Curriculum Vitae

Brian M. Zeglis, Ph.D.

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Scientific Positions

Hunter College, City University of New York — New York, NY
- Full Professor, Department of Chemistry (Aug. 2022 – present)
- Associate Professor, Department of Chemistry (Sept. 2019 – Aug. 2022)
- Assistant Professor, Department of Chemistry (Jan. 2015 – Sept. 2019)

Memorial Sloan Kettering Cancer Center (Oct. 2015 – present) — New York, NY
- Assistant Attending Radiochemist (Affiliate), Department of Radiology

Weill Cornell Medical College (Mar. 2015 – present) — New York, NY
- Assistant Professor (Adjunct), Department of Radiology

Memorial Sloan Kettering Cancer Center (Sept. 2009 – Jan. 2015) — New York, NY
- Postdoctoral Research Fellow

California Institute of Technology (2004-2009) — Pasadena, CA
- Ph.D., Chemistry — June 2010

Yale University (2000-2004) — New Haven, CT
- B.S., summa cum laude, Chemistry — May 2004

Awards and Honors

Roger Tsien Award for Excellence in Chemical Biology, World Molecular Imaging Society	October 2022
PSC-CUNY Research Award, City University of New York	June 2019
William Stewart Travel Award	June 2019
President's Award for Excellence in Scholarly and Creative Achievement, Hunter College	June 2017
William Stewart Travel Award, City University of New York	March 2017
PSC-CUNY Research Award, City University of New York	May 2016
Feliks Gross Award, City University of New York	April 2016
Junior Faculty Research Award, City University of New York	Jan. 2016
William Stewart Travel Award, City University of New York	Oct. 2015
Chief Radiology Laboratory Research Fellow, MSKCC	Sept. 2013 – Jan. 2015
CMIIT Young Investigator Award, Society of Nuclear Medicine	June 2014
Alavi Mandell Award, Society of Nuclear Medicine	June 2014
Editor's Choice Award, Society of Nuclear Medicine	June 2014
Berson-Yalow Award, Society of Nuclear Medicine	June 2013
World Molecular Imaging Society Travel Award	Sept. 2012
Finalist, World Molecular Imaging Society Young Investigator Award	Sept. 2012
Society of Radiopharmaceutical Sciences Travel Award	Aug. 2011
Arthur Fleischer Award for Excellence in Chemistry, Yale University	May 2004
Saybrook College Marshall, Yale University	May 2004
Phi Beta Kappa, early induction, Yale University	May 2002

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Funding

Active Support

National Institutes of Health R01 Award — September 2023 – August 2028
"ImmunoPET Probes for the Imaging of Lyme Disease" (Contact PI)
Hunter College/CUNY/University of Tennessee Health Sciences Campus

National Institutes of Health R01 Award — July 2023 – June 2028
"Antibodies to Tumor-Derived Neoepitopes as Biomarkers and ImmunoPET agents For the Early Detection of Small Cell Lung Cancer" (MPI)
Fred Hutchinson Cancer Research Center/Hunter College/CUNY

National Institutes of Health R21 Award — Sept. 2023 – Aug. 2025
"Targeting DNA Mismatches for Auger Electron Radiotherapy" (Contact PI)
Hunter College/CUNY/MSKCC

Clinical and Translational Science Center Pilot Award — Sept. 2023 – Aug. 2025
"PET as a Diagnostic Tool for Endometriosis" (Contact PI)
Hunter College/CUNY/WCMC

National Institutes of Health R01 Award — July 2020 – June 2025
"Novel Transgenic Mouse Models Addressing Outstanding Translational Barriers in Antibody-Based Therapeutics " (MPI)
Rockefeller University/Hunter College/CUNY

Completed Support

National Institutes of Health R01 Award — July 2019 – June 2024
"Novel Reagents for Rapid and Stable Thiol-Based Bioconjugations" (Contact PI)
Hunter College/CUNY

Memorial Sloan Kettering Cancer Center Imaging and Radiation Sciences Award — Sept. 2021 – Aug. 2023
"Ovarian Cancer Theranostics: A MUC16-targeted Antibody for ImmunoPET Imaging and Radioimmunotherapy" (MPI)
Memorial Sloan Kettering Cancer Center/Hunter College

National Institutes of Health U01 Award — Dec. 2018 – Nov. 2023
"Pretargeted Clinical Imaging of CA19.9 in Pancreatic Cancer" (MPI)
Memorial Sloan Kettering Cancer Center/Hunter College/CUNY

National Institutes of Health R21 Award — June 2020 – May 2022
"A PET Radiotracer for the Diagnostic and Theranostic Imaging of Lyme Disease" (Contact PI)
Hunter College/CUNY

National Institutes of Health R01 Award — April 2016 – March 2021
"The Clinical PET Imaging of Metastatic Breast Cancer with Site-Specifically Labeled ^{89}Zr-Trastuzumab" (MPI)
Memorial Sloan Kettering Cancer Center/Hunter College/CUNY

Memorial Sloan Kettering Cancer Center Department of Surgery Award — Sept. 2018 – Aug. 2020
"Intraoperative Imaging of High Grade Serous Ovarian Cancer During Cytoreductive Surgery" (MPI)
Memorial Sloan Kettering Cancer Center/Hunter College/CUNY

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Cookies for Kids Cancer Research Project Award — Jan. 2016 – Dec. 2018
"The Development of Preclinical Validation of Site-Specifically Radiolabeled hu3F8 for the PET Imaging and Radioimmunotherapy of Neuroblastoma" (MPI)
Memorial Sloan Kettering Cancer Center

TeamConnor Childhood Cancer Foundation Research Project Award — Jan. 2016 – Dec. 2017
"Pretargeted Radioimmunotherapy of Pediatric Neuroblastoma" (PI)
Hunter College/CUNY

Hunter College Center for Translational and Biological Research Pilot Project Award — Jan. 2016 – Dec. 2017
"Pretargeted PET Imaging of Pancreatic Cancer" (PI)
Hunter College/CUNY

Weill Cornell Medical Center Clinical and Translational Science Center Pilot Award — Oct. 2015 – Sept. 2017
"Discovery of Targeted Teretoxin Imaging Agents" (MPI)
Hunter College/Memorial Sloan Kettering Cancer Center

National Institutes of Health K99/R00 Career Transition Award — July 2014 – June 2018
"Pretargeted Radioimmunotherapy Based on Bioorthogonal Click Chemistry" (PI)
Memorial Sloan Kettering Cancer Center/Hunter College/CUNY

Translational and Integrative Medicine Research Fund Grant — May 2014 – May 2015
"The First-in-Human Clinical Trial of a Pretargeted Methodology for the PET Imaging of Colorectal Cancer" (MPI)
Memorial Sloan Kettering Cancer Center

Clinical and Translational Science Center Seed Funding Grant — Mar. 2014 – May 2014
"Assessing the Pharmacology and Toxicity of the Molecular Components of a Pretargeted Methodology for the PET Imaging of Colorectal Cancer" (MPI)
Memorial Sloan Kettering Cancer Center

MSKCC Imaging and Radiation Sciences Research Award — Sept. 2012 – Sept. 2014
"PET Imaging of Highly Reactive Oxygen Species" (PI)
Memorial Sloan Kettering Cancer Center

Department of Defense PCRP Hypothesis Development Award — Sept. 2012 – Sept. 2013
"Imaging of Oxidative Stress in Prostate Cancer" (PI)
Memorial Sloan Kettering Cancer Center

NIH F32 Postdoctoral National Research Service Award — Sept. 2009 – Sept. 2012
"PET Imaging of Topoisomerase Expression in Breast Cancer" (PI)
Memorial Sloan Kettering Cancer Center

National Science Foundation GRFP Pre-Doctoral Fellowship — Sept. 2004 – Sept. 2007
California Institute of Technology

Curriculum Vitae

Clinical Trials

NCT03109977 (Role: Investigator) Memorial Sloan Kettering Cancer Center
"Imaging With a New Agent That Finds a Cancer Protein Called HER2"

NCT02286843 (Role: Investigator) Memorial Sloan Kettering Cancer Center
"^{89}Zr-DFO-Pertuzumab for the ImmunoPET Imaging of Patients with HER2-Positive Metastatic Breast Cancer"

NCT04692831 (Role: Investigator) Memorial Sloan Kettering Cancer Center
"HER2-Targeted ImmunoPET Imaging with a Site-Specifically Labeled Radioimmunoconjugate"

NCT05737615 (Role: Investigator) Memorial Sloan Kettering Cancer Center
"Pretargeted PET Imaging in Patients with CA19-9-Expressing Pancreatic, Gastric, and Bladder Adenocarcinoma"

Publications

Citations = 8,372; h-index = 52; i10-index = 90; *co-corresponding author

1. Rodriguez, C., Sarrett, S. M., Sebastiano, J., Delaney, S., McGlone, S. A., Hosny, M. M., Thau, S., Bournazos, S., Zeglis, B. M. "Exploring the Interplay between Radioimmunoconjugates and Fcγ Receptors in Genetically Engineered Mouse Models of Cancer" *ACS Pharmacology and Translational Science* 7(11), 3452 (2024)

2. Delaney, S., Keinänen, O., Lam, D., Wolfe, A. L., Hamakubo, T., Zeglis, B. M. "Cadherin-17 as a Target for the ImmunoPET of Adenocarcinoma" *European Journal of Nuclear Medicine and Molecular Imaging* 51(9), 2547 (2024)

3. Sebastiano, J., Rodriguez, C., Samuels, Z. V., Pepin, K., Zeglis, B. M. "Molecular Imaging and Gynecology: Beyond Cancer" *Journal of Nuclear Medicine* 65(7), 998 (2024)

4. Sebastiano, J., Samuels, Z. V., Kao, W. -S., Zeglis, B. M. "Site-Specific Bioconjugation and Molecular Imaging" *Current Opinion in Chemical Biology* 81, 102471 (2024)

5. Delaney, S., Grimaldi, C., Houghton, J. K., Zeglis, B. M. "MIB Guides: Measuring the Immunoreactivity of Radioimmunoconjugates" *Molecular Imaging and Biology* 26(2), 213 (2024)

6. MacPherson, D. S., Dave, D., Kassem, S., Doganata, S., Zeglis, B. M., Ulijn, R. V. "Tuning Supramolecular Chirality in Iodinated Amphiphilic Peptides Through Tripeptide Linker Editing" *Biomacromolecules* 25(4), 2277 (2024)

7. Sarrett, S. M., Rodriguez, C., Delaney, S., Hosny, M. M., Sebastiano, J., Santos Coquillat, A., Keinänen, O. M., Carter, L. M., Lastwika, K. J., Lampe, P. J., Zeglis, B. M. "Evaluating CD133 as a Radiotheranostics Target in Small Cell Lung Cancer" *Molecular Pharmaceutics* 21(3), 1402 (2024)

8. Scott, A. M., Zeglis, B. M., Lapi, S. E., Scott, P. J. H., Windhorst, A. D., Abdel-Wahab, M., Giammarile, F., Paez, D., Jalilian, A., Knoll, P., Korde, A., Vichare, S., Ayati, N., Lee, S. T., Lyashchenko, S. K., Zhang, J., Urbain, J.-L., Lewis, J. S. "Trends in Nuclear Medicine and the Radiopharmaceutical Sciences in Oncology: Workforce Challenges and Training in the Age of Theranostics" *The Lancet Oncology* 25(6), e250 (2024).

9. Lapi, S. E., Scott, P. J. H., Scott, A. M., Windhorst, A. D., Zeglis, B. M., Abdel-Wahab, M., Baum, R. P., Buatti, J. M., Giammarile, F., Kiess, A. P., Jalilian, A., Knoll, P., Korde, A., Kunikowska, J., Lee, S. T., Paez, D., Urbain, J.-L., Zhang, J., Lewis, J. S. "Recent Advances and Impending Challenges for the Radiopharmaceutical Sciences in Oncology" *The Lancet Oncology* 25(6), e236 (2024).

10. Yeh, R., O'Donoghue, J. A., Jayaprakasam, V. S., Mauguen, A., Min, R., Park, S., Brockway, J. P.,

Bromberg, J. F., Zhi, W. I., Robson, M. E., Sanford, R., Modi, S., Agnew, B. J., Lyashchenko, S. K., Lewis, J. S., Ulaner, G. A., Zeglis, B. M. "First-in-Human Evaluation of Site-Specifically Labeled ^{89}Zr-Pertuzumab in Patients with HER2-Positive Breast Cancer" *Journal of Nuclear Medicine* 65(3), 386 (2024)

11. Bauer, D., Cornejo, M. A., Hoang, T. T., Lewis, J. S., Zeglis, B. M. "Click Chemistry and Radiochemistry: An Update" *Bioconjugate Chemistry* 34(11), 1925 (2023)

12. Delaney, S., Rodriguez, C., Sarrett, S. M., Dayts, E. J., Zeglis, B. M., Keinänen, O. "Unraveling the In Vivo Fate of Inhaled Micro- and Nanoplastics with PET Imaging" *Science of the Total Environment* 904, 166320 (2023)

13. Delaney, S., Sebastiano, J., Zeglis, B. M., Keinänen, O. "Molecular Imaging, Radiochemistry, and Environmental Pollutants" *Journal of Nuclear Medicine* 64, 1179 (2023)

14. Rodriguez, C., Delaney, S., Sebastiano, J., Sarrett, S. M., Cornejo, M. A., Thau, S., Hosny, M. M., Zeglis, B. M. Zeglis, B. M. "Site-Selective Radiolabeling Using Mushroom Tyrosinase and the Strain-Promoted Oxidation-Controlled 1,2-Quinone Cycloaddition" *RSC Advances* 13, 17705 (2023)

15. Keinanen, O., Sarrett, S. M., Delaney, S., Rodriguez, C., Dayts, E. J., Capone, E., Sauniere, F., Ippoliti, R., Sala, G., Iacobelli, S., Zeglis, B. M. "Visualizing Galectin-3 Binding Protein Expression with ImmunoPET" *Molecular Pharmaceutics* 20(6), 3241 (2023)

16. Delaney, S., Nagy, A., Karlström, A. E.*, Zeglis, B. M.* "Site-Specific Photoaffinity Bioconjugation for the Synthesis of ^{89}Zr-Labeled Radioimmunoconjugates" *Molecular Imaging and Biology* 25, 1104 (2023)

17. Bauer, D., Sarrett, S. M., Lewis, J. S., Zeglis, B. M. "Click Chemistry: A Transformative Technology in Nuclear Medicine" *Nature Protocols* 18(6), 1659 (2023)

18. MacPherson, D., Hwang, D., Sarrett, S. M., Keinanen, O., Rodriguez, C., Rader, CC., Zeglis, B. M. "Leveraging a Dual Variable Domain Antibody to Create a Site-Specifically Modified Radioimmunoconjugate." *Molecular Pharmaceutics* 20(1), 775 (2023)

19. Zeglis, B. M.* Lewis, J. S.* "Click Here for Better Chemistry" *New England Journal of Medicine* 387(24), 2291 (2022).

20. Feng, Y., Sarrett, S. M., Meshaw, R. L., Vaidyanathan, G., Cornejo, M. A., Zeglis, B. M., Zalutsky, M. R. "Site-Specific Radiohalogenation of a HER2-Targeted Single Domain Antibody Fragment Using a Novel Residualizing Prosthetic Agent." *Journal of Medicinal Chemistry* 65(22), 15358 (2022).

21. Li, L. Di, L., Akther, S., Zeglis, B. M., Qiu, W. "Evolution of the Antigenic-Variability vls Locus of the Lyme Disease Pasthogen and Development of Recombinant Monoclonal Antibodies Targeting Conserved VlsE Epitopes" *Microbiology Spectrum* 10(5), e0174322 (2022)

22. Sarrett, S. M., Rodriguez, C., Rymarczyk, G., Hosny, M., Keinänen, O., Delaney, S., Thau, S., Krantz, B. A.*, Zeglis, B. M. "Lysine-Directed Site-Specific Bioconjugation for the Creation of Radioimmunoconjugates" *Bioconjugate Chemistry* 33(9), 1750 (2022).

23. Rodriguez, C., Delaney, S., Sarrett, S. M., Keinänen, O., Zeglis B. M. "Antibody Engineering for Nuclear Imaging and Radioimmunotherapy" *Journal of Nuclear Medicine* 63, 1316 (2022).

24. Maitz, C. A., Delaney, S., Cook, B. E., Genady, A. R., Hoerres, R. Kuchuk, M., Makris, G., Valliant, J. F., Sadeghi, S., Lewis, J. S., Hennkens, H. M., Bryan, J. N.*, Zeglis, B. M.* "Pretargeted PET of Osteodestructive Lesions in Dogs" *Molecular Pharmaceutics* 19, 3153 (2022).

25. Kunihiro, A. G., Sarrett, S. M., Lastwika, K. J., Solan, J. L., Pisarenko, T., Keinänen, O., Rodriguez, C., Taverne, L. R., Fitzpatrick, A. L., Li, C. I., Houghton, A. M., Zeglis, B. M.*, Lampe, P. D.* "CD133 as a Biomarker for an Autoantibody-to-ImmunoPET Paradigm for the Early Detection of Small Cell Lung Cancer" *Journal of Nuclear Medicine* 63, 1701 (2022).

26. Macpherson, D. S., McPhee, S. A., Zeglis, B. M., Ulijn, R. V. "The Impact of Tyrosine Iodination on the Aggregation and Cleavage Kinetics of MMP-9-Responsive Peptide Sequences" *ACS Biomaterials Science and Engineering*. 8, 579 (2022).

27. Sharma, S. K., Mack, K. N., Piersigilli, A., Pourat, J., Edwards, K. J., Keinänen, O., Jiao, M. S., Zhao, H., White, B., Brooks, C. L., de Stanchina, E., Madiyalakan, M. R., Hollingsworth, M. A., Radhakrishnan, P., Lewis, J. S., Zeglis, B. M. "ImmunoPET of Ovarian and Pancreatic Cancer with AR9.6, a Novel MUC16-Targeted Therapeutic Antibody" *Clinical Cancer Research.* 28, 948 (2022).

28. Keinänen, O., Dayts, E. J., Rodriguez, C., Sarrett, S. M., Brennan, J. M., Sarparanta, M., Zeglis. B. M. "Harnessing PET to Track Micro- and Nanoplastics In Vivo" *Scientific Reports*. 11:11463 (2021).

29. Sharma, S. K., Adumeau, P., Keinänen, O., Sisodiya, V., Sarvaiya, H., Tchelepi, R., Korsen, J. A., Pourat, J., Edwards, K. A., Ragupathi, A., Hamdy, O., Saunders, L. R., Rudin, C. M., Poirier, J. T., Lewis, J. S., Zeglis, B. M. "Synthesis and Comparative In Vivo Evaluation of Site-Specifically Labeled Radioimmunoconjugates for DLL3-Targetd ImmunoPET" *Bioconjugate Chemistry*. 32, 1255 (2021).

30. Imlimthan, S., Khng, Y. C., Keinänen, O., Zhang, W., Airaksinen, A. J., Kostiainen, M. A., Zeglis, B. M., Santos, H. A., Sarparanta, M. "A Theranostic Cellulose Nanocrystal-based Drug Delivery System with Enhanced Retention in Pulmonary Metastases of Melanoma" *Small*. 2007705 (2021).

31. Sarrett, S. M., Keinänen, O., Dayts, E. J., Dewaele-Le Roi, G., Rodriguez, C., Carnazza, K. E., Zeglis, B. M. "In Vivo Pretargeting Based on Inverse Electron-Demand Diels Alder Click Chemistry" *Nature Protocols*. s41596-021-00540-2 (2021).

32. Xiao, G., Annor, G. K., Fung, K., Keinänen O., Zeglis, B. M., Bargonetti, J. "Targeting Triple Negative Breast Cancer with a Nucleus-Directed p53 Tetramerization Domain Peptide" *Molecular Pharmaceutics*. 18, 338 (2021).

33. Herth, M. M., Ametamy, S., Antuganov, D., Bauman, A., Berndt, M., Brooks, A. F., Bormans, G., Choe, Y. S., Gillings, N., Häfeli, U. O., James, M. L., Kopka, K., Kramer, V., Krasikova, R., Madsen, J., Mu, L., Neumaier, B., Piel, M., Rosch, F., Ross, R., Schibli, R., Scott, P. J. H., Shalgunov, V., Vasdev, N., Wadsak, W., Zeglis, B. M. "On the Consensus Nomenclature Rules for Radiopharmaceutical Chemistry — Reconsideration of Radiochemical Conversation" *Nuclear Medicine and Biology.* 93, 19 (2021).

34. Sarbisheh, E. K., Dewaele-Le Roi, G., Shannon, W., Tan, S., Xu, Y., Zeglis, B. M.*, Price, E. W.* "DiPODS: A Reagent for Site-Specific Bioconjugation via the Irreversible Re-bridging of Disulfide Linkages" *Bioconjugate Chemistry.* 31, 2789 (2020).

35. Keinänen, O., Fung, K., Brennan, J. M., Zia, N., Harris, M., van Dam, E. Biggin, C., Hedt, A., Stoner, J., Donnelly, P. S., Lewis, J. S., Zeglis, B. M. "Harnessing ^{64}Cu/^{67}Cu for a Theranostic Approach to Pretargeted Radioimmunotherapy" *Proceedings of the National Academic of Sciences of the United States of America.* 117(45), 28316 (2020).

36. Fung, K., Sharma, S. K., Keinänen, O., Long Roche , K., Lewis, J. S., Zeglis, B. M. "A Molecluarly Targeted Intraoperative Near-Infrared Fluorescence Imaging Agent for High-Grade Serous Ovarian Cancer" *Molecular Pharmaceutics*. 17, 3140 (2020).

37. Fung, K., Vivier, D., Keinänen, O., Sarbisheh, E. K., Price, E. W., Zeglis, B. M. "^{89}Zr-Labeled AR20.5: A

MUC1-Targeting ImmunoPET Probe" *Molecules*. 25, 2315 (2020).

38. White, J. M., Keinänen, O. M., Cook, B. E., Zeglis, B. M., Gibson, H. M., Viola, N. T. "Removal of Fc Glycans from [^{89}Zr]Zr-DFO-anti-CD8 Prevents Peripheral Depletion of CD8$^+$ T Cells" *Molecular Pharmaceutics.* 17(6), 2099 (2020).

39. Ulaner, G. A., Carrasquillo, J. A., Riedl, C., Yeh, R., Ross, D. S., Jhaveri, K., Chandarlapaty, S., Hyman, D. M., Zeglis, B. M., Lyashchenko, S. K., Lewis, J. S. "Identification of HER2-positive metastases in patients with HER2-negative primary breast cancer using HER2-targeted ^{89}Zr-pertuzumab PET/CT" *Radiology.* 296, 370 (2020).

40. Imberti, C., Adumeau, P., Blower, J. E., Al Salemee, F., Torres, J. B., Lewis, J. S., Zeglis, B. M., Terry, S. Y. A., Blower, P. J. "Manipulating the In Vivo Behavior of ^{68}Ga with Tris(hydroxypyridinone) Chelators: Pretargeting and Blood Clearance" *International Journal of Molecular Sciences.* 21, 1496 (2020)

41. Jannetti, S. A., Zeglis, B. M., Zalutsky, M. R., Reiner, T. "Poly(ADP-ribose)polymerase (PARP) Inhibitors and Radiation Therapy" *Frontiers in Pharmacology.* 11, 170 (2020)

42. Pirovano, G., Jannetti, S. A., Carter, L. M. Sadique, A., Kossatz, S., De Souza Franca, P. D., Maeda, M., Zeglis, B. M., Lewis, J. S., Humm, J. L., Reiner, T. R. "Targeted Brain Tumor Radiotherapy Using an Auger Emitter" *Clinical Cancer Research.* 26, 2871 (2020)

43. Vivier, D., Fung, K., Rodriguez, C., Adumeau, P., Ulaner, G. A., Lewis, J. S. Sharma, S. K., Zeglis, B. M. "The Influence of Glycans-Specific Bioconjugation on the FcγRI Binding and In Vivo Performance of ^{89}Zr-DFO-Pertuzumab" *Theranostics.* 10(4), 1746 (2020)

44. MacPherson, D. S., Fung, K., Cook, B. E., Francesconi, L. C., Zeglis, B. M. "A Brief Overview of Metal Complexes as Nuclear Imaging Agents" *Dalton Trans.* 48, 14547 (2019).

45. Keinänen, O. M., Brennan, J. M., Membreno, R., Fung, K. C., Gangangari, K., Dayts, E. J., Williams, C. J., Zeglis, B. M. "Dual Radionuclide Theranostic Pretargeting" *Mol. Pharm.* 16(10), 4416 (2019).

46. Rondon, A., Schmitt, S., Briat, A., Ty, N., Maigne, L., Quintana, M., Membreno, R., Zeglis B. M., Navarro-Teulon, I., Pouget, J. P., Chezal, J. M., Miot-Noirault, E., Moreau, M., Degoul, F. "Pretargeted Radioimmunotherapy and SPECT Imaging of Peritoneal Carcinomatosis Using Bioorthogonal Click Chemistry: Probe Selection and First Proof-of-Concept" *Theranostics* 9(22), 6706 (2019).

47. Membreno, R., Keinänen, O. M., Cook, B. E., Tully, K. M., Fung, K. C., Lewis, J. S., Zeglis, B. M. "Towards the Optimization of Click-Mediated Pretargeted Radioimmunotherapy" *Mol. Pharm.* 16(5), 2259 (2019).

48. Vivier, D., Sharma, S. K., Adumeau, P., Rodriguez, C., Fung, K., Zeglis, B. M. "The Impact of FcγRI Binding on ImmunoPET" *J. Nucl. Med.* 60(8), 1174 (2019).

49. Davydova, M., Dewaele Le Roi, G., Adumeau, P., Zeglis, B. M. "Synthesis and Bioconjugation of Thiol-Reactive Reagents for the Creation of Site-Selectively Modified Immunoconjugates" *Journal of Vis. Exp.* 145, e59063 (2019).

50. Membreno, R. M., Cook, B. E., Zeglis, B. M. "Pretargeted Radioimmunotherapy Based on the Inverse Electron Demand Diels-Alder Reaction" *Journal of Vis. Exp.* 143, e59041 (2019).

51. Poty, S., Carter, L. M., Mandleywala, K., Membreno, R., Abdel-Atti, D., Ragupathi, A., Scholz, W. W., Zeglis, B. M.*, Lewis, J. S.* "Leveraging Bioorthogonal Click Chemistry to Improve ^{225}Ac-

Radioimmunotherapy of Pancreatic Ductal Adenocarcinoma" *Clin. Can. Res.* 25(2), 868 (2019).

52. Cook, B. E., Membreno, R. M., Zeglis, B. M. "Dendrimer Scaffold for the Amplification of In Vivo Pretargeting Ligations" *Bioconjugate Chem.* 29, 2734 (2018).

53. Vivier, D., Sharma, S. K., Zeglis, B. M. "Understanding the In Vivo Fate of Radioimmunoconjugates for Nuclear Imaging" *J Label. Cmpd. Radiopharm.* 1-21 (2018).

54. Jannetti, S. A., Carlucci, G., Carney, B., Kossatz, S., Shenker, L., Carter, L. M., Salinas, B., Brand, C., Sadique, A., Donabedian, P. L., Cunanan, K. M., Gonen, M., Ponomarev, V., Zeglis, B. M., Souweidane, M. M., Lewis, J. S., Weber, W. W., Humm, J. L., Reiner, T. "PARP-1 Targeted Radiotherapy in Mouse Models of Glioblastoma" *J Nucl. Med.* 59, 1225 (2018).

55. Ulaner, G., Lyashchenko, S. K., Riedl, C., Ruan, S., Zanzonico, P. B., Lake, D., Jhaveri, K., Zeglis, B. M., Lewis, J. S., O'Donoghue, J. A. "First-in-Human HER2-targeted Imaging Using ^{89}Zr-Pertuzumab PET/CT: Dosimetry and Clinical Application in Patients with Breast Cancer" *J. Nucl. Med.* 59, 900 (2018).

56. Adumeau, P., Davydova, M., Zeglis, B. M.* "Thiol-Reactive Bifunctional Chelators for the Creation of Site-Selectively Modified Radioimmunoconjugates with Improved Stability" *Bioconjugate Chem.* 29, 1364 (2018).

57. Membreno, R., Cook, B. E., Fung, K., Lewis, J. S., Zeglis, B. M.* "Click-Mediated Pretargeted Radioimmunotherapy of Colorectal Cancer" *Mol. Pharm.* 15, 1729 (2018).

58. Sharma, S. K., Chow, A., Monette, S., Vivier, D., Pourat, J., Edwards, K. J., Dilling, T. R., Abdel-Atti, D., Zeglis, B. M., Poirier, J. T., Lewis, J. S. "Fc-mediated Anomalous Biodistribution of Therapeutic Antibodies in Immunodeficient Mouse Models" *Cancer Res.* 78, 1820 (2018).

59. Adumeau, P., Vivier, D., Sharma, S. K., Wang, J., Zhang, T., Chen, A., Agnew, B. J., Zeglis, B. M.* "Site-Specifically Labeled Antibody-Drug Conjugate for Simultaneous Therapy and ImmunoPET" *Mol. Pharm.* 15, 892 (2018).

60. Poty, S., Membreno, R., Glaser, J. M., Ragupathi, A., Scholz, W. W., Zeglis, B. M.*, Lewis, J. S.* "The Inverse Electron-Demand Diels-Alder Reaction as a New Methodology for the Synthesis of ^{225}Ac-Labelled Radioimmunoconjugates" *Chem. Comm.* 54, 2599-2602 (2018).

61. Keinänen, O., Fung, K., Pourat, J., Jallinoja, V., Vivier, D., Pillarsetty, N., Airaksinen, A. J., Lewis, J. S., Zeglis, B. M., Sarparanta, M. "Pretargeting of Internalizing Trastuzumab and Cetuximab with a ^{18}F-tetrazine Tracer in Xenograft Models" *Euro. J. Nucl. Med. Mol. Imag. Res.* 7, 95 (2017).

62. Meyer, J. -P., Kozlowski, P., Jackson, J., Cunanan, K. M., Adumeau, P., Dilling, T. R., Zeglis, B. M.*, Lewis, J. S.* "Exploring Structural Parameters for Pretargeting Radioligand Optimization" *J. Med. Chem.* 60(19), 8201 (2017).

63. Altai, M., Membreno, R., Cook, B., Tolmachev, V., Zeglis, B. M.* "Pretargeted Imaging and Therapy" *J Nucl. Med.* 58(10), 1553 (2017).

64. Sharma, S. K., Pourat, J., Abdel-Atti, D., Carlin, S., Piersigilli, A., Bankovich, A. J., Gardner, E. E., Hamdy, O., Isse, K., Bheddah, S., Sandoval, J., Cunanan, K. M., Johansen, E. B., Allaj, V. Sisodiya, V., Liu, D., Zeglis, B. M., Rudin, C. M., Dylla, S. J., Poirier, J. T., Lewis, J. S. "Non-Invasive Interrogation of DLL3 Expression in Metastatic Small Cell Lung Cancer" *Cancer Res.* 77(14), 1 (2017).

65. Zeglis, B. M.*, Vugts, D. J.* "ESPMIS: Helping Young Scientists Navigate the Molecular Imaging Landscape" *Mol. Imag. Biol.* 19, 325 (2017).

66. Büchel, G. E., Carney, B., Zeglis, B. M., Eppinger, J., Reiner, T. "A Novel Technique for Generating and Observing Chemiluminescence in a Biological Setting" *Journal of Vis. Exp.* e54694 (2017)

67. Houghton, J. L., Membreno, R., Abdel-Atti, D., Cunanan, K. M., Carlin, S., Scholz, W. W., Zanzonico, P. B., Lewis, J. S., Zeglis, B. M.* "Establishment of the In Vivo Efficacy of Pretargeted Radioimmunotherapy Utilizing Inverse Electron Demand Diels-Alder Click Chemistry" *Mol. Cancer Ther.* 16(1), 124 (2017).

68. Meyer, J.-P., Adumeau, P., Lewis, J.S., Zeglis, B. M.* "Click Chemistry and Radiochemistry: The First Ten Years" *Bioconjugate Chem.* 27, 2791 (2016)

69. Abdolreza, Y., Bilton, H., Vito, A., Genady, A. R., Rathmann, S. M., Zainab, A., Janzen, N., Czorny, S., Zeglis, B. M., Francesconi, L. C., Valliant, J. F. "A Bone-Seeking Trans-Cyclooctene for Pretargeting and Bioorthogonal Chemistry: A Proof-of-Concept Study Using ^{99m}Tc- and ^{177}Lu-Labeled Tetrazines" *J Med. Chem.* 59, 9381 (2016)

70. Büchel, G. E., Carney, B., Shaffer, T. M., Tung, J., Austin, C., Arora, M., Zeglis, B. M., Grimm, J., Eppinger, J., Reiner, T. "Near-Infrared Intraoperative Chemiluminescence Imaging" *ChemMedChem.* 11(18), 1978 (2016)

71. Adumeau, P., Carnazza, K. E., Brand, C., Carlin, S. D., Reiner, T., Agnew, B. J., Lewis, J. S., Zeglis, B. M.* "A Pretargeted Approach for the Multimodal PET/NIRF Imaging of Colorectal Cancer" *Theranostics* 6(12), 2267 (2016)

72. Cook, B. E., Adumeau, P., Membreno, R., Carnazza, K. E., Brand, C., Reiner, T., Agnew, B. J., Lewis, J. S., Zeglis, B. M.* "Pretargeted PET Imaging Using a Site-Specifically Labeled Immunoconjugate" *Bioconjugate Chem.* 27(8), 1789 (2016)

73. Price, E. W., Edwards, K. J., Carnazza, K. E., Carlin, S. D., Zeglis, B. M., Adam, M. J., Orvig, C., Lewis, J. S. "A Comparative Evaluation of the Chelators H$_4$Octapa and CHX-A"-DTPA with the Therapeutic Radiometal ^{90}Y" *Nuc. Med. Biol.* 43, 566 (2016)

74. Sharma, S. K., Nemieboka, B., Sala, E., Lewis, J. S., Zeglis, B. M.* "Molecular Imaging of Ovarian Cancer" *J. Nucl. Med.* 57, 827 (2016)

75. Sharma, S. K., Sevak, K. K., Monette, S., Carlin, S. D., Knight, J. C., Wuest, F. R., Sala, E., Zeglis, B. M.*, Lewis, J. S. "Preclinical ^{89}Zr-immunoPET for High Grade Serous Ovarian Cancer and Lymph Node Metastasis" *J. Nucl. Med.* 57(6), 771 (2016)

76. Houghton, J. L., Zeglis, B. M., Abdel-Atti, D., Sawada, R., Scholz, W. W., Lewis, J. S. "Pretargeted ImmunoPET of Pancreatic Cancer: Overcoming Circulating Antigen and Antibody Internalization to Reduce Radiation Doses" *J. Nucl. Med.* 57(3), 453 (2016)

77. Adumeau, P., Sharma, S. K., Brent, C., Zeglis, B. M.* "Site-Specifically Labeled Immunoconjugates for Molecular Imaging — Part 2: Peptide Tags and Unnatural Amino Acids" *Mol. Imag. Biol.* 2, 153 (2016)

78. Adumeau, P., Sharma, S. K., Brent, C., Zeglis, B. M.* "Site-Specifically Labeled Immunoconjugates for Molecular Imaging — Part 1: Cysteine Residues and Glycans" *Mol. Imag. Biol.* 18, 1 (2016)

79. Meyer, J. -P., Houghton, J. L., Koslowski, P., Abdel-Atti, D., Reiner, T., Pillarsetty, N. V. K., Scholz, W. W., Zeglis, B. M.*, and Lewis, J. S.* "^{18}F-Based Pretargeted PET Imaging Based on Bioorthogonal Diels-Alder Click Chemistry" *Bioconjugate Chem.* 27, 298 (2016)

80. Houghton, J. L., Zeglis, B. M., Abdel-Atti, D., Aggeler, A., Sawada, R., Agnew, B. J., Scholz, W. W., Lewis, J. S. "Site-Specifically Labeled CA19.9-Targeted Immunoconjugates for the PET, NIRF, and Multimodal

PET/NIRF Imaging of Pancreatic Cancer" *Proc. Nat. Acad. Sci. U.S.A.* 112(52), 15850 (2015)

81. Zeglis, B. M.*, Brand, C. Abdel-Atti, D., Carnazza, K., Cook, B., Carlin, S., Reiner, T., Lewis, J. S.* "Optimization of a Pretargeted Strategy for the PET Imaging of Colorectal Carcinoma via the Modulation of Radioligand Pharmacokinetics" *Mol. Pharm.* 25, 3575 (2015)

82. Zeglis, B. M., Lewis, J. S. "The Bioconjugation and Radiosynthesis of ^{89}Zr-DFO-Labeled Antibodies" *Journal of Vis. Exp.* 96, e52521 (2015)

83. Reiner, T., Lewis, J. S., Zeglis, B. M.* "Harnessing the Bioorthogonal Inverse Electron Demand Diels-Alder Cycloaddition for Pretargeted PET Imaging" *Journal of Vis. Exp.* 96, e52335 (2015)

84. Zeglis, B. M., Davis, C. B., Abdel-Atti, D., Carlin, S. D., Chen, A., Aggeler, R., Chen, A., Agnew, B., and Lewis, J. S. "Chemoenzymatic Strategy for the Synthesis of Site-Specifically Labeled Immunoconjugates for Multimodal PET and Optical Imaging" *Bioconjugate Chem.* 25, 2123 (2014)

85. Daumar, P., Zeglis, B. M., Ramos, N., Divilov, V., Sevak, K. K., Pillarsetty, N., Lewis, J. S. "Synthesis and Evaluation of ^{18}F-labeled ATP Competitive Inhibitors of Topoisomerase II as Probes for Imaging Topoisomerase II Expression" *Eur. J. Med. Chem.* 86, 769 (2014)

86. Price, E. W., Zeglis, B. M., Cawthray, J., Lewis, J. S., Adam, M., Orvig, C. "What a Difference a Carbon Makes: H$_4$Octapa vs. C3H$_4$Octapa, Ligands for ^{111}In and ^{177}Lu Radiochemistry" *Inorg. Chem.* 53, 10412 (2014)

87. Wagner, T., Zeglis, B. M., Groveman, S., Francesconi, L.C., Hermann, W. A., Kuhn, F. E., Reiner, T. "Synthesis of the first radiolabeled ^{188}Re *N*-heterocyclic carbene complex and initial studies on its potential use in radiopharmaceutical applications" *J. Label. Cmpd. Radiopharm.* 57, 441 (2014)

88. Deri, M., Ponnala, S., Zeglis, B. M., Pohl, G., Dannenberg, J.J., Lewis, J. S., Francesconi, L. C. "An Alternative Chelator for ^{89}Zr Radiopharmaceuticals: Radiolabeling and Evaluation of 3,4,3-(LI-1,2-HOPO)" *J. Med. Chem.* 57, 4849 (2014)

89. Zeglis, B. M., Emmetiere, F., Pillarsetty, N., Weissleder, R., Lewis, J. S., Reiner, T. "Building Blocks for the Construction of Bioorthogonally Reactive Peptides via Solid Phase Peptide Synthesis" *Chem. Open.* 3, 48 (2014)

90. Reiner, T., and Zeglis, B. M.* "The Inverse Electron Demand Diels-Alder Click Reaction in Radiochemistry" *J. Labl. Cmpd. Radiopharm.* 57(4), 285 (2014)

91. Zeglis, B. M., Houghton, J. L., Evans, M. J., Viola-Villegas, N., Lewis, J.S. "Underscoring the Influence of Inorganic Chemistry on Nuclear Imaging with Radiometals." *Inorg. Chem.* 53(4), 1880 (2014)

92. Price, E. W., Zeglis, B. M., Lewis, J. S., Adam, M. J., and Orvig, C. "H$_6$phospa-Trastuzumab: A Bifunctional Methylenephosphonate-based Chelator with ^{89}Zr, ^{111}In and ^{177}Lu." *Dalton Trans.* 43, 119 (2014)

93. Price, E. W., Zeglis, B. M., Cawthray, J. F., Ramogida, C. F., Ramos, N., Lewis, J. S., Adam, M. J., and Orvig, C. "H$_4$octapa-Trastuzumab: The Application of a Versatile Acyclic Chelate System for ^{111}In and ^{177}Lu Imaging and Therapy." *J. Am. Chem. Soc.* 135(34), 12707 (2013)

94. Zeglis, B. M., Sevak, K. K., Reiner, T., Mohindra, P., Carlin, S. D., Zanzonico, P., Weissleder, R., and Lewis, J. S. "A Pretargeted PET Imaging Strategy Based on Bioorthogonal Diels-Alder Click Chemistry" *J. Nucl. Med.* 54(8), 1389 (2013)

95. Zeglis, B. M., Davis, C. B., Aggeler, R., Kang, H. C., Chen, A., Agnew, B., and Lewis, J. S. "An Enzyme-Mediated Methodology for the Site-Specific Radiolabeling of Antibodies Based on Catalyst-Free Click

Chemistry" *Bioconjugate Chem.* 24, 1057 (2013)

96. Zeng, D.[$], Zeglis, B. M.[$], Lewis, J. S., and Anderson, C. "The Growing Impact of Bioorthogonal Click Chemistry on the Development of Radiopharmaceuticals" *J. Nucl. Med.* 54(6), 829 (2013) [$]*Co-first authors.*

97. Deri, M. A.[$], Zeglis, B. M.[$], Francesconi, L. C., Lewis, J. S. "PET Imaging with ^{89}Zr: From Radiochemistry to the Clinic" *Nucl. Med. Bio.* 40, 3 (2013)[$]*Co-first authors.*

98. Bailey, G. A., Price, E. W., Zeglis, B. M., Ferreira, C. L., Boros, E., Lacasse, M. J., Patrick, B. O., Lewis, J. S., Adam, M. J., and Orvig, C. "H_2azapa: A Versatile Acyclic Multifunctional chelator for ^{67}Ga, ^{64}Cu, ^{111}In, and ^{177}Lu" *Inorg. Chem.* 51, 12575 (2012)

99. Zeglis, B. M., Mohindra, P., Weissmann, G. I., Divilov, V., Hilderbrand, S. A., Weissleder, R., and Lewis, J. S. "A Modular Strategy for the Construction of Radiometallated Antibodies for Positron Emission Tomography Based on Inverse Electron Demand Diels-Alder Click Chemistry." *Bioconjugate Chem.* 6, 424 (2011)

100. Zeglis, B. M., Pillarsetty, N., Divilov, V., Blasberg, R. A., and Lewis, J. S. "The Synthesis and Evaluation of N^1-(4-(2-[^{18}F]-fluoroethyl)phenyl)-N^8-hydroxyoctanediamide ([^{18}F]-FESAHA), A PET Radiotracer Designed for the Delineation of Histone Deacetylase Expression in Cancer." *Nuc. Med. Bio.* 38, 683 (2011)

101. Zeglis, B. M. and Lewis, J. S. "A Practical Guide to the Construction of Radiometallated Bioconjugates for Positron Emission Tomography." *Dalton Trans.,* 40, 6168 (2011)

102. Zeglis, B. M., Divilov, V., and Lewis, J. S. "Role of Metalation in the Topoisomerase IIα Inhibition and Antiproliferation Activity of a Series of α-Heterocyclic-N^4-Substituted Thiosemicarbazones and Their Cu(II) Complexes." *J. Med. Chem.*, 54, 2391 (2011)

103. Zeglis, B. M., Kaiser, J. T., Pierre, V. C., and Barton, J. K. "Crystal Structures of a Rhodium Metalloinsertor Bound to an Adenosine-Adenosine Mismatch: General Architecture of the DNA insertion Binding Mode." *Biochemistry,* 48, 4247 (2009).

104. Zeglis, B. M., Boland, J. A., and Barton, J. K. "Recognition of Abasic Sites and Single Base Bulges in DNA by a Metalloinsertor." *Biochemistry*, 38, 39 (2009)

105. Zeglis, B. M., Boland, J. A., and Barton, J. K. "Targeting Abasic Sites and Single Base Bulges in DNA with Metalloinsertors." *J. Am. Chem. Soc.* 130, 7530 (2008)

106. Zeglis, B. M. and Barton, J. K. "Binding of $Ru(bpy)_2(eilatin)^{2+}$ to Matched and Mismatched DNA." *Inorg. Chem.* 47, 6452 (2008)

107. Zeglis, B. M., Pierre, V. P., and Barton, J. K. "Metallointercalators and Metalloinsertors." *Chem. Comm.*, 44, 4565 (2007)

108. Zeglis, B. M. and Barton, J. K. "DNA Base Mismatch Detection with Bulky Rhodium Intercalators: Synthesis and Applications." *Nature Protocols,* 2, 357 (2007)

109. Zeglis, B. M. and Barton, J. K. "A Mismatch-selective Bifunctional Rhodium-Oregon Green Conjugate: A Fluorescent Probe for Mismatched DNA." *J. Am. Chem. Soc.*, 128, 5654 (2006)

110. Greiner, E., Boos, T. L., Prisinzano, T. E., DeMartino, M. G., Zeglis, B. M., Dersch, C. M., Marcus, J., Partilla, J. S., Rothman, R. B., Jacobsen, A. E., Rice K. C. "Design and Synthesis of Promiscuous High-Affinity Monoamine Transporter Ligands: Unraveling Transporter Selectivity." *J. Med. Chem.*, 49, 1766

(2006)

111. Chianese, A. R., Zeglis, B. M., and Crabtree, R. H. "Unexpected Oxidative C-C- Cleavage in the Metallation of 2-Substituted Imidazolium Salts to Give N-Heterocylic Carbene Complexes." *Chem. Comm.*, 19, 2176 (2004)

112. Chianese, A. R., Kovacevic, A., Zeglis, B. M., Faller, J. W., and Crabtree, R. H. "Abnormal C-5 N-Heterocyclic Carbenes: Extremely Strong Donor Ligands and their Iridium(I) and Iridium(III) Complexes." *Organometallics*, 23, 2461 (2004)

Book Chapters

Keinänen, O., Zeglis, B. M. "Pretargeted Radiopharmaceutical Therapy" in *Radiopharmaceutical Therapy.* Bodei, L., Lewis, J. S., and Zeglis B. M. eds. Springer: New York, USA, 2023.

Keinänen, O., Nash, A. G., Sarrett, S. M., Sarparanta, M., Lewis, J. S., Zeglis, B. M. "Emerging Radiopharmaceuticals in Clinical Oncology" in *Nuclear Oncology: Pathophysiology and Clinical Applications, 3rd Edition.* Strauss W., Mariani G., Volterrani, D., and Larson, S. M., eds. Springer: New York, USA, 2022.

Goos, J. A. C. M., Keinänen O. M., Zeglis B. M., Lewis J. S. "Radiopharmaceuticals in Oncology" in *Handbook of Radiopharmaceuticals (2nd Edition) - Methodology and Applications*. Scott, P. J. H. and Kilbourn, M. R. Eds. Wiley-Blackwell: Hoboken, USA, 2021.

Sarparanta, M., Demoin, D., Cook, B. E., Lewis, J. S., Zeglis, B. M. "Novel Positron-Emitting Radiopharmaceuticals" in *Nuclear Oncology: Pathophysiology and Clinical Applications, 2nd Edition.* Strauss W., Mariani G., Volterrani, D., and Larson, S. M., eds. Springer: New York, USA, 2017.

Zeglis, B. M., Holland, J. P., Lebedev, A. Y., Cantorias, M. V., Lewis, J. S. "Radiopharmaceuticals for Imaging in Oncology with Special Emphasis on Positron-Emitting Agents" in *Nuclear Oncology: Pathophysiology and Clinical Applications.* Strauss W., Mariani G., Volterrani, D., and Larson, S. M., eds. Springer: New York, USA, 2012.

Books

Radiopharmaceutical Chemistry, 2nd Edition. Lewis, J. S., Windhorst, A. D., and Zeglis, B. M., Eds. Springer: New York, 2024.

Radiopharmaceutical Therapy. Bodei, L., Lewis, J. S., and Zeglis, B. M., Eds. Springer: New York, 2023.

Radiopharmaceutical Chemistry. Lewis, J. S., Windhorst, A. D., and Zeglis, B. M., Eds. Springer: New York, 2019.

Patents

Barton, J. K., Zeglis, B. M., Lau, I. H., Hart, J. R., and Lim, M. H. "Compounds and Methods for Nucleic Acid Mismatch Detection." U. S. Patent #7,786,298 (Issued August 31, 2010)

Zeglis, B. M., Adumeau, P., and Davydova, M. "Reagent for Sile-Selective Bioconjugation of Proteins or Antibodies." U. S. Patent #11,000,604 (Issued May 11th, 2021)

Zeglis, B. M., Lewis, J. S. Reiner, T., Houghton, J. H., Meyer, J-. P., and Brand, C. "Radioligands for Pretargeted PET Imaging and Methods of their Therapeutic Use" U. S. Patent #11,135,320 (Issued October 5th, 2021)

Curriculum Vitae

Entrepreneurship

Co-founder, Sharp RTx., Inc. (2021-2023)
Founder, Red Eft Bioscience, LLC (2024-)

Teaching

Introduction to Radiochemistry – Spring 2016, Spring 2017
Inorganic Chemistry – Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023
Inorganic Chemistry Laboratory – Spring 2019, Spring 2022, Spring 2024

Mentoring

Current Students and Fellows:

Dr. Mark Kao (Postdoctoral Fellow)
Mr. Mike Cornejo (Graduate Student; anticipated graduation – Winter 2026)
Ms. Joni Sebastiano (Graduate Student; anticipated graduation – Winter 2026)
Mr. Zach Samuels (Graduate Student; anticipated graduation – Winter 2027)
Ms. Camilla Grimaldi (Graduate Student; anticipated graduation – Winter 2027)
Dr. Mayuresh Mane (Graduate Student; anticipated graduation – Winter 2028)
Ms. Gina Dehlavi (Graduate Student; anticipated graduation – Winter 2028)
Mx. Ava Stoddard (Graduate Student; anticipated graduation – Winter 2028)

Former Postdoctoral Fellows

Dr. Outi Keinänen (2018-2023; K99/R00; Asst. Prof. at the University of Alabama at Birmingham)
Dr. Aaron Nash (2020-2022; Scientific Advisor; Amster Rothstein & Ebenstein, LLP.)
Dr. Sai Kiran Sharma (2015-2019, Lead *In Vivo* Imaging Scientist at Regeneron Pharmaceuticals, Inc.)
Dr. Pierre Adumeau (2015-2018; Study Director at Oncodesign, Inc.)
Dr. Delphine Vivier (2016-2018; Research Fellow at the University of Burgundy, France)

Former Graduate Students:

Dr. Cindy Rodriguez (2019-2024, Postdoctoral Fellow, Laboratory of Jason Lewis, MSKCC)
Dr. Samantha Delaney (2019-2022; Postdoctoral Fellow, Laboratory of Matthias Herth, Univ. of Copenhagen)
Dr. Samantha Sarrett (2018-2023, Staff Scientist at Novartis, Inc.)
Dr. Douglas McPherson (2018-2022; Equity Research Associate; H. C. Wainwright & Co.)
Dr. Guillaume Dewaele Le Roi (2018-2022; Staff Scientist at Evergreen Theragnostics, Inc.)
Dr. Stephen Jannetti (2015-2019; Principal Scientist at Ionetix, Inc.)
Dr. Kimberly Fung (2015-2019; Medical Director at IMPRINT Science
Dr. Rosemery Cook (2015-2018, Director of Communications, World Molecular Imaging Society)s
Dr. Brendon Cook (2015-2018; Senior Scientist at Biogen, Inc.)

Service to the University

Member (2021-Present), Hunter College Senate
Member (2019-Present), Hunter Chemistry Department Personnel and Budget Committee
Member (2021-2023), Hunter College Research Strategic Planning Committee
Committee Member (2020), Committee on Developing a Framework for the Undergraduate Honors Thesis
Committee Member (2017), Search Committee for Radiochemistry Faculty Member (Prof. Jennifer Shusterman)
Co-Chair (2017), Hunter College Symposium on Radiometals
Committee Member (2016), Search Committee for Radiochemistry Research Associate (Dr. Ali Younes)

Service to the Scientific Community

NIH Proposal Review

Standing Member, National Institutes of Health, Imaging Probes and Contrast Agents (IPCA) Study Section (2020-2021; 2022-present)

Ad Hoc Member, National Institutes of Health, Center for Molecular Imaging Probe Development (CMIP) Study Section (2017-2020)

Ad Hoc Member, National Institutes of Health, Imaging Guided Interventions and Surgery (IGIS) Study Section (2017-2019)

Editorial Work

Associate Editor (2020-2023), *Molecular Imaging and Biology*

Deputy Editor-in-Chief (2023-present), *Molecular Imaging and Biology*

Editorial Board (2016-present), *Journal of Nuclear Medicine*

Other Service

Secretary and Treasurer (2024 – present), Center for Molecular Imaging Innovation and Translation, Society of Nuclear Medicine and Molecular Imaging

Founding Member (2016) and Chair (2017-2019), Early-Stage Investigators in Molecular Imaging Sciences (ESPMIS) Interest Group, *World Molecular Imaging Society*

Reviewer for several journals, including *Cancer Research*, *Clinical Cancer Research, Cancer Discovery, Proceedings of the National Academy of Sciences, Chemical Communications, Journal of the American Chemical Society, Journal of Nuclear Medicine, and European Journal of Nuclear Medicine*

Invited Lectures

1. *European Association of Nuclear Medicine.* "Pretargeting: A Clinical Perspective on Strengths and Challenges" Hamburg, Germany: October 22nd, 2024.

2. *European Society for Molecular Imaging and Technology.* Educational Presentation on "The Promise and Pitfalls of In Vivo Pretargeting" Porto, Portugal: September 1st, 2024.

3. *Gordon Research Conference on Radiotheranostics. "In Vivo Pretargeting for the Radiopharmaceutical Therapy of Cancer"* Newry, Maine: July 2nd, 2024.

4. *International Atomic Energy Agency.* "Exploiting Innovative Animal Models for the Exploration of Radiopharmaceutical Delivery System" Vienna, Austria: May 20th, 2024.

5. *Olivet Nazarene University.* "The Inverse Electron-Demand Diels-Alder Reaction in Radiochemistry" Boubonnais, Illinois: April 30th, 2024.

6. *University of Alabama Birmingham.* "Leveraging Bioorthogonal Chemistry to Improve Radiopharmaceuticals" Birmingham, Alabama: April 10th, 2024.

7. *City College of New York.* "Harnessing Bioorthogonal Chemistry to Improve Nuclear Medicine" New York, New York: March 27th, 2024.

8. *Annual Meeting of the American Chemical Society.* "Harnessing Copper-Free Click Chemistry for Site-Specific Bioconjugation" Indianapolis, Indiana: March 28th, 2023.

9. *University of Virginia.* "Harnessing Selective Chemistries to Improve Radiopharmaceuticals" Invited Speaker. Charlottesville, Virginia: December 7th, 2022.

10. *Oak Ridge National Laboratory Meeting on Evolving Targeted Therapies for Cancer.* "Leveraging Bioorthogonal Chemistry to Improve Radiopharmaceuticals" Oak Ridge, Tennessee: November 2nd, 2022.

11. *World Molecular Imaging Congress.* "Harnessing Selective Chemistries to Improve Radiopharmaceuticals" Roger Tsien Award Lecture. Miami, Florida: September 30th, 2022 .

12. *North Carolina State University.* "Harnessing Bioorthogonal Chemistry for Nuclear Imaging and Endoradiotherapy" Virtual Presentation: February 28th, 2022.

13. *Newcastle University.* "Harnessing Bioorthogonal Chemistry for Nuclear Imaging and Endoradiotherapy" Virtual Presentation: December 14th, 2021.

14. *Wayne State University and Karmanos Cancer Center.* "Harnessing Bioorthogonal Chemistry for Nuclear Imaging and Endoradiotherapy" Detroit, Michigan: December 7th, 2021.

15. *Annual Meeting of the European Society of Nuclear Medicine.* "Antibodies as Radiopharmaceutical Vectors: Do the Benefits Outweigh the Costs" Virtual Meeting: October 5th, 2021.

16. *Department of Energy Nuclear Chemistry Summer School.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Virtual Meeting: July 23rd, 2021.

17. *Weill Cornell Medical College.* "Harnessing Click Chemistry for Pretargeted PET Imaging and Radioimmunotherapy" New York, New York: May 21st, 2021.

18. *Annual Meeting of the International Society for Radiopharmaceutical Sciences.* "Robin Hood and the Merry Pre-Targeters: On the Utility and Promise (or Lack of) Pretargeting Methods" Virtual Meeting: May 19th, 2021.

19. *Annual Meeting of the Australia and New Zealand Society of Nuclear Medicine.* "Harnessing the Heavy Chain Glycans for the Creation of Site-Specifically Modified Radioimmunoconjugates" Virtual Meeting: August 6th, 2020.

20. *Annual Meeting of the Australia and New Zealand Society of Nuclear Medicine.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Virtual Meeting: July 23rd, 2020.

21. *Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging.* "Highlights Lecture for Radiopharmacy and Radiopharmaceutical Chemistry" Virtual Meeting: June 27th, 2020.

22. *Annual Meeting of the American Association of Physicists in Medicine.* "ImmunoPET: Leveraging Antibodies for Diagnostic and Theranostic Nuclear Imaging" San Antonio, Texas: July 16th, 2019.

23. *Northeast Regional Meeting of the American Chemical Society.* "Pretargeted Radioimmunotherapy with Metallic Radionuclides" Saratoga Springs, New York: June 24th, 2019.

24. *Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging.* "Highlights Lecture for Radiopharmacy and Radiopharmaceutical Chemistry" Anaheim, California: June 23rd, 2019.

25. *Iona College Nanoscience Symposium.* "The Emergence of ^{89}Zr-ImmunoPET: Harnessing Antibodies for Nuclear Imaging" New Rochelle, New York: April 9th, 2019.

26. *University of Copenhagen.* "Pretargeted Radioimmunotherapy Based on Bioorthogonal Click Chemistry" Copenhagen, Denmark: December 6th, 2018.

27. *Stony Brook University.* "In Vivo Pretargeting: Performing Radiochemistry Within the Body" Stony Brook, New York: September 18th, 2018.

28. *Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging.* "Highlights Lecture for Radiopharmacy and Radiopharmaceutical Chemistry" Philadelphia, Pennsylvania: June 15th, 2018.

29. *Vrije Universiteit Brussel.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Workshop in Immuno-Imaging and Molecular Therapy. Brussels, Belgium: April 27th, 2018.

30. *VU University Medical Center Amsterdam.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Amsterdam, the Netherlands: April 26th, 2018.

31. *University of California, Los Angeles.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Crump Institute of Molecular Imaging. Los Angeles, California: March 26th, 2018.

32. *Annual Meeting of the Radiology Society of North America.* "A Primer in ^{89}Zr-ImmunoPET" Chicago, Illinois: December 1st, 2017.

33. *Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface." Denver, Colorado: June 12th, 2017.

34. *St Jude Children's Research Hospital.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Memphis, Tennessee: April 28th, 2017.

35. *St Jude Children's Research Hospital.* "Bioorthogonal Chemistry for Better Radiopharmaceuticals" Memphis, Tennessee: April 27th, 2017.

36. *City of Hope Hospital.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Duarte, California: April 4th, 2017.

37. *California Institute of Technology.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Pasadena, California: April 3rd, 2017.

38. *University of Missouri Columbia.* "In Vivo Pretargeting: Radiosynthesis at the Tumor Surface" Columbia, Missouri: March 10th, 2017.

39. *Annual Meeting of the Radiology Society of North America.* "A Primer in ^{89}Zr-ImmunoPET" Chicago, Illinois: December 2nd, 2016.

40. *European Association of Nuclear Medicine Congress.* "Strategies for the Site-Specific Bioconjugation of Antibodies" Barcelona, Spain: October 14th, 2016.

41. *World Molecular Imaging Congress.* "The Anatomy of a Radioimmunoconjugate" New York, New York: September 7th, 2016.

42. *Annual Symposium of the Memorial Sloan Kettering Cancer Center Imaging and Radiation Sciences Program.* "Harnessing Bioorthogonal Chemistry for Pretargeted Imaging and Therapy" New York, New York: May 31st, 2016.

43. *The University of the West Indies.* "PET Imaging with ^{89}Zr" Kingston, Jamaica: March 21st, 2016.

44. *International Workshop on Molecular Imaging.* "Harnessing Bioorthogonal Chemistry for Pretargeted PET Imaging" San Sebastien, Spain: November 11th, 2015.

45. *European Association of Nuclear Medicine Congress.* "Advances in ^{89}Zr PET Imaging" Hamburg, Germany: October 10th, 2015.

46. *International Symposium on Technetium and Radiometals in Chemistry and Medicine (TERACHEM).* "The Site-Specific Radiometallation of Antibodies on the Heavy Chain Glycans" Bressanone, Italy: September 11th, 2014.

47. *International Conference and Expo on Isotopes. "The Site-Specific Labeling of Antibodies on the Heavy Chain*

Glycans" Chicago, Illinois: August 28th, 2014.

48. *Annual Meeting of the Society of Nuclear Medicine and Molecular Imaging.* "Labeling Peptides and Proteins Using Click Chemistry" Vancouver, Canada: June 8th, 2013.

49. *Revolutionaries for Global Health Summit.* "^{89}Zr-ImmunoPET: Emergent Targets and Clinical Translation." Boston, Massachusetts: May 8th, 2013.

50. *Annual Meeting of the Society of Nuclear Medicine.* "Radiometal Chelates and Click Chemistry: The Development of Modular Systems" Miami, Florida: June 9th, 2012.

51. *Congress of the World Federation of Nuclear Medicine and Biology*. "New Radiopharmaceuticals: Availability, Development, and Challenges" Cape Town, South Africa: September 20th, 2010.