Charles Neal Stewart, Jr.
Ivan Racheff Chair of Excellence of Plant Molecular Genetics
Professor of Plant Science
Director of the Center for Agricultural Synthetic Biology

2026

Public CV

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https://agsyntheticbio.tennessee.edu/

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

Citations	32510
h-index	89
i10-index	321

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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 in Plant Molecular Genetics and Professor, Department of Plant Sciences, University of Tennessee
2018- Co-director, Center for Agricultural Synthetic Biology
2004- Core Faculty Member, Genome Science and Technology, University of Tennessee
Past:
2007-2017 BioEnergy Science Center, Oak Ridge National Laboratory
2011-2014 Senior Bioscientist, Oak Ridge National Laboratory
2009-2021 Co-director, Tennessee Plant Research Center

2009-2020	Adjunct Professor, University of Tennessee Department of Food Science
2005-2009	Cofounder and Director of Technology Development, MycoGenomix, LLC
2001-2004	Adjunct Professor, University of Tennessee Department of Entomology and Plant Pathology
1998-2002	Adjunct Associate Professor, UNCG Department of Nutrition
1997-2002	Adjunct Associate Professor, Crop Science, North Carolina State University
1996-2020	Adjunct Senior Research Scientist and Professor, University of Georgia Department of Crop and Soil Science
2000-2002	Associate Professor of Biology, University of North Carolina, Greensboro
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

Professional Societies

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

Awards and Honors

- Springer Nature Editor of Distinction Award. 2025, Springer Nature Publisher
- Plant Science and Agronomy Leader Award, 2025, Research.com
- Research.com Top 1000 Scientists in the area of Plant Science and Agronomy (#309 in the world ranking and #90 in the U.S., 2025)
- Research.com Top 1000 Scientists in the area of Plant Science and Agronomy (#360 in the world ranking and #110 in the U.S., 2024)
- Research.com Top 1000 Scientists in the area of Plant Science and Agronomy (#369 in the world ranking and #107 in the U..S, 2023)
- Global top 2% (top 0.4%)-cited scientists (Stanford List), 2020, 2021, 2022, 2023, 2024, 2025
- 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

Current editorial boards

2013- Plant Biotechnology Journal
2013- Plant Cell Reports
2012- Plants

Invited speaker in national and international conferences, symposia and workshops

2025 Advanced Research & Invention Agency Synthetic Plants Symposium, Harrogate, UK, November 19-20
2025 Plant Biotechnology Symposium, London, November 13
2025 Society for In Vitro Biology annual meeting, Norfolk, Virginia, June 8.
2025 Advanced Research & Invention Agency Synthetic Plants Symposium, Oxfordshire, UK, May 21-22
2025 Keystone Symposia: Future of Agriculture for Sustainability, Keystone Colorado, January 22
2023 International Association for Plant Biotechnology, Daejeon, Korea, August 10
2022 PlantEd Genome Editing in Plants. November 30, European Commission
2022 Synthetic Biology: Engineering, Evolution, & Design, Arlington, Virginia, May 2-5
2021 National Academies of Sciences, Engineering, and Medicine U.S. Army Synthetic Biology Roundtable July 29
2021 Plant Biology 2021, Pittsburgh, July 23
2021 DARPA IA/APT Conference, Arlington, Virginia, July 20-21
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

- Plant Synthetic Biology, International Plant and Animal Genome Conference, San Diego, Jan 2025
- Plant Synthetic Biology, International Plant and Animal Genome Conference, San Diego, Jan 2024
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2024
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2023
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2020.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2019.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2018.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 2017.
- Genomics of Weedy and Invasive Plants, International Plant and Animal Genome Conference, San Diego, Jan 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.

UTK teaching

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 (2012-2024)
RCR training workshops, UTIA (2016-2022)

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.

Episomal DNA vectors for plant genetic engineering. US Patent 11,549,121 B2 issued January 10, 2023. Inventors: Scott C. Lenaghan, Alessandro Occhialini, Alexander C. Pfotenhauer, Agnieszka Piatek, C. Neal Stewart, Jr. US Provisional Patent 62/742,640 filed October 8, 2018, converted October 2019.

Grants and Contracts
$74 million as PI (total); $2.4 million per year for career $15.5 M currently active as PI in 2025.

Current:

2025-2028 Synplastome 2.0. Phase 1, UK ARIA, UK PI, Saul Purton, 8.935 M pounds stirling (UK), UT and USA PI Scott Lenaghan and co-PI Neal Stewart 3.071 M pounds ($4M)

2023-2025 CLEAR: Cleaning and Reporting. DARPA BTO Ceres program. PI: C.N. Stewart; CoPIs: (UTIA) S.C. Lenaghan, J. DeBruyn; (MIT) C. Voigt; (Penn State) H. Salis. Total award: $12,143,688.

2024-2025 SANDS Phase III plus-up for new DNA sequencing equipment for expanded scope of work. $869, 926. PI: Neal Stewart, coPI: Scott Lenaghan.

2023-2027 Discovery of natural products as sprout inhibitors for organic potato and development of microencapsulation methods for their application. PI: Valtcho Jeliazkov, Oregon State University, $210,000 to coPI Neal Stewart.

2022-2025 Center for Bioenergy Innovation. UTIA subaward PI: Neal Stewart; co-PIs Mitra Mazarei and Reggie Millwood. $1,376,420

2022-2025 Risk of mini-synplastome escape into the environment. USDA Biotechnology Risk Assessment Grant PI: Alessandro Occhialini; co-PIs: Scott Lenaghan, Neal Stewart, Jennifer DeBruyn. $500,000

2022-2025 DARPA APT supplement (plant phenotyping). PI: Neal Stewart, coPI: Scott Lenaghan, $500,000

2025 Gene screens for deer deterrence to soybean feeding. PI: Neal Stewart, coPI: Feng Chen, $17,000

Past funding: 140 grants and contracts, $58.5 M.

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. 2022. Gene Flow: Monitoring, Modeling and Mitigation. CABI Publishing, Chichester, UK.

10. Wei, W, and C.N. Stewart, Jr. 2023. Biosafety and Ecological Assessment of Genetically Engineered and Edited Crops. MDPI Books. Basel, Switzerland, 262 pp.

11. Stewart, C.N., Jr. 2023. Research Ethics for Scientists: A Companion for Students, Second Edition. John Wiley and Sons, LTD, Chichester, UK: 258 pp.
Companion website: www.wiley.com/go/stewart/researchethics2

12. Stewart, C.N., Jr. (Ed.) 2025. Plant Biotechnology and Genetics: Principles, Techniques and Applications, Second Edition, John Wiley & Sons, Hoboken, New Jersey: 500 pp. In press.

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.

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