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Curriculum Vitae

JAMES T. COLBERT

Associate Professor
Department of Ecology, Evolution, and Organismal Biology
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EDUCATION

Ph.D. 1985	University of Wisconsin Madison, Wisconsin Botany-Plant Molecular Biology (Dr. Peter H. Quail, Dissertation Advisor)
M.S. 1981	University of Wisconsin Madison, Wisconsin Botany-Plant Anatomy (Dr. Ray F. Evert, Thesis Advisor)
B.S. 1978	Iowa State University Ames, Iowa Biology

PROFESSIONAL EXPERIENCE

2005 – present	Undergraduate Biology Program Coordinator
2003 – present	Associate Professor, Department of Ecology, Evolution, and Organismal Biology, Iowa State University, Ames, IA
1993-2003	Associate Professor, Department of Botany, Iowa State University, Ames, IA
1988-1993	Assistant Professor, Department of Botany, Iowa State University, Ames, IA
1985-88	Assistant Professor, Department of Biology, Colorado State University, Fort Collins, CO
1984-85	Research Assistant, Department of Botany, University of Wisconsin, Madison, WI
1981-84	Cellular and Molecular Biology Trainee, University of Wisconsin, Madison, WI
1978-81	Teaching Assistant, Department of Botany, University of Wisconsin, Madison, WI

HONORS and AWARDS

1978	Phi Kappa Phi Academic Honorary
1981	National Institutes of Health Traineeship
1982	University of Wisconsin Graduate Teaching Award
1994	College of Liberal Arts and Sciences Award for Outstanding Teaching at the Introductory Level
1999	Wakonse College Teaching Fellow
1999	College of Liberal Arts and Sciences Master Teacher Award (Large Class Teaching)
2000	Center for Teaching Excellence Teaching Faculty Fellow

2001	Iowa State University Louis Thompson Distinguished Undergraduate Teaching Award
2001	Iowa State University Student Activities Center Club Advisor Recognition Award
2002	Award for Innovative Excellence in Teaching, Learning and Technology, presented at the 13th International Conference on College Teaching and Learning
2002	Outstanding Innovations Award for Exemplary Contributions to Iowa State Learning Communities
2003	Iowa State University Honors Program Excellence in Honors Teaching Award
2004	Iowa State University Student Activities Center Club Advisor Recognition Award
2004	Award for Dedication and Service to Iowa State University Learning Communities
2004	IOWATER Professional of the Year Award
2004	Story County Olav Smedal Conservation Award
2004	ISU Interfraternity Council Outstanding Faculty Award
2005	National Academies Education Fellow in Life Science
2006	Governor's Environmental Excellence Award
2006	Friend of Science Education Award from the Iowa Science Teachers Section of the Iowa Academy of Science
2008	Distinguished Iowa Science Teaching Award from the Iowa Academy of Science
2008	College of Liberal Arts and Sciences Master Teacher Award (Experiential Learning)
2010	Corly Brooke Learning Community Advocate Award
2010	President, Iowa Academy of Science
2012	Ecology, Evolution, and Organismal Biology Department Outstanding Teaching Award
2012	College of Liberal Arts and Sciences Cassling Family Faculty Award for Outstanding Teaching Performance
2013	Fellow of the Iowa Academy of Science
2013	Iowa State University Learning Communities Outstanding Service Award

PRESENTATIONS and WORKSHOPS

"Regulation of Phytochrome Gene Expression in Oat Seedlings". December 12, 1985. Colorado State University, Cell and Molecular Biology Program Seminar Series.

"Regulation of Phytochrome Gene Expression in Oat Seedlings". May 12, 1986. Carleton College, Biology Seminar Series.

"Transcriptional and Post-transcriptional Regulation of Phytochrome mRNA Abundance in Oat Seedlings". February 13, 1987. University of Wyoming, Botany Seminar Series.

"Transcriptional and Post-transcriptional Regulation of Phytochrome mRNA Abundance in Oat Seedlings". April 25, 1987. Colorado State University, 5th Annual Cell and Molecular Biology Symposium.

"Regulation of Phytochrome Gene Expression". October 8, 1987. Colorado State University, Sigma Xi Seminar Series.

"Regulation of Phytochrome mRNA Abundance in Oat Seedlings". October 27, 1987. Colorado State University, Horticulture Seminar Series.

"Regulation of Phytochrome Gene Expression". March 24, 1988. Iowa State University, Botany Seminar Series.

"Regulation of Phytochrome mRNA Abundance in Oat Seedlings". November 18, 1988. Iowa State University, Zoology Seminar Series.

"Regulation of Phytochrome Gene Expression". February 9, 1989. Iowa State University, Plant Science Lecture Series.

"Regulation of Phytochrome Gene Expression". March 10, 1989. Iowa State University, Life Science Symposium.

"Regulation of Phytochrome Gene Expression". August 18, 1989. Sandoz Crop Protection, Palo Alto, California.

"Isolation and Characterization of Three Root-Preferential cDNA Clones from Maize". August 7, 1991. Sandoz Crop Protection, Palo Alto, California.

"Isolation and Characterization of Root-Preferential cDNA Clones from Zea Mays". September 25, 1992. Northrup King Company, Stanton, Minnesota.

"Root-Preferential Genes from Zea mays". September 3, 1993. Iowa State University, Zoology and Genetics Seminar Series.

"Phytochrome A mRNA turnover - It's a degrading job but somebody has to do it". February 17, 1995. Montana State University, Bozeman, Montana.

"Phytochrome A mRNA turnover - It's a degrading job but someone has to do it". March 22, 1995. Iowa State University, Interdepartmental Genetics Faculty Seminar Series.

"Phytochrome A mRNA turnover - It's a degrading job but someone has to do it". May 23, 1995. University of California-Santa Cruz, Santa Cruz, California.

"Degradation of oat phytochrome A mRNA *in vivo* and *in vitro*". January 12, 1996. The Noble Foundation, Ardmore, Oklahoma.

"Degradation of oat phytochrome A mRNA *in vivo* and *in vitro*". February 9, 1996. Iowa State University, Botany Seminar Series.

"Degradation of oat phytochrome A mRNA *in vivo* and *in vitro*". April 11, 1996. University of Wisconsin-Madison, Botany Colloquium.

"Degradation of oat phytochrome A mRNA *in vivo* and *in vitro*". January 16, 1997. 19th Annual Symposium in Plant Physiology, University of California-Riverside.

“Any Questions?” August 19,1999. ISU Center for Teaching Excellence College Teaching Seminar.

"Using Technology to INCREASE Interaction Between Students, and Between Students and Instructors, in Large Introductory Classes." November 10, 1999. ISU Science Education Seminar.

“Using Technology to increase interaction with students”. March 30, 2000. College of Liberal Arts and Sciences Master Teacher Workshop.

“Using Technology to increase student/instructor interaction in large classes”. March 31, 2000. Iowa State University 2000 Spring Faculty Conference.

“Using the web to enhance in-class discussions in large-lecture courses”. April 26, 2000. ISUComm Symposium.

“Teaching Large Classes”. August 15, 2000. ISU Center for Teaching Excellence College Teaching Seminar.

“Stimulating student questions in large lecture settings”. October 12, 2000. ISU Center For Teaching Excellence Workshop.

"Dare to Share: Making Teaching Community Property" . November 11, 2000. 25th Annual POD Conference.

“The Skunk River Navy – An example of service learning/community service in a learning community context”. November 30, 2000. ISU Center for Teaching Excellence Workshop.

“Service-Learning: An example in a biological context.” February 6 2001, ISU Science Education Seminar.

“Learning Communities, Community Service, and Service Learning:
Context and Connections”. February 16, 2001. University of Wisconsin-Fox Valley, Appleton Wisconsin.

“Plant Biology for Preservice Teachers”. April 2, 2001. Collaboratives for Excellence in Teacher Preparation Meeting, National Science Foundation, Washington D.C.

“The “Skunk River Navy”: Service-learning in a learning community context”. May 7, 2001. ISU Learning Communities Institute, Ames, IA.

“Using the Web in Large Face-to-Face Classes”. June 21, 2001. Instructional Technology Center Workshop on “Teaching on the Internet”, Iowa State University, Ames, IA.

“Student perceptions of the impact of a web-based component on their learning of biology in a large class setting”. February 6, 2002, ISU Science Education Seminar.

“Biology Education Success Teams (BEST) Service-Learning Project The Skunk River Navy”. April 2, 2002. ISU Learning Communities Advisory Committee sponsored workshop on service-learning.

“Service-Learning in a Biological Context”. April 11, 2002. Thirteenth International Conference on College Teaching and Learning.

“Student Perceptions of the Impact of a Web-Based Component on their Learning of Biology in a Large Class Setting”. April 20, 2002. Iowa Academy of Science, 114th Annual Meeting.

"Engaging Students in Large Format Biology Classes". April 26, 2002. Clarion University, Clarion, Pennsylvania.

"Curricular Linking of Service-Learning and Student Reflection in Biology and English". May 14, 2002. ISU Learning Communities Institute, Ames, IA.

"Engaging Students in Large Format Biology Classes". September 10, 2002. ISU Department of Plant Pathology Seminar Series.

"Service-Learning in a Biological Context: The Skunk River Navy". September 28, 2002. ISU Department of Ecology, Evolution, and Organismal Biology Seminar Series.

"The Skunk River Navy: Service Learning in a Biological Context". October 17, 2002. Iowa Science Teachers Section Fall Conference.

"The Skunk River Navy". February 12, 2003. Green Hills Retirement Community.

"Squaw Creek and the Squaw Creek Watershed Coalition". March 24, 2003. First Annual Meeting of the Squaw Creek Watershed Coalition.

"Squaw Creek and the Squaw Creek Watershed Coalition". March 31, 2003. ISU Forum on Research Opportunities in the Squaw Creek Watershed.

"Squaw Creek and the Squaw Creek Watershed Coalition". July 15, 2003. Story County Master Conservationist Program.

"The Skunk River Navy". November 4, 2003. Story City Iowa Kiwanis Club,

"The Skunk River Navy". November 24, 2003. Colo Iowa Lions Club.

"Fully Engaged Learning: Biology Field Trip Classes for Undergraduates". October 30, 2003. ISU Department of Ecology, Evolution, and Organismal Biology Seminar Series.

"Engaging Students in Large Classes". ISU Center For Teaching Excellence Springbrook Teaching Retreat, November 6-8, 2003.

"Squaw Creek and the Squaw Creek Watershed Coalition". February 3, 2004. Story County OWLS (Older Wiser Livelier Seniors) Program.

"Squaw Creek and the Squaw Creek Watershed Coalition". February 19, 2004. Big Bluestem Audubon Society.

"BETAL: Bridging the Gap between Biology and Pedagogy". ISU Learning Communities Institute. May 11, 2004, Ames IA.

"Skunk River Navy". May 26, 2004. Ames Iowa Morning Rotary Club.

"BETAL: Bridging the Gap Between Biology and Pedagogy". October 21, 2004. Iowa Science Teachers Section Fall Conference, Des Moines IA.

"Using the Web to Promote Interaction and Engagement in Large Format Classes". November 12, 2004. National Association of Biology Teachers Annual Conference, Chicago Illinois.

"Winter Camping". February 23, 2005. ISU Biological Sciences Club.

"Engaging Students: Large Format Classes and Service-Learning". March 1, 2005. ISU Preparing Future Faculty Program.

"Engaging Students in Large Classes". March 30, 2005. ISU Center for Excellence in Learning and Teaching Workshop".

"Engaging Students: Large Format Classes and Service-Learning". April 8, 2005. University of Wisconsin-Parkside.

"The Skunk River Navy". April 27, 2005. Nevada Elementary School.

"Some strategies for engaging students in large classes". September 1, 2005. ISU Department of Ecology, Evolution, and Organismal Biology Seminar Series.

"Implementing Service- Learning". September 24, 2005. ISU CELT Springbrook Teaching Retreat.

"The Skunk River Navy and The Squaw Creek Watershed Coalition". October 14, 2005. Ames Friday Noon Kiwanis.

"The Skunk River Navy and The Squaw Creek Watershed Coalition". October 27, 2005. Ames Thursday Morning Kiwanis.

"Issues Facing Iowa's Rivers and Streams". November 17, 2005. Hampton-Dumont High School.

"Issues Facing Iowa's Rivers and Streams". March 3, 2006. Waverly-Shell Rock High School.

"Incorporating Service-Learning into Your Learning Community". May 8, 2006, ISU Learning Communities Institute, Ames IA.

"Issues Facing Iowa's Rivers and Streams". May 9, 2006. Ames High School.

"Using Local Biodiversity and Service-Learning to Engage Students in Learning Science". October 18, 2006. Iowa Science Teachers Section Fall Conference, Cedar Rapids, IA.

"The Squaw Creek Watershed Coalition: Five Years on and Still a Long Ways to go". February 2, 2007. 7th Annual Iowa DNR Water Monitoring Conference, Ames, IA.

"The South Skunk River and it Navy". February 26, 2007. The Ames Historical Society "Along the Skunk" Lecture Series, Ames, IA.

"The South Skunk River and it Navy". April 4, 2007. Nevada Noon Rotary, Nevada, IA.

"The South Skunk River and it Navy". June 17, 2007. Iowa Project AWARE, Springbrook State Park.

"Issues Facing Iowa's Rivers and Streams". October 19, 2007. Johnston High School.

"Issues Facing Iowa's Rivers and Streams". March 7, 2008. South East Polk High School.

"Issues Facing Iowa's Rivers and Streams". November 10, 2008. Harbor High School.

"The Skunk River Navy". January 28, 2009. Nevada Elementary School.

"Prior Exploration of Biological Diversity does not Prevent Improved Understanding of Evolution". July 31, 2011. Society for the Advancement of Biology Education Research Annual Meeting Abstracts, University of Minnesota.

"The Skunk River Navy". June 11, 2012. Nevada Lions Club.

"Iowa's Lost Lichens". January 23, 2013. Biological Sciences Club. Iowa State University.

"The Skunk River Navy: 17 Years Before the Mast". March 3, 2015. Iowa Water Conference, Ames, Iowa.

PUBLISHED ABSTRACTS

Quail, P.H., J.T. Colbert, and H.P. Hershey. 1983. Autoregulation of translatable phytochrome mRNA levels. J. Cell. Biochem. 7B: 309.

Colbert, J.T., H.P. Hershey, and P.H. Quail. 1983. Autoregulation of translatable phytochrome mRNA levels. Photochem. and Photobiol. 37: 542.

Quail, P.H., J.G. Tokuhisa, S.M. Daniels, H.P. Hershey, and J.T. Colbert. 1985. Phytochrome in green plants. Photochem. and Photobiol. 41: 549.

Colbert, J.T., A.H. Christensen, N.K. Peters, and P.H. Quail. 1985. Regulation of phytochrome gene expression at the transcriptional level. In: First International Congress of Plant Molecular Biology. G.A. Galau, ed., The University of Georgia Center for Continuing Education, Athens, Georgia. p. 23.

Quail, P.H., H.P. Hershey, R.F. Barker, K. Idler, J.T. Colbert, J.L. Lissemore, J.G. Tokuhisa, S.M. Daniels, and A.M. Jones. 1985. Phytochrome and its genes. In: First International Congress of Plant Molecular Biology. G.A. Galau, ed., The University of Georgia Center for Continuing Education, Athens, Georgia. p. 41

Mendu, N., D. Loer, J.T. Colbert, J.L. Lissemore, P.H. Quail, and C. Silflow. 1985. Characterization of the tubulin cDNA clones of Avena. In: First International Congress of Plant Molecular Biology. G.A. Galau, ed., The University of Georgia Center for Continuing Education, Athens, Georgia. p. 86.

Lissemore, J.L., R.A. Sharrock, J.T. Colbert, and P.H. Quail. 1985. Molecular cloning of cDNA for Cucurbita phytochrome and studies on the regulation of its mRNA level. In: First International Congress of Plant Molecular Biology. G.A. Galau, ed., The University of Georgia Center for Continuing Education, Athens, Georgia. p. 98.

Colbert, J.T., S.A. Costigan, P. Avissar, A.H. Christensen, N.K. Peters, and P.H. Quail. 1987. Transcriptional and post-transcriptional regulation of phytochrome mRNA abundance in oat seedlings. J. Cell. Biochem. 11B: 51.

Costigan, S.A., Z. Zhao, and J.T. Colbert. 1988. Light induced decrease in β-tubulin mRNA abundance. J. Cell. Biochem. 12C: 209.

Colbert, J.T. and C.L. Edwards. 1989. Regulation of phytochrome mRNA abundance in green oat leaves. J. Cell. Biochem. 13D: 316.

Cotton, J.L.S., C.W. Ross, and J.T. Colbert. 1989. Regulation of phytochrome mRNA abundance by benzyladenine. Plant Physiol. 89S: 64.

Byrne, D.H., K.A. Seeley, and J.T. Colbert. 1990. Degradation of oat phytochrome mRNA in vivo and in vitro. Plant Physiol. 93S: 47.

John, I., B.M. Held, E.S. Wurtele, and J.T. Colbert. 1991. Isolation and characterization of root preferential cDNA clones from Zea mays. J. Cell. Biochem. 15A: 133.

Seeley, K.A, L.J. Barnes, J.T. Colbert. 1991. Inherent instability of oat phytochrome mRNA. In: Third International Congress of Plant Molecular Biology. R.B. Hallick, ed., University of Arizona, Tucson, AZ, (abstract) 456.

Barnes, L.J. and J.T. Colbert. 1993. The use of transgenic tobacco to determine the stability of plant mRNAs. Plant Physiol. 102S: 104.

Held, B.M., H. Wang, I. John, E.S. Wurtele, and J.T. Colbert. 1993. A messenger RNA putatively coding for a methyltransferase accumulates predominantly in the region of the endodermis. Plant Physiol. 102S: 151.

Higgs, D.C. and J.T. Colbert. 1993. Degradation mechanism of oat phytochrome messenger RNA. Plant Physiol. 102S: 103.

Wang, H., J. Ke, J.T. Colbert, and E.S. Wurtele. 1994. Characterization of a gene expressed early in root development. Plant Physiol. 105S: 43.

Higgs, D.C. and J.T. Colbert. 1994. Oat phytochrome A mRNA degradation mechanism. In: Fourth International Congress of Plant Molecular Biology, International Society of Plant Molecular Biology, Amsterdam, The Netherlands, (abstract) 305.

Moragoda, L. and J. T. Colbert. 1996. Detection and analysis of ZRP2 protein in maize. In: 38th Annual Maize Genetics Conference Program and Abstracts, p. 71.

Nunez, V., L. Moragoda, E. S. Wurtele, and J.T. Colbert. 1996. Toward down-regulation of ZRP4 - A maize gene that may be involved in suberin biosynthesis. In: 38th Annual Maize Genetics Conference Program and Abstracts, p. 72.

Moragoda, L. and J.T.Colbert. 1997. Detection and analysis of ZRP2, a root-preferential protein from maize. Plant Physiol. 114S: 261.

Moragoda, L., V. Nunez, J. Holtz, B. Fatland, E.S. Wurtele, and J. T. Colbert. 1997. Detection of maize ZRP4 protein and down-regulation of zrp4 gene expression in maize roots. Plant Physiol. 114S: 261.

Wu, Y., E.S. Wurtele, and J.T. Colbert. 1998. *grp*2 and *grp*4, two root preferential genes in soybean. Plant Physiol. 117S: 76.

Nunez, V., J. Holtz, B. Fatland, E.S. Wurtele, and J.T. Colbert. 1998. Investigations toward the function of *zrp*4, a root preferential gene in maize. Plant Physiol. 117: 77.

Brooke, C., C. Thralls, and J. Colbert. 2000. Dare to Share: Making Teaching Community Property. 25th Annual POD Network Conference. Conference Program.

Colbert, J. 2001. Plant Biology for Preservice Teachers. NSF Collaboratives for Excellence in Teacher Preparation Meeting. Meeting Abstracts.

Colbert, J.T. 2002. Service-learning in a Biological Context. Thirteenth International Conference on College Teaching and Learning. Conference Program p. 35.

Colbert, J.T. 2002. Student Perceptions of the Impact of a Web-Based Component on their Learning of Biology in a Large Class Setting. . Iowa Academy of Science, 114th Annual Meeting. Program Abstracts, p. 13.

Colbert, J. and I. Faass. 2002. Curricular Linking of Service-Learning and Student Reflection in Biology and English. ISU Learning Communities Institute. Conference Program, p. 9.

Colbert, J. 2002. The Skunk River Navy: Service Learning in a Biological Context. Iowa Science Teacher Section Fall Conference Program, p. 31.

Colbert, J, M.Clough, and J. Olson. 2004. BETAL: Bridging the Gap between Biology and Pedagogy. ISU Learning Communities Institute. Conference Program, p. 4.

Colbert, J, M.Clough, and J. Olson. 2004. BETAL: Bridging the Gap between Biology and Pedagogy. Iowa Science Teachers Section Fall Conference. Conference Program, p. 7.

Colbert, J. 2004. Using the Web to Promote Interaction and Engagement in Large Format Classes. National Association of Biology Teachers Annual Meeting. Conference Program, p.49.

Rice, J. W. and J.T. Colbert. 2007. Evolution Education at ISU: Student Beliefs and Understanding. Proceedings of the 119th Annual Meeting of the Iowa Academy Science. Program Abstracts, p. 46.

Colbert, J.T., J.D. Holtz, B.C. Herman, and J.K. Olson. 2009. Deep Learning: The impact of Skunk River Navy Experience on Attitudes Toward, and Understanding of, Iowa's Streams. Proceedings of the 121rst Annual Meeting of the Iowa Academy of Science. Program Abstracts, p. 41.

Herman, B. C., J.K. Olson, J.T. Colbert, and J.D. Holtz. 2010. Environmental Service Learning: The Relationship between Participation in the Skunk River Navy and Students' Learning, Personal Attitudes, and Policy Views about Iowa Waterways. Paper presented at the annual meeting of the Association for Science Teacher Education. Sacramento, CA. January 14-16, 2010.

Colbert, J.T. 2010. Looking for *Lobaria*. Proceedings of the 122nd Annual Meeting of the Iowa Academy of Science. Program Abstracts, p. 13.

Rice, J. W., and J.T. Colbert. 2011 Understanding and Acceptance of Evolution and the Nature of Science: A Study of University Faculty. Evolution 2011 Abstracts, University of Oklahoma, p. 42.

Colbert, J.T. and J. W. Rice. 2011. Prior Exploration of Biological Diversity does not Prevent Improved Understanding of Evolution. Society for the Advancement of Biology Education Research Annual Meeting Abstracts, University of Minnesota, p. 14.

Rice, J.W., and J.T, Colbert, 2011. Understanding and Acceptance of Evolution and the Nature of Science: Studies on Public College Faculty. Society for the Advancement of Biology Education Research Annual Meeting Abstracts, University of Minnesota, p. 15.

Colbert, J.T. 2012. Iowa's Lost Lichens. Proceedings of the 124th Annual Meeting of the Iowa Academy of Science. Program Abstracts, p. 49.

Colbert, J.T. 2012. Restructuring biodiversity lab activities: From death march through the phyla to voyage of exploration. Introductory Biology Project Summer Conference, p. 17.

Ihrig, L. and J. T. Colbert. 2012. Transforming science laboratory courses at Iowa State University. Iowa Science Teachers Section of the Iowa Academy of Science Annual Meeting, p. 14.

Podaril, A. and J.T. Colbert. 2013. Lichen biodiversity in southeast Iowa. Proceedings of the 125th meeting of the Iowa Academy of Science. Program Abstracts, p. 49.

Mynhardt, G. and J.T. Colbert. 2013. Student perceptions and conceptual understanding of biological diversity. Society for the Advancement of Biology Education Research, Annual Meeting Abstracts, University of Minnesota, p. 25

Podaril, A. and J. Colbert. 2014. Iowa's lichen diversity: What's left after over a century of habitat destruction. American Bryological and Lichenological Society, Annual Meeting Abstracts, Boise Idaho, page 61.

PUBLICATIONS

Colbert, J.T. 1979. Spatial relation of stem hydroids to branch hydroids in four pleurocarpous mosses. Proc. Iowa Acad. Sci. 86: 145-148.

Colbert, J.T. and R.F. Evert. 1982. Leaf vasculature in sugarcane (Saccharum officinarum L.). Planta 156: 136-151.

Colbert, J.T., H.P. Hershey, and P.H. Quail. 1983. Autoregulatory control of translatable phytochrome mRNA levels. Proc. Natl. Acad. Sci. USA 80: 2248-2252.

Quail, P.H., J.T. Colbert, H.P. Hershey, and R.D. Vierstra. 1983. Phytochrome: molecular properties and biogenesis. Phil. Trans. R. Soc. Lond. B303: 387-402.

Hershey, H.P., J.T. Colbert, J.L. Lissemore, R.F. Barker, and P.H. Quail. 1984. Molecular cloning of cDNA for Avena phytochrome. Proc. Natl. Acad. Sci. USA. 81: 2332-2336.

Hershey, H.P., R.F. Barker, J.T. Colbert, J.L. Lissemore, and P.H. Quail. 1985. Phytochrome: molecular properties, feedback regulation of mRNA levels and genomic clone isolation. In: Molecular Form and Function of the Plant Genome. Louis van Vloten-Doting, G.S.P. Groot, and T.C. Hall, eds., Plenum Press, New York. p. 101-111.

Vierstra, R.D., S.M. Langan, G.E. Schaller, J.T. Colbert, and A.L. Hass. 1985. Initial characterization of the ubiquitin-dependent proteolytic pathway in higher plants. In: Current Topics in Plant Biochemistry and Physiology. D. Randall, ed., Univ. of Missouri, Columbia, MO. p. 25-33.

Colbert, J.T., H.P. Hershey, and P.H. Quail. 1985. Phytochrome regulation of phytochrome mRNA abundance. Plant Molec. Biol. 5: 91-101.

Quail, P.H., J.T. Colbert, N.K. Peters, A.H. Christensen, R.A. Sharrock, and J.L. Lissemore. 1986. Phytochrome and the regulation of the expression of its genes. Phil. Trans. R. Soc. Lond. B314: 469-480.

Quail, P.H., R.F. Barker, J.T. Colbert, S.M. Daniels, H.P. Hershey, K.B. Idler, A.M. Jones, and J.L. Lissemore. 1987. Structural features of the phytochrome molecule and feedback regulation of the expression of its genes in Avena. In: Molecular Biology of Plant Growth Control. UCLA Symposia on Molecular and Cellular Biology, New Series 44:425-439. J.E. Fox and M. Jacobs (eds.), Alan R. Liss Inc., New York. p. 425-439.

Lissemore, J.L., J.T. Colbert, and P.H. Quail. 1987. Cloning of cDNA for phytochrome from etiolated Cucurbita and coordinate photoregulation of the abundance of two distinct phytochrome transcripts. Plant Molec. Biol. 8: 485-496.

Colbert, J.T. 1988. Molecular biology of phytochrome. Plant, Cell and Environment 11: 305-318.

Gamborg, O.L., J.T. Colbert, I. John, Y. Zafar, A.S. Kumar, and M.W. Nabors. 1989. Genetic approaches to stress tolerance in plants. In: The Role of Tissue Culture and Novel Genetic Technologies in Crop Improvement. J.L.F. Ketchum and O.L. Gamborg (eds.), Tissue Culture for Crops Project, Ft. Collins, CO, p. 63-72.

Colbert, J.T., S.A. Costigan, and Z. Zhao. 1990. Photoregulation of β-tubulin mRNA abundance in etiolated oat and barley seedlings. Plant Physiol. 93: 1196-1202.

Cotton, J.L.S., C.W. Ross, D.H. Byrne, and J.T. Colbert. 1990. Regulation of phytochrome mRNA abundance by red light and benzyladenine in etiolated cucumber cotyledons. Plant Molec. Biol. 14: 707-714.

Edwards, C.L. and J.T. Colbert. 1990. Regulation of phytochrome mRNA abundance in green oat leaves. Plant, Cell and Environment 13: 813-819.

Colbert, J.T., S.A. Costigan, P. Avissar, and Z. Zhao. 1991. Regulation of phytochrome gene expression. J. Iowa Acad. Sci. 98: 63-67.

Colbert, J.T. 1991. Regulation of type I phytochrome mRNA abundance. Physiol.Plant. 82: 327-332.

Tirimanne, T.S. and J.T. Colbert. 1991. Transient down-regulation of phytochrome mRNA abundance in etiolated cucumber cotyledons in response to continuous white light. Plant Physiol. 97: 1581-1584.

Seeley, K.A. and J.T. Colbert. 1992. Distribution of phytochrome and chlorophyll a/b binding protein mRNAs in etiolated Avena seedlings. Planta 187: 532-536.

Seeley, K.A., D.H. Byrne, and J.T. Colbert. 1992. Red light-independent instability of oat phytochrome mRNA in vivo. Plant Cell 4: 29-38.

John, I, H. Wang, B.M. Held, E.S. Wurtele, J.T. Colbert. 1992. An mRNA that specifically accumulates in maize roots delineates a novel subset of developing cortical cells. Plant Molec. Biol. 20: 821-831.

Higgs, D.C. and J.T. Colbert. 1992. RNase protection assays and RNA gel blots: A direct comparison of sensitivity. Genetic Analysis: Techniques and Applications 9: 146-148.

Byrne, D.H. , K.A. Seeley, and J.T. Colbert. 1993 Half-lives of oat mRNAs in vivo and in a polysome-based in vitro system. Planta 189: 249-256.

Higgs, D.C. and J.T. Colbert. 1993. β-glucuronidase gene expression and mRNA stability in oat protoplasts. Plant Cell Rep. 12: 445-452.

Held, B.M., H. Wang, I. John, E.S. Wurtele, and J.T. Colbert. 1993. An mRNA putatively coding for an O-methyltransferase accumulates preferentially in maize roots and is located predominantly in the region of the endodermis. Plant Physiol. 102:1001-1008.

Higgs, D.C. and J.T. Colbert. 1994. Oat phytochrome A mRNA degradation appears to occur via two distinct pathways. Plant Cell 6: 1007-1019.

Wang, H., J.T. Colbert, and E.S. Wurtele. 1995 Accumulation of the ZRP3 mRNA in the root and coleorhiza of germinating maize. Amer. J. Bot. 82: 1083-1088

Higgs, D.C., L.J. Barnes, and J.T. Colbert. 1995. Abundance and half-life of the distinct oat phytochrome A3 and A4 mRNAs. Plant Molec. Biol. 29: 367-377.

Held, B.M., I. John, H. Wang, L. Moragoda, T. S. Tirimanne, E.S. Wurtele, and J.T. Colbert. 1997. zrp2: A novel maize gene whose mRNA accumulates in the root cortex and mature stems. Plant Molec. Biol. 35:367-375.

Johnson, M. A., E. J. Baker, J.T. Colbert, and P.J. Green. 1998. Determinants of messenger RNA stability in plants. In: A Look Beyond Transcription: Mechanisms Determining mRNA Stability and Translation in Plants (Bailey-Serres, J. and Gallie, D. R., eds.). American Society of Plant Physiologists, Rockville, MD, pp 40-54.

Colbert, J.T. 2001. Genetic Engineering. In: Plant Sciences Encyclopedia Volume 2 (Robison, R., editor in Chief). Macmillan Reference USA, New York, NY, pp. 168-172.

Colbert, J. 2001. Teaching and learning in large classes. Iowa State University Center for Teaching Excellence Newsletter 13: 1-3.

Hoiberg, K.B., J. Sharp, T. Hodgson, and J. Colbert. 2005. Geometric Probabilities and the Areas of Leaves. Mathematics Teaching in the Middle School 10: 326-332.

Colbert, J. 2005. Project AWARE 2005 – More Than Meets The Eye. IOWATER Newsletter 2005-3: 1-3.

Colbert, J.T., J.K. Olson, and M.P. Clough. 2007. Using the Web to Encourage Student-generated Questions in Large-format Introductory Biology Classes. CBE Life Science Education 6: 42-48.

Rice, J.W., D. A. Warner, C. D. Kelly, M.P. Clough, and J.T. Colbert. 2010. The Theory of Evolution is not an Explanation for the Origin of Life. Evolution Education and Outreach 3: 141-142.

Rice, J.W., J.K. Olson, and J.T. Colbert. 2011. University Evolution Education: The Effect of Evolution Instruction on Biology Majors' Content Knowledge, Attitude Toward Evolution, and Theistic Position. Evolution Education and Outreach 4:137-144.

Colbert, J.T. 2011. *Chaenotheca furfuracea* and *Psilolechia lucida* occur in Iowa. Evansia 28: 38-42.

Colbert, J.T. 2011. Current Status of Lichen Diversity in Iowa. Journal of the Iowa Academy of Science 118: 16-23.

Herman, B.C., J. K. Olson, J.D. Holtz, and J.T. Colbert. 2013. The relationship between environmental free-choice learning and students' learning, attitudes, and policy views about waterways. International Journal of Science and Mathematics Education. 11: 1327-1350.

Addis, E.A., K.M. Quardokus, D.C. Bassham, P.W. Becraft, N. Boury, C.R. Coffman, J.T. Colbert, and J. Powell-Coffman. 2013. Implementing pedagogical change in introductory biology courses through the use of faculty learning communities. Journal of College Science Teaching 43: 22-29.

Podaril, A. and J. Colbert. 2015. Elemental concentrations of Iowa *Parmotrema* species. *Evansia* (in press).

Rice, J.W., M.C. Clough, J.K. Olson, D.C. Adams, and J.T. Colbert. 2015. Understanding and Acceptance of Biological Evolution: A Study on University Faculty. *Evolution Education and Outreach* (in press).

Podaril, A. and J.T. Colbert. 2015. Elemental concentrations of Iowa Parmotrema species. *Evansia* (in press).

Podaril, A, and J.T. Colbert. 2015. Lichen diversity in southeast Iowa. *Opuscula Philolichenum* (in press).

REPORTS

Norris, W.R., R. Healy, and J.T. Colbert. 2009. A comprehensive inventory (vascular plants, bryophytes, macrofungi) of Mossy Glen State Preserve (Clayton Co., Iowa). A report to the Bureau of Preserves and Ecological Services, Iowa Department of Natural Resources.

Norris, W.R. and J.T. Colbert. 2010. Bluffton Fir Stand State Preserve: Vascular Plants, Lichens and Bryophytes. 2010. A Final Report to the Iowa State Preserves Board.

TEXTBOOKS

Dolphin, W.D., D. Vleck, J.T. Colbert, L.M. Westgate. 2010. Biological Investigations: Form, Function, and Process (9th Edition). McGraw-Hill, New York, NY.

Colbert, J.T., Westgate, L.M. 2013. *Exploring Biological Diversity and Introductions to Genetics, Evolution, and Ecology.* Fountainhead Press, Southlake TX.

PATENT

Colbert J.T., B.M. Held, E.S. Wurtele, P.S. Dietrich. 1997. Root Preferential Promoter. US Patent Number 5,633,363.

GRANTS and GIFTS

"Role and mechanism of differential mRNA stability in plant gene expression". Colorado State University Agricultural Experiment Station. $100,000; 1986-1989.

"Introduction of new genes into barley by floral injection". The Adolph Coors Company. $67,000; 1986-1988.

"Expression of endogenous and introduced phytochrome genes in barley" USDA-CRGO (88-37261-4196). $100,000; 1988-1991.

"New investigator start-up grant". Iowa State University Biotechnology Council. $150,000; 1988-1991.

"Isolation of cell-type specific cDNA clones from maize roots". Sandoz Crop Protection/Northrup King Company. $171,000; 1989-1992.

"Evaluation of promoters and reporter genes for use in barley". The Adolph Coors Company. $30,000; 1990-1991.

"Nucleotide sequence determinants of phytochrome mRNA instability". USDA-CRGO (91-37304-6397). $125,000; 1991-1993.

"Chilling Tolerance during Pre-emergence Seedling Growth in Maize". Pioneer Hi-Bred (Co-PI with Dr. Cecil Stewart). $57,948; 1991-1993

"Characterization of Maize Root-Preferential Genes". Sandoz Crop Protection/Northrup King Company (Dr. Eve S. Wurtele, Co-PI). $150,000; 1992-1995

"Phytochrome mRNA Degradation: Cis-elements, Factors, and Pathway". USDA-NRICGP (93-37304-8944). $120,000; 1993-1996

"Food and Agricultural Sciences National Needs Graduate Fellowships in Plant Biotechnology". USDA-CSRS (Co-PI with Dr. Martin Spalding). $162,000; 1994-1997

"Evaluation of zrp4 a gene expressed in endodermal cells of roots during suberin deposition". USDA-NRICGP (Co-Pi with Dr. Eve Wurtele) $100,000; 1995-1997

"Root-specific promoters for use in genetically engineered soybean". Iowa Soybean Promotion Board (Dr. Eve S. Wurtele, Co-PI). $ 43,450; 1996-1997

"Root-specific promoters for use in genetically engineered soybean". Iowa Soybean Promotion Board (Dr. Eve S. Wurtele, Co-PI). $ 44,650; 1997-1998

"Root-specific promoters for use in genetically engineered soybean". Iowa Soybean Promotion Board (Dr. Eve S. Wurtele, Co-PI). $ 44,650; 1998-1999

"MENTORS: Mathematical Engineering Networking with Teachers of Real Science". NSF. $896,259 (budget included $23,323 for my contributions); 1999-2001

“Enhancing the biological monitoring capability of the Skunk River Navy”. Wal-Mart Environmental Grant Program. $2,000; 2000-2001

“Biology Teaching and Learning (BTAL) Learning Community”. ISU Learning Communities Program. $9,500. 2002-2003.

“ISU Service Learning: Enhancing Student Learning in Courses Through Service”. ISU Miller Grant Program. $17,000. 2002-2003. (Dr. Sharon McGuire, PI)

“”Biology Education Teaching and Learning Community (BETAL)”. ISU Learning Communities Program. $4,000. 2003-2004.

“”Biology Education Teaching and Learning Community (BETAL)”. ISU Learning Communities Program. $4,000. 2004-2005.

“The George Knaphus College Teaching Fellowship”. Mrs. Marie Knaphus and Family. $10,000. 2004-2005.

“Humanizing Science to Improve the Teaching and Learning of Science Content”. ISU Miller Grant Program. $24,606. 2004-2005. (Dr. Mike Clough, PI)

“The George Knaphus College Teaching Fellowship Endowment”. Mrs. Marie Knaphus and Family. $150,000. Effective, December 2004

“”Biology Education Teaching and Learning Community (BETAL)”. ISU Learning Communities Program. $5,300. 2005-2006.

“”Biology Education Teaching and Learning Community (BETAL)”. ISU Learning Communities Program. $6,000. 2006-2007.

“Humanizing Science to Improve Post-Secondary Science Education: Pursuing the Second Tier”. National Science Foundation, $293,718. 2006-2008. (MP Clough [PI], C Cervato, JT Colbert, JK Olson, MG Stanley [Co-PIs])

“”Biology Education Teaching and Learning Community (BETAL)”. ISU Learning Communities Program. $6,250. 2007-2008.

"The Ada Hayden Herbarium: Consolidation, Preservation, and Computerization". National Science Foundation. $150,071. 2007-2009 (LG Clark [PI], D Lewis, DR Farrar and JT Colbert [Co-PIs]).

“Bryophytes and Vascular Flora of Mossy Glen State Preserve”. Iowa State Preserves Board. $2680. 2008. (W Norris [PI], R Healy and JT Colbert [Co-PIs]).

“Bryophytes and Vascular Flora of Bluffton Fir Stand”. Iowa State Preserves Board. $2400. 2009. (W Norris [PI] and JT Colbert [Co-PI]).

“Anonymous Donation to the Skunk River Navy”, $10,000, 2011.

COURSES TAUGHT (PAST 5 YEARS)
Biology 211 (Principles of Biology I)
Biology 211L (Principles of Biology I Laboratory)
Biology 212 (Principles of Biology II)
Biology 393 (Biodiversity of the Boreal Forest)
Biology 455 (Bryophyte and Lichen Biodiversity)
Biology 490 (Independent Study in Biology)
Biology 491 (Undergraduate Teaching Assistantship)
Biology 494 (Internships in Biology)
LAS 125 (Biology Connections Learning Community)
Hon 290 (Research Mentorship)
Bio 112X (Transfer Student Orientation)

RECENT FIELD CLASSES TAKEN

Lichens and Lichen Ecology, 2005 (David Richardson)
Bryophytes and Bryophyte Ecology, 2006 (Nancy Slack)
Crustose Lichens, 2011 (Ernie Brodo)

COMMITTEES (PAST 5 YEARS)

Biology Major Curriculum Committee
Biology Awards and Recognition Committee
HHMI Biology Faculty Learning Community
Biology 211/212 Text Adoption Committee
LAS Honors Committee

LEARNING COMMUNITY COORDINATION (PAST 5 YEARS)

Coordinator for the "Skunk River Navy" component of the Biology Education Success Teams (BEST) learning community. (Since Fall 1998)
BEST Learning Community Co-Coordinator (since Fall 2010)