



**Dennis J. Gray**

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**Education:**

North Carolina State University	Botany and Plant Pathology	Ph.D.	1982
Auburn University	Mycology and Botany	M.S.	1979
California State College	Biology and Botany	B.A.	1976
Modesto Junior College	Biology		1974

Research Interests (with focus on Tropical Agriculture)

- 1) Development of improved grapevine varieties for tropical/subtropical climates
- 2) Developmental Biology
- 3) Conventional Plant and Microbial Genetics
- 4) Somatic Cell Genetics
- 5) Molecular Genetics
- 6) Plant Cell and Tissue Culture

**PUBLICATIONS (LAST SEVEN YEARS)**

**US Patents: (6)**

Scorza, R. and D. J. Gray, Disease resistance in *Vitis*, US Patent No. 6,232,528 B1, 2001. This patent protects use of lytic peptide genes in transgenic grape for production of Pierce's disease-resistant grapevines.

Gray, D. J., J. Subramanian<sup>2</sup>, and R E. Litz, Regeneration system for grape and uses thereof. US Patent No. 6,455,312, 2002. This patent protects the basic regeneration system needed to genetically engineer grape.

Li, Z.<sup>3</sup> and D. J. Gray, Bi-directional dual promoter complex with enhanced promoter activity for transgene expression in eukaryotes, US Patent 7,129,343, 2006. This patent protects a unique method of arranging genetic elements (DNA) to control and enhance gene expression. It has a very broad field of use in all Eukaryotes (i.e., plants, animals, fungi).

Scorza, R. and D. J. Gray, Disease resistance in *Vitis*, US Patent No. 7,151,203 B2, 2006. This patent protects use of lytic peptide genes in transgenic grape to produce grapevines resistant to certain fungi.

Subramanian, J,<sup>2</sup> and D. J. Gray, Pathogen resistant grape plants. US Patent No. 6,995,015, 2006. This patent protects the use of in vitro selection to produce disease resistant grapevines.

Li, Z.T.<sup>3</sup> and D. J. Gray, Nucleotide sequences of 2S albumen gene and its promoter from grape and uses thereof. US Patent No. 7,250,296, 2007. This patent protects the use of the grapevine-derived albumin gene and its controlling elements in all plants. The gene has antimicrobial properties for use in developing disease resistance and the promoting element is a newly-available gene controller.

**Foreign Patents: (4 primary patents issued in several countries = 35 total)**

Gray, D. J. and R. Scorza, Disease resistance in *Vitis*, Australian Patent No. 723058 (34038.97), 2001. Versions of this patent also have issued in Argentina, Australia, Austria, Chile, France, Germany, Greece, Italy, Mexico, New Zealand, Portugal, South Africa, Spain, Switzerland.

Gray, D. J., J. Subramanian<sup>2</sup>, and R E. Litz, Regeneration system for grape and uses thereof. South African Patent No. 2000/0591, 2001. Versions of this patent have issued in Argentina, Australia, Brazil, Chile, France, Germany, Italy, New Zealand, Portugal, South Africa and Spain.

Gray, D. J. and R. Scorza, Disease resistance in *Vitis*, European Patent No. 1138767, 2006. A divisional of Gray & Scorza 2001, issued in Argentina, Austria, France, Germany, Greece, Italy, Portugal, Spain and Switzerland.

Gray, D. J., J. Subramanian<sup>2</sup>, and R E. Litz, Regeneration system for grape and uses thereof. Australian Patent Ser. No. 2002301408, 2006.

### **Books, Edited (2)**

Trigiano, R. N. and Gray, D. J., Editors, Plant Development and Biotechnology, CRC Press, Boca Raton, 2005, 357 pp.

Trigiano, R. N. and Gray, D. J., Editors, La Coltura dei Tessuti Vegetali (The Culture of Plant Tissues), Edagricole, Bologna, 2003, 382 pp.

### **Books, Contributor of Chapters (22)**

Jayasankar, S.<sup>2</sup> and D. J. Gray, In vitro plant pathology, Chap. 41, *In: R. N. Trigiano, M. T Windham and A. S. Windham (Eds.), Plant Pathology: Concepts and Laboratory Exercises, 2<sup>nd</sup> Edition, CRC Press, Boca Raton, 2008, pp. 475-485.*

Gray, D. J., S. Jayasankar<sup>2</sup> and Z. Li<sup>3</sup>, Vitaceae (Grape *Vitis* spp.), Chap. 22, *In: R. E. Litz (Ed.), Biotechnology of Fruit and Nut Crops, Biotechnology in Agriculture Series, No. 29, CAB International Wallingford, U.K., 2005, pp. 672-706.*

Trigiano, R. N. and D. J. Gray, Plant morphology and anatomy, Chap. 7, *In: R. N. Trigiano and D. J. Gray (Eds.), Plant Development and Biotechnology, CRC Press, Boca Raton, 2005, pp. 73-85.*

Li, Z.T.<sup>3</sup> and D. J. Gray, Genetic engineering technologies, Chap. 19, *In: R. N. Trigiano and D. J. Gray (Eds.), Plant Development and Biotechnology, CRC Press, Boca Raton, 2005, pp. 241-250.*

Jayasankar, S.<sup>2</sup> and D. J. Gray, In vitro plant pathology, Chap. 25, *In: R. N. Trigiano, D. J. Gray (Eds.), Plant Development and Biotechnology, CRC Press, Boca Raton, 2005, pp. 293-299.*

Gray, D. J. and R. N. Trigiano, Introduction, Chap. 1, *In: R. N. Trigiano and D. J. Gray (Eds.), Plant Development and Biotechnology, CRC Press, Boca Raton, 2005, pp. 3-6.*

Gray, D. J., M. E. Compton<sup>2</sup>, E. Hiebert, C. M. Lin<sup>1</sup> and V. P. Gaba, Construction and use of a simple gene gun for particle bombardment, Chap. 21, *In: R. N. Trigiano and D. J. Gray (Eds.), Plant Development and Biotechnology*, CRC Press, Boca Raton, 2005, pp. 265-272.

Gray, D. J., A simple illumination system for visualizing green fluorescent protein, Chap. 22, *In: R. N. Trigiano, D. J. Gray (Eds.), Plant Development and Biotechnology*, CRC Press, Boca Raton, 2005, pp. 273-276.

Gray, D. J., Propagation from non-meristematic tissues - Non-zygotic embryogenesis, Chap. 14, *In: R. N. Trigiano, D. J. Gray (Eds.), Plant Development and Biotechnology*, CRC Press, Boca Raton, 2005, pp. 187-200.

Gray, D. J., Photographic methods for plant cell and tissue culture, Chap. 5, *In: R. N. Trigiano, D. J. Gray (Eds.), Plant Development and Biotechnology*, CRC Press, Boca Raton, 2005, pp. 49-54.

Capponetti, J. D., D. J. Gray and R. N. Trigiano, History of plant tissue culture, Chap. 2, *In: R. N. Trigiano, D. J. Gray (Eds.), Plant Development and Biotechnology*, CRC Press, Boca Raton, 2005, pp. 9-15.

Jayasankar, S.<sup>2</sup> and D. J. Gray, In vitro plant pathology, Chap. 38, *In: R. N. Trigiano, M. T. Windham and A. S. Windham (Eds.), Plant Pathology: Concepts and Laboratory Exercises*, CRC Press, Boca Raton, 2004, pp. 367-377.

Compton, M.E.<sup>2</sup>, D. J. Gray and V. P. Gaba, Genetic transformation of watermelon, Chap. 31, *In: I. S. Curtis (Ed.), Transgenic Crops of the World*, Kluwer Academic Publishers, Dordrecht, 2004, pp. 425-433.

Gray, D. J., R. N. Trigiano and B. V. Conger, Callo embriogenico e colture in sospensione da foglie di erba mazzolina (*Dactylis glomerata* L.) (Embryogenic callus culture in suspensions of orchardgrass), *In: R. N. Trigiano and D. J. Gray (Eds.), La Coltura dei Tessuti Vegetali, Edagricole*, Bologna, 2003, pp. 161-172.

Gray, D. J. and R. N. Trigiano, Introduzione alla coltura di tessuti vegetali (Introduction to The Culture of Plant Tissues), *In: R. N. Trigiano and D. J. Gray (Eds.), La Coltura dei Tessuti Vegetali, Edagricole*, Bologna, 2003, pp. 3-6.

Gray, D. J., M. E. Compton<sup>2</sup>, E. Hiebert, C.-M. Lin<sup>1</sup> and V. P. Gaba, Costruzione ed uso di semplice fucile genico per il bombardamento con particelle (Construction and use of a simple gene gun for particle bombardment), *In: R. N. Trigiano and D. J. Gray (Eds.), La Coltura dei Tessuti Vegetali, Edagricole*, Bologna, 2003, pp. 283-290.

Gray, D. J., Embriogenesi somatica da semi di melone (Somatic embryogenesis in melon), *In: R. N. Trigiano and D. J. Gray (Eds.), La Coltura dei Tessuti Vegetali, Edagricole*, Bologna, 2003, pp. 173-178.

Gray, D. J., Embriogenesi nonzigotica (Non-zygotic embryogenesis), *In*: R. N. Trigiano and D. J. Gray (Eds.), *La Coltura dei Tessuti Vegetali*, Edagricole, Bologna, 2003, pp. 149-160.

Gray, D. J., Tecniche di fotografica applicate alla coltura di celle e tessuti vegetali (Application of photographic techniques for plant tissue culture), *In*: R. N. Trigiano and D. J. Gray (Eds.), *La Coltura dei Tessuti Vegetali*, Edagricole, Bologna, 2003, pp. 47-50.

Compton, M.E.<sup>2</sup> and D. J. Gray, Organogenesi di germogli da espianti cotiledonari di anguria (Organogenesis from cotyledond of watermelon), *In*: R. N. Trigiano and D. J. Gray (Eds.), *La Coltura dei Tessuti Vegetali*, Edagricole, Bologna, 2003, pp. 129-136.

Caponetti, J. S., D. J. Gray and R. N. Trigiano, Storia della coltura di tessuti vegetali (History of plant tissue culture), *In*: R. N. Trigiano and D. J. Gray (Eds.), *La Coltura dei Tessuti Vegetali*, Edagricole, Bologna, 2003, pp. 9-14.

Gray, D. J., S. Jayasankar<sup>2</sup>, Z. Li, J. Cordts, R. Scorza and C. Srinivasan<sup>3</sup>, Transgenic grapevines, *In*: G. G. Khachatourians, A. McHughen, R. Scorza, W. K. Nip and Y. H. Hui (Eds.), *Transgenic Plants*, Chapter 27, Marcel Dekker, 2002, pp. 397-405.

### **Refereed Journal (17)**

Dekney, S.A., Z.T. Li, M. Dutt and D.J. Gray, Agrobacterium-mediated transformation of embryogenic cultures and plant regeneration in *Vitis rotundifolia* Michx. (Muscadine grape). *Plant Cell Reports* 2008 (accepted – see email from publisher in Further Information).

Dutt, M.<sup>1</sup>, Z.T. Li<sup>3</sup>, S.A. Dhekney<sup>2</sup> and D.J. Gray, Transgenic plants from shoot apical meristems of *Vitis vinifera* Thompson Seedless via *Agrobacterium*-mediated transformation. *Plant Cell Rep.* 26, 2007, 2101-2110.

Li, Z.T., S. Dhekney<sup>2</sup>, M. Dutt<sup>1</sup>, M. Van Aman, J. Tattersall, K.T. Kelley and D.J. Gray, Optimizing *Agrobacterium*-mediated transformation of grapevine, *In Vitro Cell. Dev. Biol. Plant.* 42, 2006, 220-227.

Jayasankar S.<sup>2</sup>, M. Van Aman, J. Cordts, Z. Li<sup>3</sup> and D. J. Gray, Long term storage of suspension culture-derived grapevine somatic embryos and regeneration of plants, *In Vitro Cell. Dev. Biol. Plant.* 41, 2005, 752-756.

Li, Z.<sup>3</sup> and D. J. Gray, Isolation by improved TAIL-PCR and characterization of a seed-specific 2S albumin gene and its promoter from grape (*Vitis vinifera* L.). *Genome* 48, 2005, 312-320.

Li, Z.<sup>3</sup>, S. Jayasankar<sup>2</sup> and D. J. Gray, Bi-directional duplex promoters with duplicated enhancers significantly increase transgene expression in grape and tobacco. *Trans. Res.* 13, 2004, 143-154.

Compton, M. E.<sup>2</sup>, D. J. Gray and V. P. Gaba, Use of tissue culture and biotechnology for the genetic improvement of watermelon, Review of Plant Tissue Culture and Biotechnology, Plant Cell Tiss. Org. Cult. 77, 2004, 231-243.

Li, Z.<sup>3</sup> and D. J. Gray, Effect of five antimicrobial peptides on the growth of *Agrobacterium tumefaciens*, *Escherichia coli* and *Xylella fastidiosa*, Vitis 42, 2003, 95-97.

Jayasankar, S.<sup>2</sup>, Z. Li<sup>3</sup> and D. J. Gray, Constitutive expression of *Vitis vinifera* thaumatin-like protein after *in vitro* selection and its role in anthracnose resistance, Functional Plant Biol. 30, 2003, 1105-1115.

Jayasankar, S.<sup>2</sup> and D. J. Gray, In vitro selection of disease resistance in plants – an alternative to genetic engineering, Review Article, AgBiotechNet 5, 2003, 1 - 5.

Gray, D. J., Plant growth and development - artificial seeds. Encyclopedia of Applied Plant Science, Elsevier Science Ltd., Oxford, 2003, 1305-1310.

Jayasankar, S.<sup>2</sup>, B. R. Bondada<sup>2</sup>, Z. Li<sup>3</sup> and D. J. Gray, Comparative anatomy and morphology of *Vitis vinifera* (Vitaceae) somatic embryos from solid and liquid culture-derived proembryogenic cell masses, Amer. J. Bot. 90, 2003, 973-979.

Jayasankar S.<sup>2</sup>, B. Bondada<sup>2</sup>, Z. Li and D. J. Gray, A unique morphotype of grape somatic embryos exhibits accelerated plant development, Plant Cell Rep. 20, 2002, 907-911.

Curuk, S., C. Elman, E. Schlarman, O. Sagee, I. Shomer, S. Cetiner, D. J. Gray and V. Gaba, A novel pathway for rapid shoot regeneration from the proximal zone of the hypocotyl of melon (*Cucumis melo* L.), In Vitro Dev. Biol. Plant 38, 2002, 260-267.

Jayasankar S.<sup>2</sup>, D. J. Gray and M. VanAman<sup>3</sup>, Direct seeding of grapevine somatic embryos and regeneration of plants, In Vitro Dev. Biol. Plant 37, 2001, 476-479.

Li, Z.,<sup>3</sup> S. Jayasankar<sup>2</sup> and D. J. Gray, An improved enzyme-linked immunoabsorbent assay protocol for the detection of small lytic peptides in transgenic grapevines (*Vitis vinifera*), Plant Molec. Biol. Repr. 19, 2001, 341-351. (Note that the cover photograph for volume 19 is taken from our work).

Li, Z.<sup>3</sup>, S. Jayasankar<sup>2</sup> and D. J. Gray, Expression of a bifunctional green fluorescent protein (GFP) fusion marker under the control of three constitutive promoters and enhanced derivatives in transgenic grape (*Vitis vinifera*), Plant Sci. 160, 2001, 877-887.

#### **Refereed Proceedings (4)**

Li, Z.T.<sup>3</sup>, S.A. Dhekney<sup>2</sup>, M. Dutt<sup>1</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup>, K. Kelley<sup>3</sup> and D.J. Gray, Isolation and characterization of the 2S albumin gene and promoter from grapevine. Proc. 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, ACTA Hort. 738, 2007, 759-765.

Dutt, M.<sup>1</sup>, Z.T. Li<sup>3</sup>, K. Kelley<sup>3</sup>, S.A. Dhekney<sup>2</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup>, and D.J. Gray, Transgenic rootstock protein transmission in grapevines, Proc. 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, ACTA Hort. 738, 2007, 749-753.

Dhekney, S.A.<sup>2</sup>, Z.T. Li.<sup>3</sup>, M. Van Aman<sup>3</sup>, M. Dutt<sup>1</sup>, J. Tattersall<sup>3</sup>, and D.J. Gray, Genetic transformation of embryogenic cultures and recovery of transgenic plants in *Vitis vinifera*, *Vitis rotundifolia* and *Vitis* hybrids, Proc. 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, ACTA Hort. 738, 2007, 743-748.

Gray, D. J., Z. Li<sup>3</sup> and J. Subramanian<sup>2</sup>, Tissue-specific expression of lytic peptides in transgenic grapevines via use of a GFP/NPTII fusion marker, Invited publication, 2<sup>nd</sup> Intern. Symp. Biotechnol. Tropical and Subtropical Species, ACTA Hort. 692, 2005, 125-130.

### **Non-Refereed Publications (3)**

Gray, D. J., A new website to support and promote Florida viticulture, Grape Times, Fla. Grape Growers Assoc. Newsletter, 10, 2004, 3.

Gray, D. J., First muscadine harvest at the new Mid-Florida Research and Education Center, Grape Times, Fla. Grape Growers Assoc. Newsletter, 2, 2004, 4.

Gray, D. J., Research vineyard at the University of Florida, Grape Times, Fla. Grape Growers Assoc. Newsletter, 7, 2002, 1.

### **h. Bibliographies/Catalogs (1)**

Gray, D. J. and S. E. Webb, 110 years of grape publications from the University of Florida/IFAS 1891-2001. Created 2001 & updated 2007.

<http://www.mrec.ifas.ufl.edu/grapes/Grape110YrIFASPubRev.pdf>

### **Abstracts (20)**

Dhekney, S.A.<sup>2</sup>, Z.T. Li.<sup>3</sup>, M. Dutt<sup>1</sup>, T. W. Zimmerman, and D.J. Gray, Greenhouse screening and field testing of transgenic grapevine for fungal resistance. 2007 Annual Meeting Society for In Vitro Biology, In Vitro, 43, 2007, S40.

Gray, D. J., Z.T. Li<sup>3</sup>, S. A. Dhekney<sup>2</sup>, M. Dutt<sup>1</sup>, D. L. Hopkins, T. W. Zimmerman, Field testing of transgenic grapevine for bacterial and fungal disease resistance. 2007 Annual Meeting of the American Society for Horticultural Science, HortScience 42, 2007,858.

Dhekney, S.A.<sup>2</sup>, Z.T. Li.<sup>3</sup>, M. Van Aman<sup>3</sup>, M. Dutt<sup>1</sup>, J. Tattersall<sup>3</sup>, K.T. Kelley<sup>3</sup>, and D.J. Gray, Disease resistant transgenic grapevine constitutively expresses *Vitis vinifera* thaumatin-like protein. 2006 Soc. In Vitro Biol. Ann. Meeting, Abstract Supplement.

Dutt, M.<sup>1</sup>, D. J. Gray, Z.T. Li<sup>3</sup>, S. Dhekney<sup>2</sup> and M. M. Van Aman<sup>3</sup>. Micropropagation cultures for genetic transformation of grapevine. HortScience 41(4), 2006, 972A.

Dutt, M.<sup>1</sup>, Z.T. Li<sup>3</sup>, S. Dhekney<sup>2</sup> and D. J. Gray. Characterization of a composite promoter from genomic sequences of grapevine. HortScience 41(4), 2006,1053A.

Gray, D. J., Z.T. Li<sup>3</sup>, S. A. Dhekney<sup>2</sup>, M. Dutt<sup>1</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup> and K. T. Kelley<sup>3</sup>, Screening disease resistant transgenic grapevines for field tests. 2006 Soc. In Vitro Biol. Ann. Meeting, In Vitro, 42, 2006, 20A.

Dhekney, S.A.<sup>2</sup>, Z.T. Li<sup>3</sup>, M. Dutt<sup>1</sup>, M. Van Aman<sup>3</sup> and D.J. Gray, Genetic transformation and transgenic plant recovery from species of grape, 2005 Soc. In Vitro Biol. Ann. Meeting, In Vitro, 41, 2005, 28A.



Dhekney, S.A.<sup>2</sup>, Z.T. Li.<sup>3</sup>, M. Van Aman<sup>3</sup>, M. Dutt<sup>1</sup>, J. Tattersall<sup>3</sup>, K.T. Kelley<sup>3</sup>, and D.J. Gray, Genetic transformation of embryogenic cultures and recovery of transgenic plants in *Vitis vinifera*, *Vitis rotundifolia* and *Vitis* hybrids, 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, Program and Abstract Book, 2005, 41.

Dutt, M.<sup>1</sup>, Z.T. Li<sup>3</sup>, K. Kelley<sup>3</sup>, S.A. Dhekney<sup>2</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup>, and D.J. Gray, Transgenic rootstock protein transmission in grapevines, 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, Program and Abstract Book, 2005, 50.

Gray, D. J., Z.T. Li<sup>3</sup>, D.L. Hopkins, M. Dutt<sup>1</sup>, S.A. Dhekney<sup>2</sup>, M. M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup> and K. T. Kelley<sup>3</sup>, Transgenic Grapevines Resistant to Pierce's Disease, 2005 Amer. Soc. Hort. Sci. Ann. Meeting, HortScience, 40, 2005, 1104A.

Gray, D. J., Z.T. Li<sup>3</sup>, M. Dutt<sup>1</sup>, S. A. Dhekney<sup>2</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup> and K.T. Kelley<sup>3</sup>, Screening transgenic grapevines for Pierce's disease resistance. 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, Program and Abstract Book, 2005, 65.

Li, Z.T.<sup>3</sup>, S.A. Dhekney<sup>2</sup>, M. Dutt<sup>1</sup>, M. Van Aman<sup>3</sup>, J. Tattersall<sup>3</sup>, K.T. Kelley<sup>3</sup> and D.J. Gray, Isolation and characterization of the 2S albumin gene and promoter from grapevine. 2005 Int. Symp. Biotechnol. Temperate Fruit Crops & Tropical Species, Program and Abstract Book, 2005, 86.

Dutt, M.<sup>1</sup>, Z. Li<sup>3</sup> and D. J. Gray, Development of an alternate genetic transformation system for *Vitis*, 68<sup>th</sup> Ann. Meeting Fla. Acad. Sci., Florida Scientist, 67, 2004, 1.

Dutt, M.<sup>1</sup>, M. Van Aman<sup>3</sup> and D. J. Gray, Liquid culture for rapid in vitro propagation of *Vitis*, 2004 Congress on In Vitro Biology, In Vitro Cell. Dev. Biol. 40, 2004, 56A.

Jayasankar, S.<sup>2</sup>, Z. J. Li<sup>3</sup>, Hopkins, D. L. and D. J. Gray, Broad spectrum disease resistance in grapevine by in vitro selection. 10<sup>th</sup> Congress of the International Association for Plant Tissue Culture, Orlando, FL June 23-28. Final Program and Abstracts P-1251, 2002, 97A.

Li, Z.T.<sup>3</sup>, Jayasankar<sup>2</sup>, S. and D. J. Gray, Use of marker genes to target disease resistance gene expression in grape. 10<sup>th</sup> Congress of the International Association for Plant Tissue Culture, Orlando, FL June 23-28. Final Program and Abstracts P-1101, 2002, 58A.

Gray, D. J., Z. Li<sup>3</sup> and J. Subramanian<sup>2</sup>, Tissue-specific expression of lytic peptides in transgenic grapevines via use of a GFP/NPTII fusion marker, Invited presentation, 2<sup>nd</sup> International Symposium on Biotechnology of Tropical and Subtropical Species, ACTA Hort., Academia Sinica, Taipei, Taiwan, Nov. 5 - 8, 2001.

Jayasankar, S.<sup>2</sup>, B. Bondada<sup>2</sup> and D. J. Gray, Histology and scanning electron microscopy of somatic embryo development in grapevine, 2001 Congress on In Vitro Biology, In Vitro Cell. Dev. Biol. 37, 2001, 42A.

Li, Z.T.<sup>3</sup>, S. Jayasankar<sup>2</sup> and D. J. Gray, Expression of a GFP fusion marker under control of three constitutive promoters and enhanced derivatives in transgenic grape, 2001 Congress on In Vitro Biology, In Vitro Cell. Dev. Biol.37, 2001, 22A.

Li, Z.T.<sup>3</sup>, S. Jayasankar<sup>2</sup> and D. J. Gray, Use of a GFP fusion marker to select grapevine clones with tissue-specific transgene expression, 2001 Congress on In Vitro Biology, In Vitro Cell. Dev. Biol.37, 2001, 43A.

### Miscellaneous Articles

Vine times. The pinot noir genome is sequenced. GM wine, anyone? The Economist. Online version 12/19/2007; Print edition 1/7/2008.

Texas winemakers find success in award-winning wine made from UF'S hardy grape, UF/IFAS News 7/12/2006.

### Contracts and Grants (Last seven years)

#### Funded Externally (Research Grants)

<b>Date</b>	<b>Value (To Gray)</b>	<b>Funding Agency</b>	<b>Title</b>	<b>Role</b>
2007 - 2007	\$14,625	FL DEPT OF AG AND CONSUMER SER	RAPID SCREENING SYSTEM TO TEST GENES FOR EFFICACY IN GRAPEVINE IMPROVEMENT	PI
2007 - 2007	\$27,375	FL DEPT OF AG AND CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2007 - 2007	\$15,000	FL DEPT OF AG AND CONSUMER SER	RAPID SCREENING SYSTEM TO TEST GENES FOR EFFICACY IN GRAPEVINE IMPROVEMENT	PI
2007 - 2007	\$37,000	FL DEPT OF AG AND CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI

2006 - 2008	\$93,000	U S DEPT OF AGRICULTURE TSTAR	DEVELOPMENT OF DISEASE-RESISTANT GRAPEVINES FOR THE CARIBBEAN REGION	Co- PI
2005 - 2006	\$15,000	DEPT OF AGRICUL & CONSUMER SER	RAPID SCREENING SYSTEM TO TEST GENES FOR EFFICACY IN GRAPEVINE IMPROVEMENT	PI
2005 - 2006	\$37,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2004 - 2005	\$30,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FL VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2004 - 2005	\$10,000	FL DEPT OF AGRICUL & CONSUMER SER	RAPID SCREENING SYSTEM TO TEST GENES FOR EFFICACY IN GRAPEVINE IMPROVEMENT	PI
2003 - 2004	\$35,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2003 - 2004	\$5,000	FL DEPT OF AGRICUL & CONSUMER SER	OPERATIONAL SUPPORT FOR THE NEW RESEARCH VINEYARD AT THE MID-FLORIDA RESEARCH & EDUCATION CENTER	PI
2003 - 2004	\$15,000	FL DEPT OF AGRICUL & CONSUMER SER	IN VITRO SELECTION OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA	PI
2002 - 2003	\$25,000	FL DEPT OF AGRICUL & CONSUMER SER	IN VITRO SELECTION OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA	PI

2002 - 2003	\$20,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2001 - 2002	\$35,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2001 - 2002	\$15,000	FL DEPT OF AGRICUL & CONSUMER SER	IN VITRO SELECTION OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA	PI
2000 - 2001	\$25,000	FL DEPT OF AGRICUL & CONSUMER SER	DEVELOPMENT OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA VIA GENETIC ENGINEERING BIOTECHNOLOGY	PI
2000 - 2001	\$25,000	FL DEPT OF AGRICUL & CONSUMER SER	IN VITRO SELECTION OF DISEASE-RESISTANT GRAPE CULTIVARS FOR FLORIDA	PI
2000 - 2001	\$180,000	PROFIGEN, INC.	TRANSFORMATION OF VINIFERA GRAPE	PI
1996 - 2003	\$80,000	U S TOBACCO COMPANY	TRANSFORMATION OF VITIS VINIFERA GRAPE	PI

*International Activities (with focus on Tropical Agriculture)*

I currently have a USDA Tropical Subtropical research grant-funded project underway with Dr. Thomas Zimmerman at the University of the US Virgin Islands to conduct field studies of transgenic grapevines that have been genetically engineered for fungal disease resistance. A larger field test is in place in Florida that also includes grapevines engineered for (bacterial) Pierce's disease resistance.