BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Theodore C. White	Member
eRA COMMONS USER NAME twhite	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Cornell University, Ithaca, N.Y.	B.S.	1975-1978	Genetics & Biochemistry
University of Michigan, Ann Arbor, Michigan	Ph.D.	1978-1984	Cell & Molecular Biology
Dr. P. Borst Lab., Netherlands Cancer Institute, Amsterdam, The Netherlands	Postdoctoral Fellowship	1985-1988	Molecular Parasitology
Dr. C.C. Wang Lab., University of CA at San Francisco, California	Postdoctoral Fellowship	1989-1990	Molecular Parasitology
Dr. N. Agabian Lab., University of CA at San Francisco, California	Postdoctoral Fellowship	1990	Molecular Mycology
Cold Spring Harbor Laboratory		1995	Yeast Genetics Course

A. Positions and Honors

Positions

1990-1991 Postgraduate Researcher, Dr. N. Agabian Lab., University of CA at San Francisco, CA
1991-1996 Assist. Res. Biochemist I & II, Dr. N. Agabian Lab., University of CA at San Francisco, CA
1996-1999 Staff Scientist, Seattle Biomedical Research Institute, Seattle, WA
1996-2001 Assistant Professor, Dept. of Pathobiology, University of Washington, Seattle, WA
1999-2003 Senior Scientist, Seattle Biomedical Research Institute, Seattle, WA
2000-2003 Associate Member, Seattle Biomedical Research Institute, Seattle, WA
2001-2005 Associate Professor, Dept. of Pathobiology, University of Washington, Seattle, WA
2003-present Member, Seattle Biomedical Research Institute, Seattle, WA
2004-present Adjunct Professor, Dept. of Microbiology, University of Washington, Seattle, WA
2005-2008 Professor, Dept. of Pathobiology, University of Washington, Seattle, WA
2005-present Adjunct Professor, Dept. of Oral Biology, University of Washington, Seattle, WA
2007-present Adjunct Professor, Dept, of Global Health, University of Washington, Seattle, WA

Honors and Professional Activities

1985-1987 N.I.H./N.I.A.I.D. Postdoctoral Fellowship
1990-1991 New Investigator Award, Center for AIDS Research, UCSF
1992-1994 New Investigator Award, University Wide AIDS Research Program, State of California.
1997-1999 New Investigator Award, Murdock Charitable Trust
1997-1999 Investigator Award in Molecular Pathogenic Mycology, Burroughs Wellcome
1998-2004 Member of NIH study section ARR4
2004-2007 Chair Elect/Chair/Past Chair, Division F Medical Mycology, American Society for Microbiology
2008-2010 ASM Council - Division Councilor at Large, American Society for Microbiology

B. Most recent peer-reviewed publications (from a total of 71)

1. Naglik, J.R., Newport, G., **White, T.C.**, Fernandes-Naglik, L.L., Greenspan, J.S., Greenspan, D., Sweet, S.P., Challacombe, S.J. and Agabian, N. (1999) In vivo analysis of secreted aspartyl proteinase expression in human oral candidiasis. Infection and Immunity 67:2482-2490.
2. Marr, K.A., Rustad, T.R., Rex, J.H., and **White, T.C.** (1999) The trailing endpoint phenotype in antifungal susceptibility testing is pH-dependent. Antimicrobial Agents and Chemotherapy 43(6): 1383-1386
3. Fung-Tomc, J.C., **White, T.C.**, Minassian, B., Huczko, E. and Bonner, D.P. (1999) In vitro antifungal activity of BMS-207147 and itraconazole against yeast strains that are non-susceptible to fluconazole. Diagnostic Microbiology and Infectious Disease 35(1):163-167.
4. Marr, K.A., Seidel, K., **White, T.C.** and Bowden, R.A. (2000) Candidemia in allogeneic blood and marrow transplant recipients: evolution of risk factors after the adoption of prophylactic fluconazole. J. of Infect. Dis. 181:309-316.
5. Lamb, D.C., Kelly, D.E., **White, T.C.** and Kelly, S.L. (1999) The R467K amino acid substitution in *Candida albicans* sterol 14alpha-demethylase causes drug resistance through reduced affinity. Antimicrobial Agents and Chemotherapy 44(1):63-67.

6. Lyons, C.N. and **White, T.C.** (2000) Transcriptional analyses of antifungal drug resistance in *Candida albicans*. Antimicrobial Agents and Chemotherapy 44(9):2296-2303
7. Marr, K.A., Ha, K., Lyons, C.N., Rustad, T.R., and **White, T.C.** (2001) Inducible azole resistance associated with a heterogeneous phenotype in *Candida albicans*. Antimicrobial Agents and Chemotherapy 45(1):52-59.
8. **White, T.C.** (2001) Therapeutic failure and possible involvement of drug resistance: Known causes of systemic antimycotic treatment failure. Cutis 67(4): S38-41.
9. Harry, J.B., Song, J.L., Lyons, C.N. and **White, T.C**. (2001) Transcription initiation of genes associated with resistance in *Candida albicans*. Medical Mycology, 40: 73-81.
10. Rustad, T.R., Stevens, D.A., Pfaller, M.A. and **White, T.C.** (2002) Homozygosity at the *Candida albicans MTL* loci associated with azole resistance. Microbiology 148:1061-1072.
11. **White, T.C.**, Holleman, S., Dy, F., Mirels, L.F. and Stevens, D.A. (2002) Analysis of resistance mechanisms in clinical isolates of *Candida albicans*. Antimicrobial Agents and Chemotherapy 46(6):1704-1713.
12. Starr, J.R., **White, T.C.**, Leroux, B., Soares Luis, H., Bernardo, M., Leitao, J., and Roberts, M.C. (2002) Persistence of oral *Candida albicans* carriage among healthy Portuguese schoolchildren followed for three years. Oral Microbiology and Immunology 17:304-310.
13. Song, J.L. and **White, T.C.** (2003) *RAM2*: An Essential Gene in the Prenylation Pathway of *Candida albicans*. Microbiology 149(1):249-259.
14. Jurevic, R.J., Bai, M., Chadwick, R.B., **White, T.C**. and Dale, B.A. (2003) Single nucleotide polymorphisms in human beta-defensin 1: High throughput SNP assays and association with *Candida* carriage in type 1 diabetics and non-diabetic controls. J. Clin. Micro. 41(1): 90-96.
15. Song, J.L., Lyons, C.N., Holleman, S., Oliver, B.G. and **White, T.C.** (2003) Antifungal activity of fluconazole in combination with lovastatin and their effects on gene expression in the ergosterol and prenylation pathways in *Candida albicans*. Medical Mycology 41(5): 417-425.
16. Song, J.L., Harry, J.B., Eastman, R.T., Oliver, B.G. and **White, T.C.** (2004) The Candida albicans lanosterol 14-alpha-demethylase (ERG11) gene promoter is maximally induced after prolonged growth with antifungal drugs. Antimicrobial Agents and Chemotherapy 48(4): 1136-1144
17. Silver, P.M., Oliver, B.G. and **White, T.C.** (2004) Role of *Candida albicans* Upc2p transcription factor in drug resistance and sterol metabolism. Eukaryotic Cell 3(6): 1391-1397.
18. Stevens, D.A., **White, T.C.** et al. (2004) Studies of the paradoxical effect of caspofungin at high drug concentrations." Diagnostic Microbiology and Infectious Disease 51(3):173-178.
19. Harry, J.B., Oliver, B.G., Song, J.L., Little, J.T., Choiniere, J., and **White, T.C.** (2005) Drug induced regulation of the *MDR1* promoter in *Candida albicans*. Antimicrobial Agents and Chemotherapy 49(7): 2785-2792.
20. Rustad, T.R., Choiniere, J.H., Howard, D.H. and **White, T.C.** (2006) The *Candida albicans* mating type like locus (MTL) is not involved in chlamydospore formation. Medical Mycology 44: 677-681.
21. Oliver, B.G., Song, J.L., Choiniere, J.H., and **White, T.C.** (2007) cis-acting Elements within the Candida albicans ERG11 Promoter mediate the Azole Response through the Transcription Factor Upc2p. Eukaryotic Cell 6(12): 2231-2239. PMID: 17951521
22. Silver, P.M., Oliver, B.G. and **White, T.C.** (2007) Characterization of caspofungin susceptibilities by broth and agar in *Candida albicans* clinical isolates with characterized mechanisms of azole resistance." Medical Mycology 46 (3): 231-239.
23. Oliver, B.G., Silver, P.M., Marie, C., Hoot, S.J., Leyde, S.E. and **White, T.C.** (2007) Tetracycline alters antifungal drug susceptibility in pathogenic fungi. Microbiology 154 (3): 960-970.
24. Oliver, B.G., Silver, P.M. and **White, T.C.** (2008) Polyene susceptibility is dependent on nitrogen source in the opportunistic pathogen Candida albicans. Journal of Antimicrobial Chemotherapy 61: 1302-1308.
25. Richards, T.S., Oliver, B.G. and **White, T.C.** (2008) Micafungin Efficacy is Not Influenced by Azole Resistance Mechanisms in Candida albicans. Journal of Antimicrobial Chemotherapy 62: 349-355; (doi:10.1093/jac/dkn156).
26. Hoot, S.J., Oliver, B.G. and **White, T.C.** (2008) *Candida albicans UPC2* is transcriptionally induced in response to antifungal drugs and anaerobicity through Upc2p dependent and independent mechanisms. Microbiology (in press)
27. Marie, C., Leyde, S.E., and **White, T.C.** (2008) Dual localization of sterol regulatory elements in *S. cerevisiae*. Fungal Genetics and Biology (E-publication ahead of print: doi: 10.1016/j.fgb.2008.07.004).
28. **White, T.C.**, Oliver, B.G., Gräser, Y. and Henn, M.R. (2008) Generating and testing molecular hypotheses in the Dermatophytes. Eukaryotic Cell 7(8): 1238-1245. (doi:10.1128/EC.00100-08).

C. Research Support

ACTIVE

R01 DE17078 (T. White, PI) 2/1/07-1/31/11
NIH National Inst. of Dental & Cranofacial Research
AIDS Related Oral Candidiasis: Drugs, Sterols and Fungal Cells
The long-range objective of this study is to understand how a fungal cell responds to azoles by studying drug import across the plasma membrane, transcriptional activation of the sterol pathway, and environmental factors that alter these two processes.

R01 DE11367 (T. White, PI) 5/1/03-4/30/09 (no cost extension)
NIH National Inst. of Dental & Cranofacial Research
Azole Drug Resistant Candidiasis in HIV Infections
The long-range objective of this study is to understand the genetic basis behind the emergency of antifungal resistance of *Candida albicans* in the HIV infected population.

R21 DE18786 (T. White, PI) 3/1/08-2/28/10
NIH National Inst. of Dental & Cranofacial Research
Glucan Binding to Azole Drugs: A Novel Resistance Mechanism in *Candida albicans*
The long range objective of this study is to understand the role of glucan in the cell wall in azole drug resistance.

Overlap
No overlap in the grants.

COMPLETED
R01 DE14161 (T. White, PI) 4/1/01-2/28/06
NIH National Inst. of Dental & Cranofacial Research
Azoles and Candida in AIDS - A Whole Cell Response
The goal of this grant was to understand the effect of azole resistance on virulence and other characteristics of the fungal pathogen *Candida albicans* including cell morphology, switching, mating, and protease expression.

R21 DE015528-01 (T. White, PI) 9/1/03 – 6/30/05
NIH National Inst. of Dental & Cranofacial Research
In Vivo Expression of Candida Drug Resistance Genes
The long-range objective of this study was to characterize the quantitative expression patterns of *C. albicans* resistance genes in oral samples from HIV patients to understand the mechanisms of resistance in vivo.

CANCIDAS grant (T. White, PI) 1/1/04 – 1/31/05
Merck School Grants
Caspofungin Susceptibility of Azole-Resistant *Candida albicans*
The objective of this study was to determine the caspofungin susceptibility of 70 strains of *C. albicans* with well characterized mechanisms of azole resistance.

R01 AI64085 (B.Wong, PI; T. White subcontract) 5/15/05-4/30/06
NIH National Inst. of Allergy and Infectious Diseases
Mechanism of Drug Resistance in Candida Albicans
For this subcontract, Dr. White's laboratory performed susceptibility testing and gene expression studies on strains from Dr. Wong.