Curriculum Vitae
Professor Virginia Walbot

Education

A.B. with Distinction & Honors in Biology, Stanford University, 1967
M. Phil. in Biology, Yale University, 1969
Ph.D. in Biology, Yale University, 1972 Mentor: Ian Sussex
NIH Postdoctoral Fellow, Department of Biochemistry, University of Georgia, 1972-1975 Mentor Leon S. Dure III

Positions Held

Assistant then Associate Professor of Biology, Washington University, St. Louis, Missouri, 1975 - 1980
Adjunct Associate Professor of Agronomy, University of Missouri, Columbia, Missouri, 1979 - 1990
Associate then Full Professor, Department of Biology, Stanford University, 1981 - present
Affiliated Faculty Member, Woods Institute, Stanford 9/1/2009 – 8/31/2011
Adjunct Staff Scientist at the Carnegie Institution of Science, Stanford 3/2016 -- present

Fellowships and Honors

National Science Foundation Predoctoral Fellow, 1969-1972
National Institutes of Health Postdoctoral Fellow, 1972-1975
Elected Fellow, 1981, American Association for the Advancement of Science
Belk Award, 1985, Miami University of Ohio
Lamb Award, 1985, University of Nebraska
Guggenheim Fellow and Visiting Scientist, C.S.I.R.O., Canberra, Australia, 1987
Eppley Award, 1993
National Geographic Exploration Award, 1998
Joan V. Wood Lectureship, Indiana University, 1999
Hageman Lectureship, Kansas State University, 2001
Elected corresponding member Mexican Academy of Sciences (AMC), first foreign woman 2004

Editorial Positions

Editorial Board, *Plant Physiology*, 1976-1980
Associate Editor, *Developmental Biology*, 1981-1988
Editorial Board, *Trends in Genetics*, 1985-1992
Associate Editor, *Annual Review of Plant Physiology and Plant Molecular Biology*, 1982-1998
Editorial Board, *Genes & Development*, 1987-1994
Editorial Board, *Current Topics in Developmental Biology*, 1989-2007
Advisory Board, *Genome Biology*, 1999-present
Highlights Advisory Panel, *Nature Reviews Genetics*, 2002-present
Editorial Board, *BMC Genetics*, 2006-2008
Editorial Board, *Journal of Biology*, 2008-present, now called *BMC Biology*
Associate Editor, Frontiers in Plant Genetics and Genomics, 2010-present

Ad hoc reviewer for Cell, EMBO J., PNAS, Plant Cell, Plant Journal, Plant Physiology, Plant Molecular Biology, Molecular Cell, Genetics, Science, and Nature

Society Service and Panel Memberships

Member, Committee on Opportunities in Science, American Association for the Advancement of Science, 1971-1974
Elected, Member-at-large, Board of Trustees, Society for Developmental Biology, 1974-1977
Elected, Board of Directors, Plant Molecular Biology Association, 1980-1983
Elected, Board of Directors, Genetics Society, 1986-1989
Elected, Nominating Committee A.A.A.S. Biological Sciences, 1990-1994; Chair, 1993-1994
Elected, Board of Directors, International Society for Plant Molecular Biology, 1991-1994
Appointed, Committee on Biodiversity, American Institute of Biological Sciences, 1993-1996
Elected, Board of the DNA Methylation Society, 1998-2001
Elected, Maize Genetics Executive Committee, 2000-2003
Elected, Member-at-Large of AAAS Section G, Biological Sciences 2002-2006
Elected, Treasurer, DNA Methylation Society, 2004-2006
Elected, President of Section G, Biological Sciences, of the AAAS 2007
Elected, Maize Genetics Executive Committee, 2007-2012
Appointed as ASPB representative to the Global Plant Council. 2015->

Advisory Activities

Member, National Science Foundation Panel on Developmental Biology, 1980-1983
Member, Board on Agriculture, National Research Council, 1982-1987
Member, Panel A Personnel, American Cancer Society, 1983-1988
Ad hoc grant reviewing for the NIH, NSF, DOE, USDA, Marsden Fund, Human Frontiers
Board of Directors, Pioneer Hi-Bred International, Inc. 1985 - 1999
External Examiner, Program in Molecular Biotechnology, Chinese University of Hong Kong 1999-2002
Non-Resident Fellow, Noble Foundation 2000-2005
Consulting for the Rockefeller Foundation and numerous US and international companies in the area of plant biotechnology
Member of the Research Coordination Network "Deep Gene" 2000-2005
Member, Advisory Board, Maize Genetics Database (MGdB), 2002-2005. Designed and implemented the new service of reviewing papers by recruiting the first team of writers.
Member, Advisory Board, Plant Sciences Institute, Iowa State University 2002-2009

Recent Activities at Stanford University

Elected, Faculty Senate 2009-2011 and Elected to Steering Committee 2009-2010
Teacher in Science-Math-Engineering core for non-science majors, 1997-1999
Chair of the Committee on Plant Growth Facilities 1995-2013
Chair, Biology Department Undergraduate Studies Committee, 2004 – 2009
Biology Department masters degree committee, 2013-2014 (shared with Hunter Fraser)

Current teaching

Freshman Seminar reading landmark papers in biotechnology and discussing societal implications, alternate years

Plant Genetics, graduate and undergraduate course with lab
Advanced Plant Biology seminar every quarter

Teaching and Science Outreach Interests

I teach a plant genetics class that includes Writing in Major, a writing intensive class for biology majors. This class is also taken by graduate students interested in genetics or considering a switch to plant biology for their postdoctoral training. I manage the Plant Biology Seminar (fall, winter, spring), and give occasional guest lectures in earth systems and human biology courses on world food issues and GMOs.

I am particularly concerned about scientific literacy, and my freshman seminar on biotechnology involves teaching students how to read and analyze scientific papers and how to debate the societal issues raised by new technologies. I have volunteered to develop new curriculum for non-science students and professional school students at Stanford. This interest started at Washington University where Joe Varner and I taught a very successful course on plants, food, and people that allowed us to introduce students to human nutrition, metabolism, plant genetics, plant structure and fibers, and secondary products as medicines. I have presented many of my current lectures at public forums in which I encourage a discussion of the science underlying transgenic food. Recent lectures have been at the Smithsonian, AAAS meeting, parent orientations at Stanford, and local public services clubs including dahlia societies.

Current Grant Support

NSF Plant Genomics Research Program 2014 – 2018 IOS-1339229 Regulatory Hierarchies and Roles of Non-Coding RNAs in Maize Anthers. PI Blake Meyers

Current Lab Members

Karina van der Linde, Postdoctoral Fellow Redox control of anther cell fate; MAC1 protein
Brad Nelms, Postdoctoral Fellow Properties of archesporial cells, pollen mother cells, and meiocytes
Mei Zhang, Postdoctoral Fellow Characteristics of pre-meiotic and meiotic cells
Han Zhang, Postdoctoral Fellow phasiRNA biogenesis; meiotic entry
Rachel Egger, graduate student Pre-meiotic male sterile mutants with division defects
Darren Morrow, B.S. LSRAII Transcriptome profiling in developing anthers
Gillian Nan, Ph.D. LSRAII Tapetal development genes
John Fernandes, B.S. LSRAII Bioinformatics Specialist
Alex Bloom, Administrative assistant
Katie Murphy, undergraduate Redox status and programmed cell death in anthers, 2015 Dean's Award and a Firestone Medal; UC-Davis graduate school in September 2015
Jonathan Colen UAR Major Grant, comparing B73 and W23 anther development
Tim Culbertson and Graham Marchant, summer field managers supervising high school interns and participating in our field genetics work
Summer 2015 undergraduates interns: Stanford VPUE students Ellen Hong (working with Han Zhang) Taylor Powell (mentor Karina van der Linde) plus UCLA undergraduate Xinyuan Chen (mentor Mei Zhang)
Summer 2015, high school interns: Natalie Baker, Jady Tian, Shawn Kayhan, Chris Peisch, Winnie Wong

Publications

Books

V. Walbot and N. Holder. 1987. **Developmental Biology**. Random House, New York, 751 pages. A college textbook.

M. Freeling and V. Walbot, editors. 1993. **The Maize Handbook**. Springer-Verlag, New York, 759 pages. A comprehensive guide to genetic, cell biology, developmental, tissue culture, and molecular techniques applied to maize. 1994 paperback edition of the same volume.

Research and Review Articles

280. Egger, R. L. and V. Walbot. 2016. A framework for evaluating developmental defects at the cellular level: an example from ten maize anther mutants using morphological and molecular data. Accepted. **Dev. Biol.** http://dx.doi.org/10.1016/j.ydbio.2016.03.016

279. Egger, R. L. and V. Walbot. 2015. Quantifying *Zea mays* tassel development and correlation with anther developmental stages as a guide for experimental studies. In press, **Maydica**.

278. Walbot, V. and R. L. Egger. May 2016. Pre-meiotic anther development: Cell fate specification and differentiation. In press, **Annu. Rev. Plant Biol.** 67.

277. Murphy, K. M., R. L. Egger, and V. Walbot. 2015. Chloroplasts in anther endothecium *of Zea mays* (Poaceae). **Am. J. Bot.** 102:1931-1937 doi:10.3732/ajb.1500384

276. Zhang, H., R. Xia, B. C. Meyers, and V. Walbot. 2015. Evolution, functions and mysteries of plant ARGONAUTE proteins. **Current Op. Plant Biol.** 27: 84-90. doi: 10.1016/j.pbi.2015.06.011 Available online 17th July 2015

275. Redkar, A. L. Schilling, R. Hoser, B. Zechmann, M. Krzymowska, V. Walbot, and G. Doehlemann. 2015. A secreted effector protein of *Ustilago maydis* is required to guide host cells to form tumors in maize leaves. **Plant Cell** 27: 1332-1351. doi: http://dx.doi.org/10.1105/tpc.114.131086

274. co-first authors Zhai, J., H. Zhang, S. Arikit, K. Huang, G. Nan, V. Walbot, and B. Meyers. 2015. Spatiotemporal and cell-type dependent biogenesis of phasi-RNAs during male reproduction in *Zea mays*. **Proc. Natl. Acad. Sci. USA** 112: 3146-3151. doi:10.1073/pnas.1418918112

Commentary M. J. Axtell. 2015. The small mysteries of males. **Nature Plants** 1: 1-2. doi: 10.1038/NPLANTS.2015.55

273. Lehnert, E. M. and V. Walbot. 2014. Sequencing and de novo assembly of a Dahlia hybrid cultivar transcriptome. **Front. Plant Sci.** 5: 340. doi: 10.3389/fpls.2014.00340

272. Kelliher, T., R. Egger, H. Zhang, and V. Walbot. 2014. Unresolved issues in pre-meiotic anther development. **Front. Plant Sci.** 5: Article 347. doi: 10.3389/fpls.2014.00347

271. co-first authors Zhang, H., R. Egger, T. Kelliher, D. J. Morrow, J. Fernandes, G-L. Nan, and V. Walbot. 2014. Transcriptomes and proteomes define gene expression progression in pre-meiotic maize anthers. **G3** 4: 994-1010. Special issue on the Genetics of Sex. doi: 10.1534/g3.113.009738

270. Schilling, L., A. Matei, A. Redkar, V. Walbot and G. Doehlemann. 2014. Virulence of the maize smut *Ustilago maydis* is shaped by organ-specific effectors. **Molecular Plant Pathology** 15: 780-789. doi: 10.1111/mpp.12133

269. Kelliher, T. and V. Walbot. 2014. Germinal cell initials accommodate hypoxia and precociously express meiotic genes. **Plant J.** 77: 639-652. doi: 10.1111/tpj.12414

268. Moon, J., D. Skibbe, L. Timofejeva, C.-J. R. Wang, T. Kelliher, K. Kremling, V. Walbot, and W. Z. Cande. 2013. Regulation of cell divisions and differentiation by MS32 is required for pre-meiotic anther development in *Zea mays.* **Plant J.** 76: 592-602. doi: 10.1111/tpj.12318

267. Li, G., T. Kelliher, L. Nguyen, and V. Walbot. 2013. *Ustilago maydis* reprograms cell proliferation in maize anthers. **Plant J.** 75: 903-914. doi: 10.1111/tpj.12270

266. Qüesta, J., V. Walbot, and P. Casati. 2013. UV-B radiation induces *Mu* element somatic transposition in maize. **Molecular Plant** 2013; doi: 10.1093/mp/sst112

265. Walbot, V. 2013. Domesticating the beast. **BMC Biology** 11: 35 doi: 10.1186/1741-7007-11-35 This is a short commentary following up on issues raised in "Are we training pit bulls to review our manuscripts?" doi:10.1186/jbiol125 published in 2009. The original commentary is one of most widely viewed articles published in the journal.

264. Walbot, V. 2013. Open questions: Reflections on plant development and genetics. **BMC Biology** 11: 25. doi: 10.1186/1741-7007-11-25

263. Marshall, W. F., K. D. Young, M. Swaffer, E. Wood, P. Nurse, A. Kimura, J. Frankel, J. Wallingford, V. Walbot, X. Qu, and A. H. K. Roeder. 2013. Forum: What determines cell size? **BMC Biology** 10:101 doi:10.1186/1741-7007-10-101

262. Wang, D., D. S. Skibbe, and V. Walbot. 2013. *Maize male sterile 8* (*ms8*), a putative beta-1,3-galactosyltransferase, is important for sugar metabolic functions during anther development. **Plant Reproduction** doi: 10.1007/s00497-013-0230-y

261. Timofejeva, L., D. S. Skibbe, S. Lee, I. Golubovskaya, R. Wang, L. Harper, V. Walbot, and W. Z. Cande. 2013. Cytological characterization and allelism testing of pre-meiotic anther developmental mutants identified in a screen of maize male sterile lines. **G3-GENES GENOMES GENETICS** 3: 231-249 doi: 10.1534/g3.112.004465

260. Skibbe, D. S., J. F. Fernandes, and V. Walbot. 2012. *Mu killer*-mediated and spontaneous silencing of *Zea mays* Mutator family transposable elements define distinctive paths of epigenetic inactivation. **Front. Plant Sci.** 3: 212. doi: 10.3389/fpls.2012.00212

259. Wang, D., C. M. Adams, J. F. Fernandes, R. L. Egger, and V. Walbot. 2012. A low molecular weight proteome comparison of fertile and *male sterile 8* anthers of *Zea mays.* **Plant Biotechnology J.** 10: 925-935. doi: 10.1111/j.1467-7652.2012.00721.x

258. Kelliher, T. and V. Walbot. 2012. Hypoxia triggers meiotic fate acquisition in maize. **Science** 337: 345-348. doi: 10.1126/science.1220080 Our article was featured in

PERSPECTIVES **Defining the Plant Germ Line—Nature or Nurture?** C. Whipple *Science* **337** (6092), 301. DOI: 10.1126/science.1224362

Science Signaling EDITORS' CHOICE **Redox Status Incites Gametogenesis** P. J. Hines *Sci. Signal.* **5** (234), ec197. DOI: 10.1126/scisignal.2003413

Nature Reviews Genetics RESEARCH HIGHLIGHT **Development: Triggering meiotic fate.** M. Muers. doi:10.1038/nrg3311 http://www.nature.com/nrg/journal/vaop/ncurrent/full/nrg3311.html

257. Wang, C-J. R., G-L. Nan, T. Kelliher, L. Timofejeva, V. Vernoud, I. N. Golubovskaya, L. Harper, R. L. Egger, V. Walbot, and W. Z. Cande. 2012. Maize *multiple archesporial cell 1 (mac1)*, an ortholog of rice *TDL1A*, modulates cell proliferation and identity in early anther development. **Development** 139: 2594-2603. doi:10.1242/dev.077891

256. Walbot, V. 2012. Distinguishing variable phenotypes from variegation caused by transposon activities. In: **Plant Transposable Elements: Methods and Protocols** in the *Methods in Molecular Biology* series T. Peterson (ed). Humana Press Inc., New York. pp.11-20.

255. Walbot, V. and J. Qüesta. 2012. Using *MuDR/Mu* transposons in directed tagging strategies. In: **Plant Transposable Elements: Methods and Protocols** in the *Methods in Molecular Biology* series T. Peterson (ed). Humana Press Inc., New York. pp. 143-155.

254. Walbot, V. 2011. How plants cope with temperature stress. **BMC Biology 9:**79 doi:10.1186/1741-7007-9-79

253. Casati, P., D. J.. Morrow, J. F. Fernandes, and V. Walbot. 2011. UV-B signaling in maize: Transcriptomic and metabolomic studies at different irradiation times. 2011PSB00399R **Plant Signaling Behavior** 6: http://www.landesbioscience.com/journals/psb/article/18164/

252. Nan, G-L., J. Fernandes, R. C. Wang, A. Ronceret, W. Z. Cande, and V. Walbot. 2011. Global transcriptome analysis of two *ameiotic1* alleles in maize anthers: defining steps in meiotic entry and progression through prophase I. **BMC Plant Biology** 11:120. doi:10.1186/1471-2229-11-120

251. Casati, P., D. J. Morrow, J. Fernandes, and V. Walbot. 2011. Rapid maize leaf and immature ear responses to UV-B radiation. **Frontiers in Plant Genetics Genomics** 2:33. doi: 10.3389/fpls.2011.00033

250. Casati, P., M. Campi, D. J. Morrow, J. Fernandes, and V. Walbot. 2011. Transcriptomic, proteomic and metabolomic analysis of maize responses to UV-B: comparison of greenhouse and field growth conditions. **Plant Signaling Behavior** 6: 1146-1153. doi:10.4161/psb.6.8.15751

249. Casati, P., M. Campi, D. J. Morrow, J. Fernandes, and V. Walbot. 2011. Transcriptomic, proteomic and metabolomic analysis of UV-B signaling in maize. **BMC Genomics** 12: 321. http://www.biomedcentral.com/1471-2164/12/321

248. Wang, DX., D. Skibbe, and V. Walbot. 2011. Maize *csmd1* exhibits pre-meiotic somatic and post-meiotic microspore and somatic defects but sustains anther growth. **Sexual Plant Reproduction** 24: 297-306. doi: 10.1007/s00497-011-0167-y

247. Pimentel, S., J. Fernandes, and V. Walbot. 2011. GRFT Genetic records family tree web applet. **Frontiers in Plant Genetics Genomics**. doi: 10.3389/fgene.2011.00014

246. Kelliher, T. and V. Walbot. 2011. Emergence and patterning of the five cell types of the *Zea mays* anther locule. **Developmental Biology** 350: 32-49. doi:10.1016/j.ydbio.2010.11.005

Picked as an Editor's Choice for a feature in SCIENCE
http://www.sciencemag.org/content/331/6018/651.3.full

245. Wang, D.-X. J. A. Oses-Prieto, K. H. Li, J. F. Fernandes, A. L. Burlingame, and V. Walbot. 2010. The *male sterile 8* mutation of maize disrupts the temporal progression of the transcriptome and results in mis-regulation of metabolic functions. **Plant J.** 63: 939-951. PMCID**:** PMC2974755 doi: 10.1111/j.1365-313X.2010.04294.x

244. Qüesta, J. I. , V. Walbot and P. Casati. 2010. Mutator transposon activation after UV-B involves chromatin remodeling and DNA demethylation. **Epigenetics** 5: 352-363. doi: 10.4161/epi.5.4.11751

243. Skibbe, D. S., G. Doehlemann, J. Fernandes and V. Walbot. 2010. Maize tumor formation after *Ustilago maydis* infection requires organ-specific gene expression by both partners. **Science** 328: 89 – 92. doi: 10.1126/science.1185775

241. Skibbe, D. S. and V. Walbot. 2009. **Gene Expression. In Maize Handbook - Volume II**: Genetics and Genetics and Genomics, J.L. Bennetzen and S. Hake, eds (New York: Springer), pp. 597-607.

240. Walbot, V. 2009. 10 Reasons to be tantalized by the B73 maize genome. Introductory piece for a special volume on the maize genome. **PLoS Genetics** 5: e1000723. doi:10.1371/journal.pgen.1000723 Editorial

240. Soderlund, C., A. Descour, D. Kudrna, M. Bomhoff, L. Boyd, J. Currie, A. Angelova, K. Collura, M. Wissotski, E. Ashley, D. Morrow, J. Fernandes, V. Walbot, and Y. Yu. 2009. Sequencing, mapping and analysis of 27,455 maize full-length cDNAs. **PLoS Genetics** 5: e1000740. doi:10.1371/journal.pgen.1000740

239. Nan, G.-L. and V. Walbot. 2009. Nonradioactive genomic DNA blots for detection of low abundant sequences in transgenic maize. In: **Transgenic Maize: Methods and Protocols**, ed. M. P. Scott, pp. 113-122.

238. Nan, G.-L. and V. Walbot. 2009. Plasmid rescue: recovery of flanking genomic sequences from transgenic transposon insertion sites. In: **Transgenic Maize: Methods and Protocols**, ed. M. P. Scott, pp. 101-109.

237. Walbot, V. and D. S. Skibbe. 2010. Maize host requirements for *Ustilago maydis* tumor induction. **Sexual Plant Reproduction** 23: 1-13. doi: 10.1007/s00497-009-0109-0

236. Johnson, C., A. Kasprzewska, K. Tennessen, J. Fernandes, G. Nan, V. Walbot, V. Sundaresan, V. Vance and L. H. Bowman. 2009. Clusters and superclusters of phased small RNAs in the developing inflorescence of rice. **Genome Research** 19: 1429-1440. doi:10.1101/gr.089854.108

235. Skibbe, D. S., J. F. Fernandes, K. Medzihradszky, A. L. Burlingame, and V. Walbot. 2009. Mutator transposon activity reprograms the transcriptome and proteome of developing maize anthers. **Plant J.** 59: 622-633. doi: 10.1111/j.1365-313X.2009.03901.x

234. Walbot, V. 2009. Are we training pit bulls to review our manuscripts? **Journal of Biology** 8: 24-26. doi:10.1186/jbiol125 Commentary. 3rd most accessed article of 2009 http://jbiol.com/content/8/12/102 Most viewed article in 2011 see Editorial http://www.biomedcentral.com/1741-7007/9/84/abstract

233. Ma, J., D. S. Skibbe, J. Fernandes, and V. Walbot. 2008. Male reproductive development: Gene expression profiling of maize anther and pollen ontogeny. **Genome Biology** 9:R181 doi:10.1186/gb-2008-9-12-r181.

232. Casati, P. and V. Walbot. 2008. Maize lines expressing RNAi to chromatin remodeling factors are similarly hypersensitive to UV-B radiation but exhibit distinct transcriptome responses. **Epigenetics** 3: 216-229.

231. Fernandes, J., D. J. Morrow, P. Casati, and V. Walbot. 2008. Distinctive transcriptome responses to adverse environmental conditions in *Zea mays* L. **Plant Biotechnology Journal** 6: 782-798.

230. Walbot, V. 2008. Maize genome in motion. **Genome Biology** 9:303doi:10.1186/gb-2008-9-4-303

229. Casati, P., M. Campi, F. Chu, N. Suzuki, D. Maltby, S. Guan, A. L. Burlingame, and V. Walbot. 2008. Histone acetylation and chromatin remodeling are required for UV-B–dependent transcriptional activation of regulated genes in maize. **Plant Cell** 20: 827-842.

228. Takumi, S. and V. Walbot. 2007. Epigenetic silencing and unstable inheritance of *MuDR* activity monitored at four *bz2-mu* alleles in maize (*Zea mays* L.). **Genes Genetic Systems** 82: 387-401.

227. Lawrence, C. J. and V. Walbot. 2007. Translational genomics for bioenergy production from fuelstock grasses: Maize as the model species. **Plant Cell** 19: 2091-2094.

226. Blanding, C. R., S. J. Simmons, P. Casati, V. Walbot, and A. E. Stapleton. 2007. Coordinated regulation of maize genes during increasing exposure to ultraviolet radiation:

identification of ultraviolet-responsive genes, functional processes and associated potential promoter motifs. **Plant Biotechnology Journal** 5: 677-695.

225. Ma, J., D. Duncan, D. J. Morrow, J. Fernandes, and V. Walbot. 2007. Transcriptome profiling of maize anthers using genetic ablation to analyze pre-meiotic and tapetal cell types. **Plant Journal** 50: 637-648. doi: 10.1111/j.1365-313X.2007.03074.x

224. Kirst, M., R. Caldo, P. Casati, G. Tanimoto, V. Walbot, R. P. Wise, and E. S. Buckler. 2006. Genetic diversity contribution to errors in short oligonucleotide microarray analysis. **Plant Biotechnology Journal** 4: 489-498.

223. Ma, J., D .J. Morrow, J. Fernandes, V. Walbot. 2006. Comparative profiling of the sense and antisense transcriptome of maize lines. **Genome Biology** 7:R22 doi:10.1186/gb-2006-7-3-r22

222. Casati, P., A. E. Stapleton, J. E. Blum, and V. Walbot. 2006. Genome-wide analysis of high altitude maize and gene knockdown implicates chromatin remodeling proteins in response to UV-B. **Plant Journal** 46: 613-627.

221. Rudenko, G. N., A. Ono, and V. Walbot. 2006. An early excision variant of the *MuDR/Mu* transposon family is not associated with a local duplication of the *bz1::Mu1* allele. **Maydica** 51: 227-232. Don Duvick memorial issue.

220. Rudenko, G. N., G.-I. Nan, and V. Walbot. 2005. Progress and perspectives in maize gene discovery. **Maydica** 50: 393-404. Special 50th anniversary volume, invited paper.

219. Walbot, V. 2005. OBPC Symposium: Maize 2004 & Beyond - Regulation of the *MuDR/Mu* transposable elements of maize and their practical uses. **In vitro Cell. Dev. Biol.-Plant** 41: 374-377.

218. Casati, P., X. Zhang, A. L. Burlingame, and V. Walbot. 2005. Analysis of leaf proteome after UV-B irradiation in maize lines differing in sensitivity. **Mol. Cell. Proteomics** 4: 1673-1685.

217. Casati, P. and V. Walbot. 2005. Differential accumulation of maysin and rhamnosylisorientin in leaves of high altitude landraces of maize after UV-B exposure. **Plant Cell Environment** 28: 788-799. doi:10.1111/j.1365-3040.2005.01329.x

216. Casati, P. and V. Walbot. 2004. Crosslinking of ribosomal proteins to RNA *in vivo* after UV-B irradiation of maize leaves. **Plant Physiology** 136: 3319-3332.

215. Fernandes, J., Q. F. Dong, B. Schneider, D. J. Morrow, G. L. Nan, V. Brendel, and V. Walbot. 2004. Genome-wide mutagenesis of *Zea mays* L. using *RescueMu* transposons. **Genome Biology** 5:82 doi:10.1186/gb-2004-5-10-r82

214. Walbot, V. 2004. Genomic, chromosomal and allelic assessment of the amazing diversity of maize. **Genome Biology** 5:328 doi:10.1186/gb-2004-5-6-328

213. Blum, J. E., P. Casati, V. Walbot, and A. E. Stapleton. 2004. Split-plot microarray design allows sensitive detection of expression differences after ultraviolet radiation in the inbred parental lines of a key maize mapping population. **Plant, Cell Environment** 27: 1374-1386.

212. Goodman, C. D., P. Casati, and V. Walbot. 2004. A multidrug-resistance associated protein involved in anthocyanin transport In *Zea mays*. **Plant Cell** 16: 1812-1826.

211. Casati, P. and V. Walbot. 2004. Rapid molecular responses of maize to UV-B: gene expression profiling in irradiated and shielded tissues. **Genome Biology** 5:R16

210. Pairoba, C. F. and V. Walbot. 2004. Post-transcriptional regulation of expression of the maize *Bronze2* gene of *Zea mays* L. **Plant Molecular Biology** 53: 75-86.

209. Kim, S.-H. and V. Walbot. 2003. Structural and functional analysis of antisense *MuDR* transcripts: insensitivity of maize Mutator transposon activities to endogenous and transgene-encoded antisense RNA. **Plant Cell** 15: 2430-2447.

208. Casati, P. and V. Walbot. 2003. Gene expression profiling in response to ultraviolet radiation in *Zea mays* genotypes with varying amounts of flavonoids. **Plant Physiology** 132: 1739-1754.

207. Walbot, V. and M. M. S. Evans. 2003. Unique features of the plant life cycle and their consequences. **Nature Reviews Genetics** 4: 369 -379.

206. Dong, Q. F., L. Roy, M. Freeling, V. Walbot and V. Brendel. 2003. ZmDB, an integrated database for maize genome research. **Nucl. Acids Res**. **31:** 244-247.

205. Rudenko, G. N., A. Ono, and V. Walbot. 2003. Initiation of silencing of maize *MuDR/Mu* transposable elements. **Plant J.** 33: 1013-1025.

204. Lunde, C. F., D. R. Morrow, L. M. Roy and V. Walbot. 2003. Progress in Maize Gene Discovery: a project update. **Functional Integrative Genomics** 3: 25-32. On-line version: October 1, 2002:, DOI 10.1007/s10142-002-0078-y.

203. Larsen, E., M. R. Alfenito, W. R. Briggs and V. Walbot. 2003. A carnation anthocyanin mutant is complemented by *Bz2*, a maize glutathione *S*-transferase. **Plant Cell Reports** 21: 900 - 904.

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