

Curriculum Vitae Wan-Ling Chiu

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Education:

- 1979-1983 **B.S.** (Botany), National Taiwan University, Taipei, Taiwan.
Senior research: "Genetic analysis of anther-derived plants of rice",
Dr. C.C. Chen, Advisor
- 1983-1987 **M.S.** (Botany and Plant Pathology), Michigan State University,
East Lansing, Michigan
Thesis: "Studies of transmission and recombination of *Oenothera*
plastomes", Dr. Barbara B. Sears, Advisor
- 1987-1991 **Ph.D.** (Botany and Plant Pathology), Michigan State University,
Thesis: "Plastid inheritance and chloroplast DNA replication in
Oenothera", Dr. Barbara B. Sears, Advisor

Positions Held:

- 1991-1992 **Postdoctoral Fellow**, MSU-DOE Plant Research Laboratory,
Michigan State University, East Lansing, Michigan. Area of Research:
Control of mRNA abundance in plants.
Dr. Pamela J. Green, Advisor
- 1992-1996 **Research Scientist**, Department of Biological Sciences,
Florida International University, Miami, Florida.
Area of Research: Gender determination and molecular taxonomy of
cycads.
- 1996-2001 **Research Scientist**, Department of Biology, University of Richmond,
Richmond, Virginia. Area of Research: Effects of protein kinases and
phosphatases on plant development.
- 1994-2005 **Research Fellow**, Department of Molecular Biology, Massachusetts
General Hospital and Department of Genetics, Harvard Medical School,
Area of Research: The roles of MAP kinase pathways in plant growth and
development. Dr. Jen Sheen, Advisor.
- 2001-2005 **Research Scientist**, Department of Biology, Virginia Commonwealth
University.
Areas of Research: (1) Regulation of plant development pertinent to
establishing symbiosis with cyanobacteria. (2) Developing plant based
biosensors for explosives and other contaminants in soil.
- 2005- ? Assistant Professor, Department of Biology, Virginia Commonwealth
University.

Awards, Grants, and Patents:

- 1984-1989 McKnight Photosynthesis Predoctoral Fellowship
- 1989 Bessey Award for Research Excellence, Department of Botany and Plant Pathology, Michigan State University
- 1989-1990 College of Natural Science Continuing Fellowship, Michigan State University
- 1991-1992 Affirmative Action Postdoctoral Fellowship, Michigan State University
- 1994-1996 Palm and Cycad Societies of Australia Ltd., Milton, Australia (grant)
- 1998-2001 Chiu, F.-S., Era TV, Taipei, Taiwan (grant)
- 2003 United States Patent number 6,548,743 to Sheen, J. and Chiu, W.-L. "Transgenic plants expressing a dual-specificity MAPK phosphatase and uses thereof"
- 2003 United States Patent number 6,613,959 to Sheen, J., Kovtun, Y. and Chiu, W.-L. "Transgenic plants expressing a MAPKKK protein kinase domain"

Contract Research:

- 2003-2005 U.S. Army and NETEC Service Group "Developing transgenic plants as biosensors for detecting TNT explosives in soil".

Teaching Experiences:

- Fall, 1983 Teaching Assistant for Plant Physiology Lab (Supervised by N. E. Good).
- Winter, 1983 T.A. for Plant Physiology Lab (Supervised by K. D. Nadler).
- Spring, 1984 T.A. for Plant Physiology Lab (Supervised by R. Bandurski).
- Fall, 1985 Teaching Assistant for Genetics (Supervised by L. Robbins).
- Fall, 1994 Strategies in Gene Regulation (with Jeff Elhai)
- 1994 – 1996 Mentor of a Master Thesis by Hong Pu, entitled "Genetic variation in *Cycas* Section *Stangierioides* using anchored microsatellite primers". Florida International U
- 1997 – 1999 Mentor of an Honors Thesis by Marc Meulener, entitled "Investigating the function of MEK1 in Arabidopsis". University of Richmond
- 1998 – 2000 Mentor of an Honors Thesis by Laura Asakura, entitled "Investigating the role of MKPs in plants". University of Richmond
- 1997 – 2000 Mentor of undergraduate researchers: Henry Chang, Jon Wakefield, and Mike Switzer. University of Richmond.
- 2002 – 2004 Mentor of undergraduate researchers: Jessica Seo, Ko Chu, George Georges, and Patric Still. Virginia Commonwealth University
- 2003 – 2004 Molecular Cloning and Gene Transfer (one lecture and lab/semester in Biotechniques), VCU
- Spring, 2004 Special Topics on "Mechanisms of Signal Transduction", VCU
- Spring, 2004 Plant Development (one unit in Developmental Biology), VCU

List of Publications:

- Sears, B.B., L.L. Stoike, and **W.-L. Chiu** (1996). Proliferation of direct repeats near the *Oenothera* chloroplast DNA origin of replication. *Mol. Biol. Evol.* 13:850-863.
- Chang, S.-L., L. Stoike, D. Zarka, G. Schewe, **W.-L. Chiu**, D.C. Jarrell, and B.B. Sears (1996). Characterization of primary lesions caused by the plastome mutator of *Oenothera*. *Current Genet.* 30:522-530.
- Chiu, W.-L.**, Y. Niwa, W. Zeng, T. Hirano, H. Kobayashi, and J. Sheen (1996). Engineered GFP as a vital reporter in plants. *Current Biol.* 3:325-330.
- Diehn, S.H., **W.-L. Chiu.**, E.J. De Rocher, and P.J. Green (1998). Premature polyadenylation at multiple sites within a *Bacillus thuringiensis* toxin gene-coding region. *Plant Physiol.* 117:1433-1443.
- Kovtun, Y., **W.-L. Chiu**, W. Zeng, and J. Sheen (1998). Suppression of auxin signal transduction by a MAPK cascade in higher plants. *Nature* 395:716-720.
- Pu, H., and **W.-L. Chiu** (1999). Genetic variation in *Cycas* Section *Stangierioides* using anchored microsatellite primers. In: *Biology and Conservation of Cycads – Proceedings of the Fourth International Conference on Cycad Biology*, C.J. Chen, ed. International Academic Publishers, Beijing. pp. 334-344.
- Kovtun, Y., **W.-L. Chiu**, G. Tena, and J. Sheen (2000). Functional analysis of oxidative stress activated MAPK cascade in plants. *Proc. Natl. Acad. Sci. USA* 97:2940-2945.
- Hupfer, H., M. Swiatek, S. Hornung, R. Herrmann, R. Maier, R., **W.-L. Chiu**, and B. Sears (2000). Complete nucleotide sequence of the *Oenothera elata* plastid chromosome, representing plastome I of the five distinguishable *Euoenothera* plastomes. *Mol. Gen. Genet.* 263:581-585.
- Tena, G., T. Asai, **W.-L. Chiu**, and J. Sheen (2001). Plant MAP kinase signaling cascades. *Curr. Opin. Plant Biol.* 4:392-400.
- Tang, W., **W.-L. Chiu**, and Hong Pu (2001). The bamboo *Cycas* and its relatives: taxonomy and distribution. *Palms and Cycads* 72:3-11.
- Asai, T., G. Tena, J. Plotnikova, M. Willmann, **W.-L. Chiu**, L. Gomez-Gomez, T. Boller, F. Ausubel, and J. Sheen (2002). MAP kinase signaling cascade in *Arabidopsis* innate immunity. *Nature* 415:977-983.
- W.-L. Chiu**, G. A. Peters, G. Levieille, P. Still, S. Cousins, B. Osborne, J. Elhai (2005). Nitrogen deprivation stimulates symbiotic gland development in *Gunnera manicata*. *Plant Physiol.* (in press).
- Brennan, K.M., A. N. Nicolas, **W.L. Chiu**, R. R. De Martino, K.L. Engler, B.L. Brown, K. Fischer-Stenger and J.K. Stewart, Expression of vesicular monoamine transporter 1 in mouse brain (submitted, 2005).