

Curriculum Vitae

William W. Turner, Jr.

Education:

Massachusetts Institute of Technology
1963-1967 S. B. (Chemistry)

Purdue 1968-1971 M. S. (Chemistry)

Professional Experience:

Eli Lilly & Company:	
Associate Organic Chemist	1967-1970
Organic Chemist	1970-1973
Assistant Senior Organic Chemist	1973-1989
Associate Senior Organic Chemist	1989-1994
Senior Organic Chemist	1994-2001
Research Scientist	2001-2003
Indiana University	
Research Associate	2007

Professional Societies:

American Chemical Society

Patents

Turner W. Patent #US3932493-Propiophenones, (alkylamino)bis-. Issued January 13, 1976.

Turner W. Patent #US4153695-Imidazo(1,2-C)pyrimidines, 2-dihydro-, antiviral agents and immune regulants. Issued May 8, 1979.

Turner W, Campbell J and Smith G. Patent #US5135955-Propanamine derivatives. Issued August 4, 1992.

Borromeo P, Jamison J, Rodriguez M, Turner W and Vasudevan V. Patent #US5646111-Cyclic peptide antifungal agents. Issued July 8, 1997.

Jamison J, Rodriguez M, LaGrandeur L, Turner W and Zweifel M. Patent #US5652213-Cyclic peptide antifungal agents. Issued July 29, 1997.

Turner W and Henle S. Patent #US5693611-Cyclic peptide antifungal agents. Issued December 2, 1997.

Turner W and Borromeo P. Patent #US5786325-Cyclic peptide antifungal agents and methods of making and using. Issued July 28, 1998.

Burkhardt F, Debono M, Nissen J and Turner W. Patent #US5932543-Cyclic peptide antifungal agents and process for preparation thereof. Issued August 3, 1999.

Burkhardt F, Debono M, Nissen J and Turner W. Patent #US5965525-Cyclic peptide antifungal agents. Issued October 12, 1999.

Burkhardt F, Debono M, Nissen J and Turner W. Patent #US6384013-Cyclic peptide antifungal agents and process for preparation thereof. Issued May 7, 2002.

Borromeo P, Cohen J, Gregory G, Henle S, Hitchcock S, Jungheim L, Mayhugh D, Shepherd T and Turner W. Patent #US6653281-Ring modified cyclic peptide analogs. Issued November 25, 2003.

Burkhardt F, Debono M, Nissen J and Turner W. Patent #US6743777-Cyclic peptide antifungal agents and process for preparation thereof. Issued June 1, 2004.

Book Chapters

Current W, Tang J, Boylan C, Watson P, Zeckner D, Turner W, Rodriguez M, Dixon C, Ma D and Radding J. "Glucan biosynthesis as a target for antifungals: the echinocandin class of antifungal agents." in *Antifungal Agents Discovery and Mode of Action*; G.K. Dixon, L.G. Copping, D.W. Hollomon, editors, Bios Scientific Publishers: 143-160,1995.

Turner W* and Current W*. "Echinocandin antifungal agents" in *Biotechnology of Industrial Antibiotics*, 2nd edition, W. R. Strohl ed., Marcel Dekker Publications: 315-334, 1997.

Papers

Booher R, Turner W, Smits S and Pohland A. Various 5-substituted and 2,5-disubstituted 1,3-dioxanes, a new class of analgesic agents. *J. Med. Chem.* 20:885-890, 1977.

Turner W*, Booher R, Smits S and Pohland A. Synthesis of two metabolites of (+)-propoxyphene. *J. Med. Chem.* 20:1065-1068, 1977.

Turner W*. A. Selective synthesis of the two diastereomers of 5-oxo-1H-pyrrolizine-3-carboxylic acid. *J. Het. Chem.* 23:327-328, 1986.

Debono M, Turner W*, LaGrandeur L, Burkhardt F, Nissen J, Nichols K, Rodriguez M, Zweifel M, Zeckner D, Gordee R, Tang J and Parr Jr. T. Semisynthetic chemical modification of the antifungal lipopeptide echinocandin B (ECB): structure-activity studies of the lipophilic and geometric parameters of polyarylated acyl analogs of ECB. *J. Med. Chem.* 38:3271-3281, 1995.

Turner W* and Rodriguez M. Medicinal chemistry of antifungal agents. *Cur. Pharm. Design* 2:209-224, 1996.

Jamison J*, LaGrandeur L, Rodriguez M, Turner W and Zeckner D. The synthesis and antifungal activity of nitrogen containing hemiaminal ethers of LY303366. *J. Antibiot.* 51:239-242, 1998.

Radding J*, Heidler S and Turner W. Photoaffinity analogs of the semisynthetic echinocandin LY303366: identification of echinocandin targets in *Candida albicans*. *Antimic. Agents Chemo.* 42:1187-1194, 1998.

Astleford B, Brown F, Clayton M, Grutsch J, Turner W*, Udodong U* and Verral D. Studies on the phosphorylation of LY303366. *Tetrahedron Letters* 39: 6115-6118, 1998.

Rodriguez M*, Vasudevan V, Jamison J, Borromeo P and Turner W. The synthesis of water-soluble prodrug analogs of Echinocandin B. *J. Bioorg. Chem. Lett.* 9:1863-1868, 1999.

Jamison J, Levy S, Sun X, Zeckner D, Current W, Zweifel M, Rodriguez M, Turner W, Chen S*. Syntheses and antifungal activity of pseudomycin side-chain analogues. Part 1. *Bioorg Med Chem Lett.* 10: 2101-2105, 2000.

Oral Presentations

Turner W*, Burkhardt F, Shaffer S, Nissen J, Clingerman K, Debono M, LaGrandeur L, Rodriguez M, Zweifel M, Gordee R, Zeckner D, Current W, Boylan C, Parr Jr. T, Tang J and Beaulieu D. New echinocandin antifungal agents. Opportunistic Infections Symposium, 205th ACS National Meeting. March 28-April 2, 1993.

Turner W*. Orally active echinocandin analogs. Medicinal Approaches to Antifungal Agents Symposium, Myco Pharmaceuticals Inc. December 7, 1993.

Current W, Boylan C, Raab P, Zeckner D, Butler T, Gordee R, Farmer J, Turner W, Burkhardt F, Debono M, LaGrandeur L, Rodriguez M and Zweifel M. Activity and efficacy of new echinocandin agents against *Pneumocystis carinii* and other pathogenic fungi. International Congress of Chemotherapy. June, 1993.

Turner W*. The design and synthesis of antifungal agents related to echinocandin natural products. University of Central Florida, March 21, 1997.

Turner W*. Echinocandin antifungals: from the lab to the clinic. Antifungal therapy symposium. 213th ACS National Meeting, San Francisco. April 13-17, 1997.

Poster Presentations

Turner W* and Lavender J. Synthesis and Herpes antiviral activity of substituted 2,3-dihydroimidazo[1,2-C]pyrimidines. 190th ACS National Meeting. September, 1985.

Paget C, Ruffolo R, Kurz K, Reamer M, Turner W and Suarez T. The pharmacological evaluation and the SAR studies leading to a novel antihypertensive agent LY127210. Medicinal Gordon Conference. August, 1985.

Paget C, Ruffolo R, Kurz K, Reamer M, Turner W and Suarez T. Synthesis and antihypertensive activity of 2-amino-1H-3-benzazepines. ASPET/ACS-Medicinal Chemistry Division Joint Meeting. August, 1985.

Turner W*, Gordee R and Zeckner D. Alkoxyphenylpropylamines as antifungal agents. 29th Interscience Conference on Antimicrobial Agents and Chemotherapy. September, 1989.

Turner W*, Debono M, Current W, Stratford R, Novilla M, Zornes L, Parr Jr. T, Tang J, Zeckner D, Butler T, Burkhardt F, Boylan C, Raab P, Farmer J, Flokowitsch J and Gordee R. Introduction to LY303366 - an orally active broad spectrum antifungal agent derived from echinocandin B. Focus on Fungal Infections 3. April 1-2, 1993.

Tang J, Parr Jr. T, Turner W, Debono M, LaGrandeur L, Burkhardt F, Rodriguez M, Zweifel M, Nissen J and Clingerman K. LY303366: a noncompetitive inhibitor of (1,3)-b-D-glucan synthases from *Candida albicans* and *Aspergillus fumigatus*. 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy. October, 1993.

Debono M, Turner W, LaGrandeur L, Molloy M, Burkhardt F, Rodriguez M, Zweifel M, Nissen J, Clingerman K, Gordee R, Zeckner D, Parr Jr. T. and Tang J. LY303366- a new semi-synthetic lipopeptide antifungal agent related to echinocandin B. 1. synthetic and structure activity studies. 33rd

Interscience Conference on Antimicrobial Agents and Chemotherapy.
October, 1993.

Turner W*, Debono M, LaGrandeur L, Burkhardt F, Rodriguez M, Zweifel M, Nissen J, Clingerman K, Gordee R, Zeckner D, Parr Jr. T. and Tang J. LY303366- a new semi-synthetic lipopeptide antifungal agent related to echinocandin B. 2. Rigid, Polyaromatic Sidechains providing Oral Activity. 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy. October, 1993.

Zornes L, Stratford R, Novilla M, Turner D, Boylan C, Boyll B, Butler T, Lin Y, Zeckner D, Turner W and Current W. Single dose IV bolus and oral administration pharmacokinetics of LY303366, a new lipopeptide antifungal agent related to echinocandin B, in female lewis rats and beagle dogs. 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy. October, 1993.

Turner W* and Schaffer S. Design and Synthesis of water-soluble echinocandin analogs. 207th ACS National Meeting, San Diego, CA. March 12-17, 1994.

Borromeo P*, Jamison J, Rodriguez M, Turner W and Vasudevan V. Water-soluble echinocandin analogs 1.- design and synthesis of phosphate, phosphonate and amino acid esters of LY303366. 213th ACS National Meeting, San Francisco. April 13-17, 1997.

Jamison J*, LaGrandeur L, Rodriguez M and Turner W. Water-soluble echinocandin analogs 2.- design and synthesis of polar hemiaminal ethers. 213th ACS National Meeting, San Francisco. April 13-17, 1997.