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**Curriculum Vitae**  
**DANIEL M. VERNON**

Arthur G. Rempel Professor of Biology  
 Department of Biology, and Program in Biochemistry, Biophysics & Molecular Biology  
 Whitman College, Walla Walla, WA 99362 USA e-mail: vernondm@whitman.edu

**EDUCATION**

- 1992 **Ph.D., Molecular & Cellular Biology**, University of Arizona, Tucson, AZ. Dissertation: "Molecular Biology of Salinity Tolerance in the Facultative Halophyte *M. crystallinum*" Advisor: Hans J. Bohnert  
 1986 **B.A., Biology**, Oberlin College, Oberlin, Ohio

**FACULTY & RESEARCH POSITIONS**

- 2013-            Arthur G. Rempel Professor of Biology, Whitman College  
 2018-19        Director, Program in Biochemistry, Biophysics & Molecular Biology (BBMB), Whitman College [also served as Director in 2005-06, 2010-11, 2014-15, 2016-17]  
 2009-12        Professor of Biology, Biology Department, Whitman College  
 2002; 2004-07 Chair, Biology Department, Whitman College  
 2001-09        Associate Professor of Biology, Whitman College  
 1999-00        Visiting Faculty, Dept of Molecular & Cellular Biology, Univ of Arizona, Tucson  
 1995-01        Assistant Professor of Biology, Whitman College [Visiting Asst. Professor, 1995-97]  
 1992-95        NSF Post-Doctoral Fellow in Plant Biology, Laboratory of Dr. David Meinke, Dept. of Botany, Oklahoma State University, Stillwater, OK  
 1992            Post-Doctoral Research Associate, Laboratory of Dr. Hans J. Bohnert, Department of Biochemistry, University of Arizona, Tucson, AZ (August-October, 1992)  
 1986-92        Graduate Research Associate, Laboratory of Dr. Hans J. Bohnert, Department of Molecular & Cellular Biology, University of Arizona, Tucson, AZ  
 1985-86        Undergraduate Research, Dr. Richard Levin, Department of Biology, Oberlin College

**AWARDS**

- 2013-            Endowed professorship - Arthur G. Rempel Professor of Biology, Whitman College  
 2005            G. Thomas Edwards Award for Excellence in Teaching & Scholarship, Whitman College  
 1993-95        National Science Foundation Post-Doctoral Fellowship in Plant Biology  
 1987-88        University of Arizona Graduate Academic Scholarship  
 1986-87        Univ. of Arizona Graduate Fellowship in Molecular & Cellular Biology

**GRANTS FOR RESEARCH & EDUCATION**

[\*Indicates peer-reviewed external funding]

- 2014            \*M.J. Murdock Charitable Trust, "Start-up Research Package for New Position in Biology", \$30,000 [Award # 2014207; proposal co-author and Chair of search committee]  
 2013-2018    Perry/Summer Research Awards (Whitman College) [6 grants for 10 undergraduate projects]  
 2013            \*ASPB Summer Undergraduate Research Fellowship Award. \$4700. Research and travel for an undergraduate student, American Soc. of Plant Biologists  
 2012-15        S.A. Abshire Awards (Whitman College) Three \$1100 -\$1200 awards for student projects  
 2012            HHMI Summer Research grant (Whitman College) \$13,000. Funding for 2 undergraduate research projects. "Using RNA interference to reduce expression of Arabidopsis PIRL genes."  
 2011-12        \*NSF \$41,700. Supplement for NSF grant "PIRL1 and PIRL9 - novel plant LRR proteins required for pollen viability" [*PI*; research grant]  
 2006-11        \*NSF- Integrative Plant Biology program. \$360,525. "PIRL1 and PIRL9- novel plant intracellular LRR proteins required for pollen viability". [*PI*; research grant]  
 2010            \*NSF \$549,446 *Co-PI* MRI: Acquisition of a Laser Scanning Confocal Microscope to Build an Integrative Life Sciences Imaging Program at Whitman College [*co-PI*; equipment grant]

### GRANTS FOR RESEARCH & EDUCATION (CONTINUED)

- 2009 \*NSF \$408,000. *Co-PI* MRI: An Environmental Scanning Electron Microscope for Multidisciplinary Research & Undergraduate Research at Whitman College." [co-*PI*; institutional equipment grant]
- 2007 \*NSF \$464,934. *Co-PI* MRI: An X-Ray diffraction Instrument for interdisciplinary and collaborative research and education in an undergraduate setting [co-*PI*; institutional grant]
- 2006 \*M.J. Murdock Charitable Trust, "Start-up Research Package for New Position in Biology", \$30,000 [Search Chair and proposal co-author]
- 2005 \*NSF ROA supplement; \$19,700 [*PI*, supplement to another lab's grant (NSF 0348028) for sabbatical travel and research; *May-June 2005*]
- 2003-05 \*WM Keck Foundation; Whitman College Integrative Biology Initiative; \$340,000 (Principle Author & Administrator; institutional award for equipment and curriculum improvements)
- 2002-05 \*USDA Plant Growth & Development program; \$150,000; "Functional Investigation of Plant LRR Proteins Related to Components of the RAS Signaling Pathway" [*PI*; research grant]
- 2001-03 \*M.J. Murdock Charitable Trust, research grant; \$35,500; "Reverse-genetic Investigation of a Family of Novel Leucine-Rich Repeat Proteins in *Arabidopsis thaliana*". [*PI*; research grant]
- 1997-01 \*NSF Plant Devel. Mechanisms; \$206,758 (incl. REU & supplement); "Mechanisms of Embryogenesis in *Arabidopsis*: Characterization of the *tnw1* & *emb88* Mutants." [*PI*; research grant]
- 1996 Murdock summer research grant (Whitman College). \$12,000 for research with undergraduates
- 1995 NSF special faculty start-up award [associated w/ NSF post-doctoral fellowship]; \$3500

### PROFESSIONAL SERVICE & SOCIETIES

***Outside evaluator for faculty tenure/promotion decisions:*** Franklin & Marshall College, Colby College, New College of Florida, Beloit College, Bennington College,

***Conference and Workshop Organization/Participation:***

- 2016 Mentoring Group, 24th Intl. Congress on Plant Reproduction, Tucson, AZ
- 2014 *Invited speaker*, University of Washington Future Faculty Fellows Workshop, Seattle, WA
- 2014 *Invited Panel Member*, PUI Career Workshop, 25th Intl. Conf. Arabidopsis Research, Vancouver, B.C.
- 2007 *Invited Panel Member*, Laboratory Leadership Workshop, ASPB meetings, Chicago, IL
- 2005 *Coordinator*, Meeting of PUI working group; ASPB meetings, Seattle, WA
- 2002 *Session Chair* (Development short talks session), ASBP meetings, Denver, CO
- 2002 *Conference organizer*: Murdock Undergraduate Research Conference, Whitman College. [A large regional undergraduate conference with participants from 18 colleges and universities]

***Peer-reviewer of research proposals for research funding agencies:***

- Federal Ministry of Education & Research (Germany): GABI-Future program
- National Science Foundation - Integrative Plant Biology & Plant Developmental Mechanisms programs
- U.S. Dept. of Agriculture - Plant Genetic Mechanisms; and Plant Growth & Development programs
- NSERC (Canada)
- Natural Environment Research Council, Directorate of Science and Technology (UK)
- American Society of Plant Biologists SURF program reviewer (grants supporting undergraduate research)
- Private Foundations: W.J.Murdock Trust; American Philosophical Society; Jeffress Memorial Trust.

***Peer-reviewer for professional journals (all international):*** Trends in Plant Sciences; Genome; The Plant Cell; The Plant Journal; Developmental Biology; J. of Experimental Botany; Plant Physiology & Biochemistry; Planta; Plant Science; Physiologia Plantarum; Am. J. of Botany; Int. J. of Plant Sci; The Journal of Plant Research; Thai Journal of Agricultural Research; Annals of Botany; Devel. Dynamics

***Professional Societies:*** American Society of Plant Biologists; Intl. Soc. of Plant Sexual Reproduction Research; American Assoc. for Advancement of Science.

### PATENT

Transgenic Plants with Altered Polyol Content (*co-inventor*; United States Patent #5,563,324)

**PUBLICATIONS**

[\*Asterisks denote undergraduate student co-authors. **Bold** designates peer-reviewed journals]

Forsthoefel NR, Klag KA\*, McNichol SR\*, Arnold CE\*, Vernon CR\*, Wood WW\* & Vernon DM (2018) Arabidopsis Ras-group LRR PIRL6 is essential for both Male and Female Gametogenesis and is Regulated by Alternative Splicing. **Plant Physiology**, *in press*.

Vernon DM, Forsthoefel NF (2018) *PIRL6* alternatively spliced mRNA sequences A-F [6 sequences], accessions MH618667-MH618672, NIH GenBank database, <https://www.ncbi.nlm.nih.gov/genbank/>

Stanton K, Edger PP, Puzey JR, Kinser T, Cheng P\*, Vernon DM, Forsthoefel NR, Cooley A (2017) A Whole Transcriptome Approach to Identification of Novel Reference Genes for Quantitative Gene Expression Studies in *Mimulus*. **Genes, Genomes, Genetics**, 7 [DOI: <https://doi.org/10.1534/g3.116.038075>]

Forsthoefel NR, Klag KA\*, Simeles BP\*, Reiter R\*, Brougham L\*, Vernon DM (2013) The Arabidopsis *PIRL* family and the value of reverse genetic analysis for identifying genes that function in gametophyte development. **Plants**, 2: 507-520 [DOI: 10.3390/plants2030507]

Forsthoefel NR & Vernon DM (2011) Effect of sporophytic *PIRL9* genotype on post-meiotic expression of the Arabidopsis *pir11;pir19* mutant pollen phenotype. **Planta**, 233:423-431 [DOI:10.1007/s00425-010-1324-5]

Forsthoefel NR, Dao TP\*, and Vernon DM (2010) PIRL1 and PIRL9, Encoding Members of a Novel Family of Plant Leucine-rich Repeat Proteins, Are Essential for Differentiation of Microspores into Pollen. **Planta**, 232(5):1101-1114. [DOI: 10.1007/s00425-010-1242-6]

Chen T, Martin D, Nayak N, Majee S, Lowenson J, Schäfermeyer KR, Eliopoulos AC, Lloyd TD, Villa S, Dinkins R, Perry SE, Forsthoefel NR, Clarke SG, Vernon DM, Zhou Z, Rejtar T, and Downie AB. (2010) Substrates of the *Arabidopsis thaliana* PIMT1 identified using seed phage display cDNA libraries and biopanning with recombinant enzyme. **J. Biol. Chem.**, 285:37281-37292 [DOI:10.1074/jbc.M110.157008]

Forsthoefel NR, Cutler K\*, Port MD\*, Yamamoto T\*, & Vernon DM (2005) PIRLs: A novel class of plant intracellular leucine rich repeat proteins. **Plant & Cell Physiology**, 46: 913-922 [DOI: 10.1093/pcp/pci097]

Cushing DA\*, Forsthoefel NR, Gestaut DR\*, Vernon DM (2005) *Arabidopsis emb175* and other *ppr* knockout mutants reveal essential roles for PPR proteins in plant embryogenesis. **Planta**, 222: 424-436.

Vernon DM & Forsthoefel NR (2002) Leucine-rich repeat proteins in plants: diverse roles in signaling and development. Research Signpost: Recent Research Developments in Plant Biology. 2: 201-214.

Tax FE & Vernon DM (2001) T-DNA associated duplication/ rearrangements in *Arabidopsis*: implications for reverse genetics and functional genomics. **Plant Physiology**, 126:1526-1537

Vernon DM, Hannon MJ\*, Le M-P\*, Forsthoefel NR (2001) An expanded role for the *TWN1* gene in embryogenesis: defects in cotyledon pattern and morphology in the *twn1* mutant of *Arabidopsis*. **American Journal of Botany**, 88(4), 570-582.

Schwartz B, Vernon DM, Meinke DW (1997) Development of the Suspensor: Differentiation, Communication, & Programmed Cell Death during Plant Embryogenesis. *Adv. in Cellular & Molecular Biol. of Plant Seed Development*, v 2 (BA Larkins & IK Vasil, eds) Kluwer Press, Dordrecht, The Netherlands, pp53-72

Vernon DM and Meinke DW (1995) The Late *embryo-defective* Mutants of *Arabidopsis*, **Developmental Genetics**, 16, 311-320.



**PUBLICATIONS (CONTINUED)**

- Forsthoefel NR, Vernon DM, Cushman JC (1995) A Salinity-Induced Gene from the Halophyte *M. crystallinum* Encodes a Glycolytic Enzyme, Phosphoglyceromutase, **Plant Molecular Biol.**, 29, 213-226.
- Vernon DM and Meinke DW (1994) Embryogenic Transformation of the Suspensor in *twin*, a Polyembryonic Mutant of *Arabidopsis*, **Developmental Biology**, 165, 566-573.
- Vernon DM, Tarczynski MC, Jensen RG, Bohnert HJ (1993) Cyclitol Production in Transgenic Tobacco, **The Plant Journal**, 4(1), 199-205.
- Vernon DM, Ostrem JA, Bohnert HJ (1993) Stress Perception and Response in a Facultative Halophyte: The Regulation of Salinity-Induced Genes in *M. crystallinum*, **Plant, Cell & Environment**, 16, 437-444.
- Vernon DM and Bohnert HJ (1992) A Novel Methyl Transferase Induced by Osmotic Stress in the Facultative Halophyte *M. crystallinum*, **EMBO Journal**, 11(6), 2077-2085.
- Vernon DM and Bohnert HJ (1992) Increased Expression of an Inositol Methyl Transferase in *M. crystallinum* is Part of a Stress Response Distinct from CAM Induction, **Plant Physiology**, 99, 1695-1698.
- Cushman JC, Vernon DM, Bohnert HJ (1992) ABA and the Transcriptional Control of CAM Induction during Salt Stress in the Common Ice Plant. In: *Control of Plant Gene Expression*, (D.P. Verma, ed). CRC Press, Boca Raton, FL, pp287-300.
- Adams P, Thomas JC, Vernon DM, Bohnert HJ, Jensen RG (1992) Distinct Cellular and Organismic Responses to Salt Stress, **Plant & Cell Physiol.**, 33(8), 1215-1223.
- Bohnert HJ, Vernon DM, DeRocher EJ, Michalowski CB, Cushman JC (1992) Biochemistry & Molecular Biology of CAM. In: *Inducible Plant Proteins: Biochemistry & Molecular Biology* (JL Wray, ed) Cambridge Univ Press, Cambridge, UK, pp113-137.
- Vernon DM (1992) Molecular Biology of Salinity Tolerance in the Facultative Halophyte *M. crystallinum*, Ph.D. dissertation, University of Arizona
- Ostrem JA, Vernon DM, Bohnert HJ (1990) Increased Expression of a Gene Coding for NAD-GAPdH during the Transition from C3 Photosynthesis to Crassulacean Acid Metabolism in *M. crystallinum*. **Journal of Biological Chemistry**, 265(6), 3497-3502.
- Bohnert HJ, Ostrem JA, Cushman JC, Michalowski CB, Rickers J, Meryer G, DeRocher EJ, Vernon DM, Vasquez-Moreno L, Hoefner R, Schmitt JM (1988) *M. crystallinum*, a Higher Plant Model for the Study of Environmentally Induced Changes in Gene Expression. **Plant Molec. Biol. Reporter** 6, 10-28.
- Vernon DM, Ostrem JA, Schmitt JM, Bohnert HJ (1988) PEPCase Transcript Levels in *M. crystallinum* Decline Rapidly upon Relief from Salt Stress. **Plant Physiology**, 86, 1002-1004.

**MEETING PRESENTATIONS & INVITED SEMINARS**

[**Bold** = invited presentation based on peer-reviewed submission; \* designates undergraduate co-authors]

- Forsthoefel NR, Foy TE\*, Vernon DM (2017) *PIRL6* Functions in Early Mitotic Stages of Both Male and Female Gametophyte Development. **Plant Biology 2017** (American Society of Plant Biologists meeting) Honolulu, HI.

- Forsthoefel NR, Klag KA\*, Lampron-York A\*, Arnold CE\*, McNichol SR\*, Wood WW\*, Vernon DM (2016) Regulated alternative splicing contributes to gametophyte-specific expression of Arabidopsis Ras-group LRR gene *PIRL6*. Plant Biology 2016 (ASPB meeting) Austin, TX [**Invited minisymposium talk**]
- Forsthoefel NR, Klag KA\*, Arnold CE\*, McNichol SR\*, Wood WW\* & Vernon DM. (2016) Arabidopsis Ras-group LRR *PIRL6* functions in both male and female gametophyte development and is regulated by alternative splicing. The 24th International Congress on Plant Reproduction. Tucson, AZ March 2016
- Stanton K, Edgert P, Puzey J, Cheng P\*, Vernon DM, Forsthoefel N, and Cooley A (2015) A Whole Transcriptome Approach to Identification of Novel Reference Genes for Quantitative Gene Expression Studies in *Mimulus*. Meetings of the Society for Molecular Biology & Evolution, Vienna, July 2015
- Forsthoefel NR, Klag KA, Wood WW, McNichol SR, Vernon DM (2015) Arabidopsis *PIRL6* encodes a Ras-group LRR protein important for formation of both male and female gametophytes. 26th International Conference on Arabidopsis Research, Paris, France, July 2015
- Vernon DM (2015) Arabidopsis *PIRL* genes: functions in plant reproduction and development. Oberlin College, Laskowski Laboratory Group, April 2015 [invited seminar]
- Forsthoefel NR, Gilmore KA\*, Hasson A\*, Sheppard B & Vernon DM (2014) Overexpression of the pollen-essential *PIRL9* gene stunts plant growth and suggests a function in Arabidopsis sporophyte development, 25th International Conference on Arabidopsis Research (ICAR), Vancouver, B.C., Canada and Plant Biology 2014, Portland, OR. July/August, 2014
- Vernon DM, Reiter R\*, Reinhart C\*, Forsthoefel N (2013) The Arabidopsis *PIRL2*, *PIRL3*, and *PIRL9* genes function in the formation and organization of the male germ unit in developing pollen. Plant Biology 2013 (American Society of Plant Biologists meetings), Providence, RI, 7/13 [**Invited minisymposium talk**]
- Forsthoefel NR, Klag KA\*, Vernon DM (2013) Alternative splicing, RNA expression, & knockout analysis suggest an essential function for *PIRL6* in Arabidopsis gametophytes. Plant Biology 2013, Providence, RI
- Vernon DM, Brougham L\*, Reinhart C\*, Forsthoefel N (2012) Arabidopsis *PIRL2* & *PIRL3* function in pollen differentiation and nuclear organization and interact with the pollen-essential gene *PIRL9*, 23rd International Conference on Arabidopsis Research (ICAR), Vienna, Austria
- Forsthoefel N & Vernon DM (2012) The Arabidopsis *PIRL9* gene functions in both the flowering transition and pollen differentiation, 23rd Intl. Conference on Arabidopsis Research (ICAR), Vienna, Austria
- Forsthoefel NR, ReinhartCS\*, and Vernon DM (2010) *PIRLs* & Pollen: The *PIRL2* and *PIRL3* genes function in pollen development and have complex genetic interactions with *PIRL1* & *PIRL9*. Plant Biology 2010 meetings (American Society of Plant Biologists), Montreal, Canada
- Forsthoefel N, Reinhart C\*, Dao TP\*, Simeles BP\*, & Vernon DM (2009) The Arabidopsis *PIRL1* & *PIRL9* genes are essential for microspore mitosis, growth, and differentiation into pollen, and have limited functional overlap with related *PIRLs*. Plant Biology 2009 (ASPB conference), Honolulu, HI.
- Vernon DM, Shafer M, and Forsthoefel NR (2009) An adaptable undergraduate molecular biology lab module that integrates use of genomic resources with bench experiments to pursue original research questions. Plant Biology 2009 (ASPB conference), Honolulu, HI.
- Vernon DM, Davis NA\*, Forsthoefel NR (2008) Diverse impacts of *PPR* knockout mutations on *Arabidopsis* embryo morphology, cell organization, and plastid development. Plant Biology 2008 (American Society of Plant Biologists conference), Merida, Mexico. [**Invited minisymposium talk**]
- Forsthoefel NR, Simeles BP\*, Dao TP\*, & Vernon DM (2008) The Arabidopsis *PIRL1* & *PIRL9* genes are essential for differentiation of microspores into pollen. Plant Biology 2008, Merida, Mexico, June, 2008

#### **MEETING PRESENTATIONS & SEMINARS (continued)**

- Forsthoefel N, Dao TP\*, Geiser HA, and Vernon DM (2006) The novel intracellular LRR proteins *PIRL1* and *PIRL9* are required for Arabidopsis pollen development and viability. Plant Biology 2006 (ASPB conference), Boston, MA [**Invited minisymposium talk**]
- Forsthoefel N, Geiser HA, & Vernon DM (2005) *PIRL1* and *PIRL9*, novel intracellular LRR proteins, are required for pollen development in Arabidopsis. Plant Biology 2005, Seattle, WA, July 2005.
- Vernon DM (2005) Developmental functions and genomic evolution of plant *PPR* proteins: insights from Arabidopsis knockout mutants. MBBE Department, U. Hawaii-Manoa, HI, June 2005. [invited seminar]
- Russo JE, Vernon DM (2005) Biochemistry, biophysics, and molecular biology (BBMB): An interdisciplinary major program in the Molecular Life Sciences at Whitman College; FASEB Journal 19 (5): A1394-A1394

- Part 2 Suppl. [presentation by J.R. at FASEB conference, San Diego, 4/2005]
- Anderson TM\*, Hutchison D, Vernon DM (2004) A possible role for RNA-mediated gene duplication in the evolution of a huge plant superfamily. Plant Biology 2004 (meetings of American Society of Plant Biology), Orlando, FL, July 2004 **[invited minisymposium talk]**
- Cushing DA\*, Gestaut DR\*, Forsthoefel N, & Vernon DM (2003) Essential roles for PPR proteins in plant development revealed by Arabidopsis knock-out mutants. Plant Biology 2003, Honolulu, HI, July, 2003 **[invited minisymposium talk]**
- Forsthoefel N, Cutler K\*, & Vernon DM (2003) Overlapping genes and aberrant splicing at the Arabidopsis PIRL6 mRNA, Plant Biology 2003, Honolulu, HI, July, 2003 [presented by N.F.]
- Cushing DA, Gestaut DR & Vernon DM (2002) Disruption of a PPR protein in the Arabidopsis *emb175* mutant. Plant Biology 2002, Denver, CO, August 2002 **[invited minisymposium talk]**
- Forsthoefel N, Yamamoto TN\*, & Vernon DM (2001) Structural and reverse genetic analysis of the *SLATs*. 12<sup>th</sup> International Conference on Arabidopsis Research. Madison, WI, June, 2001.
- Vernon DM, Brinck MD\*, Brady MA\*, Eastberg JH\*, & Forsthoefel N (2000) *SLATs*: a family of *Arabidopsis* proteins resembling components of the RAS signaling pathway, Plant Biology 2000 conference (meeting of the ASPB), San Diego, CA, July, 2000
- Vernon DM & Tax FE (2000) Jumbled genes: T-DNA associated chromosomal rearrangements, & implications for genomics & reverse genetics, 11<sup>th</sup> Intl Conf. on Arabidopsis Res., Madison, WI, 6/2000.
- Mackie SM\*, Brinck MD\*, Hamilton BG\*, Forsthoefel NR, & Vernon DM (1998) A Novel Arabidopsis Leucine-Rich Repeat Protein, Meeting of the American Soc of Plant Physiol., Madison, WI, June, 1998
- Hannon MJ\*, Le MT\*, & Vernon DM (1998) Embryo-Specific Defects in Pattern and Morphogenesis in the Arabidopsis *twin1* Mutant, 9<sup>th</sup> Intl Conference on Arabidopsis Research, Madison, WI June, 1999
- Hamilton BG\*, Keenan S\*, Meinke D, & Vernon DM (1997) The Arabidopsis *EMB88* Gene Encodes a Leucine-Rich Repeat Protein Similar to Mammalian RSU-1/RSP-1, 8<sup>th</sup> International Conference on Arabidopsis Research, Madison, WI, June, 1997 **[invited workshop talk]**
- Vernon DM (1997) Using Developmental Mutants to Identify Genes Essential for Plant Embryogenesis, Walla Walla College Department of Biology, April, 1997 [invited seminar]
- Vernon DM (1996) Discovering Genes Involved in Plant Embryogenesis Using Mutants of *Arabidopsis*. Murdock Research Conference, Pacific Lutheran University, Tacoma, WA, Nov., 1996 [invited talk]
- Vernon DM & Meinke DW (1995) Molecular and Phenotypic Characterization of *round embryo* Mutants of *Arabidopsis*, 6<sup>th</sup> International Conference on *Arabidopsis* Research, Madison, WI, June, 1995
- Vernon DM & Meinke DW (1994) The *twin* Mutant of *Arabidopsis*: Development of Viable Embryos from Cells of the Suspensor, Intl Soc. for Plant Molec Biol, 4<sup>th</sup> Intl. Congress, Amsterdam, The Netherlands
- Vernon DM & Meinke DW (1993) *Twin*: an *Arabidopsis* Mutant Displaying Frequent Polyembryony, 5<sup>th</sup> International Conference on *Arabidopsis* Research, Columbus, OH, August, 1993
- Vernon DM (1992) Osmoprotection in a Facultative Halophyte: Transcriptional Activation of an Inositol O-Methyl Transferase in Adaptation to Salt Stress, Am. Soc. of Plant Physiol (ASPP), Pittsburgh, PA, July, 1992 **[invited minisymposium talk]**
- Vernon DM (1991) A Methyl Transferase Induced by Salt Stress and ABA in the Facultative Halophyte *M. crystallinum*, International Society for Plant Molecular Biology, Third International Congress, Tucson, AZ, October, 1991 **[invited talk]**
- Vernon DM (1991) The Regulation of Genes Involved in Salt Tolerance and CAM Induction in *M. crystallinum*: A Complex Web of Molecular Responses to Environmental Stimuli, American Society of Plant Physiologists, Albuquerque, NM, July, 1991. **[invited minisymposium talk]**
- Vernon DM, Ostrem JA, Bohnert HJ (1988) PEPCase Transcript levels in *M. crystallinum* Decline Rapidly upon Relief from Salt Stress. Plant Physiol. s86(4):14. ASPP meetings, St. Louis, MO, July 1988

### TEACHING EXPERIENCE

WHITMAN COLLEGE, WALLA WALLA, WA, 1995-PRESENT:

GENE DISCOVERY & FUNCTIONAL GENOMICS 342: Advanced elective class taken mainly by Biology and BBMB (biochemistry) majors

- MOLECULAR BIOLOGY 326: Advanced class covering molecular biology and genomics; emphasis on gene regulatory mechanisms. Required for Whitman BBMB majors.
- MOLECULAR BIOLOGY LABORATORY 336: Lab course in molecular techniques such as gene cloning, PCR, RT-PCR and genome database use. Required for BBMB majors.
- BIOCHEMISTRY, BIOPHYSICS, & MOLECULAR BIOLOGY SEMINAR 400: Capstone seminar for the BBMB major; presentation & discussion of research literature and student thesis research.
- GENETICS 205: Biology majors' sophomore-level required genetics class; includes both molecular and Mendelian genetics and an introduction to genomics.
- GENETICS LABORATORY 206: Required for Biology majors; included Mendelian and molecular genetic projects and use of genome sequence databases.
- DEVELOPMENTAL BIOLOGY 329: Upper-level elective emphasizing developmental mechanisms in animal systems at the cellular and genetic levels. Included lecture and laboratory.
- GENES & GENETIC ENGINEERING 125: A non-majors' class on genetics, related technologies & controversies
- BIOLOGICAL PRINCIPLES 111 LAB: Laboratory of introductory biology course, covering principles of molecular, cellular, and organismal biology
- STUDENT RESEARCH 489-490: Supervision of independent student research projects, senior thesis preparation, and seminar presentation, for my own lab students and others who do research off-campus. Since 1996: >60 undergraduate students have worked in my lab; many as full-time summer research interns supported by external research grants.

OTHER LECTURES AND COURSES:

- 2 invited lectures, graduate Plant Development course, Plant Sciences Dept, Univ. of Arizona, Nov. 1999
- Invited Lecture/Seminar, "Arabidopsis as a Model System for the Study of Plant Development", Undergraduate Genetics class (Bio 306), Biology Department, University of Michigan at Dearborn, 1994
- Invited Lecture in graduate course, "Molecular Biology of Plant Environmental Stress", Department of Biochemistry, Oklahoma State University, 1993
- Graduate Teaching Assistant, undergraduate introductory biology (Bio 181), Department of Molecular and Cellular Biology, University of Arizona, 1987.
- Teaching Assistant, non-majors Human Biology, & majors' Introductory Biology Laboratories, Biology Dept, Oberlin College, 1985, 1986. Labs included detailed fetal pig dissection, plus microscopy.
- Oberlin College Experimental College class: "Introduction to Freshwater Fishing". I designed, organized, and co-taught this 1-credit course offered for credit through Oberlin's "EXCO" program. Spring, 1986