papaya* L.)

BMC Biotechnology 13:69. http://www.biomedcentral.com/1472-6750/13/69

175. Muthukumar, B., B.L. Joyce, M.P. Elless, C.N. Stewart Jr. 2013.Stable transformation of ferns using spores as targets: *Pteris vittata* and *Ceratopteris thalictroides*. Plant Physiology 163: 648-658.

176. Rice, J.H., R.E. Mundell, R.J. Millwood, O.D. Chambers, L.G. Abercrombie, H.M. Davies, and C.N. Stewart, Jr. 2013. An orange fluorescent protein tagging system for real-time pollen tracking. BMC Research Notes 6:383. http://www.biomedcentral.com/1756-0500/6/383/abstract

177. Yau, Y.Y. M. Easterling, C.N. Stewart, Jr. 2013. Precise transgene stacking *in planta* through the combined use of TALENs and uni-directional site-specific recombination systems OA Biotechnology 2(3): 24.

178. Baxter, H.L. and C.N. Stewart, Jr. 2013. Effects of altered lignin biosynthesis on phenylpropanoid metabolism and plant stress. Biofuels 4: 635-650.

179. Liu, W., J.S. Yuan and C.N. Stewart, Jr. 2013. Advanced genetic tools for plant biotechnology. Nature Reviews Genetics 14: 781-793.

180. Lin, J. M. Mazarei, N. Zhao, J.J. Zhu, X Zhaung, W. Liu., V.R. Pantalone, P.R. Arelli, C. N. Stewart, Jr., F. Chen. 2013. Overexpression of a soybean salicyclic acid methlyltransferase confers resistance to soybean cyst nematode. Plant Biotechnology Journal 11: 1135-1145.

181. Ellstrand, N.C., P. Meirmans, J. Rong, D. Bartsch, A. Ghosh, T.J. de Jong, P. Haccou, B.-R. Lu, A.A. Snow, C.N. Stewart, Jr., J.L. Strasburg, P.H. van Tienderen, K. Vrieling, D. Hooftman. 2013. Introgression of crop alleles into wild or weedy populations. Annual Review of Ecology, Evolution, and Systematics 44: 325-345.

182. Shen H., M. Mazarei, H. Hisano, F. Hardin, L.L. Escamilla-Treviño, C. Fu, Y. Pu, M.R. Rudis, Y. Tang, X. Xiao, L. Jackson, G. Li, T. Hernandez, F. Chen, A.J. Ragauskas, C.N. Stewart Jr., Z.-Y. Wang, and R.A. Dixon. 2013. A genomics approach to deciphering lignin biosynthesis in switchgrass (*Panicum virgatum* L.). Plant Cell 25: 4342-4361.

183. Higginbotham, K.L., K.P. Burris, S. Zivanovic, P.M. Davidson, C.N. Stewart, Jr. 2014. Aqueous extracts of *Hibiscus sabdariffa* calyces as an antimicrobial rinse on hot dogs against *Listeria monocytogenes* and methicillin-resistant *Staphylococcus aureus.* Food Control 40: 274-277.

184. Higginbotham, K.L., K.P. Burris, S. Zivanovic, P.M. Davidson, C.N. Stewart, Jr. 2014. Antimicrobial activity of *Hibiscus sabdariffa* aqueous extracts against *Escherichia coli* O157:H7 and *Staphylococcus aureus* in a microbiological medium and milk of varying fat concentrations. Journal of Food Protection 77: 262-268.

185. Resnick, D.B., and C.N. Stewart, Jr. 2014. Expanding the scope of responsible conduct in research instruction. Accountability in Research 21:321-327.

186. Xie, F., C.N. Stewart, Jr., F. Taten, Q. He, H. Liu, B. Zhang. 2014. High throughput deep sequencing shows that microRNAs play important roles in switchgrass responses to drought and salinity stress for biofuel production. Plant Biotechnology Journal12: 354-366.

187. Gressel, J., C.N Stewart, Jr., L.V. Giddings, A.J. Fischer, J.C. Streibig, N.R. Burgos, A. Trewavas, A. Merotto, Jr., C.J. Leaver, K. Ammann, V. Moses, A. Lawton-Rauh. 2014. Overexpression of *epsps* transgene in weedy rice: insufficient evidence to support multiple conclusions about biosafety. New Phytologist 202:360-362.

188. Salgotra, R.K., B.B. Gupta, C.N. Stewart, Jr. 2014. From genomics to functional markers in the era of next-generation sequencing. Biotechnology Letters 36: 417-426.

189. Liu, W., M.R. Rudis, Y. Peng, M. Mazarei, R.J. Millwood, J.-P. Yang, W. Yu, J.D. Chesnut, C.N. Stewart Jr. 2014. Synthetic TAL effectors for targeted enhancement of transgene expression in plants. Plant Biotechnology Journal 12: 436-446 (with accompanying journal cover).

190. Stewart, C.N., Jr. 2014. Images and imagination: the role of figures in plant cell and molecular biology publications. Plant Cell Reports 33: 829-830.

191. Darbani, B., C.N. Stewart, Jr. 2014. Reproducibility and reliability assays of gene expression measurements. Journal of Biological Research 21:3.

192. Cao, D., C.N. Stewart Jr, M. Zheng, Z. Guan, Z.-X. Tang, W. Wei, K.-P. Ma. 2014. Stable *Bacillus thuringiensis* transgene introgression from *Brassica napus* to wild mustard *B. juncea*. Plant Science 227: 45-50.

193. Ali, A., J.C. Zinnert, B. Muthukumar, Y. Peng, S.-M. Chung, C.N. Stewart, Jr. 2014. Physiological and transcriptional responses of *Baccharis halimifolia* to the explosive 'composition B' (RDX/TNT) in amended soil. Environmental Science and Pollution Research 21: 8261-8270.

194. Fethe, M.H., W. Liu, J.N. Burris, R.J. Millwood, M. Mazarei, M.R. Rudis, D.G. Yeaman, M. Dubosquielle, C.N. Stewart Jr. 2014. The performance of pathogenic bacterial phytosensing transgenic tobacco in the field. Plant Biotechnology Journal 12: 755-764.

195. Chauhan, A. A. Smartt, J.Wang, S. Utturkar, A. Frank, M. Bi, J. Liu, D. Williams, T. Xu, M. Eldridge, A. Arreaza, A. Rogers, H.C. Gonzalez, A.C. Layton, H.L. Baxter, M. Mazarei, J.M. DeBruyn, C.N. Stewart, Jr., S.D. Brown, L.J. Hauser, G.S. Sayler. 2014. Integrated metagenomics and metatranscriptomics analyses of root-associated soil from transgenic switchgrass. Genome Announcements 2:e00777-14. doi:10.1128/genomeA.00777-14.

196. Baxter, H.L, M. Mazarei, N. Labbe, L. Kline, Q. Cheng, M. Windham, D.G.J. Mann, C. Fu, A. Ziebell, R. Sykes, M. Rodriguez, M. Davis, J. Mielenz, R.A. Dixon, Z.-Y. Wang, C.N. Stewart, Jr. 2014. Two-year field analysis of decreased recalcitrance transgenic switchgrass. Plant Biotechnology Journal 12: 914-924 (with accompanying journal cover).

197. Nageswara-Rao, M., M. Hanson, S. Agarwal, C.N. Stewart Jr. C. Kwit. 2014. Genetic diversity analysis of switchgrass (*Panicum virgatum* L.) populations using microsatellites and chloroplast sequences. Agroforestry Systems 88: 823-834.

198. Mahfouz, M.M., A. Piatek, C.N. Stewart Jr. 2014. Genome engineering via TALENs and CRISPR/Cas9 systems: challenges and perspectives. Plant Biotechnology Journal 12: 1006-1014.

199. Liu, W., M. Mazarei, Y. Peng, M.H. Fethe, M.R. Rudis, J. Lin, R.J. Millwood, P.R. Arelli, C.N. Stewart, Jr. 2014. Computational discovery of soybean promoter *cis*-regulatory elements for the construction of soybean cyst nematode-inducible synthetic promoters. Plant Biotechnology Journal 12: 1015-1026.

200. Darbani, B., C.N. Stewart, Jr., S. Neoparvar, S. Borg. 2014. Correction of gene expression data: performance-dependency on inter-replicate and inter-treatment biases. Journal of Biotechnology 188: 100-109.

201. Zhang, W., E.R. Brown, L. Viveros, K. Burris, C.N. Stewart, Jr. 2014. Narrow terahertz attenuation signatures in *Bacillus thuringiensis*. Journal of Biophotonics 7: 818-824.

202. Ji, H., Y. Peng, N. Meckes, S. Allen, C.N. Stewart, Jr., and M.B. Traw. 2014. ATP-dependent binding cassette transporter G family member 16 increases plant tolerance to abscisic acid and assists in basal resistance against *Pseudomonas syringae* DC3000. Plant Physiology 166: 879-888.

203. Peng, Y., Z. Lai, T. Lane, M. Nageswara-Rao, M. Okada, M. Jasieniuk, H. O'Geen, R.W. Kim, R.D. Sammons, L. Rieseberg, C.N. Stewart, Jr. 2014. *De novo* genome assembly of the economically-important weed *Conyza canadensis* using integrated data from multiple sequencing platforms. Plant Physiology 166: 1241-1254.

204. Joyce, B.L., S. Eda, J. Dunlap, and C.N. Stewart, Jr. 2014. Morphology and ploidy level determination of *Pteris vittata* callus during induction and regeneration. BMC Biotechnology 14:96. http://www.biomedcentral.com/1472-6750/14/96/

205. Floyd, S.K., J.G. Ryan, S.J. Conway, E. Brenner, K.P. Burris, J.N. Burris, T. Chen, P.P. Edger, S.W. Graham, J.H. Leebens-Mack, J.C. Pires, C.J. Rothfels, E.M. Sigel, D.W. Stevenson, C.N. Stewart, Jr., G.K.-S. Wong, J.L. Bowman. 2014. Origin of a novel regulatory module by duplication and degeneration of an ancient plant transcription factor. Molecular Phylogenetics

and Evolution 81: 159-173.

206. Peng, Y., S. Allen, R.J. Millwood, C.N. Stewart, Jr. 2014. Building the 'Fukusensor:' a genetically engineered plant for reporting DNA damage in response to gamma radiation. Plant Biotechnology Journal 12:1329-1332.

207. Poovaiah, C., M. Nagaswara-Rao, J.R. Soneji, H.L. Baxter, C.N. Stewart, Jr. 2014. Altered lignin biosynthesis using biotechnology to improve lignocellulosic biofuel feedstocks. Plant Biotechnology Journal 12: 1163-1173.

208. Mitchell, J.L.B., M. Halter, C.N. Stewart, Jr., E.T. Nilsen. 2014. Cool temperature effects on photosynthetic parameters of two biomass fuel feedstocks in a low light intensity environment. Biofuels 5:534-544.

209. Alexander, L.W., E.R. Haynes, J. Burris, S. Jackson, C.N. Stewart, Jr. 2014. Cultural treatments for accelerated growth and flowering of *Panicum virgatum* Biofuels 5:771-780.

210. Piya, S., S.K. Shrestha, B. Binder, C.N. Stewart, Jr., T. Hewezi. 2014. Protein-protein interaction and gene co-expression maps of ARFs and Aux/IAAs in Arabidopsis. Frontiers in Plant Science 5: 744. http://journal.frontiersin.org/article/10.3389/fpls.2014.00744/abstract

211. Cannon, S.B., M.R. McKain, A. Harkess, M.N. Nelson, S. Dash, M.K. Deyholos, Y. Peng, B. Joyce, C.N. Stewart, Jr., M. Rolf, T. Kutchan, X. Tan, C. Chen, Y. Zhang, E. Carpenter, G.K.-S. Wong, J.J. Doyle, J. Leebens-Mack. 2015. Multiple polyploidy events in the early radiation of nodulating and nonnodulating legumes. Molecular Biology and Evolution 32: 193-210. DOI: 10.1093/molbev/msu296

212. Trumbo, J.L., B. Zhang, and C.N. Stewart, Jr. 2015. Manipulating microRNAs for improved biomass and biofuels from plant feedstocks. Plant Biotechnology Journal 13: 337-354. DOI: 10.1111/pbi.12319

213. Burris, K.P., K.L. Higginbotham, C.N. Stewart, Jr. 2015. Aqueous extracts of yerba mate as bacteriacidal agents against methicillin-resistant *Staphylococcus aureus* in a microbiological medium and ground beef mixtures. Food Control 50: 748-753. DOI: 10.1016/j.foodcont.2014.10.021

214. Cardinale, V.C.B., A.C.R. Dias, T.C. Mueller, L. Abercrombie, C.N. Stewart, Jr., P.J. Christoffoleti. 2015. Shikimate accumulation, glyphosate absorption and translocation in horseweed biotypes. Planta Daninha 33: 109-118. DOI: 10.1590/S0100-83582015000100013

215. Okada, M., B.D. Hanson, K.J. Hembree, Y. Peng, A. Shrestha, C.N. Stewart, Jr., S.D. Wright, and M. Jasieniuk. 2015. Evolution and spread of glyphosate resistance in *Conyza bonariensis* in California and a comparison with closely related *Conyza canadensis.* Weed Research 55:173-184. DOI: 10.1111/wre.12131

216. Poovaiah, C.R., M. Mazarei, S.R. Decker, G.B. Turner, R.W. Sykes, M.F. Davis, C.N. Stewart, Jr. 2015. Overexpression of switchgrass sucrose synthase (*PvSUS1*) increases plant biomass in transgenic switchgrass (*Panicum virgatum* L.). Biotechnology Journal 10: 552-563. DOI: 10.1002/biot.201400499

217. Liu, Y. C.N. Stewart, Jr., J. Li. 2015. China: inform public on GM, don't cheerlead. Nature 520: 295. DOI: 10.1038/520295c

218. Liu, W., and C.N. Stewart, Jr. 2015. Plant synthetic biology. Trends in Plant Science 20: 309-317. DOI: 10.1016/j.copbio.2015.10.001

219. Rempe, C.S., K.P. Burris, H.L. Woo, B. Goodrich, D.K. Gosnell, T.J. Tschaplinski, C.N. Stewart, Jr. 2015. Computational ranking of yerba mate small molecules based on their predicted contribution to antibacterial activity against methicillin-resistant *Staphylococcus aureus*. PLOS ONE 10(5): e0123925. DOI: 10.1371/journal.pone.0123925
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0123925

220. Wuddineh, W.A., M. Mazarei, J. Zhang, C.R. Poovaiah, D.G.J. Mann, A. Ziebell, R.W. Sykes, M.F. Davis, M.K. Udvardi, C.N. Stewart, Jr. 2015. Identification and overexpression of *gibberellin 2-oxidase* (*GA2ox*) in switchgrass (*Panicum virgatum* L.) for improved plant architecture and reduced biomass recalcitrance. Plant Biotechnology Journal 13: 636-647. DOI: 10.1111/pbi.12287

221. Liu, Y.-B., H. Darmency, C. N. Stewart, Jr., W. Wei, Z.-X. Tang, K.-P. Ma. 2015. The effect of *Bt*-transgene introgression on plant growth and reproduction in wild *Brassica juncea*. Transgenic Research 24: 537-547. DOI: 10.1007/s11248-014-9858-0

222. Liu, J., N. Nana, J.N. Grant, Z.-M. Cheng, C.N. Stewart, Jr., T. Hewezi. 2015. Soybean kinome: functional classification and gene expression patterns. Journal of Experimental Botany 66: 1919-1934. DOI: 10.1093/jxb/eru537

223. Liu, Y., J. Li, C.N. Stewart, Jr., Z. Luo, N. Xiao. 2015 The effects of the presence of Bt-transgenic oilseed rape in wild mustard populations on the rhizosphere nematode and microbial communities. Science of the Total Environment 530-531: 263-270. DOI: 10.1016/j.scitotenv.2015.05.073

224. Wuddineh, W.A., M. Mazarei, G.B. Turner, R.W. Sykes, S.R. Decker, M.F. Davis, C.N. Stewart, Jr. 2015 Identification and molecular characterization of the switchgrass AP2/ERF transcription factor superfamily, and overexpression of PvERF001 for improvement of biomass characteristics for biofuel. Frontiers in Bioengineering and Biotechnology 3: 101. DOI: 10.3389/fbioe.2015.00101 http://journal.frontiersin.org/article/10.3389/fbioe.2015.00101/abstract

225. Rambani, A., J.H. Rice, J. Liu, T. Lane, P. Ranjan, M. Mazarei, V. Pantalone, C.N. Stewart, Jr., M. Staton, T. Hewezi. 2015. The methylome of soybean roots during the compatible

interaction with the soybean cyst nematode. Plant Physiology 168: 1364-1377. DOI: 10.1104/pp.15.00826

226. Huang, H., R. Ye, M. Qi, X. Li, D.R. Miller, C.N. Stewart, D.W. DuBois, J. Wang. 2015. Wind-mediated horseweed (*Conyza canadensis*) gene flow: pollen emission, dispersion, and deposition. Ecology and Evolution 5: 2646-2658. DOI: 10.1002/ece3.1540

227. Rothfels, C.J., F.-W. Li, E.M. Sigel, L. Huiet, A. Larsson, D.O. Burge, M. Ruhsam, M. Deyholos, D.E. Soltis, C.N. Stewart, Jr., S.W. Shaw, L. Pokorny, T. Chen, C. dePamphilis, L. DeGironimo, L. Chen, X. Wei, X. Sun, P Korall, D.W. Stevenson, S.W. Graham, G.K.-S. Wong, K.M. Pryer. 2015. The evolutionary history of ferns inferred from 25 low-copy nuclear genes. American Journal of Botany 102: 1089-1107. DOI: 10.3732/ajb.1500089

228. Baxter, H.L., C.R. Poovaiah, K.L. Yee, M. Mazarei, M. Rodriguez, Jr., O.A. Thompson, H. Shen, G.B. Turner, S.R. Decker, R.W. Sykes, F. Chen, M.F. Davis, J.R. Mielenz, B.H. Davison, R.A. Dixon, C.N. Stewart Jr. 2015. Field evaluation of transgenic switchgrass plants overexpressing *PvMYB4* for reduced biomass recalcitrance. BioEnergy Research 8: 910-921. DOI: 10.1007/s12155-014-9570-1

229. Stewart, C.N., Jr. 2015. Songwriting and science. Science 349: 446.

230. Mitchell, J.L.B., M. Halter, C.N. Stewart, Jr., E.T. Nilsen. 2015. Photosynthetic parameters of switchgrass (*Panicum virgatum*) under low radiation: influence of stable overexpression of *Miscanthus x giganteus* PPDK on responses to light and CO_2 under warm and cool growing conditions. New Negatives in Plant Science 1-2: 23-32. DOI: 10.1016/j.neps.2015.08.001

231. Joyce, B.L., V.D. Zheljazkov, R. Sykes, C.L. Cantrell, C. Hamilton, D.G.J. Mann, M. Rodriguez, J.R. Mielenz, T. Astatkie, and C.N. Stewart, Jr. 2015. Ethanol and high-value terpene co-production from lignocellulosic biomass of *Cymbopogon flexuosus* and *Cymbopogon martinii*. PLoS ONE 10(10): e0139195. DOI: 10.1371/journal.pone.0139195 http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0139195

232. Burkhardt, A. A. Gawde, C.L. Cantrell, H.L. Baxter, B.L. Joyce, C.N. Stewart, Jr., V.D. Zheljazkov 2015. Effects of produced water on soil characteristics, plant biomass, and secondary metabolites. Journal of Environmental Quality 44: 1938-1947. DOI: 10.2134/jeq2015.06.0299

233. Liu, Y., Y.-X. Zhang, S.-Q. Song, J. Li, C.N. Stewart, Jr., W. Wei, Y. Zhao, W.-Q. Wang. 2015. A proteomic analysis of seeds from Bt-transgenic *Brassica napus* and hybrids with wild *B. juncea*. Scientific Reports 5: 15480. DOI: 10.1038/srep15480

234. Liu, Y., C. N. Stewart, Jr., J. Li, H. Huang, X. Zhang. 2015. The presence of Bt-transgenic oilseed rape in wild mustard populations affects plant growth. Transgenic Research 24: 1043-1053. DOI: 10.1007/s11248-015-9903-7

235. Ye, R., H. Huang, J. Alexander, W. Liu, R.J. Millwood, J. Wang, C.N. Stewart., Jr. 2016. Field studies on dynamic pollen production, deposition and dispersion from glyphosate-resistant horseweed (*Conyza canadensis*). Weed Science 64: 101-111. DOI: 10.1614/WS-D-15-00073.1

236. Liu, W., C.N. Stewart, Jr. 2016. Plant synthetic promoters and transcription factors. Current Opinion in Biotechnology 37: 36-44. DOI: 10.1016/j.copbio.2015.10.001

237. Sykes, V.R., F.L. Allen, J.R. Mielenz, C.N. Stewart, Jr., M.T. Windham, C.Y. Hamilton, M. Rodriguez, Jr., K.L. Yee. 2016. Reduction of ethanol yield from switchgrass infected with rust caused by *Puccinia emaculata*. Bioenergy Research 9: 239-247. DOI: 10.1007/s12155-015-9680-4

238. Burris, K.P., E.M Dlugosz, A.G. Collins, C.N. Stewart, Jr., S.C. Lenaghan. 2016. Development of a rapid, low-cost protoplast transfection system for switchgrass (*Panicum virgatum* L.). Plant Cell Reports 35: 693-704.

239. Millwood, R.J., H.S. Moon, C.R. Poovaiah, B. Muthukumar, J.H. Rice. J.M. Abercrombie, L.L Abercrombie, W.D. Green, C.N. Stewart, Jr. 2016. Engineered selective plant male sterility through pollen-specific expression of the *Eco*RI restriction endonuclease. Plant Biotechnology Journal 14: 1281-1290. DOI: 10.1111/pbi.12493 http://onlinelibrary.wiley.com/doi/10.1111/pbi.12493/epdf

240. Wuddineh, W.A., M. Mazarei, J.-Y. Zhang, G. Turner, R. Sykes, S.R. Decker, M.F. Davis, M. Udvardi, C.N. Stewart, Jr. 2016. Identification and overexpression of a Knotted1-like transcription factor in switchgrass (*Panicum virgatum* L.) for lignocellulosic feedstock improvement. Frontiers in Plant Science **7**:520. DOI: 10.3389/fpls.2016.00520 http://journal.frontiersin.org/article/10.3389/fpls.2016.00520/abstract

241. Baxter, H.L., L.W. Alexander, M. Mazarei, E. Haynes, G.B. Turner, R.W. Sykes, S.R. Decker, M.F. Davis, R.A. Dixon, Z.-Y.Wang, C.N. Stewart, Jr. 2016. Hybridization of downregulated-COMT transgenic switchgrass lines with field selected switchgrass for improved biomass traits. Euphytica 209: 341-355. . DOI: 10.1007/s10681-016-1632-3

242. Lane, T.S., C.S. Rempe, J. Davitt, M.E.Staton, Y. Peng, D.E. Soltis, M. Melkonian, M. Deyholos, J.H. Leebens-Mack, M. Chase, C.J. Rothfels, D. Stevenson, S.W Graham, J.Yu, T. Liu, J.C. Pires, P.P. Edgar, Y. Zhang, Y. Xie, Y. Zhu, E. Carpenter, G.K.-S. Wong, C.N. Stewart, Jr. 2016. Diversity of ABC transporter genes across the plant kingdom and their potential utility in biotechnology. BMC Biotechnology 16:47. DOI: 10.1186/s12896-016-0277-6 http://www.biomedcentral.com/1472-6750/16/47

243. Willis, J.D., M. Mazarei, C.N. Stewart, Jr. 2016. Transgenic plant-produced hydrolytic enzymes and the potential of insect gut-derived hydrolases for biofuels. Frontiers in Plant Science 7: 675. DOI: 10.3389/fpls.2016.00675 http://journal.frontiersin.org/article/10.3389/fpls.2016.00675/abstract

244. Mahfouz, M., T. Cardi, and C.N. Stewart, Jr. 2016. Next-generation precision genome engineering and plant biotechnology. Plant Cell Reports 35: 1397-1399. DOI: 10.1007/s00299-016-2009-8

245. Cardi, T., C.N. Stewart, Jr. 2016. Progress of targeted genome modification approaches in higher plants. Plant Cell Reports 35: 1401-1416. DOI: 10.1007/s00299-016-1975-1

246. Altpeter, F., N.M. Springer, L.E. Bartley, A.E. Blechl, T.P. Brutnell, V. Citovsky, L.J. Conrad, S.B. Gelvin, D.P. Jackson, A.P. Kausch, P.G. Lemaux, J.I. Medford, M.L. Orozco-Cárdenas, D.M. Tricoli, J. Van Eck, D.F. Voytas, V. Walbot, K. Wang, Z.J. Zhang, C.N. Stewart, Jr. 2016. Advancing crop transformation in the era of genome editing. Plant Cell 15:1510-1520 DOI: 10.1105/tpc.16.00196

247. Dlugosz, E.M., S.C. Lenaghan, C.N. Stewart, Jr. 2016. A robotic platform for high-throughput protoplast isolation and transformation. Journal of Visualized Experiments (115), e54300, DOI: 10.3791/54300.

248. Willis, J.D., J.A. Smith, M. Mazarei, J.-Y. Zhang, G.B. Turner, S.R. Decker, R.W. Sykes, C.R. Poovaiah, H.L. Baxter, M.F. Davis, M.K. Udvardi, M.J. Peña, J. Backe, M. Bar-Peled, C. N. Stewart, Jr. 2016. Downregulation of a UDP-arabinomutase gene in switchgrass (*Panicum virgatum* L.) results in increased cell wall lignin while reducing arabinose-glycans. Frontiers in Plant Science 7:1580. DOI:10.3389/fpls.2016.01580.

249. Lin, J. M. Mazarei, N. Zhao, C.A. Hatcher, W.A. Wuddineh, M. Rudis, T.J. Tschaplinski, V.R. Pantalone, P.R. Arelli, T. Hewezi, F. Chen, C.N. Stewart, Jr. 2016. Transgenic soybean overexpressing *GmSAMT1* exhibits resistance to multiple-HG types of soybean cyst nematode *Heterodera glycines.* Plant Biotechnology Journal 14: 2100-2109. DOI: 10.1111/pbi.12566/full

250. Baxter, H.L.,M. Mazarei, C. Fu, K. Cheng, G.B. Turner, R.W. Sykes, M.T. Windham, M.F. Davis, R.A. Dixon, Z.-Y.Wang, C.N. Stewart, Jr. 2016. Time course field analysis of COMT-downregulated switchgrass: lignification, recalcitrance, and rust susceptibility. BioEnergy Research 9: 1087-1100. DOI: 10.1007/s12155-016-9751-1

251. Pigna, G., T. Dhillon, E.M. Dlugosz, J.S. Yuan, C. Gorman, P. Morandini, S.C. Lenaghan, C.N. Stewart, Jr. 2016. Methods for suspension culture, protoplast extraction, and transformation of high-biomass yielding perennial grass *Arundo donax*. Biotechnology Journal 11: 1657-1666. DOI: 10.1002/biot.201600486

252. Manshardt, R., D. Bishaw, K. Pitz, C.N. Stewart 2016. Gene flow from commercial transgenic papaya fields into feral populations in Hawaii. Acta Horticulturae. 1124: 33-40. DOI: 10.17660/ActaHortic.2016.1124.5

253. Li, M., Y. Pu, C.G. Yoo, E. Gjersing, S.R. Decker, C. Doeppke, T. Shollenberger, T.J. Tschaplinski, N.L. Engle, R.W. Sykes, M.F. Davis, H.L. Baxter, M. Mazarei, C. Fu, R.A. Dixon,

Z.-W. Wang, C.N. Stewart, Jr., A.J. Ragauskas. 2017. Study of traits and recalcitrance reduction of field-grown *COMT* down-regulated switchgrass. Biotechnology for Biofuels 10: 12. DOI: 10.1186/s13068-016-0695-7
https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/s13068-016-0695-7

254. Al-Ahmad, H., S.A. Kania, D.J. Trent, C.N.Stewart, Jr. 2017. Estimation of nuclear DNA content of three economically important plant species by laser flow cytometry. An-Najah University Journal of Research (Natural Science) 31: 35-54. . DOI: 20.500.11888/2882

255. Rempe, C.S., K.P Burris, S.C. Lenaghan, C.N. Stewart, Jr. 2017. The potential of systems biology to discover antibacterial mechanisms of plant phenolics. Frontiers in Microbiology 8:422. DOI: 10.3389/fmicb.2017.00422:

256. Lin, J., D. Wang, X. Chen. T.G. Köllner, M. Mazarei, H. Guo, V.R. Pantalone, P. Arelli, C.N. Stewart, Jr., N. Wang, F. Chen. 2017. An (*E*,*E*)-α-farnesene synthase gene of soybean has a role in defence against nematodes and is involved in synthesizing insect-induced volatiles. Plant Biotechnology Journal 15: 510-519. DOI: 10.1111/pbi.12649

257. Rempe, C.S., S.C. Lenaghan, K.P. Burris, C.N. Stewart, Jr. 2017.Metabolomic analysis of the mechanism of action of yerba mate aqueous extract on *Salmonella enterica* serovar Typhimurium. Metabolomics 13:16. DOI: 10.1007/s11306-016-1159-6

258. Gould, F., R.M. Amasino, D. Brossard, C.R. Buell, R.A. Dixon, J.B. Falk-Zepeda, M.A. Gallo, K.E. Giller, L.L. Glenna, T. Griffin, B.R. Hamaker, P.M. Kareiva, D. Magraw, C. Mallory-Smith, K.V. Pixley, E.P. Ransom, M. Rodemeyer, D.M. Stelley, C.N. Stewart, Jr. R.J. Whitaker. 2017. Elevating the conversation about GE crops. Nature Biotechnology 35: 302-304. DOI: 10.1038/nbt.3841

259. Grant, J.N., J.N. Burris, C.N. Stewart, Jr., S.C. Lenaghan. 2017. Improved tissue culture conditions for the emerging C_4 model *Panicum hallii*. BMC Biotechnology 17:39. DOI: 10.1186/s12896-017-0359-0 https://bmcbiotechnol.biomedcentral.com/articles/10.1186/s12896-017-0359-0

260 Stewart, C.N., Jr. 2017. Becoming weeds. Nature Genetics 49:654-655. DOI: 10.1038/ng.3851

261. Millwood, R., M. Naghugiri-Rao, R. Ye, E. Terry-Emert, C.R. Johnson, M. Hanson, J.N. Burris, C. Kwit, C.N. Stewart, Jr. 2017. Pollen-mediated gene flow from transgenic to non-transgenic switchgrass (*Panicum virgatum* L.) in the field. BMC Biotechnology 17:40. DOI: 10.1186/s12896-017-0363-4 https://bmcbiotechnol.biomedcentral.com/articles/10.1186/s12896-017-0363-4

262. Dumitrache, A., J. Natzke, M. Rodriguez, Jr., K.L. Yee, O.A. Thompson, C.R. Poovaiah, H. Shen, M. Mazarei, H.L. Baxter, C. Fu, Z.-Y. Wang, A.K. Biswal, G. Li, A.C. Srivastava, Y. Tang, C.N. Stewart, Jr., R.A. Dixon, R.S. Nelson, D. Mohnen, J. Mielenz, S.D. Brown, B.H. Davison. 2017. Transgenic switchgrass (*Panicum virgatum* L.) targeted for reduced recalcitrance

to bioconversion: a 2-year comparative analysis of field-grown lines modified for target gene or genetic element expression. Plant Biotechnology Journal 15: 688-697. DOI: 10.1111/pbi.12666

263. DeBruyn, J. M.; D.A. Bevard, M.E. Essington, J.Y. McKnight, S.M. Schaeffer, H.L. Baxter, M. Mazarei, D.G.J. Mann, R.A. Dixon, F. Chen, C Zhuo, Z.-Y. Wang, C.N. Stewart, Jr. 2017. Field grown transgenic switchgrass (*Panicum virgatum* L.) with altered lignin does not affect soil chemistry, microbiology and carbon storage potential. GCB Bioenergy 9: 1100-1109. DOI: 10.1111/gcbb.12407

264. Wang, J., M. Qi, H. Huang; R. Ye; X. Li, C.N. Stewart 2017. Atmospheric pollen dispersion from herbicide-resistant horseweed (*Conyza canadensis* L.) Aerobiologia 33: 393-406. DOI: 10.1007/s10453-017-9477-3

265. Stewart, C.N., Jr., W. Liu. 2017. Synthetic promoters for precise control of gene expression in plants. Chemical Engineering Progress 113: 36-39. DOI: 10.1016/j.copbio.2015.10.001

266. Johnson, C.R., R.J. Millwood, Z.-Y. Wang, C.N. Stewart, Jr. 2017. Light and temperature effects on miR156 transgenic switchgrass flowering: a simulated latitudinal study. Plant Direct 2017; 1:1-6. DOI: 10.1002/pld3.26

267. Willis, J.D., J.N. Grant, M. Mazarei, L.M. Kline, C.S Rempe, A.G. Collins, G.B. Turner, S.R. Decker, R.W. Sykes, M.F. Davis, N. Labbe, J.L. Jurat-Fuentes, C.N. Stewart, Jr., 2017. The TcEG1 beetle (*Tribolium castaneum*) cellulase produced in transgenic switchgrass is active at alkaline pH and auto-hydrolyzes biomass for increased cellobiose release. Biotechnology for Biofuels 10:230. DOI: 10.1186/s13068-017-0918-6
https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/s13068-017-0918-6

268. Johnson, C.R., R.J. Millwood, Y. Tang, J. Gou, R.W. Sykes, G.B. Turner, M.F. Davis, Y. Sang, Z.-Y. Wang, C.N. Stewart, Jr. 2017. Field-grown miR156-transgenic switchgrass reproduction, yield, global gene expression analysis, and bioconfinememt. Biotechnology for Biofuels 10:255. DOI: 10.1186/s13068-017-0918-6
https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/s13068-017-0918-6

269. Nelson, R.S., C.N. Stewart, Jr., J. Gou, S. Holladay, L. Gallego-Giraldo, A. Flanagan, D.G.J. Mann, H. Hisano, W.A. Wuddineh, C.R. Pooviaiah, A. Srivastava, A.K. Biswal, H. Shen, L.L. Escamilla-Treviño, J. Yang, C.F. Hardin, R. Nandakumar, C. Fu, J. Zhang, X. Xiao, R. Percifield, F. Chen, J.L. Bennetzen, M. Udvardi, M. Mazarei, R.A. Dixon, Z.-Y. Wang, Y. Tang, D. Mohnen, B. H. Davison. 2017. Development and use of a switchgrass (*Panicum virgatum* L.) transformation pipeline by the BioEnergy Science Center to evaluate plants for reduced cell wall recalcitrance. Biotechnology for Biofuels 10: 309. DOI: 10.1186/s13068-017-0991-x
https://biotechnologyforbiofuels.biomedcentral.com/articles/10.1186/s13068-017-0991-x

270. Baxter, H.L., M. Mazarei, A. Dumitrache, J.M. Natzke, M. Rodriguez, Jr., J. Gou, C. Fu, R.W. Sykes, G.B. Turner, M.F. Davis, S.D. Brown, B.H. Davison, Z.-Y. Zhang, C.N. Stewart Jr. 2018. Transgenic miR156 switchgrass in the field: growth, recalcitrance and rust susceptibility.

Plant Biotechnology Journal 16:39-49. DOI: 10.1111/pbi.12747/full
http://onlinelibrary.wiley.com/doi/10.1111/pbi.12747/full

271. Hewezi, T, V. Pantalone, M. Bennett, C.N. Stewart, Jr., T.M. Burch-Smith. 2018. Phytopathogen-induced changes to plant methylomes. Plant Cell Reports 1: 17-23. DOI: 10.1007/s00299-018-2253-1
https://link.springer.com/article/10.1007/s00299-018-2253-1

272. Mahas, A., C.N. Stewart, Jr., M.M. Mahfouz. 2018. Harnessing CRISPR/Cas systems for programmable transcriptional and post-transcriptional regulation. Biotechnology Advances 36: 295-310 DOI: 10.1016/j.biotechadv.2017.11.008

273. Biswal, A.K., M.A. Atmodjo, M. Li, H.L. Baxter, C.G. Yoo, Y. Pu, Y.-C. Lee, M. Mazarei, I.M. Black, J.-Y. Zhang, H. Ramanna, A.L. Bray, Z.R. King, P.R. LaFayette, S. Pattathil, B.S. Donohoe, S.S. Mohanty, D. Ryno, K. Yee, O.A. Thompson, M. Rodriguez, Jr., A. Dumitrache, J. Natzke, K.Winkeler, C. Collins, X. Yang, L. Tan, R.W. Sykes, E.L. Gjersing, A. Ziebell, G.B. Turner, S.R. Decker, M.G. Hahn, B.H. Davison, M.K. Udvardi, J. Mielenz, M.F. Davis, R.S. Nelson, W.A. Parrott, A.J. Ragauskas, C.N. Stewart, Jr., D. Mohnen. 2018. Gains in biomass and biofuel from engineered switchgrass and poplar with downregulated *Galacturonosyltransferase (GAUT)4*. Nature Biotechnology 36: 249-257. DOI: 10.1038/nbt.4067
https://www.nature.com/articles/nbt.4067

274. Burris, J.N., S.C. Lenaghan, C.N. Stewart, Jr. 2018. Climbing plants: attachment adaptations and bioinspired innovations. Plant Cell Reports 37: 565-574. DOI: 10.1007/s00299-017-2240-y
https://link.springer.com/article/10.1007/s00299-017-2240-y

275. Xu, W., W. Liu, R. Ye, M. Mazarei, D. Huang, X. Zhang, C.N. Stewart, Jr. 2018. A *prolifin* gene promoter from switchgrass (*Panicum virgatum* L.) directs strong and specific transgene expression to vascular bundles in rice. Plant Cell Reports 37: 587-597. DOI: 10.1007/s00299-018-2253-1
https://link.springer.com/article/10.1007%2Fs00299-018-2253-1

276. Liu, W., M. Mazarei, R. Ye, Y. Peng, Y. Shao, H.L. Baxter, R.W. Sykes, G.B. Turner, M.F. Davis, Z.-Y. Wang, R.A. Dixon, C.N. Stewart, Jr. 2018. Switchgrass (*Panicum virgatum* L.) promoters for green tissue-specific expression of the *MYB4* transcription factor for reduced-recalcitrance transgenic switchgrass Biotechnology for Biofuels 11:122. DOI: 10.1186/s13068-018-1119-7
https://doi.org/10.1186/s13068-018-1119-7

277. Piatek, A.A., S.C. Lenaghan, C.N. Stewart, Jr. 2018 Advanced editing of the nuclear and plastid genomes in plants. Plant Science 273: 42-49. DOI: 10.1016/j.plantsci.2018.02.025
https://europepmc.org/abstract/med/29907308

278. Stewart, C.N., Jr. R.K. Abudayyeh, S.G. Stewart. 2018. Houseplants as home health monitors. Science 361: 229-330. DOI: 10.1126/science.aau2560
http://science.sciencemag.org/content/361/6399/229

279. Mazarei, M, H.L. Baxter, M. Li, A.K. Biswal, K. Kim, X.Meng, Y. Pu, W.A. Wuddineh, J.-Y. Zhang, G.B. Turner, R.W. Sykes, M.F. Davis, M.K. Udvardi, Z.-Y. Wang, D. Mohnen, A.J. Ragauskas, N. Labbe, C. N. Stewart Jr. 2018. Functional analysis of cellulose synthase *CesA4* and *CesA6* genes in switchgrass (*Panicum virgatum*) by overexpression and RNAi-mediated gene silencing. Frontiers in Plant Science 9:1114. DOI: 10.3389/fpls.2018.01114
https://www.frontiersin.org/articles/10.3389/fpls.2018.01114/abstract

280. Liu, Y., C.N. Stewart, Jr., J. Li, W. Wei. 2018. One species to another: Sympatric Bt-transgene gene flow from *Brassica napus* alters the reproductive strategy of wild relative *Brassica juncea*. Annals of Botany 122: 617-625. DOI: 10.1093/aob/mcy096

281. Schindel, H.S., A.A. Piatek, C.N. Stewart, Jr., S.C. Lenaghan. 2018. The plastid genome as a chassis for synthetic biology-enabled metabolic engineering: players in gene expression. Plant Cell Reports 37: 1419-1429. DOI: 10.1007/s00299-018-2323-4

282. Stewart, C.N., Jr. N. Patron, A.D. Hanson, J.M. Jez. 2018. Plant metabolic engineering in the synthetic biology era: plant chassis selection. Plant Cell Reports 37: 1357-1358.

283. Zheljazkov, V.D., C.N. Stewart, Jr., B. Joyce, H. Baxter, C.L. Cantrell, T. Astatkie, E. Jeliazkova, C.R. Poovaiah. 2018. Dual utilization of medicinal and aromatic crops for plant chemicals and biofuels. Journal of Agricultural and Food Chemistry 66: 8744-8752.

284. Holwerda, E.K., R.S. Worthen, N. Kothari, R.C. Lasky, B.H. Davison, C. Fu, Z.-Y. Wang, R.A. Dixon, A.K. Biswal, D. Mohnen, R.S. Nelson, H.L. Baxter, M. Mazarei, C.N. Stewart, Jr., W. Muchero, G.A. Tuskan, C.M. Cai, E.E. Gjersing, M.F. Davis, M.E. Himmel, C.E. Wyman, P. Gilna, L.R. Lynd. 2019. Multiple levers for overcoming the recalcitrance of lignocellulosic biomass. Biotechnology for Biofuels 12: 15. https://doi.org/10.1186/s13068-019-1353-7

285. Occhialini, A, A.A. Piatek, A.C. Pfotenhauer, T.P. Frazier, C.N. Stewart, Jr., S.C. Lenaghan. 2019. MoChlo: a versatile modular cloning toolbox for chloroplast biotechnology. Plant Physiology 179: 943-957. DOI: 10.1104/pp.18.01220

286. Lenaghan, S.C., Stewart C.N. Jr. 2019 An automated protoplast transformation system. Methods in Molecular Biology vol 1919: 355-363. Plant Genome Editing with CRISPR Systems. Humana Press.

287. Caverzan, A., C. Piasecki, G. Chavarria, C.N. Stewart, Jr., L. Vargas. 2019. Defenses against ROS in crops and weeds: the effects of interference and herbicides. International Journal of Molecular Sciences 20: 1086. doi.org/10.3390/ijms20051086

288. Piasecki, C., Y. Yang, D.P. Benemann, F.S. Kremer, V. Galli, R.J. Millwood, J. Cechin, D. Agostinetto, L.C. Maia, L. Vargas, C.N. Stewart, Jr. 2019 Transcriptomic analysis identifies new non-target site glyphosate-resistance genes in *Conyza bonariensis*. Plants 8: 157. doi:10.3390/plants8060157

289. Liu, Y., C.N. Stewart, Jr. 2019. An exposure-based risk assessment model for GM plants. Plant Biotechnology Journal 17: 1859-1861. https://doi.org/10.1111/pbi.13146

290. Pixley, K.V., J. B. Falck-Zepeda, K.E. Giller, L.L. Glenna, F. Gould, C. A. Mallory-Smith, D.M. Stelly, C.N. Stewart, Jr. 2019. Genome editing, gene drives, and synthetic biology: will they contribute to disease-resistant crops, and who will benefit? Annual Review of Phytopathology. 57: 165-188 https://doi.org/10.1146/annurev-phyto-080417-045954

291. Sultana, M.S., T.P. Frazier, R.J Millwood, S.C. Lenaghan, C.N. Stewart, Jr. 2019. Development and validation of a novel and robust cell culture system in soybean (*Glycine max* (L.) Merr.) for promoter screening. Plant Cell Reports 38: 1329-1345. https://doi.org/10.1007/s00299-019-02455-5

292. Piasecki, C, I.R. Carvalho, J. Cechin, F.A.P. Goulart, L.C. de Maia, D. Agostinetto, A. Caverzan, C.N. Stewart, Jr., L. Vargas. 2019. Oxidative stress and differential antioxidant enzyme activity in glyphosate-resistant and -sensitive hairy fleabane in response to glyphosate treatment. Bragantia 78:379-396. https://doi.org/10.1590/1678-4499.20180289

293. Xu, S, S.L. Ottinger, S.M. Schaeffer, J.M. DeBruyn, M. Mazarei, C.N. Stewart, Jr., S. Jagadamma, 2019. Effects of field-grown transgenic switchgrass carbon inputs on soil organic carbon cycling. PeerJ 7:e7887. DOI 10.7717/peerj.7887

294. Ostrov, N., J. Beal, T. Ellis, D.B. Gordon, B.J. Karas, H.H. Lee, S.C. Lenaghan, J.A. Schloss, G. Stracquadanio, A. Trefzer, J.S. Bader, G.M. Church, C.M. Coelho, J.W. Efcavitch, M. Güell, L.A. Mitchell, A.A.K. Nielsen, B. Peck, A.C. Smith, C.N. Stewart, Jr., H. Tekotte. 2019. Technological challenges and milestones for writing genomes. Science 366: 310-312. DOI: 10.1126/science.aay0339

295. One Thousand Plant Transcriptomes Initiative. 2019. One thousand plant transcriptomes and phylogenomics of green plants. Nature 574: 679-685. https://doi.org/10.1038/s41586-019-1693-2 (Cover article).

296. Piasecki, C, D. Benemann, I.R. Carvalho, D. Agostinetto, C.N. Stewart, Jr., L. Vargas. 2019. Does glyphosate treatment interfere negatively on RNA integrity in glyphosate-resistant and -sensitive *Conyza bonariensis*? Planta Daninha 37: e019217909

297. Liu, W., M.R. Rudis, M.H. Cheplick, R.J. Millwood, J.-P. Yang, C.A. Ondzighi-Assoume, G.A. Montgomery, K.P. Burris, M. Mazarei, J.D. Chesnut, C.N. Stewart, Jr. 2019. Lipofection-mediated genome editing using DNA-free delivery of the Cas9/gRNA ribonucleoprotein into plant cells. Plant Cell Reports 39: 245-257. https://doi.org/10.1007/s00299-019-02488-w

298. Lee J.H., M. Mazarei, A.C. Pfotenhauer, A.B. Dorrough, M.R. Poindexter, T. Hewezi, S.C., Lenaghan, D.E. Graham, C.N. Stewart, Jr. 2019. Epigenetic footprints of CRISPR/Cas9-

mediated genome editing in plants. Frontiers in Plant Science 10:1720. doi: 10.3389/fpls.2019.01720

299. Ondzighi-Assoume, C.A., J.D. Willis, W.K. Ouma, S.M. Allen, Z. King, W.A. Parrott, W. Liu, J.N. Burris, S.C. Lenaghan, C.N. Stewart, Jr. 2019. Embryogenic cell suspensions for high-capacity genetic transformation and regeneration of switchgrass (*Panicum virgatum* L.). Biotechnology for Biofuels 12:290. **DOI :** 10.1186/s13068-019-1632-3

300. Alexander, L, C. Hatcher, M. Mazarei, E. Haynes. H. Baxter, K. Kim, C. Hamilton, R. Sykes, G. Turner, M. Davis, Z.-Y. Wang, N. Labbe, C.N. Stewart, Jr. 2020. Development and field assessment of transgenic hybrid switchgrass for biofuel traits. Euphytica 216:25. doi: 10.1007/s10681-020-2558-3

301. Persad, R., D.N. Reuter, L.T. Dice, M.-A. Nguyen, S.B. Rigoulot, J.S. Layton, M.J. Schmid, M.R. Poindexter, A. Occhialini, C.N. Stewart, Jr., S.C. Lenaghan. 2020. The Q-system as a synthetic transcriptional regulator in plants. Frontiers in Plant Science 11: 245. https://doi.org/10.3389/fpls.2020.00245

302. Rambani, A., V. Pantalone, S. Yang, J.H. Rice, M. Mazarei, P.R. Arelli, K. Meksem, C.N. Stewart, Jr., T. Hewezi. 2020. Identification of introduced and stably inherited DNA methylation variants in soybean associated with soybean cyst nematode parasitism. New Phytologist 227: 168-184.

303. Mazarei, M., H. L. Baxter, A. Srivastava, G. Li**,** H. Xie, A. Dumitrache, M. Rodriguez, Jr., J.M. Natzke, J.-Y. Zhang, G. B. Turner, R.W. Sykes, M.F. Davis, M.K. Udvardi, Z.-Y.Wang, B.H. Davison, E. Blancaflor, Y. Tang, C.N. Stewart Jr. 2020. Silencing *folylpolyglutamate synthetase1* (*FPGS1*) in switchgrass (*Panicum virgatum* L.) improves lignocellulosic biofuel production. Frontiers in Plant Science 11: 843.doi: 10.3389/fpls.2020.00843

304. Salgotra, R.K., C.N. Stewart, Jr. 2020. Functional markers for precision plant breeding. International Journal of Molecular Sciences 21: 4792. doi:10.3390/ijms21134792

305. Brabazon, H., J.M. DeBruyn, S.C. Lenaghan, F. Li, A.Z. Mundorff, D.W. Steadman, C.N. Stewart, Jr. 2020. Plants to remotely detect human decomposition? Trends in Plant Science. https://doi.org/10.1016/j.tplants.2020.07.013

306. Kline, L.M., P. Voothuluru, S.C. Lenaghan, J.N. Burris, M. Soliman, L. Tetard, C.N. Stewart, Jr., T.G. Rials, N. Labbé. 2020. A robust method to quantify cell wall bound phenolics in plant suspension culture cells using pyrolysis-gas chromatography/mass spectrometry. Frontiers in Plant Science 11: 574016. https://doi.org/10.3389/fpls.2020.574016

307. Reuter, D.N., C.N. Stewart, Jr., S.C. Lenaghan. Lighting the way: Advances in engineering autoluminescent plants. Trends in Plant Science. DOI: 10.1016/j.tplants.2020.08.004

308. Guan Z., B.-C. Shen, W. Wei, Z.-X. Tang, C.N. Stewart, Jr. 2020. Loss of C-genome-

specific markers during the transgene introgression from *Brassica napus* to wild *B. juncea*. Nordic Journal of Botany. DOI: 10.1111/njb.02794

309. Li, F, C. Piasecki, R.J. Millwood, B. Wolfe, M. Mazarei, C.N. Stewart, Jr. 2020. UAV-based high-throughput switchgrass phenotyping and biomass modeling. Frontiers in Plant Science doi: 10.3389/fpls.2020.574073.

310. Occhialini, A., A.C. Pfotenhauer, T.P. Frazier, L. Li, S.A. Harbison, A.J. Lail, Z. Mebane, A.A. Piatek, S.B. Rigoulot, H. Daniell, C.N. Stewart, Jr., S.C. Lenaghan. 2020. Generation, analysis, and transformation of macro-chloroplast potato (*Solanum tuberosum*) lines for chloroplast biotechnology (*Solanum tuberosum*). Scientific Reports 10: 21144. DOI: 10.1038/s41598-020-78237-x

311. Guan, Z.-J., W. Wei, C.N. Stewart, Jr. Z-X. Tang. 2021. Effects of transgenic oilseed rape harboring the Cry1Ac gene on microbial communities in the rhizosphere soil. European Journal of Soil Biology 103: 103277. https://doi.org/10.1016/j.ejsobi.2021.103277

312. Rigoulot, S.B., T.M. Schimel, J.H. Lee, R.G. Sears, H. Brabazon, J.S. Layton, L. Li, K.A. Meier, M.R. Poindexter, M.J. Schmid, E.M. Seaberry, J.W. Brabazon, J.A. Madajian, M.J. Finander, J. DiBenedetto, A. Occhialini, S.C. Lenaghan, C.N. Stewart, Jr. 2021. Imaging of multiple fluorescent proteins in canopies enables synthetic biology in plants. Plant Biotechnology Journal. DOI: 10.1111/pbi.13510
https://onlinelibrary.wiley.com/doi/epdf/10.1111/pbi.13510

313. Yang, Y., J.H. Lee, M.R. Poindexter, Y. Shao, W. Liu, S.C. Lenaghan, A.H. Ahkami, E. Blumwald, C.N. Stewart, Jr. 2021. Rational design and testing of abiotic stress-inducible synthetic promoters from poplar *cis*-regulatory elements. Plant Biotechnology Journal. DOI: 10.1111/pbi.13550