

CORINNE A. MICHELS, PH.D.

CUNY Distinguished Professor of Biology Emerita
Queens College of the City University of New York
65-30 Kissena Boulevard
Flushing, NY 11367

EDUCATION

Queens College of CUNY	1960-1963	B.S. Biology
Columbia University	1963-1965	M.S. Biological Sciences
Columbia University	1965-1969	Ph.D. Biological Sciences
Columbia University	1969-1970	Postdoctoral Fellow
Albert Einstein College of Medicine, NY	1970-1972	Postdoctoral Fellow

ACADEMIC AND RESEARCH APPOINTMENTS

Columbia University	1965-1966	Teaching Assistant
Queens College of CUNY	1972-73	Instructor
	1973-78	Assistant Professor
	1979-84	Associate Professor
	1985-2004	Professor
	2004-2011	Distinguished Professor
	2001-2011	Chair of Biology
	2011-present	Distinguished Professor Emerita
Graduate School of CUNY	1977-2011	PhD Program in Biology
	2011-present	PhD Program in Biology - Emeritus
	1979-2011	PhD Program in Biochemistry
	1987-93	Subprogram in Molecular, Cellular, & Developmental Biology Advisor Committee of PhD Program in Biology
	1988-91	Chair, Subprogram in Molecular, Cellular, & Developmental Biology Advisor Committee of PhD Program in Biology
	1988-1996	Deputy Executive Officer of PhD Program in Biology
Cold Spring Harbor Laboratory Cold Spring Harbor, NY	1979-80	Visiting Scientist
Columbia University College of Physicians and Surgeons, Dept. of Microbiology	1987-88	Visiting Professor

ACADEMIC AND PROFESSIONAL RECOGNITION

Honors and awards:

Phi Beta Kappa, Magna Cum Laude (Queens College of CUNY)
National Science Foundation Predoctoral Fellowship (1963-69)
National Institutes of Health Postdoctoral Fellowship (1969-71)
National Science Foundation Travel Award (1983) – Attended International Congress of
Genetics, New Delhi, INDIA
National Science Foundation Visiting Professorship for Women Award (1987-88)

Professional activities:

Member: Genetics Society of America
American Society for Microbiology
American Society for Biochemistry and Molecular Biology
American Society for Cell Biology
American Association for the Advancement of Science
Sigma Xi (President of Queens College Kappa Chapter 1986-88)
Organizing Committee of Yeast Genetics and Molecular Biology Meetings (1994, 1996, 1998)
Workshop Organizer at the 18th International Conference on Yeast Genetics and Molecular
Biology, Stellenbosch University, Stellenbosch, SOUTH AFRICA
Editorial Board: Journal of Bacteriology (1993-1997)
Manuscript reviewer for: *Current Genetics*, *Genetics*, *EMBO Journal*, *Eukaryotic Cell*, *Journal
of Bacteriology*, *Molecular and Cellular Biology*, *Molecular Biology of the Cell*,
Molecular Microbiology, *Proceedings of the National Academy of Science*, *Yeast*, and
others on occasion

Grant peer review committee member:

Genetics Study Section of the National Institutes of Health (member 1991-1995)
Member of Special Emphasis Panel for Research Planning Grants and Career Advancement
Awards for Women of the Division of Molecular and Cellular Biosciences of the
National Science Foundation (1996)
Member of Cancer Special Program Advisory Committee of the National Institute of Cancer
Reviewer and participant in site visits for Program Project Grants at:
Indiana University School of Medicine, Indianapolis, IN
Roswell Park Cancer Institute, Buffalo, NY
National Cancer Institute - Fredrick Center for Cancer Research
Ad Hoc reviewer for Genetics Study Section of NIH
Ad Hoc reviewer for NIH AREA Grants
Panel member for the evaluation of the National Science Foundation Predoctoral Fellowship
Awards, National Research Council (1984, 1985, 1986)
Panel member for the evaluation of the Howard Hughes Doctoral Fellowships in Biological
Sciences, National Research Council (1990)
External reviewer for the National Science Foundation Research Program
Panel member for the National Science Foundation Major Research Instrumentation Program
(2007)

GRANTS AND CONTRACTS

National Institutes of Health

National Institute of General Medical Sciences Research Grant - GM28216 (2001-2008)

“Maltose sensing and signaling in *Saccharomyces*”

National Institute of General Medical Sciences Research Grant - GM28216 (1996-2001)

"The regulation of maltose fermentation in yeast"

National Institute of General Medicine Research Grant - GM49280 (1993-1999)

"Glucose inactivation of maltose permease in *Saccharomyces*"

National Institute of General Medical Sciences Research Grant - GM28216 (1992-96)

"The regulation of maltose fermentation in yeast"

National Institute of General Medical Sciences Research Grant - GM28216 (1987-92)

"The regulation of maltose fermentation in yeast"

National Institutes of Health Small Instrumentation Grant - GM47046 (1991-1992)

"Purchase of pulsed-field DNA gel apparatus"

National Institute of General Medical Sciences Research Grant - GM28216 (1982-87)

"The regulation of maltose fermentation in yeast"

National Cancer Institute Research Grant - CA18394 (1979-82)

"Yeast as a model organism for studying cancer"

National Cancer Institute Research Grant - CA18394 (1977-79)

"Yeast as a model organism for studying cancer"

National Cancer Institute Research Grant - CA18394 (1975-77)

"Yeast as a model organism for studying cancer"

National Science Foundation

National Science Foundation Major Research Instrumentation Grant – DBI-0521382 (2005-08)

“Acquisition of confocal microscope and biolistic unit for interdisciplinary programs”

National Science Foundation Research Grant - DCB 8916077 (1990-93)

"The mechanism of glucose-induced inactivation of maltose permease in *Saccharomyces*"

National Science Foundation Visiting Professorship for Women Award - RII 8700006 (1987-1988) Administered by Columbia University

"The mechanism of glucose-induced inactivation of maltose permease in *Saccharomyces*"

National Science Foundation Research Grant - DMB 8510719 (1986-88)

"Alternate DNA structures in *Saccharomyces*"

National Science Foundation Equipment Grant - PMC 78-18899 (1979)

"Purchase of an ultracentrifuge for DNA analysis"

Other agencies

New York State Higher Education and Applied Technology Award (1995-98)

“Establishment of Cellular Imaging and Molecular Biology Core Facility”

Howard Hughes Medical Institute Grant for Undergraduate Education in Science Award

Member of writing committee for two successful proposals from Queens College:

\$1,800,000 (1991-1996)

\$ 600,000 (1996-2001)

PSC – CUNY Faculty Research Award
(1973, 1975, 1979, 1982, 1983, 1986, 1987, 1988, 1989, 1990, 2001, 2008)

PSC – CUNY Equipment Grant (2004)
“Acquisition of a Real-time PCR”

Corporate relations

Royal Dutch Gist-Brocades, Delft, The Netherlands

Fleischmann & Royal, Rio DeJaniero, Brazil

PUBLICATIONS

Books:

Genetic Techniques for Biological Research: A Case Study Approach Published by John Wiley & Sons, Ltd., London. 2002

Monographs, Chapters and Reviews:

Michels, C.A., 1969. The initiation of polypeptide synthesis and complementation in the *Z* gene of the *Lac* operon of *Escherichia coli*. Ph.D. Thesis, Columbia University.

Reviewer for: Vivier, M.A., M.G. Lambrechts, I.S. Pretorius, 1997. Coregulation of starch-degradation and dimorphism in the yeast *Saccharomyces cerevisiae*. *Critical Reviews in Biochemistry and Molecular Biology* **32**: 405-435.

Michels, H.T. and **C.A. Michels**, 2016. The new ‘old’ weapon in the fight against infectious disease. *Curr. Trends Microbiol.* **10**: 23-45.

Michels, H.T. and **C.A. Michels**, 2017. Potential of copper alloys to kill bacteria and reduce hospital infection rates. *Internal Medicine Review* **3**: in press.

Journal Articles: (CUNY doctoral students^D and Queens College students^{U,M} names indicated)

Michels, C.A. and D. Zipser, 1969. The non-linear relationship between the enzyme activity and the structural protein concentration of thiogalactoside transacetylase of *E. coli*. *Biochem. Biophys. Res. Commun.* **34**: 522-527.

Michels, C.A. and D. Zipser, 1969. The mapping of polypeptide reinitiation sites within the α -galactosidase structural gene. *Jour. Mol. Biol.* **41**: 341-347.

Michels, C.A. and W.S. Reznikoff, 1970. The gradient of polarity of *Z* gene nonsense mutations in *Trp-Lac* fusion strains. *Jour. Mol. Biol.* **55**: 119-122.

Michels, C.A., J. Blamire, B. Goldfinger and J. Marmur, 1973. Studies on the action of nalidixic acid in the yeast *Saccharomyces cerevisiae*. *Antimicro. Agents and Chemotherapy* **3**: 562-567.

Reznikoff, W.S., **C.A. Michels**, T.G. Cooper, A.E. Silverstone and B. Magasanik, 1974. Inhibition of *LacZ* gene translation initiation in *Trp-Lac* fusion strains. *Jour. Bacteriol.* **117**: 1231-1239.

Michels, C.A., J. Blamire, B. Goldfinger and J. Marmur, 1975. A genetic and biochemical analysis of the *petite* mutation in yeast. *Jour. Mol. Biol.* **90**: 431-449.

Blamire, J., **C.A. Michels**, J.M. Walsh^U and D.L. Friedenberg^U, 1976. Mitochondrial DNA in yeast: recombination and subsequent modification following mating between a *grande* and a suppressive *petite*. *Molec. Gen. Genet.* **143**: 253-259.

Furst, A.^M and **C.A. Michels**, 1977. D-glucosamine as a gratuitous catabolite repressor in yeast. *Molec. Gen. Genet.* **155**: 309-314.

- Michels, C.A.** and **A. Romanowski^U**, 1980. Pleiotropic glucose repression-resistant mutations in *Saccharomyces carlsbergensis*. *Jour. Bacteriol.* **143**: 674-679.
- Mishra, S.D.^D** and **C.A. Michels**, 1982. Glucosamine-resistant mutations in yeast affecting the glucose repression sensitivity of electron transport enzymes. *Curr. Genet.* **6**: 209-217.
- Michels, C.A.**, **K.M. Hahnenberger^M** and **Y. Sylvestre^M**, 1983. Pleiotropic mutations regulating resistance to glucose repression in *Saccharomyces carlsbergensis* are allelic to the structural gene for hexokinase B. *Jour. Bacteriol.* **153**: 574-578.
- Needleman, R.B. and **C.A. Michels**, 1983. A repeated family of genes controlling maltose fermentation in *Saccharomyces carlsbergensis*. *Molec. Cell. Biol.* **3**: 796-802.
- Michels, C.A.** and R.B. Needleman, 1983. A genetic and physical analysis of the *MAL1* and *MAL3* standard strains of *Saccharomyces cerevisiae*. *Molec. Gen. Genet.* **191**: 225-230.
- Michels, C.A.** and R.B. Needleman, 1984. The *MAL* loci: A dispersed repeated family of loci in the *Saccharomyces* yeasts. *Jour. Bacteriol.* **157**: 949-952.
- Needleman, R.B., D.B. Kaback, **R.A. Dubin^D**, E.L. Perkins, N.G. Rosenberg, K.A. Sutherland, D.B. Forrest and **C.A. Michels**, 1984. *MAL6* of *Saccharomyces*: A complex locus containing three genes required for maltose fermentation. *Proc. Nat. Acad. Sci. USA* **81**: 2811-2815.
- Dubin, R.A.^D**, R.B. Needleman, D. Gosset and **C.A. Michels**, 1985. Identification of the structural gene encoding maltase within the *MAL6* locus of *Saccharomyces carlsbergensis*. *Jour. Bacteriol.* **164**: 605-610.
- Dubin, R.A.^D**, E.L. Perkins, R.B. Needleman and **C.A. Michels**, 1986. Identification of a second trans-acting gene controlling maltose fermentation in *Saccharomyces carlsbergensis*. *Molec. Cell. Biol.* **6**: 2757-2765.
- Charron, M.J.^D**, **R.A. Dubin^D** and **C.A. Michels**, 1986. Structural and functional analysis of the *MAL1* locus of *Saccharomyces cerevisiae*. *Molec. Cell. Biol.* **6**: 3891-3899.
- Charron, M.J.^D** and **C.A. Michels**, 1987. The constitutive, glucose-repression insensitive mutation of the yeast *MAL4* locus is an alteration of the *MAL43* gene. *Genetics* **116**: 23-31.
- Charron, M.J.^D** and **C.A. Michels**, 1988. The naturally occurring alleles of *MAL1* in *Saccharomyces* species evolved by various mutagenic processes including chromosomal rearrangement. *Genetics* **120**: 83-93.
- Dubin, R.A.^D**, **M.J. Charron^D**, **S.R. Haut^U**, R.B. Needleman and **C.A. Michels**, 1988. Constitutive expression of the maltose fermentative enzymes in *Saccharomyces carlsbergensis* is dependent upon the mutational activation of a nonessential homolog of *MAL63*. *Molec. Cell. Biol.* **8**: 1027-1035.
- Chang, Y.S., **R.A. Dubin^D**, E. Perkins, D. Forrest, **C.A. Michels** and R.B. Needleman, 1988. *MAL63* codes for a positive regulation of maltose fermentation in *Saccharomyces cerevisiae*. *Curr. Genet.* **114**: 201-209.
- Kim, J.^D** and **C.A. Michels**, 1988. The *MAL63* gene of *Saccharomyces* encodes a cysteine-zinc finger protein. *Curr. Genet.* **114**: 319-323.
- Charron, M.J.^D**, E. Read, **S.R. Haut^U** and **C.A. Michels**, 1989. Molecular evolution of the telomere-associated *MAL* loci of *Saccharomyces*. *Genetics* **122**: 307-316.
- Cheng, Q.^D** and **C.A. Michels**, 1989. The maltose permease encoded by the *MAL61* gene of *Saccharomyces cerevisiae* exhibits both sequence and structural homology to other sugar transporters. *Genetics* **123**: 477-484.

- Chang, Y. S., R.A. Dubin^D, E. Perkins, **C.A. Michels** and R.B. Needleman, 1989. Identification and characterization of the maltose permease in a genetically defined strain of *Saccharomyces*. *Jour. Bacteriol.* **171**: 6148-6154.
- Cheng, Q.^D and **C.A. Michels**, 1991. *MAL11* and *MAL61* encode the inducible, high-affinity maltose transporter of *Saccharomyces cerevisiae*. *Jour. Bacteriol.* **173**: 1817-1820.
- Naumova, E.S., G.I. Naumov, **C.A. Michels** and D.R. Beritashvili, 1991. Chromosomal DNA identification in yeast *Saccharomyces bayanus* and *S. pastorianus*. *Doklady Biological Sciences* **316**: 744-746.
- Naumov, G.I., E.S. Naumova and **C.A. Michels**, 1991. Identification of a functional α -glucosidase gene in natural mutants of *Saccharomyces cerevisiae* and *S. paradoxus* that do not ferment maltose. *Doklady Biological Sciences* **316**: 1249-1252.
- Levine, J.^D, L. Tanouye and **C.A. Michels**, 1992. The UAS_{MAL} is a bidirectional promoter element required for the expression of both the *MAL61* and *MAL62* genes of the *Saccharomyces MAL6* locus. *Curr. Genet.* **22**: 181-189.
- Michels, C.A.**, E. Read, K. Nat and M.J. Charron^D, 1992. The telomere-associated *MAL3* locus of *Saccharomyces* is a tandem array of repeated genes. *Yeast* **8**: 655-665.
- Naumov, G.I., E.S. Naumova and **C.A. Michels**, 1994. Genetic variation of the repeated *MAL* loci in natural populations of *Saccharomyces cerevisiae* and *Saccharomyces paradoxus*. *Genetics* **136**: 803-812.
- Hu, Z.^D, J.O. Nehlin, H. Ronne and **C.A. Michels**, 1995. *MIG1*-dependent and *MIG1*-independent glucose regulation of *MAL* gene expression in *Saccharomyces cerevisiae*. *Curr. Genet.* **28**: 258-266.
- Han, E.-K., F. Cotty^D, C. Sottas^U, H. Jiang^D and **C.A. Michels**, 1995. Characterization of *AGT1* encoding a general α -glucoside transporter from *Saccharomyces*. *Molec. Microbiol.* **17**: 1093-1107.
- Medintz, I.^D, H. Jiang^D, E.-K. Han, W. Cui^M, and **C.A. Michels**, 1996. Characterization of the glucose-induced inactivation of maltose permease in *Saccharomyces cerevisiae*. *J. Bacteriol.* **178**: 2245-2254.
- Jiang, H.^D, I. Medintz^D, and **C.A. Michels**, 1997. Two glucose sensing/signalling pathways stimulate glucose-induced inactivation of maltose permease in *Saccharomyces*. *Molec. Biol. Cell* **8**: 1293-1304.
- Gibson, A.W.^D, L. A. Wojciechowicz^D, S. E. Danzi^D, B. Zhang^M, J. Kim^D, Z. Hu^D, and **C.A. Michels**, 1997. Constitutive mutations of the *Saccharomyces cerevisiae* *MAL*-activator genes *MAL23*, *MAL43*, *MAL63*, and *mal64*. *Genetics* **146**: 1287-1298.
- Rotenberg, S.A., J. Zhu, J. Hansen, X.-D. Li, Z.-G. Sun, **C.A. Michels**, and H. Riedel, 1998. Deletion analysis of protein kinase C α reveals a novel regulatory segment. *Jour. Biochem.* **124**: 756-763.
- Medintz, I.^D, H. Jiang^D, and **C.A. Michels**, 1998. The role of ubiquitin-conjugation in glucose-induced proteolysis of *Saccharomyces* maltose permease. *Jour. Biol. Chem.* **273**: 34454-34462.
- Hu, Z., A.W. Gibson, J.H. Kim, L.A. Wojciechowicz, B. Zhang, and **C.A. Michels**, 1999. Functional domain analysis of the *Saccharomyces MAL*-activator. *Curr. Genet.* **36**: 1-12.
- Hu, Z.^D, Y. Yue^M, H. Jiang^D, B. Zhang^M, P.W. Sherwood, and **C.A. Michels**, 2000. Analysis of the mechanism by which glucose inhibits maltose induction of *MAL* gene expression in *Saccharomyces*. *Genetics* **154**: 121-132.

- Jiang, H.^D, I. Medintz^D, P.W. Sherwood, and **C.A. Michels**, 2000. Metabolic signals trigger glucose-induced inactivation of maltose permease in *Saccharomyces*. *J. Bacteriol.* **182**: 647-654.
- Medintz, I.^D, X. Wang^D, T. Hradek^U, and **C.A. Michels**, 2000. A PEST-like sequence in the N-terminal cytoplasmic domain of *Saccharomyces* maltose permease is required for glucose-induced proteolysis and rapid inactivation of transport activity. *Biochemistry* **39**: 4518-4526.
- Jiang, H.^D, K. Tatchell, S. Liu, and **C.A. Michels**, 2000. Protein phosphatase type-1 regulators *REG1* and *REG2* play a role in glucose-induced proteolysis of maltose permease in *Saccharomyces*. *Molec. Gen. Genet.* **263**: 411-422.
- Danzi, S.E.^D, B. Zhang^M, and **C.A. Michels**, 2000. Alterations in the *Saccharomyces MAL*-activator cause constitutivity but can be suppressed by intragenic mutations. *Curr. Genet.* **38**: 233-240.
- Wang, X.^D, M. Bali^D, I. Medintz^D, and **C.A. Michels**, 2002. Intracellular maltose is sufficient to induce *MAL* gene expression in *Saccharomyces cerevisiae*. *Eukaryotic Cell* **1**: 696-703.
- Danzi, S.E.^D, M. Bali^D, and **C.A. Michels**, 2003. Clustered-charge to alanine-scanning mutagenesis of the Mal63 *MAL*-activator C-terminal regulatory domain. *Curr. Genet.* **44**: 173-183.
- Bali, M.^D, B. Zhang^M, K.A. Morano, and **C.A. Michels**, 2003. The Hsp90 molecular chaperone complex regulates maltose induction and stability of the *Saccharomyces MAL* gene transcription activator Mal63p. *J. Biol. Chem.* **278**: 47441-47448.
- Wang, X.^D and **C.A. Michels**, 2004. Mutations in *SIN4* and *RGR1* cause constitutive expression of *MAL* structural genes in *Saccharomyces cerevisiae*. *Genetics* **168**: 747-757.
- Gadura, N.^D, L.C. Robinson, and **C.A. Michels**, 2006. Yck1,2 casein kinase type-1 signals to Glc7-Reg1 protein phosphatase to regulate the transport activity and glucose-induced inactivation of *Saccharomyces* maltose permease. *Genetics* **170**: 1427-1439.
- Gadura, N.^D and **C.A. Michels**, 2006. Sequences in the N-terminal cytoplasmic domain of *Saccharomyces cerevisiae* maltose permease are required for vacuolar degradation but not glucose-induced internalization. *Curr. Genet.* **50**: 101-14.
- Ran, F.^D, M. Bali^D, and **C.A. Michels**, 2008. Hsp90/Hsp70 chaperone machine regulation of the *Saccharomyces MAL*-activator as determined *in vivo* using noninducible and constitutive mutant alleles. *Genetics* **179**:331-43.
- Ran, F.^D, N. Gadura, and **C.A. Michels**, 2010. The Hsp90 cochaperone Aha1 is a negative regulator of the *Saccharomyces MAL*-activator and acts early in the chaperone cycle. *Journ. Biol. Chem.* **285**: 13850-13862.
- Hong, R, T.Y. Kang, **C.A. Michels**, and N. Gadura, 2012. Membrane lipid peroxidation in copper alloy-mediated contact killing of *Escherichia coli*. *Appl. Environ. Microbiol.* **78**: 1776-1784.
- San, K, J. Long, **C.A. Michels**, and N. Gadura, 2015. Antimicrobial copper alloy surfaces are effective against vegetative but not sporulated cells of Gram-positive *Bacillus subtilis*. *MicrobiologyOpen* **4**(5): 753-763. DOI: 10.1002/mbo3.276
- Cheema, S.^D and **C. A. Michels**. *SNF1* is required at a post-transcriptional level for the expression of Mal61 maltose permease protein. Manuscript in preparation.

PRESENTATIONS AT SCIENTIFIC MEETINGS

- Michels, C.A.** and S. Dhar, 1977. Catabolite repression resistant mutants in *Saccharomyces carlsbergensis*. Cold Spring Harbor Laboratory Meeting on the Molecular Biology of Yeast, Cold Spring Harbor Laboratory, NY.
- Klar, A.J.S., J.N. Strathern, J. Hicks and **C.A. Michels**, 1979. Mechanism of mating-type gene transposition in yeast. Annual Meeting of the American Society of Microbiology, Miami Beach, FL.
- Michels, C.A.**, K. Hahnenberger and Y. Sylvestre, 1981. Pleiotropic mutants regulating resistance to glucose repression are allelic to *HXK2*. Cold Spring Harbor Laboratory Meeting on the Molecular Biology of Yeast, Cold Spring Harbor Laboratory, NY.
- Michels, C.A.** and R.B. Needleman, 1982. Organization of the *MAL* loci in the *Saccharomyces* yeasts. Annual Meeting of the Genetics Society of America, Yale University, CT.
- Needleman, R.B. **C.A. Michels**, R.A. Dubin and R. Perkins, 1983. The *MAL6* gene is a complex locus. Cold Spring Harbor Meeting on the Molecular Biology of Yeast, Cold Spring Harbor Laboratory, NY.
- Michels, C.A.**, M.J. Charron and R.B. Needleman, 1984. The *MAL* loci of *Saccharomyces* are a small family of dispersed repeated genes. UCLA Symposium on Genome Rearrangement, Steamboat Springs, CO.
- Michels, C.A.**, R.A. Dubin, D. Gosset, E.L. Perkins and R.B. Needleman, 1984. The roles of the *MAL62* and *MAL63* genes in the fermentation of maltose. The XII International Conference on Yeast Genetics and Molecular Biology, Edinburgh, Scotland.
- Charron, M.J., R.B. Needleman and **C.A. Michels**, 1985. The molecular organization of the *MAL* loci of *Saccharomyces*. The Fourth Summer Symposium in Molecular Biology, Pennsylvania State University, PA.
- Chang, Y.S., R.A. Dubin, E.L. Perkins, **C.A. Michels** and R.B. Needleman, 1985. *MAL63* is a positive regulatory gene at the *MAL6* locus of *Saccharomyces carlsbergensis*. Cold Spring Harbor Meeting on the Molecular Biology of Yeast, Cold Spring Harbor, NY.
- Michels, C.A.**, R.A. Dubin, E.L. Perkins and R.B. Needleman, 1985. Characterization of a second trans-acting regulatory element controlling maltose fermentation. Cold Spring Harbor Meeting on the Molecular Biology of Yeast, Cold Spring Harbor, NY.
- Levine, J. and **C.A. Michels**, 1986. Suppression of the glucose repression insensitive phenotype of *HXK2* mutations by the cloned *HXK1* gene. Yeast Genetics and Molecular Biology Meetings, University of Illinois, Champaign-Urbana, IL.
- Charron, M.J., R.A. Dubin, R.B. Needleman and **C.A. Michels**, 1986. Two mechanisms for constitutivity at the *MAL* loci. The XIII International Conference on Yeast Genetics and Molecular Biology, Banff, Canada.
- Charron, M.J. and **C.A. Michels**, 1987. The structure of the *MAL* family of loci in *Saccharomyces*. Yeast Genetics and Molecular Biology Meetings, San Francisco, CA.
- Levine, J. and **C.A. Michels**, 1987. Deletion analysis of the *MAL61-MAL62* intergenic region. Yeast Genetics and Molecular Biology Meetings, San Francisco, CA.
- Kim, J., R.B. Needleman and **C.A. Michels**, 1987. Sequence of the *MAL63* gene and non-inducible *mal63* mutations. Yeast Genetics and Molecular Biology Meetings, San Francisco, CA.
- Johnston, M., J. Dover, J. Kim and **C.A. Michels**, 1988. Role of the cysteine-zinc finger in DNA binding. UCLA Symposium on DNA-Protein Interactions in Transcription, Keystone, CO.

- Johnston, M., J. Dover, J. Kim and **C.A. Michels**, 1988. Role of the cysteine-zinc finger in DNA binding. The XIV International Conference on Yeast Genetics and Molecular Biology, Helsinki, Finland.
- Young, L.A. and **C.A. Michels**, 1989. Sequence of *MAL64* mutant alleles encoding trans-acting factors for constitutive expression of the maltose fermentative genes. UCLA Symposium on Yeast and Filamentous Fungi, Steamboat Springs, CO.
- Young, L.A. and **C.A. Michels**, 1989. Sequence of *MAL64* mutant alleles encoding trans-acting factors for constitutive expression of the maltose fermentative genes. Yeast Genetics and Molecular Biology Meetings, Atlanta, GA.
- Cheng, Q. and **C.A. Michels**, 1989. The maltose permease encoded by *MAL61* exhibits both sequence and structural homology to other sugar transporters. Yeast Genetics and Molecular Biology Meetings, Atlanta, GA.
- Cheng, Q. and **C.A. Michels**, 1989. The maltose permease encoded by *MAL61* exhibits both sequence and structural homology to other sugar transporters. Yeast Cell Biology Meetings, Cold Spring Harbor Laboratory, NY.
- Young, L.A. and **C.A. Michels**, 1990. The regulation of maltose fermentation in *Saccharomyces*: Analysis of the cryptic nature of the MAL-activator encoded by *MAL64*. UCLA Meeting on Transcriptional Control of Cell Growth, Keystone, CO.
- Gibson, A.W. and **C.A. Michels**, 1990. Sequence comparison of wild type and constitutive alleles of *MAL* activator genes of *Saccharomyces cerevisiae*. XV International Congress on Yeast Genetics and Molecular Biology, The Hague, The Netherlands.
- Cheng, Q. and **C.A. Michels**, 1990. The high-affinity maltose transporter of *Saccharomyces cerevisiae* is encoded by the *MAL61* gene. XV International Congress on Yeast Genetics and Molecular Biology, The Hague, The Netherlands.
- Michels, C.A.**, J. H. Kim, L.A. Wojciechowicz and A.W. Gibson, 1991. Functional domains of the *MAL* activator. Yeast Genetics and Molecular Biology Meetings, San Francisco.
- Hu, Z. J.O. Nehlin, H. Ronne and **C.A. Michels**, 1993. Glucose regulation of *MAL* gene expression by *MIG1* and *SKO1*. Yeast Genetics and Molecular Biology Meetings, University of Wisconsin, Madison.
- Han, E.-K., F. Cotty and **C.A. Michels**, 1993. Glucose-induced inactivation of maltose permease in *Saccharomyces*. Yeast Genetics and Molecular Biology Meetings, University of Wisconsin, Madison.
- Gibson, A.W. and **C.A. Michels**, 1993. Molecular genetic analysis of *MAL43-C* encoding a constitutive *MAL*-activator in *Saccharomyces*. Yeast Genetics and Molecular Biology Meetings, University of Wisconsin, Madison.
- Han, E.-K., F. Cotty and **C.A. Michels**, 1993. Glucose-induced inactivation of maltose permease in *Saccharomyces*. FASEB Meeting on Ubiquitin and Proteolysis, Saxtons River, VT.
- Han, E.-K., F. Cotty and **C.A. Michels**, 1993. Glucose-induced inactivation of maltose permease in *Saccharomyces*. Yeast Cell Biology Meetings, Cold Spring Harbor Laboratory, NY.
- Gibson, A.W., **C.A. Michels**, L.A. Wojciechowicz and S.E. Danzi, 1994. Molecular genetic analysis of the functional domains of the *MAL*-activator of *Saccharomyces*. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.

- Jiang, H., E.-K. Han, Z. Hu, and **C.A. Michels**, 1994. *HXK2*-dependent glucose regulation of maltose fermentation. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- Jiang, H., I. Medintz, E.-K. Han, and **C.A. Michels**, 1995. Glucose-induced inactivation of maltose permease is dependent on endocytosis and vacuolar proteolysis. Yeast Cell Biology meetings, Cold Spring Harbor Laboratory, NY.
- Gibson, A.W., L.A. Wojciechowicz, J.H. Kim, B. Zhang, Z. Hu, S. Danzi, X. Li, and **C.A. Michels**, 1995. Functional domains of the *Saccharomyces MAL*-activator: a model of maltose-regulated transcription activation. Cold Spring Harbor Laboratory, NY.
- Jiang, H., I. Medintz, E.-K. Han, and **C.A. Michels**, 1995. Glucose-induced inactivation of maltose permease is dependent on endocytosis and vacuolar proteolysis. American Society for Cell Biology Meeting, Washington, D.C.
- Michels, C.A.**, H. Jiang, I. Medintz, W. Cui, 1996. Glucose sensing and signaling pathways for glucose-induced inactivation of maltose permease. Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison.
- Danzi, S.E. and **C.A. Michels**, 1996. Charged-cluster to alanine scanning mutagenesis of the regulatory domain of the Mal-activator protein. Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison.
- I. Medintz, H. Jiang, W. Cui, and **C.A. Michels**, 1996. Role of the ubiquitin-conjugating enzymes in the glucose-induced inactivation of maltose permease. Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison.
- Danzi, S.E. and **C.A. Michels**, 1996. Charged-cluster to alanine scanning mutagenesis of the regulatory domain of the *MAL*-activator protein. Yeast Genetics and Human Disease Meeting, Johns Hopkins University, Baltimore.
- I. Medintz, H. Jiang, W. Cui, and **C.A. Michels**, 1996. Role of the ubiquitin-conjugating enzymes in the glucose-induced inactivation of maltose permease. Yeast Genetics and Human Disease Meeting, Johns Hopkins University, Baltimore.
- I. Medintz, H. Jiang, W. Cui, and **C.A. Michels**, 1996. Role of the ubiquitin-conjugating enzymes in the glucose-induced inactivation of maltose permease. International Congress on Cell Biology, San Francisco.
- I. Medintz, W. Cui, H. Jiang, and **C.A. Michels**, 1997. Role of the ubiquitin-conjugating enzymes in the glucose-induced inactivation of maltose permease. 18th International Conference on Yeast Genetics and Molecular Biology, Stellenbosch University, Stellenbosch, South Africa.
- I. Medintz, W. Cui, H. Jiang, and **C.A. Michels**, 1997. Role of the ubiquitin-conjugating pathway in the glucose-induced inactivation of maltose permease in *Saccharomyces*. The Biology of Proteolysis. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
- H. Jiang, I. Medintz, and **C.A. Michels**, 1997. Two glucose signaling pathways stimulate glucose-induced inactivation of maltose permease in *Saccharomyces*. Yeast Cell Biology. Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
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- Z. Hu, H. Jiang, B. Zhang, P.W. Sherwood, and **C.A. Michels**, 1998. Identification of novel *HXK2*-, *REG1*-, and *GRR1*-dependent mechanisms through which glucose inhibits

- maltose induction of *MAL*-activator function. Yeast Genetics and Molecular Biology Meetings, University of Maryland, College Park.
- I. Medintz, X. Wang, T. Hradek, and **C.A. Michels**, 1998. Mutation analysis of the cytoplasmic C-terminal and N-terminal domains of maltose permease. Yeast Genetics and Molecular Biology Meetings, University of Maryland, College Park.
- C. A. Michels** and Y. Yue, 1999. Snf1 protein kinase is required post-transcriptionally for the biosynthesis of maltose permease in *Saccharomyces*. At the Keystone Symposium on Protein folding, modification, and transport in the early secretory pathway, Copper Mountain, CO.
- C. A. Michels**, B. Zhang, and S. E. Danzi, 1999. Constitutive and noninducible mutations of the *Saccharomyces MAL*-activator define regulatory subdomains with distinct functions in induction. Workshop and poster presentation at the XIX International Conference on Yeast Genetics and Molecular Biology, Rimini, Italy.
- C. A. Michels**, Z. Hu, H. Jiang, S. Liu, I. Medintz, Y. Yue, Z. Wang, and B. Zhang, 1999. Glucose blocks maltose induction of *MAL* gene expression via multiple mechanisms. Yeast Cell Biology meetings, Cold Spring Harbor Laboratory, NY.
- X. Wang and **C. A. Michels**, 1999. Maltose permease is both a maltose transporter and a maltose receptor signaling *MAL* gene induction. Yeast Cell Biology meeting, Cold Spring Harbor Laboratory, NY.
- Y. Yue, Z. Hu, and **C. A. Michels**, 1999. Analysis of Mig1p-independent glucose inhibition. Yeast Cell Biology meetings, Cold Spring Harbor Laboratory, NY.
- S. Liu, L. Robinson, and **C. A. Michels**, 1999. Role of casein kinase I (*YCK1,2*) in the glucose-induced inactivation of maltose permease. Yeast Cell Biology meeting, Cold Spring Harbor Laboratory, NY.
- C.A. Michels**, Z. Hu, H. Jiang, S. Liu, I. Medintz, Y. Yue, Z. Wang, and B. Zhang, 1999. Speeding the transition from maltose to glucose utilization: Effects of glucose on the synthesis, secretion, and stability of maltose permease. Yeast Genetics and Molecular Biology Symposium in honor of Fred Sherman, University of Rochester Medical School, NY. October, 1999.
- C.A. Michels**, Z. Hu, H. Jiang, S. Liu, I. Medintz, Y. Yue, X. Wang, S. Cheema, B. Zhang, 2000. Maltose permease is the target of multiple glucose regulatory processes and is a key mediator of *MAL* gene induction. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- C.A. Michels**, K.A. Morano, B. Zhang, and M. Bali, 2001. Role of Hsp90 chaperone complex in *MAL* gene induction. Yeast Cell Biology Meeting, Cold Spring Harbor Laboratory, NY.
- X. Wang, N. Gadura, and **C.A. Michels**, 2001. Intracellular maltose is sufficient for *MAL* gene induction. Yeast Cell Biology meeting, Cold Spring Harbor Laboratory, NY.
- M. Bali, B. Zhang, K.A. Morano, and **C.A. Michels**, 2002. Role of Hsp90 chaperone complex in *MAL* gene induction. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- N. Gadura and **C.A. Michels**, 2002. The role of phosphorylation in glucose-induced inactivation in *Saccharomyces* maltose permease. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- X. Wang and **C.A. Michels**, 2002. Characterization of mutants constitutive for *MAL* gene expression in *Saccharomyces*. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.

- N. Gadura, L.C. Robinson, T. Hart-Williams, and **C.A. Michels**, 2003. A novel Glc7-Reg1 – Yck1,2 signaling pathway in the glucose-induced inactivation in *Saccharomyces* maltose permease. Yeast Cell Biology meetings, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- N. Gadura, L.C. Robinson, T. Hart-Williams, and **C.A. Michels**, 2003. The role of phosphorylation in the glucose-induced inactivation of *Saccharomyces* maltose permease. XXI International Conference on Yeast Genetics and Molecular Biology, Gotenberg, Sweden.
- X. Wang and **C.A. Michels**, 2003. Sin4p and Rgr1p are negative regulators of *Saccharomyces MAL* gene expression. Eukaryotic Transcription meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- Mehtap Bali, Bin Zhang, Fulai Ran, Kevin A. Morano, and **Corinne A. Michels**, 2004. The Hsp90 molecular chaperone complex Regulates maltose induction and stability of the *Saccharomyces MAL* gene transcription activator. Molecular Chaperone meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- N. Gadura, L.C. Robinson, and **C.A. Michels**, 2004. A novel Glc7-Reg1 – Yck1,2 signaling pathway in the glucose-induced inactivation in *Saccharomyces* maltose permease. Special Meeting of the Biochemical Society on Nutrient Sensing Through the Plasma Membrane in Eukaryotes, Cirencester, England.
- Saima Cheema and **C. A. Michels**, 2005. *SNF1* is required at a post-transcriptional level for the expression of Mal61 maltose permease protein. Yeast Cell Biology meetings, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- Gadura, N., L.C. Robinson, and **C.A. Michels**, 2006. Yck1,2 casein kinase type-1 signals to Glc7-Reg1 protein phosphatase to regulate the transport activity and glucose-induced inactivation of *Saccharomyces* maltose permease. Genetics Society of America meeting on Genetic Analysis: Model Organisms to Human Biology, San Diego, CA.
- Ran, F., M. Bali, and **C.A. Michels**, 2006. Analysis of defects in HSP90 chaperone complex interaction with mutant *MAL*-activator proteins. Molecular Chaperones and the Heat Shock Response meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- Ran, F., M. Bali, and **C.A. Michels**, 2006. Role of Hsp90 chaperone complex in *Saccharomyces MAL*-activator regulation as revealed by analysis of noninducible and constitutive mutant alleles. 3^d International Conference on The HSP90 Chaperone Machine, Monastery Seon, Germany.
- Ran, F., M. Bali, and **C.A. Michels**, 2007. Mutant *Saccharomyces MAL*-activator alleles define distinct *in vivo* complexes of the Hsp90/Hsp70 chaperone cycle. Yeast Cell Biology meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.
- Ran, F. and **C.A. Michels**, 2008. Aha1 cochaperone is a negative regulator of *Saccharomyces MAL*-activator and acts early in its activation by the Hsp90/Hsp70 chaperone machine. Genetics Society of America meeting on Genetic Analysis: Model Organisms to Human Biology, San Diego, CA.
- Ran, F. and **C.A. Michels**, 2008. Aha1 cochaperone is a negative regulator of *Saccharomyces MAL*-activator and acts early in its activation by the Hsp90/Hsp70 chaperone machine. Molecular Chaperones and the Heat Shock Response meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.

Young, T., S.A. Rotenberg, **C.A. Michels**, and N. Gadura, 2008. Functional significance of PKC α and Hsp90 interactions in a yeast model. Molecular Chaperones and the Heat Shock Response meeting, Cold Spring Harbor Laboratories, Cold Spring Harbor, NY.

INVITED TALKS

- 1977 The mechanism of suppressivity in cytoplasmic *petites* of yeast. Brooklyn College Conference on the Molecular Biology of Microorganisms, Brooklyn College of CUNY, NY.
- 1980 The how and why of genetic engineering. The Paul D. Merrick Research Laboratory of the International Nickel Company.
- 1981 The *MAL* gene system in yeast. Queens College Biomedical Research Symposium, Queens College of CUNY, NY.
- 1982 The how and why of genetic engineering. Queens College Sigma Xi.
- 1982 Genetic engineering. Queens College Women's Club.
- 1982 The regulation of sugar fermentation in the *Saccharomyces* yeasts. New York University Dental School, Department of Microbiology.
- 1982 The *MAL* gene family of the *Saccharomyces* yeasts. The New York Metropolitan Area Yeast Club.
- 1983 Glucose repression and maltose fermentation in the *Saccharomyces* yeasts. St. Johns University, Department of Biology.
- 1983 Thirty years of DNA. The Queens College Scholars Program.
- 1983 The *MAL6* locus of *Saccharomyces carlsbergensis*. The XV International Congress of Genetics, New Delhi, India.
- 1984 The regulation of maltose fermentation in *Saccharomyces*. Brooklyn College Biology Department.
- 1985 The *MAL6* locus of *Saccharomyces* is a complex locus controlling the fermentation of maltose. Queens College Department of Biochemistry.
- 1985 The regulation of maltose fermentation in *Saccharomyces*. Columbia University Department of Microbiology.
- 1986 The regulation of maltose fermentation in yeast. Queens College Biology Department.
- 1986 Two mechanisms for constitutivity at the *MAL* loci. Yeast Genetics and Molecular Biology Meetings, University of Illinois, Champaign-Urbana, IL.
- 1987 The regulation of maltose fermentation in *Saccharomyces*. SUNY-Stony Brook, Department of Biochemistry.
- 1988 The regulation of maltose fermentation in *Saccharomyces*. Medical School of CUNY, Department of Microbiology.
- 1989 The molecular evolution of the *MAL* loci. The New York Metropolitan Area Yeast Club.
- 1990 Comparison of two high-affinity maltose permeases from *Saccharomyces*. The 9th Small Meeting on Yeast Transport and Energetics, Madrid, Spain.
- 1991 The genetics of maltose fermentation in *Saccharomyces*: 50 years in the brewing. University of Iowa, Iowa City, Department of Biology.
- 1992 The genetics of maltose fermentation in *Saccharomyces*: 50 years in the brewing. St. Johns University, Department of Biology.
- 1993 Two maltose permeases in *Saccharomyces* with different substrate specificities. The New York Metropolitan Area Yeast Club.

- 1994 The regulation of *MAL* gene expression in *Saccharomyces*. University of Maryland, Baltimore County, Department of Biology.
- 1995 The regulation of *MAL* gene expression in *Saccharomyces*. The New York Area Metropolitan Yeast Club.
- 1996 Glucose-induced inactivation of maltose permease in *Saccharomyces*. City College of CUNY, Biology Department.
- 1996 Glucose sensing and signaling pathways for glucose-induced inactivation of maltose permease. Yeast Genetics and Molecular Biology Meeting, University of Wisconsin, Madison.
- 1996 Glucose-induced inactivation of maltose permease in *Saccharomyces*. Long Island Jewish Hospital, Program in Molecular and Cellular Medicine.
- 1997 Glucose-induced inactivation of maltose permease in *Saccharomyces*. Wayne State University Medical School, Institute of Chemical Toxicology.
- 1999 Constitutive and noninducible mutations of the *Saccharomyces MAL*-activator define regulatory subdomains with distinct functions in induction. XIX International Conference on Yeast Genetics and Molecular Biology, Rimini, Italy.
- 2000 Maltose permease is the target of multiple glucose regulatory processes and is a key mediator of *MAL* gene induction. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- 2000 The Glucose-induced proteolysis of Maltose Permease. St. John's University Biology Department
- 2000 Maltose sensing and signaling in *Saccharomyces* and its glucose regulation. The Banbury Meeting on "Sugar Sensing and Signaling in Plants and Other Organisms", The Banbury Center, Cold Spring Harbor Laboratory. October 29-November 1, 2000.
- 2002 Role of Hsp90 chaperone complex in *MAL* gene induction. Yeast Genetics and Molecular Biology Meetings, University of Washington, Seattle.
- 2008 Regulation of the of the *Saccharomyces MAL*-activator by the Hsp90/Hsp70 Chaperone Machine. St. John's University Department of Biological Sciences
- 2011 Membrane lipid peroxidation plays a crucial role in copper alloy mediated contact killing of *Escherichia coli*. Special Symposium on Mechanisms of Copper Killing, Medical Biodefense Conference, Bundeswehr Institute of Microbiology, Munich Germany