

Joseph Martin Ready

Department of Biochemistry
University of Texas Southwestern Medical
Center

5323 Harry Hines Blvd.
Dallas, TX 75390-9038
(214) 648-0313
joseph.ready@utsouthwestern.edu

Employment

2012 – Professor, UT Southwestern
2009 – Director, Medicinal Chemistry Laboratory, UT Southwestern
2007 – 2012 Associate Professor, UT Southwestern
2007 – Chair, chemistry training track, UT Southwestern
2003 – 2007 Assistant Professor, UT Southwestern and Southwestern Medical
Foundation Endowed Scholar

Education:

2001 Ph.D. in Chemistry
Harvard University, Cambridge, MA

1996 B.S. in Chemistry, Highest Honors, Highest Distinction
University of North Carolina, Chapel Hill, NC

Research Experience:

2001 - 2003 **Postdoctoral Fellow with John L. Wood**
Yale University, New Haven, CT
Studies towards the total synthesis of Welwitindolinone A

1997 - 2001 **Graduate Research with Eric N. Jacobsen**
Harvard University, Cambridge, MA
Development of catalytic asymmetric epoxide ring opening reactions

1995 - 1997 **Research Assistant with Masahiko Negishi**
National Institute of Environmental Health Sciences
Research Triangle Park, NC
Studies on sex-dependent expression of Cytochrome P450 2D9

1995 - 1996 **Undergraduate Research with Paul J. Kropp**
University of North Carolina, Chapel Hill, NC
Studies on alumina-mediated reactions

Awards and Fellowships:

- 2009 - 2011 Fellow of the Alfred P. Sloan Foundation
 2008 American Cancer Society Research Scholar
 2007 Amgen Young Investigator Award
 2006 NSF CAREER Award
 2003 Southwestern Medical Foundation Scholar in Biomedical Research
 2001 - 2003 NIH Postdoctoral Fellow (Yale University, 2001-2003)
 2000 - 2001 Eli Lilly and Company predoctoral fellowship (Harvard University)
 1999 - 2000 American Chemical Society, Organic Division predoctoral fellowship (Harvard University)
 1996 Phi Beta Kappa (University of North Carolina, Chapel Hill)

Independent Research Publications:

Kemp, S. W. P.; Szykaruk, M.; Stanoulis, K. N.; Wood, M. D.; Liu, E. H.; Willand, M. P.; Morlock, L.; Naidoo, J.; Williams, N. S.; Ready, J. M.; Namgano, T. J.; Beggs, S.; Salter, M. W.; Gordon, T.; Pieper, A. A.*; Borschel, G. H.* "Pharmacologic rescue of motor and sensory neurons by the neuroprotective compound P7C3 following neonatal nerve injury. *Neuroscience*, **2014**, in press. PMID: 25313000.

Wang, G.; Han, T.; Nijhawan, D.; Theodoropoulos, P.; Naidoo, J.; Yadavalli, S.; Mirzaei, H.; Pieper, A.; Ready, J. M.,* McKnight, S. L.* "The P7C3 Class of Neuroprotective Chemicals Function by Activating the Rate-limiting Enzyme in NAD Salvage." *Cell* **2014**, *158*, 1324-1334. PMID: 25215490.

Yin, T.C.; Britt, J.K.; De Jesus-Cortes, H.; Lu, Y.; Genova, R.M.; Khan, M.Z.; Voorhees, J.R.; Shao, J.; Katzman, A.C.; Huntington, P.J.; Wassink, C.; McDaniel, L.; Newell, E.A.; Dutca, L.M.; Naidoo, J.; Cui, H.; Bassuk, A.G.; Harper, M.M.; McKnight, S.L.; Ready, J.M.; Pieper, A.A. P7C3 Neuroprotective Chemicals Block Axonal Degeneration and Preserve Function after Traumatic Brain Injury. *Cell Reports* **2014**, *8*, 1731-1740. PMID: 25220467.

Zhang, W.; Ready, J. M.* "The Ketene-Surrogate Coupling: Catalytic Conversion of Aryl Iodides into Aryl Ketenes through Ynol Ethers." *Angew. Chem. Int. Ed.* **2014**, *52*, 8980-8984. PMID: 24975840.

Naidoo, J.; De Jesus-Cortes, H.; Huntington, P.; Estill, S; Morlock, L. K.; Starwalt, R.; Mangano, T. J.; Williams, N. S.; Pieper, A. A.*; Ready, J. M.* "Discovery of a Neuroprotective Chemical, (S)-N-(3-(3,6-Dibromo-9H-carbazol-9-yl)-2-fluoropropyl)-6-methoxy-pyridine-2-amine [(-)-P7C3-S243], with Improved Druglike Properties. *J. Med. Chem.* **2014**, 3746. PMID: 24697290.

Pieper, A. A.; McKnight, S. L.; Ready, J. M.* "P7C3 and an unbiased approach to drug discovery for neurodegenerative diseases." *Chem. Soc. Rev.* **2014**, *43*, 6716-6726. PMID:24514864.

Walker, A. K.; Rivera, P. D.; Wang, Q.; Chuang, J.-C.; Tran, S.; Osborne-Lawrence, S.; Estill, S. J.; Starwalt, R.; Huntington, P.; Morlock, L.; Naidoo, J.; Williams, N.; Ready, J. M.; Eisch, A. J.; Piper, A. A.*; Zigman, J. M.* “The P7C3-class of neuroprotective compounds exerts antidepressant efficacy in mice by increasing hippocampal neurogenesis.” *Mol. Psychiatry* **2014**, in press. PMID:24751964.

Brown, C.S.; Lee, M.S.; Leung, D.W.; Wang, T.; Xu, W.; Luthra, P.; Anantpadma, M.; Shabman, R.S.; Melito, L.M.; MacMillan, K.S.; Borek, D.M.; Otwinowski, Z.; Ramanan, P.; Stubbs, A.J.; Peterson, D.S.; Binning, J.M.; Tonelli, M.; Olson, M.A.; Davey, R.; Ready, J.M.; Basler, C.F.; Amarasinghe, G.K.* “In silico derived small molecules bind the filovirus VP35 protein and inhibit its polymerase cofactor activity,” *J. Mol. Biol.* **2014**, 2045. PMID: 24495995.

Wang, Y.; Wang, C.; Butler, J. R.; Ready, J. M.* “Dehydrogenative Coupling to Enable the Enantioselective Total Synthesis of (-)-Simaomicin α .” *Angew. Chem. Int. Ed.* **2013**, 52, 10,796. PMID: 24038677.

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Kilgore, J. A.; Du, X.; Melito, L.; Wei, S.; Wang, C.; Chin, H. G.; Posner, B.; Pradhan, S.; Ready, J. M.; Williams, N. S.* “Identification of DNMT1 Selective Antagonists Using a Novel Scintillation Proximity Assay.” *J. Biol. Chem.* **2013**, 288, 19673. PMID: 23671287.

Naidoo, J.; Bembien, C. J.; Allwein, S. R.; Liang, J.; Pieper, A. A.; Ready, J. M.* “Development of a Scalable Synthesis of P7C3-A20, a Potent Neuroprotective Agent.” *Tetrahedron Lett.* **2013**, 54, 4429.

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Tesla, R.; Wolf, H. P.; Xu, P.; Drawbridge, J.; Estill, S. J.; Huntington, P.; McDaniel, L.; Knobbe, W.; Morlock, L.; Naidoo, J.; Williams, N. S.; Ready, J. M.*; McKnight, S. L.*; Pieper, A. A.* “Neuroprotective Efficacy of Aminopropyl Carbazoles in a Mouse Model of Amyotrophic Lateral Sclerosis.” *Proc. Natl. Acad. Sci. USA*, **2012**, 109, 17016. PMID: 23027932.

Wang, Y.; Ready, J.M.* “Cyclocondensation of Amino-propargyl Silanes.” *Org. Lett.* **2012**, 14, 2308-2311. PMID: 22506695.

Antczak, M.; Ready, J.M.* “Two-, Three-, and Four-Component Coupling to form Isoquinolones Based on Directed Metalation.” *Chem. Sci.* **2012**, 3, 1450-1454.

Cai, F.; Pu, X.; Qi, X.; Radha, A.; Lynch, V.; Ready, J.M.* "Chiral Allene-Containing Phosphines in Asymmetric Catalysis." *J. Am. Chem. Soc.* **2011**, *133*, 18066-18069. PMID: 21972824.

Butler, J.R.; Wang, C.; Bian, J.; Ready, J.M.* "Enantioselective Total Synthesis of (-)-Kibdelone C." *J. Am. Chem. Soc.* **2011**, *133*, 9956-9959. PMID: 21648478.

Lee, K.S.; Ready, J.M.* "Oxidative Arylation of Homoallylic Alcohols" *Angew. Chem. Int. Ed.* **2011**, *50*, 2111-2114. PMID: 21344563

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Antczak, M.I.; Cai, F.; Ready, J.M.* "Asymmetric Synthesis of Tertiary Benzylic Alcohols" *Org. Lett.* **2011**, *13*, 184-187. PMID: 21142190.

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Espindola, A. P. D. M.; Crouch, R.; DeBergh, J. R.; Ready, J. M.; MacMillan, J. B.* "Deconvolution of Complex NMR Spectra in Small Molecules by Multi Frequency Homonuclear Decoupling (MDEC)." *J. Am. Chem. Soc.* **2009**, *131*, 15994-15995.

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Pu, X.; Ready, J. M.* "Direct and Stereospecific Synthesis of Allenes via Reduction of Propargylic Alcohols with Cp₂Zr(H)Cl" *J. Am. Chem. Soc.* **2008**, *130*, 10874-10875. PMID: 18652467.

DeBergh, J. R.; Spivey, K. M.; Ready, J. M.* "Preparation of Substituted Enol Derivatives from Terminal Alkynes and Their Synthetic Utility" *J. Am. Chem. Soc.* **2008**, *130*, 7828-7829. PMID: 18517202.

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Germanas, J. P.; Wang, S.; Miner, A.; Hao, W.; Ready, J. M.* “Discovery of Small-Molecule Inhibitors of Tyrosinase” *Bioorg. Med. Chem. Lett.* **2007**, 6871-6875.

Qi, X.; Ready, J. M.* “Copper-Promoted Cycloaddition of Diazocarbonyl Compounds and Acetylides” *Angew. Chem. Int. Ed.* **2007**, *46*, 3242-3244.

Zhang, D. H.; Ready, J. M.* “Iron-Catalyzed Carbometalation of Propargylic and Homopropargylic Alcohols” *J. Am. Chem. Soc.* **2006**, *128*, 15050-15051. PMID: 17117831.

Bian, J.; Wingerden, M. V.; Ready, J. M.* “Enantioselective Total Synthesis of (+)- and (-)-Nigellamine A₂” *J. Am. Chem. Soc.* **2006**, *128*, 7428-7429. PMID: 16756282.

Zhang, D. H.; Ready, J. M.* “Tandem Carbocupration/Oxygenation of Terminal Alkynes” *Org. Lett.* **2005**, *7*, 5681-5683.

Malosh, C. F.; Ready, J. M.* “Catalytic Cross-Coupling of Alkylzinc Halides with α -Chloroketones” *J. Am. Chem. Soc.* **2004**, *126*, 10240-10241.

Issued Patents

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. “Methods for Treating Parkinson’s Disease Using Pro-Neurogenic Compounds.” 2014, U.S. 8,877,797.

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. “Methods of treating traumatic brain injury using pro-neurogenic compounds.” 2014, US 8,791,149 B2.

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. “Methods of treating post-traumatic stress disorder using pro-neurogenic compounds.” 2014, US8,748,473 B2.

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. “Methods for treating amyotrophic lateral sclerosis using pro-neurogenic compounds.” 2014, US8735440 B2.

Schneider, J.; Hsieh, J.; Frantz, D. E.; McKnight, S. L.; Ready, J. M. “Chemical inducers of neurogenesis.” 2014, US 8,778,940 B2.

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. Proneurogenic Compounds. 2013. U.S. Patent No. 8,604,074.

McKnight, S.L.; Pieper, A.A.; Ready, J.M.; De Brabander, J. Proneurogenic Compounds. 2013. U.S. Patent No. 8,362,277.

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Composition and methods of modulating 15-PGDH activity. S. Markowitz, Y. You, J. M. Ready, B. Posner, J. Willson, M. I. Antczak, M. C. Moss. PCT/US2013/036790

Pieper, A. A.; McKnight, S. L.; Ready, J. M.; De Brabander, J. "Preparation of carbazolylaminopropanols and related compounds as pro-neurogenic compounds." PCT Int 2012/WO 2012006419

Pieper, A. A.; McKnight, S. L.; Ready, J. M.; De Brabander, J. "Proneurogenic Coomounds." US Patent 2010/020681.

Review Articles

Lynch, K. W.; Ready, J. M.* "Science at the interface of chemistry and biology at UT Southwestern" *ACS Chem. Biol.* **2007**, 512-514.

Publications from Postdoctoral Studies:

Reisman, S. E.; Ready, J. M.; Weiss, M. M.; Hasuoka, A.; Hirata, M.; Tamaki, K.; Ovaska, T. V.; Smith, C. J.; Wood, J. L.* "Evolution of a Synthetic Strategy: Total Synthesis of Welwitindolinone A Isonitrile." *J. Am. Chem. Soc.* **2008**, *130*, 2087-2100.

Reisman, S. E.; Ready, J. M.; Hasuoka, A.; Smith, C. J.; Wood, J. L.* "Total Synthesis of Welwitindolinone A Isonitrile" *J. Am. Chem. Soc.* **2006**, *128*, 1448-1449.

Ready, J. M.; Reisman, S. E.; Hirata, M.; Weiss, M. M.; Tamaki, K.; Ovaska, T.; Wood, J. L.* "A Mild and Efficient Synthesis of Oxindoles: Application to the Synthesis of Welwitindolinone A Isonitrile." *Angew. Chem. Int. Ed.*, **2004**, *43*, 1270-1272.

Publications from Graduate Studies:

Ready, J. M.; Jacobsen, E. N.* "A Practical Oligomeric [(salen)Co] Catalyst for Asymmetric Epoxide Ring-Opening Reactions." *Angew. Chem. Int. Ed.*, **2002**, *41*, 1374-1377.

Ready, J. M.; Jacobsen, E. N.* "Highly Active Oligomeric (salen)Co Catalysts for Asymmetric Epoxide Ring Opening Reactions." *J. Am. Chem. Soc.* **2001**, *123*, 2687-2688.

Ready, J. M.; Jacobsen, E. N.* "Asymmetric Catalytic Synthesis of α -Aryloxy Alcohols: Kinetic Resolution of Terminal Epoxides via Highly Enantioselective Ring Opening with Phenols" *J. Am. Chem. Soc.* **1999**, *121*, 6086-6087.