

Simon W.-L. Chan

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Department of Plant Biology
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Education and Research Experience

- July 2006- **University of California, Davis**, Davis, CA
 Assistant Professor
- 2002-2006 **University of California, Los Angeles**, Los Angeles, CA
 Postdoctoral fellowship
 Advisor: Dr. Steven E. Jacobsen
- 1996-2002 **University of California, San Francisco**, San Francisco, CA
 Ph.D. in Cell Biology.
 Advisor: Dr. Elizabeth H. Blackburn
- 1992-1995 **University of Auckland**, Auckland, New Zealand
 Bachelor of Science (with Honours) in Biochemistry.
 Advisor: Dr. Nigel P. Birch

Awards

- 2010 Basil O'Connor Starter Scholar Award, March of Dimes
- 2006 American Society of Plant Biologists Early Career Award
- 2004 UCLA Boyer-Parvin Postdoctoral Award
- 2003-2006 Life Sciences Research Foundation Postdoctoral Fellowship (sponsored by the U.S. Department of Energy, Energy BioSciences division)
- 1997-2002 Howard Hughes Medical Institute Predoctoral Fellowship

Advanced Coursework

- 2008 National Academies Education Fellow in the Life Sciences (attended The National Academies Summer Institute on Undergraduate Education in Biology).
- 2003 QB3 Microarray Course at UC Santa Cruz (taught by Dr. Joseph Derisi and colleagues).

Publications

Marimuthu, M.P.A.*, Jolivet, S.*, Ravi, M.*, Pereira, L., Davda, J.N., Cromer, L., Wang, L., Nogu , F., **Chan, S.W.L.#**, Siddiqi, I.# & Mercier, R.#

Synthetic clonal reproduction through seeds

Science *in press*

* co-first authors, # corresponding authors

Greenberg, M.V.C., Ausin, I., **Chan, S.W.L.**, Cokus, S.J., Cuperus, J.T., Feng, S., Law, J.A., Chu, C., Pellegrini, M., Carrington, J.C. and Jacobsen, S.E.

Identification of genes required for *de novo* DNA methylation in Arabidopsis

Epigenetics 6, 344-354 (2011)

Chan, S.W.L.

Chromosome engineering: power tools for plant genetics

Trends in Biotechnology 28, 605-610 (2010) [review article]

Ravi, M., Kwong, P.N., Menorca, R.M.G., Valencia, J.T., Ramahi, J.S., Stewart, J.L., Tran, R.K., Sundaresan, V., Comai, L. and **Chan, S.W.L.**

The rapidly evolving centromere-specific histone has stringent functional requirements in *Arabidopsis thaliana*

Genetics 186, 461–471 (2010)

Ravi, M. and **Chan, S.W.L.**

Haploid plants produced by centromere-mediated genome elimination

Nature 464, 615-618 (2010)

Henderson, I.R., **Chan, S.R.**, Cao, X., Johnson L. and Jacobsen S.E.

Accurate sodium bisulfite sequencing in plants

Epigenetics 5, 47-49 (2010)

Chan, S.W.L.

Inputs and outputs for chromatin-targeted RNAi.

Trends in Plant Sciences 7, 383-389 (2008) [review article]

Chan, S.W.L., Zhang, X., Bernatavichute, Y.V. and Jacobsen, S.E.

Two-step recruitment of RNA-directed DNA methylation to tandem repeats.

PLoS Biology 4, e363 (2006)

Peng, P., **Chan, S.W.L.**, Shah, G., and Jacobsen, S.E.

Elevated outcrossing in *hothead* mutants.

Nature 443, E8 (2006)

Zhang, X.*, Yazaki, J.*, Sundaresan, A*., Cokus, S*, **Chan, S.W.L.**, Chen, H., Henderson, I.R., Shinn, P., Pellegrini, M., Jacobsen, S.E. and Ecker, J.R.

Genome-wide high-resolution mapping and functional analysis of DNA methylation in *Arabidopsis*.

Cell 126, 1189-1201 (2006)

Li, C.F, Pontes, O., El-Shami, M., Henderson, I.R., Bernatavichute, Y.V., **Chan, S.W.L.**, Lagrange, T., Pikaard, C.S. and Jacobsen, S.E.

An ARGONAUTE4-containing nuclear processing center co-localized with Cajal bodies in *Arabidopsis thaliana*.

Cell 126, 93-106 (2006)

Chan, S.W.L., Henderson, I.R., Zhang, X., Chien, J., Shah, G. and Jacobsen, S.E.

RNAi, DRD1 and histone methylation actively target developmentally important non-CG DNA methylation in *Arabidopsis*.

PLoS Genetics 2, e83 (2006)

Chan, S.W.L.*, Henderson, I.R.* and Jacobsen, S.E.

Gardening the genome: DNA methylation in *Arabidopsis thaliana*.

Nature Reviews Genetics 6 351-360 (2005) [review article]

Mockler, T.C., **Chan, S.**, Sundaresan A., Chen, H., Jacobsen S.E. and Ecker, J.R.

Applications of DNA tiling arrays for whole-genome analysis.

Genomics 85 1-15 (2005) [review article]

Morris, K.V., **Chan, S.W.L.**, Jacobsen, S.E. and Looney, D.J.

siRNA-induced transcriptional gene silencing in human cells.

Science 305, 1289-1292 (2004)

Chan, S.W.L., Zilberman D., Xie, Z., Johansen, L.K., Carrington, J.C. and Jacobsen, S.E.

RNA silencing genes control *de novo* DNA methylation.

Science 303, 1336 (2004)

Chan, S.R.W.L. and Blackburn, E.H.

Telomeres and telomerase.

Phil. Trans. R. Soc. Lond. B 359, 109-121 (2004)

Chan, S.W.L. and Blackburn, E.H.

Telomerase and ATM/Tel1p protect telomeres from non-homologous end-joining.

Molecular Cell 11, 1379-1387 (2003)

Chan, S.W.L. and Blackburn, E.H.

New ways not to make ends meet.

Oncogene 21, 553-563 (2002) [review article].

Chan, S.W.L., Chang, J., Prescott, J. and Blackburn, E.H.

Altering telomere structure allows telomerase to act in yeast lacking ATM kinases.

Current Biology 11, 1240-1250 (2001).

Blackburn, E.H., **Chan, S.**, Chang, J., Fulton, T.B., Krauskopf, A., McEachern, M., Prescott, J., Roy, J., Smith, C. and Wang, H.

Molecular manifestations and molecular determinants of telomere capping.

Cold Spring Harbor Symposia on Quantitative Biology, 65, 253-263 (2000)

* denotes equal contribution

Invited seminars and conference talks

Plant and Animal Genome XIX (Plant Cytogenetics workshop), San Diego
January 2011

Institute for Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China
December 2010

Nara Institute of Science and Technology, Nara, Japan
December 2010

Molecular Biology Society of Japan conference, Kobe, Japan
December 2010

National Institute of Genetics, Mishima, Japan
December 2010

Plant Gene Expression Center, USDA/UC Berkeley
December 2010

University of Indiana
November 2010

Life Sciences Research Foundation Alumni meeting, San Francisco
October 2010

University of Arizona
September 2010

Bill and Melinda Gates Foundation Cassava Doubled Haploid meeting
CIAT (Centro Internacional de Agricultura Tropical), Palmira, Colombia
August 2010

Queenstown Molecular Biology meeting, Plant Satellite (keynote address), Queenstown, New Zealand
July 2010

Temasek Life Sciences Laboratory, Singapore
June 2010

University of California, San Diego
June 2010

University of California, Berkeley
April 2010

University of Chicago
April 2010

XIII National Congress of Plant Molecular Biology and 6th Symposium Mexico-USA
Guanajuato, Mexico
November 2009

Temasek Life Sciences Laboratory, Singapore
June 2009

International Plant Epigenome conference, Sydney, Australia
September 2008

University of Wisconsin
July 2008

Memberships

American Society for Cell Biology

Genetics Society of America