# Simon W.-L. Chan

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Department of Plant Biology
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## Education and Research Experience

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

## Awards

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| 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

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| 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

Ravi, M., Shibata, F., Ramahi, J.S., Nagaki, K., Chen, C., Murata, M. & **Chan, S.W.L.**
Meiosis-specific loading of the centromere-specific histone CENH3 in *Arabidopsis thaliana*
**PLoS Genetics**, *in press*

Marimuthu, M.P.A.*, Jolivet, S.*, Ravi, M.*, Pereira, L., Davda, J.N., Cromer, L., Wang, L., Nogué, F., **Chan, S.W.L.#**, Siddiqi, I.# & Mercier, R.#
Synthetic clonal reproduction through seeds
**Science** *331*, 876 (2011)
* 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

University of Missouri
March 2011

53rd Annual Maize Genetics Conference (plenary speaker), St Charles, Illinois
March 2011

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

Indiana University

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