

Timothy P. Devarenne

Associate Professor
Department of Biochemistry & Biophysics
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Present Position:

Associate Professor, Department of Biochemistry & Biophysics, Molecular and Environmental Plant Sciences program, Texas A&M University

Fields: - Signal transduction and regulation of protein kinases involved in the control of plant cell death and plant-pathogen interactions.
- Molecular biology of algal hydrocarbon biosynthesis and algal cell biology.

Education

- 2001-2006 Postdoctoral Fellow
Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY
Field: Molecular Plant-Pathogen interactions
Advisor: Gregory B. Martin
- 1995-2000 Ph.D.
University of Kentucky, Lexington, KY
Field: Plant Physiology/Molecular Biology/Biochemistry
Advisor: Joe Chappell
- 1991-1993 M.S.
Michigan Technological University, Houghton, MI
Field: Plant Physiology
Advisor: John H. Adler
- 1987-1991 B.S.
Michigan Technological University, Houghton, MI
Field: General Biology
Advisor: John H. Adler

Professional Experience:

- 2012-present **Associate Professor**, Department of Biochemistry and Biophysics, Molecular and Environmental Plant Sciences program, Texas A&M University
- 2011 - 2012 **Assistant Professor**, TAMU Molecular and Environmental Plant Sciences program
- May 2009 **Research Fellow, Japan Society for the Promotion of Science**, Laboratory of Aquatic Natural Products Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo
- May 2007 **Visiting Scientist**, Laboratory of Marine Biochemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo
- 2006 - 2012 **Assistant Professor**, Department of Biochemistry and Biophysics, Texas A&M University

- 2001 – 2006 **Postdoctoral Fellow**, Boyce Thompson Institute for Plant Research
- 2000 **Visiting Scientist**, Laboratory of Marine Biochemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo
- 1995 – 2000 **Graduate Research Assistant**, Agronomy Department, University of Kentucky
- 1994 – 1995 **Research Technician**, Biology Department, DePaul University
- 1993 – 1994 **Research Technician**, Biology Department, Michigan Technological University
- 1991 – 1993 **Graduate Research Assistant**, Biology Department, Michigan Technological University
- 1991 **Summer Research Internship**, CIBA-GEIGY (now Syngenta), Research Triangle Park, North Carolina
- 1990 **Summer Research Internship**, CIBA-GEIGY (now Syngenta), Research Triangle Park, North Carolina
- 1988 – 1991 **Undergraduate Student Researcher**, Biology Department, Michigan Technological University

Research Funding:

Current Funding:

Regulation of tomato cell death by the protein kinase Adi3 during resistance to *Pseudomonas syringae*. USDA-NIFA-AFRI, Understanding Plant-Associated Microorganisms and Plant-Microbe Interactions, grant # pending. Role: PI. Funding period: 11.15.2013-11.14.2016. Total funding: \$371,294

The nuclear role of the plant cell death suppressor Adi3. NSF-MCB-Systems and Synthetic Biology #1244068. Role: PI. Funding period: 09.01.2013-08.31.2014. Total funding: \$134,869; Devarenne total funding: \$84,346.

Characterization of defense mechanisms in the green microalga *Botryococcus braunii*. Texas A&M University - National Council of Science and Technology, México (Consejo Nacional de Ciencia y Tecnología, CONACYT) Collaborative Research Grant Program. Funding Period: 01.14.2013-12.31.2013. Total Funding: \$24,000; Devarenne total funding: \$6,000.

Microalgae lab-on-chip photobioreactor platform for genetic screening and metabolic analysis leading to scalable biofuel production. NSF-EFRI-PSBR #1240478. This is a group of 5 PIs. Role: Co-PI. Funding period: 08.15.2012-08.14.2016. Total funding: \$2,000,000; Devarenne total funding: \$540,000.

Synthetic crops for direct drop-in biofuel production through rerouting photosynthetic intermediates and engineering terpenoid pathways. DOE-ARPA-E-PETRO. #DE-AR0000203. This is group of 8 PIs. Role: Co-PI. Funding period: 02.15.2012-02.14.2015. Total funding: \$1,800,000; Devarenne total funding: \$204,832.

Pseudomonas syringae induction of host programmed cell death through the regulation of the tomato protein kinase Adi3. USDA-NIFA-AFRI, Microbial Associations with Plants #2010-65108-20526. Role: PI. Funding period: 01.15.2010-01.14.2013. No cost extension to 01.14.14. Total funding: \$399,000; \$2,500 remaining as of 09.10.13.

Completed Funding:

Development of a microfluidic photobioreactor device for use with microalgae. TAMU Whole Systems Genomics Initiative. Role: Co-PI. Funding period: 06.01.12-05.31.13. Total Funding: \$10,000; Devarenne total funding: \$3,000.

National Alliance for Advanced Biofuels and Bioproducts, DOE-ARRA. #DE-EE0003046. This was a large consortium of which Devarenne is a member. Role: PI member. Funding period: 04.01.2010-03.31.2013. Devarenne total funding: \$205,005.

Studies on novel methyltransferases from a green microalga that catalyze production of useful isoprenoids. Japan Society for the Promotion of Science Research Fellowship. #S-09103. Role: PI. Funding Period: May 2009. Total funding: \$4,500.

Role of an AvrPto-dependent Pto-interacting protein, Adi3, in the host response to *Pseudomonas*, USDA-CSREES-NRI, Biology of Plant-Microbe Associations #2007-35319-17832. Role: Co-PI. Funding period: 12.01.2006-11.30.2009. Total Funding: \$364,000 Devarenne total funding: \$256,380.

Collaboration reinforcement to study the production of renewable energy sources by the algae *Botryococcus braunii*. International Travel Research Assistance Grant, Texas A&M University International Programs Office. Role: PI. Funding Period: May 2007, Total funding: \$2,700.

Molecular basis of recognition-specificity in plant disease resistance, USDA-CSREES-NRI, Plant Genetic Mechanisms #2002-01235. Role: Co-PI as postdoctoral researcher. Funding period: 2002-2005. Total funding: \$280,000.

No-cost Grants:

Whole genome sequencing of the colony forming green microalga *Botryococcus braunii* var. Showa. DOE-JGI, Community Sequencing Projects 2010, #CSP2010-784140. Role: Co-PI. No funding to any labs on the grant. DNA provided by another Co-PI, library construction and sequencing carried out by JGI. Gene annotation to be carried out by JGI and all PIs.

Novel Electrochemical Process for Microalgae Harvesting, DOE-SBIR #2009-DOE590-0001. Awarded to Lynch, Inc., College Station, TX. Role: Consultant. Funding period: 2009-2010.

EST sequencing for the colony forming green microalga *Botryococcus braunii* var. Showa. DOE-JGI, Community Sequencing Projects 2009, #CSP2009-795836. Role: Co-PI. No funding to any labs on the grant. RNA provided by Devarenne lab, library construction and sequencing carried out by JGI.

Professional Development/Involvement:

Chair, Phosphoregulation Minisymposium, ASPB annual meeting 2010. Montréal, Canada.

Sabbatical host for Dr. Robb VanPutte, McKendree University, October-November, 2009.

Sabbatical host for Dr. Edmundo Lozoya-Gloria, CINVESTAV Unidad Irapuato, México, planned for 2014.

Grant review panel member for USDA-NIFA-AFRI, NSF-IOS.

Manuscript reviewer for: *African Journal of Biotechnology* ('11), *Applied Energy* ('11), *Archives of Biochemistry and Biophysics* ('07), *Biochimica Biophysica Acta - Molecular and Cell Biology of Lipids* ('12), *Biologia - Cellular & Molecular Biology* ('13), *European Journal of Phycology* ('12), *FEBS letters* ('10), *FEMS Microbiology Letters* ('07), *International Journal of Molecular Science* ('10), *Journal of Agriculture & Food Chemistry* ('07), *Journal of Biological Chemistry* ('06, '08, '10, '11), *Journal of Environmental & Analytical Toxicology* ('12), *Journal of Experimental Botany* ('13), *Journal of Phycology* ('02), *Journal of Plant Research* ('12), *Journal of Proteome Research* ('12), *Molecular Biology of the Cell* ('02), *Molecules* ('12), *New Phytologist* ('12), *Phytochemistry* ('08), *Plant Cell* ('03, '08), *Plant Cell Reports* ('09), *Plant Growth Regulation* ('07), *The Plant Journal* ('02-'05), *Plant Molecular Biology* ('08), *Plant Physiology* ('09, '11), *Plant Physiology & Biochemistry* ('12), *PLoS One* ('11, '12, '13), *PLoS Pathogens* ('10, '11).

Grant Proposal Reviewer for: Hungarian Scientific Research Fund ('12), Kentucky Science & Engineering Foundation ('10), Natural Sciences and Engineering Research Council of Canada ('07), National Science Foundation ('04, '06, '12, '13), Netherlands Organization for Scientific Research ('07), Polish National Science Center ('13), United States-Israel Binational Science Foundation ('04), USDA-CSREES-NRI ('03, '04), USDA-NIFA-AFRI ('10).

Member of American Society of Plant Biologists (ASPB) since 1991.

Member of the Japan Society for the Promotion of Science USA Alumni Association since 2011.

Executive Committee member, Japan Society for the Promotion of Science USA Alumni Association, 2013.

Departmental Activities:

Chair, Department of Biochemistry and Biophysics Seminar Series, 2007-present.

Faculty advisor, Biochemistry Graduate Association, 2007-2009.

Graduate Program Committee member, 2008-present.

Faculty search committee, Center for Phage Technology Assistant Professor Positions, Fall 2012.

Chair, Department of Biochemistry and Biophysics Awards Committee, 2013-present

University Activities:

Symposium organization committee member, TAMU Molecular & Environmental Plant Sciences (MEPS) Program. 2010, 2011.

Oral presentation judge, TAMU Student Research Week. 2009-2012.

Faculty search committee, Plant Biology Positions, TAMU Institute for Plant Genomics & Biotechnology. Fall 2007.

2013 Deans Outstanding Achievement Awards Selection Advisory Committee, Texas A&M University College of Agriculture and Life Sciences.

Student Advising:

1 postdoctoral researcher in Devarenne Lab, February 2007-July 2010.

8 Ph.D. students in Devarenne Lab since May 2007, 4 have graduated.

On thesis committees for 14 additional TAMU Ph.D students and 4 M.S. students.

On thesis committee of Ivette Cornejo Corona, CINVESTAV, México, 2012-present

External thesis reviewer for Eman Ibrahim Abdel-Aal Ibrahim, University of Mansoura, Egypt

17 TAMU undergraduate students have worked in the Devarenne Lab since 2006.

4 NSF REU undergraduate students have worked in the Devarenne Lab for the summers of 2009 - 2012.

2 College Station high school students have worked in the Devarenne lab for the summers of 2007, 2008, and 2009.

Teaching at TAMU:

BICH 303, Elements of Biological Chemistry, Fall 2007, Spring 2009, 2010, 2011, 2012, 2013; 3 credits

BICH 407, Horizons in Biological Chemistry II The Biochemistry and Ethics Behind Current Biofuels, Fall 2008, 2009, 2010, 2011, 2012, 2013; 1 credit

BICH 671, Molecular Biophysics journal club, Spring 2008, Fall 2008; 1 credit

BICH 675, Plant Biochemistry and Genomics journal club, every semester, Spring 2008 - present; 1 credit

Guest Lectures: MEPS 313 - Introduction to Plant Physiology, Spring 2009, 2010, 2011

BESC 489 - Biotechnology for Biofuels and Bioproducts, Spring 2009

MEPS 605 - Plant Biochemistry, Spring 2008 - 2013

GENE 481 - Seminars in Genetics, Fall 2009, 2011, 2013

BICH 631 - Biochemical Genetics, Spring 2011 - 2013

Teaching at National Taiwan University:

Special Topics in Microbiology; a two week class for 30 students on the use of oils from microalgae as a biofuel source. December 2013.

Teaching at Cornell:

BioPI 7410, Problems in Plant Cell and Molecular Biology, one class session in 2002

Invited Lecture at Canisius College: Biochemistry and Function of Plant Protein Kinases. February, 2005.

Teaching at Michigan Technological University:

BL 1010, General Biology Lab, 1991

BL 2160, Botany Lab, 1992, 1993

BL 3010, Plant Morphology Lab plus 2 lectures in main class, 1993

BL 4140, Plant Physiology Lab, 1991

Patents:

Botryococcus braunii triterpene synthase proteins and nucleic acid molecules, and methods for their use. Patent #7,985,568. Issued July 26, 2011.

Invited Talks:

Summer Workshop for the Texas A&M Institute for Quantum Science and Engineering. July 9, 2013. Casper College, Casper, WY.

TERPNET 2013, 11th International Meeting on the Biosynthesis, Function, and Biotechnology of Isoprenoids in Terrestrial and Marine Organisms. June 3, 2013. Kolymvari, Crete, Greece (given by graduate student Hem Thapa).

México Bio 2012, 4th Forum of Biotechnology and Business for Bioenergetics, CINVESTAV Irapuato, México, November 16, 2012.

Plant Responses to Stress Minisymposium, Plant Biology 2012, ASPB annual meeting, Austin, TX, July 2012 (Given by graduate student Joel Gray).

Biology Department, Texas State University, April 2012.

1st International Conference on Algal Biomass, Biofuels, and Bioproducts, St. Louis, July 2011 (given by graduate student Taylor Weiss).

Microbial Biology and Microbial Functional Genomics Awardee Meeting, USDA-NIFA-AFRI, Washington, DC, July 2011.

Department of Biochemistry, Indiana University, February 2011.

Raman Microscopy and Imaging Symposium, FACSS annual meeting, Raleigh, NC, Oct. 2010 (given by graduate student Taylor Weiss).

Department of Plant Sciences, University of Kentucky, September 2010.

Plant Sciences Program, University of Arizona, August 2010.

Plant-Pathogen Interactions Minisymposium, Plant Biology 2010, ASPB annual meeting, Montréal, Canada, August 2010.

Phosphoregulation Minisymposium, Plant Biology 2010, ASPB annual meeting, Montréal, Canada, August 2010 (given by graduate student Julian Avila).

Plant Pathology Department, Texas A&M University, September, 2009.

Protein Modification and Turnover Minisymposium, Plant Biology 2008, ASPB annual meeting, Mérida, México, July 2008 (Given by Postdoc María Ek-Ramos).

Soil and Crop Sciences Department, Texas A&M University, September, 2008.

Molecular/Cellular Plant-Microbe Interactions symposium, American Phytopathological Society annual meeting, Minneapolis, MN, July, 2008.

Lost Pines Molecular Biology Conference, University of Texas M.D. Anderson Cancer Center Science Park, Smithville, TX, November, 2007.

Laboratory of Marine Biochemistry, Tokyo University, Tokyo Japan, May, 2007.

Plant Immunity Research Group, RIKEN Plant Science Center, RIKEN Yokohama Institute, Yokohama Japan, May, 2007.

Plant Pathology Department, Texas A&M University, April, 2007.

Plant Interactions with Pests and Pathogens Workshop, Plant & Animal Genome XV Conference, San Diego, CA, January, 2007.

Intracellular Signaling Minisymposium, Plant Biology 2006, ASPB annual meeting, Boston, MA, August, 2006.

Canisius College, Buffalo, NY, Biology Department graduate student seminar series, February, 2005.

2004 Plant Protein Phosphorylation Workshop, Snowbird, Utah, October, 2004.

Plant Defense Signaling Minisymposium, Plant Biology 2004, ASPB annual meeting, Orlando, FL, July, 2004.

Poster Presentations:

ASPB Annual meetings: 2013 (Providence), 2012 (Austin), 2011 (Minneapolis), 2010 (Montréal), 2008 (Mérida), 2006 (Boston), 2005 (Seattle), 2004 (Orlando), 2002 (Denver), 1999 (Baltimore), 1998 (Madison), 1997 (Vancouver), 1993 (Minneapolis), 1991 (Pittsburgh)

TERPNET International Isoprenoid Meeting: 2013 (Kolymvari, Greece), 2011 (Kalmar, Sweden), 2009 (Tokyo, Japan), 2007 (Strasbourg, France), 2003 (Lexington, KY), 1998 (Barcelona, Spain)

Advances in Optics for Biotechnology, Medicine and Surgery XII, 2011, Naples, Florida

Federation of Analytical Chemistry and Spectroscopy Societies (FACSS) Annual Meeting 2010, Raleigh

2007 Lost Pines Molecular Biology Conference, University of Texas M.D. Anderson Cancer Center, Smithville, TX

2004 Plant Protein Phosphorylation Workshop, October, Snowbird, Utah

Publications (*Devarenne as corresponding author; †postdoctoral researcher, #graduate student, §undergraduate, or ¶research technician in Devarenne lab):

2013

Gray JW[#], Nelson Dittrich AC[#], Chen S, Avila J[#], Giavalisco P, **Devarenne TP*** (2013) Two Pdk1 phosphorylation sites on the plant cell death suppressor Adi3 contribute to substrate phosphorylation. *Biochim Biophys Acta - Proteins Proteom.* **1834**:1099-1106. (Published online March 16, 2013).

Avila J[#] and **Devarenne TP*** (2013) Ubiquitination of the tomato cell death suppressor Adi3 by the RING E3 ubiquitin ligase AdBiL. *Biochem. Biophys. Res. Commun.* **430**:119-124. (Published online November 22, 2012).

Chun HJ, Weiss TL[#], **Devarenne TP**, Laane J (2013) Vibrational spectra and DFT calculations of squalene. *J. Mol. Struct.* **1032**:203-206. (Published online October 13, 2012).

2012

Weiss TL[#], Roth R, Goodson C, Vitha S, Black I, Azadi P, Rusch J, Holzenburg A, **Devarenne TP***, Goodenough U* (2012) Colony organization in the green alga *Botryococcus braunii* (Race B) is specified by a complex extracellular matrix. *Eukaryotic Cell.* **11**:1424-1440. (Devarenne and Goodenough co-corresponding authors. Cover image/article for December 2012 issue. Published online August 31, 2012).

Molnár I, Lopez D, Wisecaver JH, **Devarenne TP**, Weiss TL[#], Pellegrini M, Hackett JD (2012) Bio-crude transcriptomics: Gene discovery and metabolic network reconstruction for the biosynthesis of the terpenome of the hydrocarbon oil-producing green alga, *Botryococcus braunii* race B (Showa). *BMC Genomics.* **13**:576.

Avila J[#], Gregory OG, Su D[#], Deeter TA[§], Chen S, Silva-Sanchez C, Xu S, Martin GB, **Devarenne TP*** (2012) The β -subunit of the SnRK1 complex is phosphorylated by the plant cell death suppressor Adi3. *Plant Physiol.* **159**:1277-1290. (published online May 9, 2012; recommended by Faculty of 1000).

Nelson Dittrich AC[#], **Devarenne TP*** (2012) Perspectives in PDK1 evolution: insights from photosynthetic and non-photosynthetic organisms. *Plant Sig & Behav.* **7**:642-649.

Deng L, Senseman SA, Gentry TJ, Zebra DA, Weiss TL[#], **Devarenne TP**, Camargo ER (2012) Effect of selected herbicides on growth and hydrocarbon content of *Botryococcus braunii* (Race B). *Ind Crop Prod.* **39**:154-161.

Niehaus TD, Kinison S, Okada S, Yo Y-S, Bell SA, Cui P[¶], **Devarenne TP**, Chappell J (2012) Functional Identification of triterpene methyltransferases from *Botryococcus braunii*, race B. *J Biol Chem.* **287**:8163-8173. (published online January 12, 2012).

Nelson Dittrich AC[#], **Devarenne TP*** (2012) Characterization of a PDK1 homologue from the moss *Physcomitrella patens*. *Plant Physiol.* **158**:1018-1033. (published online December 7, 2011).

Nelson Dittrich AC[#], **Devarenne TP*** (2012) An ATP analog-sensitive version of the tomato cell death suppressor protein kinase Adi3 for use in substrate identification. *Biochim Biophys Acta - Proteins Proteom.* **1824**:269-273. (published online October 17, 2011).

2011

Weiss TL[#], Johnston, JS, Fujisawa K, Okada S, **Devarenne TP*** (2011) Genome size and phylogenetic analysis of the A and L races of *Botryococcus braunii*. *J App Phycol.* **23**:833-839. (published online September 8, 2010).

Devarenne TP* (2011) The plant cell death suppressor Adi3 interacts with the autophagic protein Atg8h. *Biochem. Biophys. Res. Commun.* **412**:699-703. (published online August 16, 2011).

Niehaus TD, Okada S, **Devarenne TP**, Watt DS, Sviripa V, Chappell J (2011) Identification of unique mechanisms for triterpene biosynthesis in *Botryococcus braunii*. *Proc. Natl. Acad. Sci. USA*. **108**:12260-12265 (published online July 11, 2011).

Lu D, Lin W, Wu S, Gao X, Cheng C, Avila J[#], Heese A, **Devarenne TP**, He P, Shan L (2011) Direct ubiquitination of pattern recognition receptor FLS2 attenuates plant innate immunity. *Science*. **332**:1439-1442.

2010

Weiss TL[#], Chun HJ, Okada S, Vitha S, Holzenburg A, Laane J, **Devarenne TP*** (2010) Raman spectroscopy analysis of botryococcene hydrocarbons from the green microalga *Botryococcus braunii*. *J Biol Chem*. **285**:32458–32466. (published online August 12, 2010).

Ek-Ramos MJ[†], Avila J[#], Cheng C, Martin GB, **Devarenne TP*** (2010) The T-loop extension of the tomato protein kinase AvrPto-dependent Pto-interacting protein 3 (Adi3) directs nuclear localization for suppression of plant cell death. *J Biol Chem*. **285**:17584-17594. (published online April 6, 2010).

Weiss TL[#], Johnston JS, Fujisawa K, Sumimoto K, Okada S, Chappell J, **Devarenne TP*** (2010) Phylogenetic placement, genome size, and GC-content of the liquid hydrocarbon producing green microalga *Botryococcus braunii* var. Berkeley (Showa) (Chlorophyta). *J. Phycol.* **46**:534-540. (published online April 5, 2010).

2009

Devarenne TP* (2009) Terpenoids: Higher. In: Encyclopedia of Life Sciences (ELS). John Wiley & Sons, Ltd: Chichester. DOI: 10.1002/9780470015902.a0001916.pub2

2007

Devarenne TP* and Martin GB (2007) Manipulation of plant programmed cell death pathways during plant-pathogen interactions. *Plant Sig & Behav*. **2**:188-190.

2006

Devarenne TP, Ekengren SK, Pedley KF, Martin GB (2006) Adi3 is a Pdk1-interacting AGC kinase that negatively regulates plant cell death. *EMBO J*. **25**, 255-265.

2004

Okada S, **Devarenne TP**, Murakami M, Abe H, Chappell J (2004) Characterization of botryococcene synthase enzyme activity, a squalene synthase-like activity from the green microalgae *Botryococcus braunii*, race B. *Arch. Biochem. Biophys*. **422**:110-118.

2002

Devarenne TP, Ghosh A, Chappell J (2002) Regulation of tobacco squalene synthase; a key enzyme in sterol biosynthesis. *Plant Physiol*. **129**:1095-1106.

Devarenne TP, Riely BK, Lin N-C, Kim Y-J, Cohn J, Mysore K, Charkravarthy S, Bogdanove AJ, D'Ascenzo M, Debbie P, Tuori B, Martine GB (2002) Recognition of *Pseudomonas* effector proteins by tomato and profiling of plant gene expression changes that occur during plant-pathogen interactions. *Biology of Plant-Microbe Interactions*, Volume 3, Eds: S.A. Leong, C.

Allen, and E.W. Triplett. International Society for Molecular Plant – Microbe Interactions. St. Paul, MN.

2000

Okada S, **Devarenne TP**, Chappell J (2000) Molecular characterization of squalene synthase from the green microalgae *Botryococcus braunii*, race B. *Arch. Biochem. Biophys.* **373**:307-17.

1999

Thai L, Rush JS, Maul JE, **Devarenne TP**, Rodgers DL, Chappell J, Waechter CJ (1999) Farnesol is utilized for isoprenoid biosynthesis in plant cells *via* farnesyl diphosphate formed by successive monophosphorylation reactions. *Proc. Natl. Acad. Sci. USA* **96**:13080-13085.

1998

Godoy-Hernández G, Chappell J, **Devarenne TP**, García-Pineda E, Guevara-García AA, Lozoya-Gloria E, (1998) Antisense expression of *hmg1* from *Arabidopsis thaliana* encoding 3-hydroxy-3-methylglutaryl coenzyme A reductase, reduces isoprenoid production in transgenic tobacco plants. *J. Plant Physiol.* **153**: 415-424.

Devarenne TP, Shin DH, Back K, Yin S, Chappell J (1998) Molecular characterization of tobacco squalene synthase and regulation in response to fungal elicitor. *Arch. Biochem. Biophys.* **349**:205-215.

1997

Dean JV, **Devarenne TP** (1997) Peroxidase-mediated conjugation of glutathione to unsaturated phenylpropanoids. Evidence against glutathione S-transferase involvement. *Physiol. Plant.* **99**:271-278.

1995

Dean JV, **Devarenne TP**, Lee I-S, Orlofsky LE (1995) Properties of a Maize glutathione S-transferase that conjugates coumaric acid and other phenylpropanoids. *Plant Physiol.* **108**:985-994.

Devarenne TP, Michael BS, Adler JH (1995) Biosynthesis of ecdysteroids in *Zea mays*. *Phytochem.* **40**:1125-1131.