

Professor Thomas J. Meade
Northwestern University
Eileen M. Foell Endowed Professor of Cancer Research
and
Professor of Chemistry, Professor of Molecular Biosciences, Professor of Neurobiology, Professor of
Biomedical Engineering and Professor of Radiology
Director of the Center for Advanced Molecular Imaging

Education

Postdoctoral Research Fellow. California Institute of Technology, 1987-89.
Advisor: Professor Harry B. Gray.

National Institutes of Health Postdoctoral Fellow. Harvard Medical School and the
Massachusetts General Hospital, 1985-1987. Advisor: Professor Thomas J. Brady.

Ph.D. in Inorganic Chemistry, The Ohio State University; Columbus, Ohio, 1985. Dissertation
Advisor: Professor Daryle H. Busch.

M.S. in Chemistry (Division of Biochemistry), The Ohio State University, Columbus Ohio,
1982. Thesis Advisor: Professor Perry A. Frey.

B.S. with Honors in Chemistry, Arizona State University; Tempe, Arizona, May, 1979. Honors
Thesis Advisor: Professor Therald Moellar.

Professional Experience

Professor of Biomedical Engineering, Northwestern University, (2011- present)

Director: Center for Advanced Molecular Imaging, Northwestern U. (2006- present)

Professor of Chemistry; Molecular Biosciences, Neurobiology and Radiology; Northwestern
University (2002- present)

Senior Research Faculty, Division of Biology and the Beckman Institute, California Institute of
Technology, (1991-2002).

Research Interests

Chemistry of Life Sciences, bioinorganic chemistry, biological molecular imaging with particular
emphasis on: Inorganic Chemistry, Electron Transfer Mechanisms, and Transcription Factors.

Honors and Awards

Stony Brook University, Franklin Lecturer, 2017
Elected Fellow, National Academy of Inventors 2017
Elected Fellow, Royal Society of Chemistry, 2016
The J. Stieglitz Award: The University of Chicago and the American Chemical Society, 2016
Elected Fellow, American Association of Advancement of Science, 2015
Catalyst Award, Northwestern University and City of Evanston, 2014
Duke University Hill Lecturer, 2014
World Molecular Imaging Society Fellow, 2012
American Chemical Society Fellow, 2011
Faculty Honor Roll, Associated Student Government, Northwestern University, 2008 & 2011
Society for Molecular Imaging Annual Exceptional Achievement Award, 2010
Musselman Award for Visiting Scientist, 2010
Illinois Biotechnology Industry Organization (iBIO) iCON Innovator Award, 2009

Miller Fellow, University of California Berkeley, 2009
Faculty Honor Roll, Associated Student Government, Northwestern University. 2008
Northwestern University Excellence in Teaching Award, 2008
William Beaumont Award: Wayne County Medical Society, 2007
Allen & Constance Ford Distinguished Award, CWR University, 2006
Eileen Foell Chair in Cancer Research, Northwestern University, 2005
Elected President – Society of Molecular Imaging 2005
FMC Award - Princeton University, 2004
Elkin Distinguished Investigators Cancer Award, Emory University, 2003
Frontier Lecturer, Texas A&M University, 2003
Neuroscience Award, Society for NeuroOncology
National Academy of Engineering Lecturer, Cleveland, Ohio, 2000
Pendergast Lecturer, University of Pennsylvania, 1999
American College of Neuropharmacology Lecturer, 1999
Grubstakes Award, Direct Detection of Gene Expression via MRI
Watson Lecturer, Caltech, 1997
NIH Postdoctoral Research Fellow, 1986
National Research Service Award, Harvard Medical School, 1985
B.S. in Chemistry with Honors Thesis, 1979

Professional Service

Elected: Northwestern University Faculty Senate, 2016-
Associate Editor, Chemical Science, 2015-
Inorganic Chemistry Division Chair, Northwestern University, 2015
ACS Division of Inorganic Chemistry, Bioinorganic Subdivision Chair, 2014
Dean's Advisory Council Member: School of Pharmaceutical Science and Technology, Tianjin University: 2013-2016.
NIH Intramural Review Board (NIBIB) 2011-2015
International Advisory Board, WIREs Nanomedicine and Nanotechnology, 2014-2016
Editorial Board, Theranostics, 2012-
SBCA Study Section Member, 2007-2011
Founder, Ohmx Inc., Evanston, IL, 2005
Co-Founder: Chemistry of Life Processes Institute, Northwestern University, 2004
Founder: PreDx Inc. 2004
Editorial Advisory Board: Accounts of Chemical Research, 2002-
Editorial Advisory Board: Inorganic Chemistry, 1999-
Program Workshop Chair, CTEP drug development program, NCI, 1999-2000
Editorial Advisory Board: Bioconjugate Chemistry, 1999-
Founder: Imaging in 2020; National Cancer Institute and NIBIB; 1999-present
Founder and CEO, Metaprobe Inc. Pasadena, CA. 1998-
Chairmen: After The Genome IV Conference; 1998
Guest Editor: Coordination Chemistry Review, 1998-99
Cofounder and Board Member, Clinical Micro Sensors Inc., Pasadena, CA. 1995.
Founder; "Seeing is Believing: A Classroom Tour of the Sciences." 1995.

Affiliations

American Chemical Society, American Association for the Advancement of Science, Royal Society of Chemistry, International Society for Magnetic Resonance in Medicine, Sigma Chi

Professor Thomas J. Meade
Honorary Research Society, Alpha Chi Sigma, New York Academy of Sciences, World
Molecular Imaging Society.

Publications

181 peer reviewed publications and 5 book chapters.

Patents

80 United States Issued Patents (> 200 Foreign Filings).

Invited/Plenary/Keynote Lectures at National & International Conferences:

129 Lectures in the United States, Europe and Asia

Invited Academic and Industrial Presentations:

188 invited academic and industrial lectures

Founder and Co-Founder of Three Biotechnology Companies:

Clinical MicroSensors, Predx Inc., and Ohmx, (1995-present)

Trainee History

Supervised 72 undergraduates, 82 graduate students and 35 postdoctoral fellows, 1992-present.

Publications

Selected Publications (2014-present)

Townsend TR Moyle-Heyrman G, Sukerkar PA, MacRenaris KW, Burdette JE, Meade TJ. "Progesterone-targeted Magnetic Resonance Imaging Probe Bioconjugate Chemistry. (2014) 25(8), 1428-1437. PMID: PMC4140536.

Heffern MC, Velasco PT, Matosziuk LM, Coomes JL, Karras C, Ratner MA, Klein WB, Eckermann AE, Meade TJ, "Modulation of Amyloid- β Aggregation by Histidine-coordinating Cobalt(III) Schiff Base Complexes" Chem Bio Chem (2014) Jul 21;15(11):1584-9. PMID: PMC4166533.

Preslar AT, Parigi G, McClendon MT, Sefick SS, Moyer TJ, Haney C, Waters EA, MacRenaris KW, Luchinat C, Stupp SI, Meade TJ, "Gd(III) Labeled Peptide Nanofibers for Reporting on Biomaterial Localization In Vivo." ACS Nano (2014) Jul 22;8(7):7325-32. PMID: PMC4216205.

Hung AH, Holbrook RJ, Rotz MW, Glasscock CJ, Mansukhani ND, MacRenaris KW, Manus LM, Duch MC, Dam KT, Hersam MC, and Meade TJ, "Graphene Oxide Enhances Cellular Delivery of Hydrophilic Small Molecules by Co-incubation" ACS Nano (2014) Oct 28;8(10):10168-77 PMID: PMC4212791.

Harrison VSR, Carney CE, Macrenaris KW and Meade TJ, "A Multimeric MR-optical Contrast Agent for Multimodal Imaging," Chem. Commun., (2014), Oct 9;50(78):11469-71. PMID:PMC4344311.

Rotz MW, Culver KSB, Parigi G, MacRenaris KW, Luchinat C, Odom TW, Meade TJ, "High Relaxivity Gd(III)-DNA Gold Nanostars: Investigation of Shape Effects on Proton Relaxation" ACS Nano. (2015) Mar 24;9(3):3385-96. PMID:PMC4489565.

Holbrook RM, Weinberg D, Peterson M, Weiss E, Meade TJ, "Light-Activated Protein Inhibition through Photoinduced Electron Transfer of a Ruthenium(II)-Cobalt(III) Bimetallic Complex" *JACS* (2015) Mar 11;137(9):3379-85. PMID: PMC4487626.

Carney CE, Lenov IL, Baker CJ, MacRenaris, KW, Eckermann AL, Sligar SG, Meade TJ, "Nanodiscs as a Modular Platform for Multimodal MR-Optical Imaging" *Bioconj Chem* (2015), May 20;26(5):899-905. PMID: PMC4486023.

Harrison VSR, Carney CE, Macrenaris KW, Waters EA, Meade TJ, "A Multimeric Near IR-MR Contrast Agent for Multimodal In Vivo Imaging" *J Am Chem Soc.* (2015) Jul 22;137(28):9108-16. PMID: PMC4512902

Vistain LF, Yamamoto N, Rathore R, Cha P, Meade TJ. "Targeted inhibition of Snail activity in breast cancer cells using a Co(III)-Ebox conjugate" *Chembiochem.* 2015 Sep; 16(14): 2065–2072. PMID: PMC4638217

Carney CE, MacRenaris KW, Meade TJ. "Water-Soluble Lipophilic MR Contrast Agents for Cell Membrane Labeling" *Journal of Biological Inorganic Chemistry* (2015) 2015 Sep;20(6):971-7. PMID: PMC4546878

Heffern MC, Reichova V, Coomes J, Harney A, Bajema EA, Meade TJ. "Tuning Cobalt(III) Schiff Base Complexes as Activated Protein Inhibitors." *Inorg Chem.* 2015 Sep 21; 54(18): 9066–9074. PMID: PMC4638226

Vistain LF, Rotz MW, Rathore R, Preslar AT, Meade TJ. "Targeted Delivery of Gold Nanoparticle Contrast Agents for Reporting Gene Detection by Magnetic Resonance Imaging" *ChemComm*, (2015), Dec 15;52(1):160-3. PMID: PMC4679476.

MacRenaris KW, Zhidong M, Krueger RL, Carney CE, Meade TJ. "A Cell Permeable Esterase-Activated Ca(II)-Sensitive MRI Contrast Agent" *Bioconjugate Chemistry*, (2016) Feb 17;27(2):465-73. PMID: PMC4776747

Hung AH, Lilley LM, Hu F, Harrison VS, Meade TJ. "Magnetic Barcode Imaging for Contrast Agents." *Magn Reson Med.* (2017), Mar;77(3):970-978. PMID: PMC5055837

Holbrook RJ, Rammohan N, Rotz MW, MacRenaris KW, Preslar AT, Meade TJ. "Gd(III)-Dithiolane Gold Nanoparticles for T1-Weighted Magnetic Resonance Imaging of the Pancreas," *Nano Letters* (2016), 16(5), 3202-3209. PMID: PMC5045863.

Preslar AT, Tantakitti F, Park KE, Zhang S, Stupp S, Meade TJ. "19F-Magnetic Resonance Imaging Signals from Peptide Amphiphile Nanostructures are Strongly Affected by their Shape" *ACS Nano* (2016) Aug 23;10(8):7376-84. PMID: PMC5036169.

Rammohan N, MacRenaris KW, Moore LK, Parigi G, Mastarone DJ, Manus LM, Lilley LM, Preslar AT, Waters EA, Filicko A, Luchinat C, Ho D, Meade TJ. "Nanodiamond-Gadolinium(III) Aggregates for Tracking Cancer Growth In Vivo at High Field". (2016) *Nano Lett.* 2016 Dec 14;16(12):7551-7564. PMID: PMC5482002.

Rammohan N; Holbrook RJ; Rotz MW; MacRenaris KW; Preslar AT; Carney CE; Reichova V; Meade TJ. "Gd(III)-Gold Nanoconjugates Provide Remarkable Cell Labeling for High Field MR Imaging" *Bioconjugate Chemistry* (2017) Jan 18;28(1):153-160. PMID: PMC5243168

Preslar AT, Lilley LM, Sato K, Zhang S, Chia ZK, Stupp SI, and Meade TJ. "Calcium induced morphological transitions in Peptide Amphiphiles detected by ¹⁹F-Magnetic Resonance Imaging" *ACS AML* (2017) Article ASAP. DOI: 10.1021/acsami.7b07828. [Epub ahead of print]

Verma KD; Massing JO; Kamper SG; Carney CE; MacRenaris; Basilion JP; Meade TJ: "Synthesis and evaluation of MR probes for targeted-reporter imaging," *Chem. Sci.*, 2017, (2017), 8, 5764-5768 PMID: PMC5621504