**Curriculum Vitae**

**Tara E. Mastren**

**Assistant Professor**

**University of Utah**

50 South Central Campus Drive MEB 3280B, Salt Lake City, Utah 84112

Tara.Mastren@Utah.edu

**EDUCATION**

**Dec 2014** Ph.D. Chemistry, Washington University in St Louis, St Louis, MO

**May 2008** B.S. Chemistry, Maryville University, St Louis, MO

**EXPERIENCE**

**2018-Present** Assistant Professor, Nuclear Engineering Program, University of Utah

**2018-Present** Assistant Professor, Civil and Environmental Engineering, University of Utah

**2018-2020** Guest Scientist, Isotope Team, Chemistry Division, Los Alamos National Laboratory

**2016-2018** Postdoctoral Researcher, Isotope Team, Chemistry Division, Los Alamos National Laboratory

**2015-2016** Postdoctoral Researcher, Radiology, UT Southwestern Medical Center

**2010-2014** Graduate Research Assistant, Department of Chemistry, Washington University in St Louis

**2008-2010** Research Chemist I, Monsanto Company, St Louis, MO

**2007-2008** Laboratory Technician, Washington University in St Louis School of Medicine

**CONTINUING EDUCATION**

**2014** NSSC-LANL Nuclear Safeguards Summer School

**2011** EBSS2011 Tenth Exotic Beam Summer School

**HONORS AND AWARDS**

**2022** Article “Copper-67 Radioimmunotheranostics for Simultaneous Immunotherapy and Immuno-SPECT” made “Top 100 in Cancer 2021” in Scientific Reports

**2021** DOE Early Career Award

**2017** Article “Simultaneous Separation of Actinium and Radium Isotopes from a Proton Irradiated Thorium Matrix made “Top 100 in Chemistry in 2017” (out of >5000) in

Scientific Reports

**2012** 14th International Workshop on Targetry and Target Chemistry, Travel Award

**2006** Outstanding Junior Award, American Chemical Society, Saint Louis Section

**Student Awards**

**2019** Rachel Payne: Undergraduate Research Opportunities Program Research Fellowship

**2020** George Diehl: NSF Graduate Fellowship Honorable Mention

**2021** George Diehl: Pacifichem Travel Award

**2022** Connor Holiski: Workshop on Targetry and Target Chemistry Travel Award

**2023** George Diehl: International Symposium on Radiopharmaceutical Science Travel Award

**2023** Aidan Bender: International Symposium on Radiopharmaceutical Science Travel Award

**2023** Connor Holiski: International Symposium on Radiopharmaceutical Science Travel

 Award

**2022** Connor Holiski: HIPPO Fellowship (Research at University of Wisconsin)

**2023** Aidan Bender: HIPPO Fellowship (Research at University of Wisconsin)

**2023** Connor Holiski: DOE SCGSR Fellowship (Research at LLNL)

**2023** Aidan Bender: DOE SCGSR Fellowship (Research at INL)

**PROFESSIONAL SOCIETIES**

**2011-Present** Society of Nuclear Medicine

**2015-Present** American Chemical Society, Nuclear Division

 Program Chair 2021-

 Isotope Production Steering Committee 2019-

**2023-Present** Society of Radiopharmaceutical Sciences

**UNIVERSITY SERVICE ACTIVITIES**

Society of Women Engineers Faculty Advisor 2019-Present

Graduate Recruitment Committee-Member (2019, 2020, 2022, 2023), Chair-2021

Safety Committee-2018, 2019, 2020, 2021, 2022, 2023

Graduate Application Review Committee-2018, 2019, 2020, Chair-2021, 2022, 2023

Nuclear Engineering Faculty Hiring Committee-2018

**SERVICE ACTIVITIES**

**Editorial Board:** Plos One (Academic Editor)

**Journal Reviewer:** Plos One, Journal of Current Radiopharmaceuticals, Scientific Reports, Applied Radiation and Isotopes, IEEE Transactions on Nuclear Science, Nature Chemistry, European Journal of Nuclear Medicine and Molecular Imaging, Chemical Sciences, Molecules

**Abstract Reviewer:** Society of Nuclear Medicine and Molecular Imaging Annual Meeting

Workshop on Targetry and Target Chemistry

 World Molecular Imaging Conference

**Proposal Reviewer:** DOE SBIR/STTR Proposal Review Panel (2019), DOE Office of Science Nuclear Physics Nuclear Data Review Panel (2021 and 2022), DOE Office of Science Early Career Award (2022 and 2023), Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Award (2022 and 2023), DOE Office of Science Isotope Program Review Panel, Canadian Medical Isotope Ecosystem Development Fund

**ACS NUCL:** Spring program chair for the nuclear division at the national meeting, 2021-Present

Co-Organizer for the DEI panel session at the Spring 2023 meeting

**WTTC:** Scientific Advisory Committee, Workshop on Targetry and Target Chemistry, 2022

**ISRS:** Panel Member on Theranostics in Nuclear Medicine

**TEACHING EXPERIENCE**

**2018, 2019, 2020** Graduate Radiochemistry, University of Utah

**2019-2024**  Radiation Interactions, University of Utah

**2022** General Topic in Nuclear Medicine (Graduate)

**2023** Health Physics (Graduate)

**Trainees: Graduate Researchers**

**Doctoral**

Brock Mower (2022-Present)

Nicholas Becker (2023-Present)

George Diehl (2019-Present)

Connor Holiski (2020-Present)

Aidan Bender (2020-Present)

Brock Mower (2021-Present)

Erin Johnston (2020-2021)

Christoph Schulzke (2020-2022)

**Master**

Ryan Forrester (2020-2022) Now Scientist at LANL

**Current Undergraduate Researchers**

Ellie Lundgreen (2022-Present)

**Past Undergraduate Researchers**

Nejra Mujkanovic **(Summer 2022 HIPPO)**

Lauren Hoekstra **(Summer 2023 HIPPO)**

Melanie Guerrero **(Summer 2023 HIPPO)**

Nicholas Becker (2022-Present)

Sophia Birkner (2021-2022)

Lauren Gilmore (2022-2022)

Jeri Landeros (2019-2021)

Tavie Parker (2020-2020)

Colton Dixon (2020-2021)

Xandi Carver (2019-2020)

Thomas Ashton (2019-2020)

Gabriel Mensinger (2018-2020)

Rachel Payne (2018-2020) UROP Awardee Spring 2019

**GRANT SUPPORT**

**ERF/NETRF Nuclear Medicine Pilot Grant** 2019-2022

ERF $95,238 direct costs

Functionalized Silica Nanoparticles: Development of a Combined PET and TAT Theranostic Agent for Neuroendocrine Tumors

**LANL Laboratory Directed Research and Development**

LANL 2019-2022

225Ac/213Bi Generator Based on Microfluidics Controlled Electrodeposition $90,000 total costs

**INL Laboratory Directed Research and Development**

INL 2019-2022

Development of novel radiometal chelators for imaging and therapeutic nuclear medicine $235,000 total costs

**INL Laboratory Directed Research and Development**

INL 2020

Photonuclear production of radionuclides $30,000 total costs

**INL**

INL 2020-2022

Alpha Emitting Materials $120,000 total costs

**1U4U**

University of Utah 2020-2021

Targeted Alpha Therapy for the Treatment of Alzheimer’s Disease $30,000 direct costs

**Department of Energy Isotope Program** 2020-2022

DOE $450,000 of $800,000

Collaborative Effort between University of Wisconsin and Hunter College

Production and Improved Separation of Therapeutic Radionuclides Tb-161 and Er-165

**Department of Energy Office of Science** 2021-2026

DOE $750,000

Early Career Award

Nanomaterials for use in Radionuclide Generator Systems for Alpha Emitting Radionuclides

**Department of Energy Isotope Program** 2022-2024

DOE $2M ($85k Utah)

Multi-institution Traineeship in Isotope Productions “Horizon-Broadening Isotope Production Pipeline Opportunities (HIPPO)

**Gordon and Betty Moore Foundation** 2023-2027

Francium-silver molecules for revolutionary sensitivity to hadronic CP violation $2.8M ($441k Utah)

**PUBLICATIONS**

1. *Ryan Forrester*, Guy Dutech, Andrew Akin, Michael E. Fassbender, and **Tara Mastren**, An Electrochemical Generator for the Separation of 213Bi from 225Ac for use in Targeted Radiotherapy Applications, In final stages for submission to Scientific Reports
2. *Aidan A. Bender, Emily K. Kirkeby*, Donna J. Cross, Satoshi Minoshima, Andrew G. Roberts, and **Tara E. Mastren**, Development of a bismuth-213 labeled pyridyl benzofuran for targeted alpha therapy of amyloid beta aggregates, Submitted to JNM under review
3. *Emily K Kirkeby*, Ming-Kuan Chyan, *George Diehl*, D Scott Wilbur, Yawen Li, Andrew G Roberts, and **Tara Mastren**, Design and synthesis of astatinated benzothiazole compounds for their potential use in Targeted Alpha Therapy (TAT) strategies to treat Alzheimer's disease-associated amyloid plaques, 2022, Applied Radiation and Isotopes, 191, 110555
4. Brian T Arko, David Dan, Sara Adelman, David B Kimball, Stosh A Kozimor, Marki M Martinez, **Tara Mastren**, Daniel L Huber, Veronika Mocko, Jung Rim, Jenifer C Shafer, Benjamin W Stein, E Miller Wylie, Exploring how exposure to radiolysis and harsh chemical reagents impact americium-241 extraction chromatography, 2022, Materials Advances, 4(1), 265-283
5. **(Top 100 Cancer 2021)** Guiyang Hao, **Tara Mastren**, William Silvers, Gedaa Hassan, Orhan K. Öz, and Xiankai Sun, Copper-67 Radioimmunotheranostics for Simultaneous Immunotherapy and Immuno-SPECT, **2021**, S*cientific Reports*, 11(1), 1-11
6. Antonietta M. Lillo, Nileena Velappan, Julia M. Kelliher, Austin J. Watts, Samuel P. Merriman, Grace Vuyisich, Laura M. Lilley, Kent E. Coombs, **Tara Mastren**, Munehiro Teshima, Benjamin W. Stein, Gregory L. Wagner, Srinivas Iyer, Andrew R. M. Bradbury, Jennifer Foster Harris, Armand E. Dichosa, and Stosh A. Kozimor, Development of anti-Y. pestis human antibodies with features required for diagnostic and therapeutic applications, **2020**, *Immunotargets and Therapy,* 9, 299-316
7. **Tara Mastren**, Andrew Akin, Roy Copping, Mark Brugh, D. Scott Wilbur, Eva R. Birnbaum, Francois M. Nortier, Kevin D. John, and Michael E. Fassbender, A Reverse 230U/226Th Radionuclide Generator for Targeted Alpha Therapy Applications, **2020**, *Nuclear Medicine and Biology,* 90-91, 69-73
8. Maryline G. Ferrier, Yawen Li, Ming-Kuan Chyan, Roger Wong, Lily Li, Donald K. Hamlin, **Tara Mastren**, Michael E. Fassbender, Chris Orvig, and D. Scott Wilbur, Thorium chelators for Targeted Alpha Therapy: Rapid chelation of thorium-226, **2020**, *Journal of Labelled Compounds and Radiopharmaceuticals*, 63 (12), 502-516
9. Mitchell T Friend, T Gannon Parker, **Tara Mastren**, Veronika Mocko, Mark Brugh, Eva R Birnbaum, and Michael E Fassbender, Extraction chromatography of 225Ac and lanthanides on N, N-dioctyldiglycolamic acid/1-butyl-3-methylimidazolium bis (trifluoromethylsulfonyl) imide solvent impregnated resin, **2020**, Journal of Chromatography A, 1624, 461219.
10. Mitchell T. Friend, **Tara Mastren**, T. Gannon Parker, Christiaan E. Vermeulen, Mark Brugh, Eva R. Birnbaum, F. Meiring Nortier, and Michael E. Fassbender, Production of 230Pa by proton irradiation of 232Th at the LANL isotope production facility: Precursor of 230U for targeted alpha therapy, **2020**, *Applied Radiation and Isotopes*, 108973.
11. Kattathu Mathew, Theresa Kayzar-Boggs, Zsolt Varga, Amy Gaffney, Joanna Denton, James Fulwyler, Katherine Garduno, Andrew Gaunt, Jeremy Inglis, Russ Keller, William Kinman, Dana Labotka, Elmer Lujan, Joel Maassen, **Tara Mastren**, Iain May, Klaus Mayer, Adrian Nicholl, Chelsea Ottenfeld, Tashi Parsons-Davis, Donivan Porterfield, Jung Rim, John Rolison, Floyd Stanley, Rob Steiner, Lav Tandon, Mariam Thomas, Richard Torres, Kerri Treinen, Maria Wallenius, Allison Wend, eRoss Williams, and Josh Wimpenny, Intercomparison of the Radio-Chronometric Ages of Plutonium-Certified Reference Materials with Distinct Isotopic Compositions, **2019**. *Analytical Chemistry*, 91 (18), 11643-11652
12. E Paige Abel, Mikael Avilov, Virginia Ayres, Eva Birnbaum, Georg Bollen, Greg Bonito, Todd Allen Bredeweg, Hannah Clause, Aaron Couture, Joe DeVore, Matthew Dietrich, Paul Ellison, Jonathan Engle, Richard Ferrieri, Jonathan Fitzsimmons, Moshe Friedman, Dali Georgobiani, Stephen Graves, John Greene, Suzanne Lapi, C Shaun Loveless, **Tara Mastren**, Cecilia Martinez-Gomez, Sean McGuinness, Wolfgang Mittig, David Morrissey, Graham Peaslee, Frederique Pellemoine, J David Robertson, Nicholas Scielzo, Matthew D Scott, Gregory W Severin, Dawn Shaughnessy, Jennifer Shusterman, Jaideep Singh, Mark Stoyer, Logan Sutherlin, Ate Visser, and John Wilkinson, Isotope harvesting at FRIB: additional opportunities for scientific discovery, **2019.** *Journal of Physics G: Nuclear and Particle Physics*, 46(10), 1-33
13. **Tara Mastren**, Christiaan Vermeulen, Mark Brugh, Eva R. Birnbaum, Meiring F. Nortier, and Michael E. Fassbender, Natural nickel as a proton beam energy monitor for energies ranging from 15 to 30 MeV, **2019**. *Nuclear Instruments and Methods in Physics Research B*, 443, 1-4
14. **Tara Mastren**, Benjamin W. Stein, T Gannon Parker, Valery Radchenko, Roy Copping, Allison Owens, Lance E Wyant, Mark Brugh, Stosh A Kozimor, F Meiring Nortier, Eva R Birnbaum, Kevin D John, and Michael E Fassbender, Separation of protactinium employing thiol-based extraction chromatographic resins, **2018**. *Analytical Chemistry*, 90(11), 7012-7017
15. Philip D. Hopkins, **Tara Mastren**, Justyna A. Florek, Roy Copping, Mark Brugh, Kevin D John, Meiring F Nortier, Eva R Birnbaum, Freddy Kleitz, and Michael E Fassbender, Synthesis and radiometric evaluation of diglycolamide functionalized mesoporous silica for the chromatographic separation of actinides Th, Pa and U, **2018**. *Dalton Transactions*, 47, 5189-5195.
16. **Tara Mastren**, Valery Radchenko, Philip Hopkins, Jonathan W Engle, John W Weidner, Roy Copping, Mark Brugh, F Meiring Nortier, Eva R Birnbaum, Kevin D John, and Michael E Fassbender, Separation of 103Ru from a proton irradiated thorium matrix: A potential source of 103mRh an isotope of interest for Auger therapy, **2017**. *Plos One*, 12.
17. **Tara Mastren**, Valery Radchenko, Jon Engle, John W Weidner, Allison Owens, Lance E Wyant, Roy Copping, Mark Brugh, F Meiring Nortier, Eva R Birnbaum, Kevin D John, and Michael E Fassbender. Chromatographic separation of the theranostic radioisotope 111Ag from a proton irradiated thorium matrix, **2017**. *Analytica Chimica Acta,* 998.
18. **(Top 100 Chemistry 2017) Tara Mastren,** Valery Radchenko, Allison Owens, Roy Copping, Rose Boll, Justin R Griswold, Saed Mirzadeh, Lance E Wyant, Mark Brugh, Jonathan W Engle, Francois M Nortier, Eva R Birnbaum, Kevin D John, and Michael E Fassbender, Simultaneous Separation of Actinium and Radium Isotopes from a Proton Irradiated Thorium Matrix, **2017**. *Scientific Reports*, 7:8216.
19. Valery Radchenko, **Tara Mastren**, Catherine A. L. Meyer, Alexander S Ivanov, Vyacheslav S Bryantsev, Roy Copping, David Denton, Jonathan W Engle, Justin R Griswold, Karen Murphy, Justin J Wilson, Allison Owens, Lance Wyant, Eva R Birnbaum, Jonathan Fitzsimmons, Dmitri Medvedev, Cathy S Cutler, Leonard F Mausner, Meiring F Nortier, Kevin D John, Saed Mirzadeh, and Michael E Fassbender. Radiometric Evaluation of Diglycolamide Resins for the Chromatographic Separation of Actinium from Fission Product Lanthanides, **2017**. *Talanta*, 175, 318-324.
20. **Tara Mastren**, Valery Radchenko, Hong T. Bach, Ethan R Balkin, Eva R Birnbaum, Mark Brugh, Jonathan W Engle, Matthew D Gott, James Guthrie, Heather M Hennkens, Kevin D John, Alan R Ketring, Marina Kuchuk, Joel R Maassen, Cleo M Naranjo, F Meiring Nortier, Tim E Phelps, Silvia S Jurisson, D Scott Wilbur, and Michael E Fassbender, Bulk Production and Evaluation of High Specific Activity 186gRe for Cancer Therapy Using Enriched 186WO3 Targets in a Proton Beam, **2017**. *Nuclear Medicine and Biology,* 49, 24-29.
21. Valery Radchenko, Jonathan W. Engle, Dmitri. G. Medvedev, Joel M Maassen, Cleo M Naranjo, George A Unc, Catherine AL Meyer, **Tara Mastren**, Mark Brugh, Leonard Mausner, Cathy S Cutler, Eva R Birnbaum, Kevin D John, F Meiring Nortier, and Michael E Fassbender, Proton-induced production and radiochemical isolation of 44Ti from scandium metal targets for 44Ti/44Sc generator development, **2017**. *Nuclear Medicine and Biology,* 50, 25-32.
22. Valery Radchenko, Catherine Meyer, Jonathan W. Engle, Cleo Micah Naranjo, George A Unc, **Tara Mastren**, Mark Brugh, Eva R Birnbaum, Kevin Dale John, Francois Meiring Nortier, and Michael E Fassbender, Separation of 44Ti from proton irradiated scandium by using solid-phase extraction chromatography and design of 44Ti/44Sc generator system, **2016**. *Journal of Chromatography A*, 1477, 39-46.
23. Amit Kumar, **Tara Mastren**, Bin Wang, Jer-Tsong Hsieh, Guiyang Hao, and Xiankai Sun, Design of a Small-Molecule Drug Conjugate for Prostate Cancer Targeted Theranostics, **2016**. *Bioconjugate Chemistry*, 27, 1681-1689.
24. **Tara Mastren,** Aranh Pen, Shaun Loveless, Bernadette V Marquez, Elizabeth Bollinger, Boone Marois, Nicholas Hubley, Kyle Brown, David J Morrissey, Graham F Peaslee, and Suzanne E Lapi, Harvesting 67Cu from the Collection of a Secondary Beam Cocktail at the National Superconducting Cyclotron Laboratory, **2015**.  *Analytical Chemistry*, 87, 10323-10329.
25. **Tara Mastren,** Bernadette V. Marquez, Deborah E Sultan, Elizabeth Bollinger, Paul Eisenbeis, Tom Voller, and Suzanne E Lapi, Cyclotron production of high specific activity 55Co and the evaluation of the stability of 55Co metal-chelate-peptide complexes in vivo, **2015**. *Molecular Imaging*, 14.
26. **Tara Mastren**, Aranh Pen, Graham F. Peaslee, Nick Wozniak, Shaun Loveless, Scott Essenmacher, Lee G Sobotka, David J Morrissey, and Suzanne E Lapi, Feasibility of Isotope Harvesting at a Projectile Fragmentation Facility: 67Cu, **2014**. *Scientific Reports*, 4, 6706.
27. **Tara Mastren**, James Guthrie, Paul Eisenbeis, Tom Voller, Efrem Mebrahtu, J David Robertson, and Suzanne E Lapi, Specific Activity Measurement of 64Cu: A Comparison of Methods, **2014**. *Applied Radiation and Isotopes*, 90, 117-121.
28. Aranh Pen, **Tara Mastren**, Graham F. Peaslee, Kelly Petrasky, Paul A DeYoung, David J Morrissey, and Suzanne E Lapi, Design and construction of a water target system for harvesting radioisotopes at the National Superconducting Cyclotron Laboratory, **2014**. *Nuclear Instruments and Methods in Physics Research Section A*, 747, 62-68
29. Tolulope A. Aweda, Oluwatayo Ikotun, **Tara Mastren**, Carolyn L Cannon, Brian Wright, Wiley J Youngs, Cathy Cutler, James Guthrie, and Suzanne E Lapi, The use of 111Ag as a tool for studying biological distribution of silver-based antimicrobials, **2013**. *Med Chem Comm*, 4, 1015-1017.

**BOOK CHAPTERS**

Eva R Birnbaum, Michael E Fassbender, Maryline G Ferrier, Kevin D John, and **Tara Mastren**, Actinides in Medicine, The Heaviest Metals: Science and Technology of the Actinides and Beyond, Encyclopedia of Inorganic and Bioinorganic Chemistry, John Wiley & Sons, Ltd, **2018**.

**Tara Mastren**, Targeted Alpha Therapy, Rare Earth Elements and Actinides: Progress in Computational Science Applications, ACS Symposium Series Vol 1388, Chapter 13, 277-283, **2021**

**INVITED PRESENTATIONS**

**Tara Mastren,** *The Production and Application of Radionuclides for Targeted Radiotherapy,* MIZZOU Chemistry Seminar Series, February 25, 2022.

**Tara Mastren,** *The Production and Application of Radionuclides for Targeted Radiotherapy,* Colorado State University Health Physics Seminar Series, November 5, 2021.

**Tara Mastren,** *The Production and Application of Radionuclides for Targeted Radiotherapy,* Washington University in St Louis Chemistry Seminar, October 14, 2021.

**Tara Mastren**, *Applications of Nuclear Medicine*, American Physics Society Department of Nuclear Physics Conference Workshop Series, October 11, 2021.

**Tara Mastren,** *The Production and Application of Radionuclides for Targeted Radiotherapy,* University of Alabama/University of Wisconsin Seminar Series, October 6, 2021.

**Tara Mastren**, *Production and Application of Beta Emitting Radionuclides for Targeted Radiotherapy*, World Molecular Imaging Society Webinar Series, March 24, 2021.

**Tara Mastren,** *The Production and Application of Radionuclides for the Treatment of Cancer*, University of Tennessee Nuclear Engineering Colloquium, January 22, 2020.

**Tara Mastren**, DOE Isotope Program University Isotope Network Reactor Production Workshop, November 5, 2019.

**Tara Mastren**, *Isotope Production*, Exotic Beam Summer School 2019, Oak Ridge National Laboratory, June 26, 2019

**ORAL PRESENTATIONS**

**Tara Mastren,** *Production and separation of 230Pa for targeted alpha therapy applications utilizing progeny radionuclides 230U/226Th*, 17th International Workshop on Targetry and Target Chemistry, Coimbra, Portugal, August 30, 2018

**Tara Mastren,** *Chromatographic separation of Medically-Related Radionuclides from Proton-Irradiated Thorium Targets*, 254th American Chemical Society National Meeting & Exposition, Washington D.C., August 20, 2017

**Tara Mastren,** *A generator concept to yield 226Th: an isotope of interest for targeted alpha therapy*, 22nd International Symposium on Radiopharmaceutical Sciences, Dresden, Germany, May 15, 2017

**Tara Mastren**, *Selective Extraction of Medically-Related Radionuclides from Proton-Irradiated Thorium Targets*, 16th International Workshop on Targetry and Target Chemistry, Santa Fe, NM, August 29, 2016

**Tara Mastren**, *Isotope Harvesting at Heavy Ion Fragmentation Facilities*, 15th International Workshop on Targetry and Target Chemistry, Prague, Czech Republic, August 20, 2014

**Tara Mastren**, *Separation Chemistries for Isotope Harvesting at Heavy Ion Fragmentation Facilities*, University Industry Technical Interchange, Walnut Creek, CA, June 5, 2014.

**Tara Mastren**, *Transition Metal Ion Chromatography to Measure True Specific Activity of 64Cu*, Radiometals, Sonoma, CA, June 16, 2013.

**Tara Mastren**, *Studies for Isotope Harvesting at the Facility for Rare Isotope Beams*, NSSC Webinar, March 21, 2013.

**STUDENT PRESENTATIONS**

Aidan Bender, Emily K. Kirkeby, Donna Cross, Andrew G. Roberts, and Tara Mastren, *Evaluation of Pyridyl Benzofuran Derviative for Targeted Alpha Therapy of Alzheimer's Disease*, Poster Presentation, International Symposium on Radiopharmaceutical Sciences, Honolulu, HI, May 2023

George L. Diehl III, Viktoriya Semeykina, Paran Aboufazeli, Katherine Gingrich, Sophia Birkner, Illya Zharov and Tara Mastren, *Nanoparticles as a Radinuclide Generator System for 225Ac/213Bi*, Poster Presentation, International Symposium on Radiopharmaceutical Sciences, Honolulu, HI, May 2023

Connor Holiski, Christoph A. Schulzke, Glenn E. Sjoden, and Tara E. Mastren, *TRIGA Reactor Production and Synergistic Separation of 161Tb from Enriched 160Gd Targets Using Novel Extraction Chromatographic Resins*, Oral Presentation, International Symposium on Radiopharmaceutical Sciences, Honolulu, HI, May 2023

Connor Holiski, Christoph A. Schulzke, Glenn E. Sjoden, and Tara E. Mastren, *TRIGA Reactor Production and Synergistic Separation of 161Tb from Enriched 160Gd Targets,* Oral Presentation, 18th International Workshop on Targetry and Target Chemistry, Whistler, CA, August 2022

George L. Diehl III, Viktoriya Semeykina, Paran Aboufazeli, Katherine Gingrich, Sophia Birkner, Illya Zharov and Tara Mastren, *Silica and iron oxide nanoparticles as delivery vehicles for 225Ac and 89Zr to combine targeted α-therapy and PET imaging*, Oral Presentation, Pacifichem, Virtual, December 2021

Emily K. Kirkeby, Ming-Kuan Chyan, Yawen Li, D. Scott Wilbur, Andrew G. Roberts, and Tara Mastren, *Evaluating the Potential of At-211 as Targeted Alpha Therapy for the Treatment of Alzheimer’s Disease*, Poster Presentation, Gordon Research Conference on Medicinal Chemistry, West Dover, VT October 2021

George L. Diehl III, Viktoriya Semeykina, Gabriel Mensinger, Illya Zharov and Tara Mastren, *Silica Nanoparticles as a vehicle for 225Ac/89Zr delivery for use as a theranostic agent in targeted alpha therapy*, Poster presentation, American Chemical Society, Philadelphia, PA, March 2021

Emily K. Kirkeby, George L. Diehl III, Rachel Payne, Andrew G. Roberts, Tara Mastren, *An At-211 labelled small molecule based on the flutemetamol scaffold: a potential theranostic for Alzheimer’s disease*, Poster Presentation, American Chemical Society, Philadelphia, PA, March 2021

Rachel Payne, George L. Diehl III, Tara Mastren, *Thermodynamic, Heat, and Radiolytic Stability of LN and DGA Resins for the Production of 161Tb*, Oral Presentation, American Chemical Society, Philadelphia, PA, March 2021

George L. Diehl III, Viktoriya Semeykina, Gabriel Mensinger, Illya Zharov and Tara Mastren, *Silica Nanoparticles as a vehicle for 225Ac/89Zr delivery for use as a theranostic agent in targeted alpha therapy*, Poster presentation, International Symposium on Biomedical Materials for Drug/Gene Delivery, Salt Lake City, UT, February 8, 2020

**CONFERENCE PROCEEDINGS**

**Mastren, T.**, Sultan, D., Lapi, S.E., (2012) Production and Separation of 55Co via the 58Ni(p,α) Reaction, Proceedings of the 2012 Workshop on Targetry and Target Chemistry, Cancun, MX, AIP Conference Proceedings-American Institute of Physics, 1509, 96.

**PATENTS**

* B. Stein, **T. Mastren**, M.E. Fassbender, S. Kozimor, Extractants and extractant compositions for radioisotope and metal recovery. US Patent # 10998107
* **T. Mastren**, M.E. Fassbender, A generator concept to yield 226Th: an isotope of interest for targeted alpha therapy. US Patent # 10562835