

## Joseph Martin Ready

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### ***Employment***

- 2003 – 2007 Assistant Professor, UT Southwestern and Southwestern Medical Foundation  
Endowed Scholar
- 2007 – 2013 Chair, chemistry training track, UT Southwestern
- 2009 – Director, Medicinal Chemistry Laboratory, UT Southwestern
- 2007 – 2012 Associate Professor, UT Southwestern
- 2012 – Professor, UT Southwestern
- 2012 – 2014 Consultant, Peloton Therapeutics
- 2014 – 2016 Consultant, Calico Life Sciences
- 2017 - Founder, Consultant, Rodeo Therapeutics
- 2017 - Founder, Consultant, Proneurotech Therapeutics
- 2017 - Bonnie Bell Harding Professor of Biochemistry
- 2019 - Vice Chairman, Department of Biochemistry, UT Southwestern

### ***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:***

- 2017 Top 20 Translational Researcher (*Nat. Biotech.* **2018** (36) 798)  
 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:***

Leng, L.; Fu, Y.; Liu, P.; Ready, J. M. Regioselective, Photocatalytic  $\alpha$ -Functionalization of Amines. *J. Am. Chem. Soc.* **2020**, *142*, 11972-11977. PMID: 32573218 DOI: 10.1021/jacs.0c03758.

Williams, N.S.; Gonzaels, S.; Naidoo, J.; Rivera-Cancel, G.; Voruganti, S.; Mallipeddi, P.; Theodoropoulos, P.C.; Geboers, S.; Chen, H.; Ortiz, F.; Posner, B.; Nijhawan, D.; Ready, J.M. Tumor-Activated Benzothiazole Inhibitors of Stearoyl-CoA Desaturase. *J. Med. Chem.* **2020**, DOI: 10.1021/acs.jmedchem.0c00899. PMID: 32787093.

Ullah, I.; Gahalawat, S.; Booshehri, L; Niederstrasser, H.; Majumdar, S.; Leija, C.; Bradford, J. M.; Hu, B.; Ready, J. M.; Wetzel, D. M. An Antiparasitic Compound from the Medicines for Malaria Venture Pathogen Box Promotes Leishmania Tubulin Polymerization. *ACS Infect. Dis.* **2020**, *6*, 2057-2072.

Madhusudhan, N; Hu, B.; Mishra, P.; Calva-Moreno, J. F.; Patel, K.; Boriack, R.; Ready\*, J. M.; Nijhawan, D. Target discovery of selective non-small-cell lung cancer toxins reveals inhibitors of mitochondrial complex I. *ACS Chem. Bio.*, **2020**, *15*, 158-170. PMID: 31874028.

Esparza, M.; Mor. A.; Niederstrasser, H.; White, L.; White, A.; Zhang, K.; Gao, S.; Wang, J.; Liang, J.; Sho, S.; Sakthivel, R.; Sathe, A.; Xing, C.; Muñoz-Moreno, R.; Shay, J.; García-Sastre, S.; Ready, J.; Posner, B.; Fontoura, B. M. Chemical Intervention of Influenza Virus mRNA Nuclear Export. *PLoS Pathogens*, **2020**, doi.org/10.1371/journal.ppat.1008407. PMID: 32240278.

Ma, A.J.; Ready, J.M. Synthetic Studies on the Kigamicins. *Org. Lett.*, **2019**, *21*, 1148-1151. PMID: 30714741.

Coffin, A.; Ready, J.M. A selective synthesis of (+)-Dysoline. *Org. Lett.*, **2019**, *21*, 648-651. PMID: 30653329.

- Panda, S.; Ready, J.M. Tandem allylation/1,2-boronate rearrangement for the asymmetric synthesis of indolines with adjacent quaternary stereocenters. *J. Am. Chem. Soc.* **2018**, *140*, 13242-13252. PMID: 30240211.
- Luthra, P.; Naidoo, J.; Pietzsch, C.A.; De, S.; Khadka, S.; Anantpadma, M.; Williams, C.G.; Edwards, M.R.; Davey, R.A.; Bukreyev, A.; Ready, J.M.; Basler, C.F. Inhibiting pyrimidine biosynthesis impairs Ebola virus replication through depletion of nucleoside pools and activation of innate immune responses. *Antiviral Res.* **2018**, *158*, 288-302. PMID: 30144461.
- Winterton, S. E.; Capota, E.; Wang, X.; Chen, H.; Mallipeddi, P. L.; Williams, N. S.; Posner, B. A.; Nijhawan, D.\*; Ready, J. M.\* Discovery of Cytochrome P450 4F11 Activated Inhibitors of Stearoyl Coenzyme A Desaturase. *J. Med. Chem.* **2018**, *61*, 5199-5221. PMID: 29869888.
- Desai, A.; Zhang, Y.; Park, Y.; Dawson, D.M.; Larusch, G.A.; Kasturi, L.; Wald, D.; Ready, J.M.; Gerson, S.L.; Markowitz, S.D. A second-generation 15-PGDH inhibitor promotes bone marrow transplant recovery independently of age, transplant dose, and granulocyte colony-stimulating factor support. *Haematologica*, **2018**, *103*, 1054-1064. PMID: 29472361.
- Luthra, P.; Liang, J.; Pietzsch, C.A.; Khada, S.; Edwards, M.R.; Wei, S.; De, S.; Posner, B.; Bukreyev, A.; Ready, J.M.; Basler, C.F. A high throughput screen identified benzoquinoline compounds as inhibitors of Ebola virus replication. *Antiviral Res.* **2018**, *150*, 193-201. PMID: 29294299.
- Zhang, W.; Ready, J.M.\* Total synthesis of the dictyodendrins as an arena to highlight emerging synthetic technologies. *Nat. Prod. Rep.* **2017**, *34*, 1010-1034. PMID: 28737179.
- Chen, B.; Fang, C.; Liu, P.; Ready, J.M.\* Rhodium-Catalyzed Enantioselective Radical Addition of CX<sub>4</sub> Reagents to Olefins. *Angew. Chem. Int. Ed.* **2017**, *139*, 8780-8784. PMID: 28544237.
- Kishore, A.H.; Liang, H.; Kanchwala, M.; Xing, C.; Ganesh, T.; Akgul, Y.; Posner, B.; Ready, J.M.; Markowitz, S.D.; Word, A.R. Prostaglandin dehydrogenase is a target for successful induction of cervical ripening. *Proc. Natl. Acad. Sci.*, **2017**, E4627. PMID: 28716915.
- Antczak, M. I.; Zhang, Y.; Wang, C.; Doran, J.; Naidoo, J.; Voruganti, S.; Williams, N, S.; Markowitz, S.D.\*; Ready, J.M.\* Inhibitors of 15-Prostaglandin Dehydrogenase to Potentiate Tissue Repair. *J. Med. Chem.* **2017**, *60*, 3979-4001. PMID: 28398755.
- Panda, S.; Ready, J.M.\* Palladium Catalyzed Asymmetric Three Component Coupling of Boronic Esters, Indoles and Allylic Acetates. *J. Am. Chem. Soc.* **2017**, *139*, 6038-6041. PMID: 28414430.
- Zhang, W.; Ready, J.M.\* A Concise Total Synthesis of Dictyodendrins F, H and I Using Aryl Ynol Ethers as Key Building Blocks. *J. Am. Chem. Soc.* **2016**, *138*, 10684-10692. PMID: 27471872
- Rujirawanich, J.; Kim, S.; Ma, A.-J.; Butler, JR.; Wang, C.; Rosen, M.; Posner, B.; Nijhwawn, D.; Ready, J.M.\* Synthesis and Biological Evaluation of Kibdelone C and Its Simplified Derivatives. *J. Am. Chem. Soc.* **2016**, *138*, 10561-10570. PMID: 27459345.
- Moss, M.; Han, X.; Ready, J.M.\* Zirconocene-Mediated Carbonylative Coupling of Grignard Reagents. *Angew. Chem. Int. Ed.* **2016**, *55*, 10017-10021. PMID: 27410720.

Winterton, S.E.; Ready, J.M.\* [3+2]-Cycloadditions of ynolates and azomethine imines. *Org. Lett.* **2016**, *18*, 2608-2611. PMID: 27218461.

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Chen, J.; Koswatta, P.; DeBergh, J. R.; Fu, P.; Pan, E.; MacMillan, J. B.; Ready, J. M.\* “Structure Elucidation of Nigriganoside A Through Enantioselective Total Synthesis.” *Chem. Sci.* **2015**, *6*, 2932-2937. PMID: 26877863.

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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**, *284*, 202-16. 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; PMCID: 4134717.

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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.

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

Cai, F.; Thangada, N. D.; Pan, E.; Ready, J. M.\* “On the Rapid Oxidation of Allene-Containing Phosphines.” *Organometallics*, **2013**, *32*, 5619.

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.; Bemben, 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.

De Jesús-Cortés, H.; Xu, P.; Drawbridge, J.; Estill, S. J.; Huntington, P.; Tran, S.; Britt, J.; Tesla, R.; Morlock, L.; Naidoo, J.; Melito, L. M.; Williams, N. S.; Ready, J. M.\*; McKnight, S. L.\*; Pieper, A. A.\* “Neuroprotective Efficacy of Aminopropyl Carbazoles in a Mouse Model of Parkinson’s Disease.” *Proc. Natl. Acad. Sci. USA*, **2012**, *109*, 17010. PMID: 23027934.

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. PMID: 21142190.

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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

MacMillan, K.S.; Naidoo, J.; Liang, J.; Melito, L.; Williams, N.S.; Morlock, L.; Huntington, P.J.; Estill, S.J.; Longgood, J.; McKnight, S.L.; Pieper, A.A.; De Brabander, J.K.; Ready, J.M.\* “Development of Proneurogenic, Neuroprotective Small Molecules.” *J. Am. Chem. Soc.* **2011**, *133*, 1428-1437. PMID: 21210688.

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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Pu, X.; Qi, X.; Ready, J. M.\* “Allenenes in Asymmetric Catalysis: Asymmetric Ring Opening of meso-Epoxides Catalyzed by Allene-Containing Phosphine Oxides” *J. Am. Chem. Soc.* **2009**, *131*, 10364-10365. PMID: 19722613.

Qi, X.; Ready, J. M.\* “Synthesis of Cyclopentenones from Cyclopropanes and Silyl Ynol Ethers” *Angew. Chem. Int. Ed.* **2008**, *47*, 7068-7070. PMID: 18666301.

Pu, X.; Ready, J. M.\* “Direct and Stereospecific Synthesis of Allenenes via Reduction of Propargylic Alcohols with  $\text{Cp}_2\text{Zr}(\text{H})\text{Cl}$ ” *J. Am. Chem. Soc.* **2008**, *130*, 10874-10875. PMID: 18652467.

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Liu, X.; Ready, J. M.\* “Directed Hydrozirconation of Homopropargylic Alcohols” *Tetrahedron*, **2008**, *64*, 6955-6960.

Zhang, D. H.; Ready, J. M.\* “Directed Hydrozirconation of Propargylic Alcohols” *J. Am. Chem. Soc.* **2007**, *129*, 12088-12089. PMID: 17850152.

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

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### ***Issued Patents***

Word, R. A.; Annavarapu, H. K.; Posner, B.; Ready, J.; Markowitz, S. Compositions and methods for modulating cervical ripening. 2019, WO 2019010482.

Markowitz, S.; Antczak, M.; Ready, J.; Zhang, Y. Preparation of thienopyridines and related compounds, their compositions and methods of modulating short-chain dehydrogenase activity. 2018, WO 2018218251.

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## ***Review Articles***

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## ***Publications from Postdoctoral Studies:***

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***Publications from Graduate Studies:***

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