

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 (deceased)

NIH Postdoctoral Fellow, Department of Biochemistry, University of Georgia, 1972-1975

Mentor Leon S. Dure III (deceased)

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

Honorary Adjunct Staff Scientist at the Carnegie Institution of Science, Department of Plant
Biology, 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

Presently 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, Soc. 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, A.I.B.S., 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, 2015-2017

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, 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)
Committee on University wide Safety 2012-2015
Committee on University research 2016-2019
Committee on Introductory Seminars 2018-2021

Current teaching

Freshman Seminar Visions of Paradise, a course on garden design starting spring 2017
Plant Genetics, graduate and undergraduate course with lab, since 1990
Advanced Plant Biology seminar, 1 or more quarters per year, since 2000
Coursemaster and Lecturer in a new plant biology course, Bio129/229 winter 2020

Teaching and Science Outreach Interests

I manage the Plant Biology Seminar (spring), and give occasional guest lectures in earth systems and human biology courses on world food issues and GMOs. I also lecture in advanced biology courses. Currently my primary teaching is a freshman seminar on garden design that involves lectures, hands on activities, and weekly visits to Stanford or off campus gardens. Students learn the history of garden types, color impact, plant properties, requirements for garden maintenance, and other practical skills. In addition, they develop a personal esthetic regarding gardens and construct a final project.

I am particularly concerned about scientific literacy, and my freshman seminar on biotechnology involved teaching students how to read and analyze scientific papers and how to debate the societal issues raised by new technologies. I 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. The latter led to a citizen science side project in which we are using RNA transcriptomics to organize the dahlia genus and to try to determine which species were hybridized to give rise to modern tetraploid dahlia cultivars about 300-400 years ago. I've collected Dahlia seed in Mexico on several expeditions with Mexican collaborators.

Current Grant Support

NSF Plant Genomics Research Program 2018 – 2022 IOS-17-54097 PI Blake Meyers, coPIs Virginia Walbot, Jeffery Caplan “The Role of Non-Coding RNA in the Modulation of Anther & Pollen Development in Grasses”

Current Lab Members

Gillian Nan, Ph.D. LSRAll Transcription factor genes regulating tapetal development.

John Fernandes, B.S. LSRAll Bioinformatics Specialist.

Alex Ferris, Ph.D. graduate student in Bioengineering Detailed analysis of *Ustilago maydis* infection in anthers; RNA-seq of isolated infected cells and confocal microscopy analysis.

Xue Zhou, Postdoctoral fellow Do meiocytes contain 24-nt phasiRNAs? OCL4 transcription factor control of 21-nt phasiRNAs.

Blaine Marchant, NSF PGRP Postdoctoral fellow Single cell RNA-seq analysis of W23 fertile anthers and in five tapetal mutants across multiple redifferentiation stages.

Alex Bloom, Administrative assistant.

Tim Culbertson, high school science teacher and summer field manager.

2019 undergraduate interns: Simon Covington (African American), Alejandra Salazar (first gen, LatinX), Yadira Calderon (first gen, LatinX), Keegan Cross (first gen), Anna Park (first gen).

Recently departed: Pranjal Yadava, Fulbright-Nehru Postdoctoral Fellow Small RNAs involved in anther developmental transitions now a Professor in India. Brad Nelms NSF PGEP Postdoctoral Fellow, single cell RNA-seq analysis of male germinal cells, microspores, and pollen; now an assistant professor at the University of Georgia. Mei Zhang Postdoctoral Fellow, phasiRNA involvement in DNA methylation regulation. Now has her own lab at the Chinese Academy of Agricultural Sciences, Botany Department.

Patents Issued

United States Patent No. 9,516,824 on December 13, 2016 *Method for Modulating the Number of Archisporial Cells in a Developing Anther*

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

293. Ferris, A. C. and V. Walbot. 2021. Understanding *Ustilago maydis* infection of multiple maize organs. **J. Fungi** 7: 8. doi.org/10.3390/jof7010008

292. Zhang, M., X. Ma, C. Wang, Q. Li, B. C. Meyers, N. M Springer, and V. Walbot. 2020. CHH DNA methylation increases at 24-*PHAS* loci depend on 24-nt phasiRNAs in maize meiotic anthers. **New Phytologist** 229: 2984-2997. doi.org/10.1111/nph.17060

291. Yadava, P., S. Tamin, H. Zhang, C. Teng, X. Zhou, B. C. Meyers, and V. Walbot. 2021. Transgenerational conditioned male fertility of HD-ZIP IV transcription factor mutant *ocl4*: impact on 21-phasiRNA accumulation in pre-meiotic maize anthers. **Plant Reproduction** 34: next issue. Available on-line doi.org/10.1007/s00497-021-00406-3

290. Teng, C., H. Zhang, R. Hammond, K. Huang, B. Meyers, and V. Walbot. 2020. *Dicer-like 5* deficiency confers temperature-sensitive male sterility in maize. **Nat. Communications** 11, 2912 <https://doi.org/10.1038/s41467-020-16634-6>

289. Nelms, B. and V. Walbot. 2019. Defining the developmental program leading to meiosis in maize. **Science** 364: 52-56. [doi: 10.1126/science.aav6428](https://doi.org/10.1126/science.aav6428) We are also the cover photo for this issue.

288. van der Linde, K., and Walbot, V. 2019. *Pre-meiotic anther development*. In **Current Topics in Developmental Biology: Plant Development and Evolution**, U. Grossniklaus, Ed. (San Diego: Academic Press).

287. van der Linde, K., R. L. Egger, L. Timofejeva, and V. Walbot. 2018. Applications of pathogen Trojan horse approach in pre-meiotic maize (*Zea mays*) anther development. **Plant Cell Signaling and Behavior** 13: on line [doi: 10.1080/15592324.2018.1547575](https://doi.org/10.1080/15592324.2018.1547575)

286. Sosso*, D., K. van der Linde*, M. Bezruczyk, D. Schuler, K. Schneider, J. T. Kämper, and V. Walbot. 2018. Sugar partitioning between *Ustilago maydis* and its host *Zea mays* L. during infection. **Plant Physiol.** * co first authors [doi: 10.1104/pp.18.01435](https://doi.org/10.1104/pp.18.01435)

285. Matei, A., C. Ernst, M. Günl, B. Thiele, J. Altmüller, V. Walbot, B. Usadel, and G. Doehlemann. 2018. How to make a tumor: Cell type specific dissection of *Ustilago maydis*-induced tumor development in maize leaves. **New Phytologist** 217: 1681-1695. [doi: 10.1111/nph.14960](https://doi.org/10.1111/nph.14960)

284. van der Linde, K., L. Timofejeva, R. L. Egger, B. Ilau, R. Hammond, C. Teng, B. C. Meyers, G. Doehlemann, and V. Walbot. 2018. Pathogen Trojan horse delivers bioactive host protein to alter maize (*Zea mays*) anther cell behavior in situ. *Plant Cell* 30: 528-542. Breakthrough article. doi: <https://doi.org/10.1105/tpc.17.00238>

Commentary Farquharson, K. L. 2018. The Trojan horse approach to protein jockeying. *Plant Cell* 30: 517. doi: [10.1105/tpc.18.00170](https://doi.org/10.1105/tpc.18.00170)

283. Nan, G.-L., J. Zhai, S. Arikait, D. Morrow, J. Fernandes, L. Mai, N. Nguyen, B. C. Meyers and V. Walbot. 2017. MS23, a master basic helix-loop helix factor, regulates the specification and development of tapetum in maize. *Development* 144: 163-172. doi: [10.1242/dev.140673](https://doi.org/10.1242/dev.140673)

282. Char, S. N., A. K. Anjanasree K. Neelakandan, H. Nahampun, B. Frame, M. Main, M. H. Spalding, P. W. Becraft, B. C. Meyers, V. Walbot, K. Wang, and B. Yang. 2016. An Agrobacterium-delivered CRISPR/Cas9 system for high-frequency targeted mutagenesis in maize. Early view, *Plant Biotechnology J.* 15: 257-268. doi: [10.1111/pbi.12611](https://doi.org/10.1111/pbi.12611)

281. Altpeter, F., N.M. Springer, L. E. Bartley, A. Blechl, T. P. Brutnell, V. Citovsky, L. Conrad, S. B. Gelvin, D. Jackson, A. P. Kausch, P.G. Lemaux, J. I. Medford, M. Orozco-Cardenas, D. Tricoli, J. VanEck, D. F. Voytas, V. Walbot, K. Wang, Z. J. Zhang, and C. Neal Stewart, Jr. 2016. Advancing crop transformation in the era of genome editing. *Plant Cell* 28:1510-1520. <http://dx.doi.org/10.1105/tpc.16.00196>

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. *Dev. Biol.* 419: 26-40. doi: doi.org/10.1016/j.ydbio.2016.03.016

279. Walbot, V. and R. L. Egger. 2016. Pre-meiotic anther development: Cell fate specification and differentiation. *Annu. Rev. Plant Biol.* 67: 365–395. doi: [10.1146/annurev-arplant-043015-111804](https://doi.org/10.1146/annurev-arplant-043015-111804)

278. Egger, R. L. and V. Walbot. 2015. Quantifying *Zea mays* tassel development and correlation with anther developmental stages as a guide for experimental studies. *Maydica* 60: M34.

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](https://doi.org/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 Opin. Plant Biol.* 27: 84-90. doi: [10.1016/j.pbi.2015.06.011](https://doi.org/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. Arikait, 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](https://doi.org/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/mp.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/tbj.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/tbj.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/tbj.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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/10.1126/scisignal.2003413)

Nature Reviews Genetics RESEARCH HIGHLIGHT **Development: Triggering meiotic fate.** M. Muers. doi:[10.1038/nrg3311](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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, D.-X., 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. PMID: 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 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](https://doi.org/10.1007/s00497-009-0109-0)
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