Curriculum Vitae

Xuyi (Kevin) Yue, PhD

Date: August 2023
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EDUCATION

2000-2004 BS, Lanzhou University, P. R. China (Chemistry)
2004-2009 PhD, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, P. R. China (Organic Chemistry)

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS

2009-2011 Postdoctoral Fellow, University of Maryland Baltimore, Maryland
2011-2014 Postdoctoral Fellow, National Institute of Biomedical Imaging and Bioengineering, National Institutes of Health, Bethesda, Maryland
2014-2014 Visiting Researcher, Mallinckrodt Institute of Radiology, Washington University in St. Louis, Missouri
2014-2017 Staff Scientist, Mallinckrodt Institute of Radiology, Washington University in St. Louis, Missouri

FACULTY APPOINTMENTS

2017-2021 Assistant Research Scientist, Diagnostic & Research PET/MRI Center
Nemours/Alfred I. duPont Hospital for Children
2020- Research Assistant Professor of Pediatrics
Thomas Jefferson University
2022- Research Scientist and Head of Lab, Diagnostic & Research PET/MRI Center
Nemours Children's Hospital, Delaware
2022- Affiliated Assistant Professor, Department of Psychological and Brain Sciences
University of Delaware

AWARDS AND HONORS

2004 Outstanding Graduate of Lanzhou University, awarded by Lanzhou University
2009 Outstanding Graduate of Shanghai Municipality, awarded by Shanghai Municipality
2013 Student Travel Stipend Award, awarded by 2013 World Molecular Imaging Congress, Savannah
2015 Gold award for oral presentation in World Molecular Imaging Congress, Hawaii, awarded by The Chinese Society for Molecular Imaging
2020 The ACNM Ursula Mary Kocemba-Slosky, PhD best ACNM Nuclear Medicine Research Abstract, Tampa, FL, awarded by the 2020 ACNM Annual Meeting Program Committee
2021 NCGR Virtual Bioinformatics Intensive award, awarded by the New Mexico IDeA Network of Biomedical Research Excellence
2021 NIH/NIBIB R21 Trailblazer Award
2021 SPR John Caffey Best Educational Poster, awarded by The Society for Pediatric Radiology

2021 DE CTR ACCEL Pilot Award
2022 Delaware INBRE Faculty Start-up (FASTAR) Award
2022 DE-INBRE Developmental Research Pilot Project Award
2023 DE-INBRE Supplemental Funds
2023 Nemours Grants for Open Access from Library Services (GOALS)

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

World Molecular Imaging Society (Member, 2013, 2015)
Society of Nuclear Medicine and Molecular Imaging (SNMMI) (Member, 2014)
Society of Radiopharmaceutical Sciences (Member, 2015, 2023)
Society of Nuclear Medicine and Molecular Imaging (SNMMI) (Member, 2017-2023)
World Molecular Imaging Society (Member, 2022, 2023)

PROFESSIONAL AND SCIENTIFIC COMMITTEES

2021 Early Career Reviewer program, Center for Scientific Review, National Institutes of Health. October 14-15, 2021 Review Panel for Imaging Probes and Contrast Agents study section.
2021 Member of Pediatric Imaging Council Mentorship Program, SNMMI.
2023 Member of Nemours Biomedical Research Safety Committee
2022 Mentor, Nemours Summer Undergraduate Research Program
2023 Mentor, Nemours Summer Undergraduate Research Program

EDITORIAL POSITIONS

2015-2017 Editorial Board, ARC Journal of Radiology and Medical Imaging
2020-2023 Reviewer Board, Cancers
2021-2023 Guest Editor for “In Vivo Nuclear Molecular Imaging in Drug Development and Pharmacological Research”, Pharmaceuticals (IF 5.86)
2022-2023 Topical Advisory Panel, International Journal of Molecular Sciences
2022-2023 Editorial Board, Drug Metabolism and Transport

MAJOR CLINICAL RESPONSIBILITIES AT THE NEMOURS CHILDREN'S HOSPITAL, DELAWARE

1. Prepared [^{18}F]GE180 investigational new drug (IND) application; clinical production of [^{18}F]GE180 and PET/MR imaged 12 patients (13 – 72 years old); prepared FDA [^{18}F]GE180 annual report.
2. Completed clinical production of [^{18}F]GE179 and prepared chemistry, manufacturing and controls documents.
3. Led clinical validation runs of L-1-[^{18}F]fluoroethyl tryptophan; scheduled and presided over FDA pre-IND meeting; prepared exploratory IND (eIND) documents. The eIND application has been approved by FDA for first-in-human investigation in May 2021.

LECTURES BY INVITATION (Delaware Valley)

02/20/2019 Translational Theranostic Imaging in Neuroscience, Nemours Grand Rounds
02/27/2019 Neuroscience Research, Center for Pediatric Clinical Research and Development
09/12/2019 Clinical Production of 1-(2-[^{18}F]fluoroethyl)-L-Tryptophan for Imaging of Tryptophan Metabolic Pathway, ACCEL DE CTR Junior Investigators Networks
02/26/2020 Neuroscience Research, Center for Pediatric Clinical Research and Development
03/11/2020 Development of PET Tracers for Brain Disorders - From Bench to Bedside, Chemistry Biology Interface Program, University of Delaware

05/19/2020 Nemours PET/MRI Core Overview, DE INBRE Core presentation
07/23/2020 Radiotracer Development for Neuroimaging, ACCEL DE CTR Junior Investigators Networks
02/15/2021 PET/MR Application in Pediatric Research, Nemours Lectures on Pediatric Research
05/28/2021 Bench to Bedside Clinical Translation of Radiotracers, Nemours Residency Program, Department of Radiology
07/01/2021 Nemours Neurotheranostics Program, Radiology Residency Program
08/19/2021 Development of Positron Emission Tomography (PET) Radiotracers for Imaging Brain Glymphatic System, University of Delaware NIH Academy pitch talk
12/16/2021 Neuroscience retreat presentation, Research at the Positron Emission Tomography (PET) Imaging Laboratory
06/30/2022 Noninvasive Detection of Neurofibromatosis Type 1 with Positron Emission Tomography Imaging, ACCEL DE CTR Junior Investigators Networks
10/13/2022 PET imaging of brain glymphatic-meningeal system by targeting VEGFR3, Nemours Neuroscience Talk
10/20/2022 PET imaging of tryptophan metabolism in a neurofibromatosis type 1 animal model, 2022 Delaware Valley Research Week
05/18/2023 PET imaging of two fluorine-18 labeled radiotracers in a neurofibromatosis type 1 animal model, 2nd Annual Nemours Children's Health Research Week

WORKSHOPS

- 10/27/2020-10/30/2020 NIH VIRTUAL SEMINAR on Program Funding and Grants Administration
- 01/19/2021-01/29/2021 NCGR Virtual Bioinformatics Intensive, the New Mexico INBRE and the National Center for Genome Resources (NCGR) in Santa Fe, NM
- 02/11/2021 Flight School Peer Review Session, ACCEL DE CTR-the Professional Development
- 07/20/2021 Steps for success: A guide to writing NIH and NSF proposals, Charles River
- 2021 – 2022 Selected into University of Delaware NIH Proposal Academy
- 03/06/2023 SuRE Resource Center - Grantsmanship Bootcamp
- 07/19/23-07/20/23 Professional NIH Grant Development, Grant Training Center

MEDIA RELEASE

02/2020 Dr. Kevin Yue Receives Best Research Abstract Award in the 2020 SNMMI Mid-Winter and ACNM Annual Meeting, Nemours QuickLinks
07/2021 Dr. Yue receives 3-Year NIH R21 Trailblazer Award, Nemours Under the Lens
07/2021 Nemours Neurotheranostics Program Receives FDA Approval for Exploratory Investigational New Drug (eIND), Nemours Under the Lens
08/2021 Nemours Children's Health secures NIH grant to study COVID-19 mortality risk and pre-existing conditions - Prestigious Trailblazer Award to Fund Research on ACE2 and COVID-19 Severity, EurekAlert
05/2022 DE CTR ACCEL, ask the researcher: Xuyi (Kevin) Yue
05/2023 Dr. Xuyi (Kevin) Yue Publishes an e-Book in Pharmaceuticals, Nemours Under the Lens

PEER-REVIEWED PUBLICATIONS

1. Yue X. Special Issue "In Vivo Nuclear Molecular Imaging in Drug Development and Pharmacological Research". *Pharmaceuticals (Basel)*. 2023, *16*, 459.
2. Nikam RM, Kecskemethy HH, Kandula VVR, Averill LW, Langhans SA, Yue X. Abusive Head Trauma

Animal Models: Focus on Biomarkers. *Int. J. Mol. Sci*. 2023, *24*, 4463 (Corresponding author).

3. Nikam RM, Yue X, Kaur G, Kandula V, Khair A, Kecskemethy HH, Averill LW, Langhans SA. Advanced Neuroimaging Approaches to Pediatric Brain Tumors. *Cancers.* 2022, *14*, 3401.
4. Yue X, Nikam RM, Kecskemethy HH, Kandula VVR, Falchek SJ, Averill LW, Langhans SA. Radiosynthesis of 1-(2-[^{18}F]fluoroethyl)-L-tryptophan using a one-pot, two-step protocol. *J. Vis. Exp.* 2021, *175*, e63025 (Corresponding author).
5. Nikam RM, Yue X, Kandula VV, Paudyal B, Langhans SA, Averill LW, Choudhary AK. Unravelling neuroinflammation in abusive head trauma with radiotracer imaging. *Pediatr. Radiol.* 2021, *51*, 966-970.
6. Nikam RM, Kandula VV, Yue X, Krishnan V, Kumbhar SS, Averill LW, Paudyal B, Choudhary AK. Birth-related subdural hemorrhage: prevalence and imaging morphology. *Pediatr Radiol.* 2021, *51*, 939-946.
7. Xin Y, [#] Yue X, [#] Li H, Li Z, Cai H, Choudhary AK, Zhang S, Chugani DC. Langhans SA. PET imaging of medulloblastoma with an ^{18}F-labeled tryptophan analogue in a transgenic mouse model. *Sci. Rep.* 2020, *10*, 3800 (Co-first authors).
8. Yue X, Xin Y, Zhang S, Nikam R, Kandula V, Choudhary AK, Chugani HT, Chugani DC. Automated production of 1-(2-[^{18}F]fluoroethyl)-L-tryptophan for imaging of tryptophan metabolism. *Appl. Radiat. Isot.* 2020, 1*56*, 109022 (Corresponding author).
9. Yue X,[#] Xin Y,[#] Chugani HT, Chugani DC, Zhang S. Automated production of a *N*-methyl-D-aspartate receptor radioligand [^{18}F]GE179 for clinical use. *Appl. Radiat. Isot.* 2019, *148*, 246-252 (Co-first authors).
10. Wu Y, Zhang Q, Qi Y, Gao J, Li W, Lv L, Chen G, Zhang Z, Yue X, Peng S. Enzymatic activity of palmitoyl-protein thioesterase-1 in serum from schizophrenia significantly associates with schizophrenia diagnosis scales. *J. Cell Mol. Med.* 2019, 23, 6512-6518.
11. Yue X, Luo Z, Liu H, Kaneshige K, Parsons SM, Perlmutter JS, Tu Z. Radiosynthesis and evaluation of a fluorine-18 labeled radioligand targeting vesicular acetylcholine transporter. *Bioorg. Med. Chem. Lett.* 2018, *28*, 3425-3430.
12. Yue X, Dhavale DD, Li J, Luo Z, Liu J, Yang H, Mach RH, Kotzbauer PT, Tu Z. Design, synthesis, and *in vitro* evaluation of quinolinyl analogues for *α*-synuclein aggregation. *Bioorg. Med. Chem. Lett.* 2018, *28*, 1011-1019.
13. Liu H, Jin H, Luo Z, Yue X, Zhang X, Flores H, Su Y, Perlmutter JS, Tu Z. *In Vivo* characterization of two ^{18}F-labeled PDE10A PET radioligands in nonhuman primate brains. *ACS Chem. Neurosci.* 2018, *9*, 1066-1073.
14. Liu C, Liu H, Jin H, Yue X, Luo Z, Tu Z. Cholinergic imbalance in lumbar spinal cord of a rat model of multiple sclerosis. *J. Neuroimmunol.* 2018, *318*, 29-35.
15. Jin H, Yue X, Liu H, Han J, Flores H, Su Y, Parsons SM, Perlmutter JS, Tu Z. Kinetic modeling of [^{18}F]VAT, a novel radioligand for positron emission tomography imaging vesicular acetylcholine transporter in non-human primate brain. *J. Neurochem.* 2018, *144*, 791-804.
16. Luo Z, Yue X, Yang H, Liu H, Klein RS, Tu Z. Design and synthesis of pyrazolopyridine derivatives as sphingosine 1-phosphate receptor 2 ligands. *Bioorg. Med. Chem. Lett.* 2018, *28*, 488-496.

17. Jin H, Han J, Resing D, Liu H, Yue X, Miller RL, Schoch KM, Miller TM, Perlmutter JS, Egan TM, Tu Z. Synthesis and *in vitro* characterization of a P2X7 radioligand [^{123}I]TZ6019 and its response to neuroinflammation in a mouse model of Alzheimer disease. *Eur. J. Pharmacol.* 2018, *820*, 8-17.

18. Liu H, Jin H, Han J, Yue X, Yang H, Zayed MA, Gropler RJ, Tu Z. Upregulated Sphingosine 1-Phosphate Receptor 1 Expression in Human and Murine Atherosclerotic Plaques. *Mol. Imaging Biol.* 2018, *20*, 448-456.

19. Yue X, Jin H, Liu H, Luo Z, Zhang X, Kaneshige K, Flores HP, Perlmutter JS, Parsons S and Tu Z. Synthesis, resolution and in vitro evaluation of three vesicular acetylcholine transporter ligands and evaluation of the lead fluorine-18 radioligand in a nonhuman primate. *Org. Biomol. Chem.* 2017, *15*, 5197-5209.

20. Yue X, Jin H, Luo Z, Liu H, Zhang X, McSpadden ED, Tian L, Flores HP, Perlmutter JS, Parsons SM, Tu Z. Chiral resolution of serial potent and selective σ_1 ligands and biological evaluation of (-)-[^{18}F]TZ3108 in rodent and nonhuman primate brain. *Bioorg. Med. Chem.* 2017, *25*, 1533-1542.

21. Liu H, Jin H, Yue X, Han J, Baum P, Abendschein DR, Tu Z. PET study of sphingosine-1-phosphate receptor 1 expression in response to vascular inflammation in a rat model of carotid injury. *Mol. Imaging*. 2017, *16*, 1-7.

22. Liu H, Jin H, Yue X, Han J, Yang H, Flores H, Su Y, Alagille D, Perlmutter JS, Tamagnan G, Tu Z. Comparison of [^{11}C]TZ1964B and [^{18}F]MNI659 for PET imaging brain PDE10A in nonhuman primates. *Pharmacol. Res. Perspect.* 2016, *4*, e00253.

23. Rosenberg AJ, Liu H, Jin H, Yue X, Riley S, Brown SJ, Tu Z. Design, synthesis and in vitro and in vivo evaluation of an ^{18}F-labeled sphingosine 1-phosphate receptor 1 (S1P1) PET tracer. *J. Med. Chem.* 2016, *59*, 6201-6220.

24. Liu H, Jin H, Yue X, Luo Z, Liu C, Rosenberg AJ, Tu Z. PET imaging study of S1PR1 expression in a rat model of multiple sclerosis. *Mol. Imaging Biol.* 2016, *18*, 724-732.

25. Jin H, Zhang X, Yue X, Liu H, Li J, Yang H, Flores H, Su Y, Parsons SM, Perlmutter JS, Tu Z. Kinetics modeling and occupancy studies of a novel PET tracer for VAChT in nonhuman primates. *Nucl. Med. Biol*. 2016, *43*, 131-139.

26. Yue X, Bognar C, Zhang X, Gaehle G, Moerlein SM, Perlmutter JS, and Tu Z. Automated production of [^{18}F]VAT suitable for clinical PET studies. *Appl. Radiat. Isot.* 2016, *107*, 40-46.

27. Karimi M, Tu Z, Yue X, Zhang X, Jin H, Perlmutter JS, Laforest R. Radiation dosimetry of [^{18}F]VAT in nonhuman primates. *EJNMMI Res.* 2015, *5*, 73.

28. Lee DE, Yue X, Ibrahim WG, Lentz MR, Peterson KL, Jagoda EM, Kassiou M, Maric D, Reid WC, Hammoud DA. Lack of neuroinflammation in the HIV-1 transgenic rat: an [^{18}F]-DPA714 PET imaging study. *J. Neuroinflammation.* 2015, *12*, 171.

29. Liu H, Jin H, Yue X, Zhang X, Yang H, Li J, Flores H, Su Y, Perlmutter JS, Tu Z. Preclinical evaluation of a promising C-11 labeled PET tracer for imaging phosphodiesterase 10A in the brain of living subject. *Neuroimage* 2015, *121*, 253-262.

30. Yue X, Jin H, Liu H, Rosenberg AJ, Klein RS, Tu Z. A Potent and selective C-11 labeled PET tracer for imaging sphingosine-1-phosphate receptor 2 in the CNS demonstrates sexually dimorphic expression. *Org. Biomol. Chem.* 2015, *13*, 7928-7939.

31. Tu Z, Zhang X, Jin H, Yue X, Padakanti PK, Yu L, Liu H, Flores HP, Kaneshige K, Parsons SM, Perlmutter J S. Synthesis and biological characterization of a promising F-18 PET tracer for vesicular acetylcholine transporter. *Bioorg. Med. Chem.* 2015, *23*, 4699-4709.

32. Yue X,[#] Wang Z,[#] Zhu L, Wang Y, Qian C, Ma Y, Kiesewetter DO, Niu G, Chen X. A novel ^{19}F activatable probe for the detection of matrix metalloprotease-2 activity by MRI/MRS. *Mol. Pharm.* 2014, *11*, 4208-4217 (Co-first authors).

33. Hu H, Huang P, Weiss OJ, Yan X, Yue X, Zhang MG, Tang Y, Nie L, Ma Y, Niu G, Wu K, Chen X. PET and NIR optical imaging using self-illuminating ^{64}Cu-doped chelator-free gold nanoclusters. *Biomaterials* 2014, *35*, 9868-9876.

34. Wang Y, Yue X, Kiesewetter DO, Wang Z, Lu J, Niu G, Teng G, Chen X. [^{18}F]DPA-714 PET imaging of AMD3100 treatment in a mouse model of stroke. *Mol. Pharm.* 2014, *11*, 3463-3470.

35. Huang P, Rong P, Jin A, Yan X, Zhang MG, Lin J, Hu H, Wang Z, Yue X, Li W, Niu G, Zeng W, Wang W, Zhou K, Chen X. Dye-loaded ferritin nanocages for multimodal imaging and photothermal therapy. *Adv. Mater.* 2014, *26*, 6401-6408.

36. Yue X,[#] Yan X,[#] Wu C, Kiesewetter DO, Niu G, Ma Y, Jacobson O, Shen B, Chen X. One-pot two-step radiosynthesis of a new ^{18}F-labeled thiol reactive prosthetic group and its conjugate for insulinoma imaging. *Mol. Pharm.* 2014, *11*, 3875-3884 (Co-first authors).

37. Wang Z,[#] Yue X,[#] Wang Y, Qian C, Huang P, Lizak M, Niu G, Wang F, Rong P, Kiesewetter DO, Ma Y, Chen X. A symmetrical fluorous dendron-cyanine dye conjugated bimodal nanoprobe for quantitative ^{19}F MRI and NIR fluorescence bioimaging. *Adv. Healthcare Mater.* 2014, *3*, 1326-1333 (Co-first authors).

38. Wu C, Yue X, Lang L, Kiesewetter DO, Li F, Zhu Z, Niu G, Chen X. Longitudinal PET imaging of muscular inflammation using ^{18}F-DPA-714 and ^{18}F-Alfatide II and differentiation with tumors. *Theranostics* 2014, *4*, 546-555.

39. Wang Y, Yue X, Kiesewetter DO, Niu G, Teng G, Chen X. PET imaging of neuroinflammation in a rat traumatic brain injury model with radiolabeled TSPO ligand DPA-714. *Eur. J. Nucl. Med. Mol. Imaging.* 2014, *41*, 1440-1449.

40. Rong P, Yang K, Srivastan A, Kiesewetter DO, Yue X, Wang F, Nie L, Bhirde A, Wang Z, Liu Z, Niu G, Wang W, Chen X. Photosensitizer loaded nano-graphene for multimodality imaging guided tumor photodynamic therapy. *Theranostics* 2014, *4*, 229-239.

41. Yue X, Kiesewetter DO, Guo J, Sun Z, Zhang X, Zhu L, Niu G, Ma Y, Lang L, Chen X. Development of a new thiol site-specific prosthetic group and its conjugation with [cys^{40}]-exendin-4 for in vivo targeting of insulinomas. *Bioconjugate Chem.* 2013, *24*, 1191-1200.

42. Huang P, Lin J, Wang S, Zhou Z, Li Z, Wang Z, Zhang C, Yue X, Niu G, Yang M, Cui D, Chen X. Photosensitizer-conjugated silica-coated gold nanoclusters for fluorescence imaging-guided photodynamic therapy. *Biomaterials* 2013, *34*, 4643-4654.

43. Wang Z, Zhang X, Huang P, Zhao W, Liu D, Nie L, Yue X, Wang S, Ma Y, Kiesewetter DO, Niu G, Chen X. Dual-factor triggered fluorogenic nanoprobe for ultrahigh contrast and subdiffraction fluorescence imaging. *Biomaterials* 2013, *34*, 6194-6201.

44. Zhang X, Wang Z, Yue X, Ma Y, Kiesewetter DO, Chen X. pH-sensitive fluorescent dyes: Are they really pH-sensitive in cells? *Mol. Pharm.* 2013, *10*, 1910-1917.

45. Yue X, Feng Y, Yu YB. Synthesis and characterization of fluorinated conjugates of albumin. *J. Fluorine Chem.* 2013, *152*, 173-181.

46. Yue X, Taraban MB, Hyland LL, Yu YB. Avoiding steric congestion in dendrimer growth through proportionate branching: A twist on da Vinci's Rule of tree branching. *J. Org. Chem.* 2012, *77*, 8879-8887 (Featured article).

47. Lin J, Yue X, Huang P, Cui D, Qing FL. Total synthesis of *gem*-difluoromethylenated analogs of pironetin. *Synthesis* 2010, 267-275.

48. Chu L, Yue X, Qing FL. Cu(II)-mediated methylthiolation of aryl C-H bonds with DMSO. *Org. Lett.* 2010, *12*, 1644-1647.

49. Guo C, Yue X, Qing FL. Palladium-catalyzed cross-coupling of ethyl *α*-bromo-*α*-fluoroacetate with arylboronic acids: facile synthesis of *α*-aryl-*α*-fluoroacetates. *Synthesis* 2010, 1837-1844.

50. Yin Z, Yue X, Deng X, Qing FL. A practical approach to synthesize the C(9)-C(24) fragment of (+)-discodermolide. *Chin. J. Chem.* 2010, *28*, 1400-1408.

51. Yue X, Zhang X, Qing FL. Highly diastereoselective zinc/$SnCl_2$-mediated *gem*-difluoroallylation of chiral hydrazones. *Org. Lett.* 2009, *11*, 73-76.

52. Yue X, Qiu X, Qing FL. Metal-mediated *gem*-difluoroallylation of *N*-acylhydrazones: highly efficient synthesis of *α*, *α*-difluorohomoallylic amines. *Chin. J. Chem.* 2009, *27*, 141-150.

53. Yue X, Qiu XL, Qing FL. Synthesis of 2′, 3′-dideoxy-6′, 6′-difluoro-3′-azanucleosides. *J. Fluorine Chem.* 2008, *129*, 866-874.

54. Xie YF, Xu XH, Yue XY, You ZW, Qing FL. Synthesis of *gem*-difluoromethylenated goniodiol. *Chin. J. Org. Chem.* 2008, *28*, 283-287.

55. Yue X, Wu YY, Qing FL. Synthesis of a series of novel 2′, 3′-dideoxy-6′, 6′-difluoro-3′-thionucleosides. *Tetrahedron* 2007, *63*, 1560-1567.

ABSTRACTS

1. Boyapati S, Langhans SA, Shaffer TH, Xu W, Kandula VVR, Kecskemethy HH, Averill LW, Nikam RM, Yue X. Kinetic analysis of two fluorine-18 labeled radiotracers in a neurofibromatosis type 1 mouse model. Poster presentation, SNMMI Annual Meeting. June 24-27, 2023, Chicago, Illinois.

2. Boyapati S, Langhans SA, Shaffer TH, Xu W, Kandula VVR, Kecskemethy HH, Averill LW, Nikam RM, Yue X. PET imaging of two fluorine-18 labeled radiotracers in a neurofibromatosis type 1 mouse model. Oral presentation. The 2nd Annual Nemours Children's Health Research Week. May 15-19, 2023, Wilmington, Delaware.

3. Xu W, Johnson DK, Shaffer TH, Kandula VVR, Kecskemethy HH, Averill LW, Langhans SA, Nikam RM, Yue X. Design and synthesis of fluorine-18-labeled MLN-4760 analogs for PET imaging of angiotensin-converting enzyme 2. Poster presentation. The 2nd Annual Nemours Children's Health Research Week. May 15-19, 2023, Wilmington, Delaware.

4. Yue X, Langhans SA, Kecskemethy HH, Kandula VVR, Falchek SJ, Averill LW, Nikam RM. Clinical translation of a fluorine-18 labeled tryptophan imaging agent for tuberous sclerosis complex. Poster presentation. May 11, 2023, Delaware's DNA 2023 Life Science Conference, Wilmington, Delaware.

5. Yue X, Johnson DK, Langhans SA, Nikam RM, Shaffer TH. Rational design and synthesis of

angiotensin-converting enzyme 2 inhibitors targeting severe acute respiratory syndrome coronavirus 2. Poster Presentation. American Physiology Summit. April 20–23, 2023, Long Beach, California.

6. Boyapati S, Langhans SA, Shaffer TH, Kandula VVR, Kecskemethy HH, Averill LW, Nikam RM, Yue X. Comparison of F-18 fluorodeoxyglucose and F-18 tryptophan positron emission tomography in a neurofibromatosis type 1 mouse model. Biennial National IDeA Program Meeting (NISBRE), December 12-14, 2022.
7. Yue X, Langhans SA, Kecskemethy HH, Shaffer TH, Kandula VVR, Falchek SJ, Averill LW, Nikam RM. Radiosynthesis of 1-(2-[^{18}F]fluoroethyl)-L-tryptophan suitable for clinical investigation. Poster presentation. Delaware Valley Research Week, October 17-21, 2022.
8. Yue X, Johnson DK, Shaffer TH, Kandula VVR, Kecskemethy HH, Averill LW, Langhans SA, Nikam RM. Design, synthesis, and molecular docking of MLN-4760 analogs targeting angiotensin-converting enzyme 2. Poster presentation. Delaware Valley Research Week, October 17-21, 2022.
9. Boyapati S, Langhans SA, Shaffer TH, Kandula VVR, Kecskemethy HH, Averill LW, Nikam RM, Yue X. Comparing PET Imaging Results of L-[^{18}F]FETrp and ^{18}F-Fluorodeoxyglucose Radiotracers in a Neurofibromatosis Type 1 Transgenic Mouse Model. Poster presentation. August 3, 2022, Nemours Summer Undergraduate Research Program.
10. Yue X, Langhans SA, Shaffer TH, Kandula VVR, Kaur G, Kecskemethy HH, Averill LW, Nikam RM. PET imaging of tryptophan metabolism in a neurofibromatosis type 1 animal model. Poster presentation. SNMMI 2022 Annual Meeting, June 11-14, 2022, Vancouver, Canada.
11. Yue X, Langhans SA, Shaffer TH, Kandula VVR, Kecskemethy HH, Averill LW, Nikam RM. PET imaging of neurofibromatosis type 1 with a fluorine-18 labeled tryptophan tracer. Delaware Clinical and Translational Research (DE-CTR) ACCEL Community Research Exchange Conference. May 9, 2022, Wilmington DE.
12. Nikam R, Mcilvain G, Kandula V, Yue X, Kaur G, Averill L, Choudhary A, Johnson C. Pediatric clinical magnetic resonance elastography: A primer for radiologists. 2021 International Pediatric Society Congress, October 11 – 15, 2021, Rome, Italy.
13. Yue X, Nikam R, Xin Y, Kandula V, Langhans S, Choudhary AK. Preliminary evaluation of shaken baby syndrome using [^{18}F]GE180. Oral presentation. 2020 SNMMI Annual Virtual Meeting, July 11-14, 2020.
14. Yue X, Xin Y, Li H, Li Z, Cai H, Langhans SA. Tumor-specific PET imaging with an ^{18}F-labeled tryptophan analogue in a transgenic medulloblastoma mouse model. American Association for Cancer Research Virtual Annual Meeting, June 22-24, 2020.
15. Yue X, Xin Y, Zhang S, Nikam R, Kandula V, Choudhary AK, Chugani HT, Chugani DC. Clinical production of 1-(2-[^{18}F]fluoroethyl)-L-tryptophan for imaging of tryptophan metabolism. Oral presentation. 2020 SNMMI Mid-Winter and ACNM Annual Meeting, January 23-25, 2020, Tampa, FL.
16. Yue X, Xin Y, Zhang S, Li H, Choudhary AK, Langhans SA. Comparison of 1-(2-[^{18}F]fluoroethyl)-L-tryptophan and FDG for the detection of medulloblastoma in a transgenic mouse model. Oral presentation, SNMMI Annual Meeting. June 22-25, 2019, Anaheim, California.
17. Tu Z, Yue X, Gu J, Luo Z, Weng CC, Lengyel Z, Dhavale D, Kotzbauer P, Mach R. Radiosynthesis and *in vitro* characterization of an iodine-125 labeled radiotracer for alpha-synuclein. Poster

presentation, 23rd International Symposium on Radiopharmaceutical Sciences. May 26-31, 2019, Beijing, China.

18. Jain BG, Li H, Zhang S, Yue X, Nikam R, Alana S, Xin Y, Chugani D, Chugani H. Use of the radiotracer ^{18}F-GE180 for PET scan imaging of active neuro-inflammation in children with multiple sclerosis. Poster presentation, International Child Neurology Congress, November 15-18, 2018, Mumbai, India.
19. Dalvi N, Zhang S, Litan A, Xin Y, Yue X, Li H, Li Z, Cai H, Chugani H, Chugani D, Langhans SA. Evaluation of a novel ^{18}F-labeled tryptophan tracer for PET imaging of brain tumors in a medulloblastoma mouse model. Oral presentation, 47th Annual Child Neurology Society Meeting, October 15-18, 2018, Chicago, Illinois.
20. Chugani H, Li H, Zhang S, Elia J, Jain B, Salvucci A, Yue X, Nikam R, Xin Y, Chugani D. Application of the new PET radiotracer ^{18}F-GE180 to image neuroinflammation in children. Poster presentation, 47th Annual Child Neurology Society Meeting, October 15-18, 2018, Chicago, Illinois.
21. Zhang S, Dalvi N, Xin Y, Litan A, Yue X, Li H, Li Z, Cai H, Chugani H, Langhans S, Chugani D. Brain tumor PET imaging in a transgenic medulloblastoma mouse model using a novel ^{18}F-labeled tryptophan tracer. Oral presentation, SNMMI Annual Meeting. June 23-26, 2018, Philadelphia, Pennsylvania.
22. Yue X, Dhavale DD, Li J, Yang H, Mach RH, Kotzbauer PT, Tu Z. Design, synthesis, and *in vitro* evaluation of quinolinyl analogues for imaging *α*-synuclein aggregation. Oral presentation, SNMMI Annual Meeting. June 10-14, 2017, Denver, Colorado.
23. Yue X, Jin H, Liu H, Luo Z, Zhang X, Kaneshige K, Parsons SM, Perlmutter JS, Tu Z. Chiral resolution and radiosynthesis of a fluorine-18 new enantiomeric tracer for imaging the VAChT in nonhuman primate. Oral presentation, 22nd International Symposium on Radiopharmaceutical Sciences, May 14 – 19, 2017, Dresden, Germany.
24. Rosenberg AJ, Liu H, Yue X, Jin H, Tu Z. Development and *in vivo* evaluation of three F-18 labeled S1P1 ligands as PET tracers for MS. Oral presentation, SNMMI Annual Meeting. June 11-15, 2016, San Diego, California.
25. Luo Z, Jin H, Liu H, Yue X, Perlmutter JS, Parsons SM, Tu Z. Exploration of new sulfur-containing analogues and *in vivo* evaluation of a lead F-18 PET tracer for imaging VAChT in rodent and nonhuman primate. Oral presentation, SNMMI Annual Meeting. June 11-15, 2016, San Diego, California.
26. Han J, Jin H, Liu H, Liu C, Yue X, Tu Z. *In vivo* study of a PET radiotracer for imaging P2X7 receptors for neuroinflammation in animal model. Oral presentation, SNMMI Annual Meeting. June 11-15, 2016, San Diego, California.
27. Liu H, Jin H, Yue X, Flores H, Alagille D, Perlmutter JS, Tamagnan G, Tu Z. Comparison of two PDE10A radiotracers, Comparison of two PDE10A radiotracers, [^{11}C]TZ1964B and [^{18}F]MNI659 in the brains of non-human primates. Oral presentation, SNMMI Annual Meeting. June 11-15, 2016, San Diego, California.
28. Liu C, Jin H, Liu H, Yue X, Tu Z. Detection of motor neuron loss in spinal cord of experimental allergic encephalomyelitis rats by specific cholinergic radiotracer [^{18}F]VAT. Poster presentation, Mallinckrodt Institute of Radiology Research Symposium. Mar 24, 2016, Washington University in St. Louis.
29. Liu H, Jin H, Yue X, Rosenberg A, Tu Z. *In vivo* detecting atherosclerotic plaques using an S1P1 PET radiotracer [^{11}C]TZ3321 in ApoE deficiency mice. Poster presentation, Mallinckrodt Institute of Radiology Research Symposium. Mar 24, 2016, Washington University in St. Louis.

30. Yue X, Jin H, Liu H, Rosenberg AJ, Yang H, Klein RS. and Tu Z. A Potent and selective C-11 labeled PET tracer for imaging sphingosine-1-phosphate receptor 2 (S1PR2). Oral presentation, World Molecular Imaging Congress. September 2-5, 2015, Honolulu, Hawaii.

31. Jin H, Yue X, Zhang X, Li J, Yang H, Flores H, Karimi M, Perlmutter J, Parsons S, Tu Z. A promising F-18 labeled PET radiotracer (-)-[^{18}F]VAT for assessing the VAChT *in vivo*. Oral presentation, SNMMI Annual Meeting. June 6-10, 2015, Baltimore, Maryland.

32. Karimi M, Yue X, Zhang X, Perlmutter J, Moerlein S, Tu Z, Laforest R. Radiation dosimetry for [^{18}F] (-)-(1-(8-(2-Fluoroethoxy)-(3-hydroxy-1,2,3,4-tetrahydronaphthalen-2-yl) piperidin-4-yl)(4-fluorophenyl)methanone. Poster presentation, SNMMI Annual Meeting. June 6-10, 2015, Baltimore, Maryland.

33. Yue X, Bognar C, Gaehle G, Moerlein S, Zhang X, Tu Z. Automation of [^{18}F]VAT using the Eckert and Ziegler modular-Lab, GE TRACERlab FX-N module. Poster presentation, 21st International Symposium on Radiopharmaceutical Sciences. May 26-31, 2015, University of Missouri, Columbia, Missouri.

34. Yue X, Jin H, Zhang X, Liu H, Li J, Yang H, Flores HP, Perlmutter JS, Parsons SM, Tu Z. A F-18 labeled enantiomeric PET radiotracer for σ_1 receptors. Poster presentation, 21st International Symposium on Radiopharmaceutical Sciences. May 26-31, 2015, University of Missouri, Columbia, Missouri.

35. Yue X, Jin H, Liu H, Rosenberg AJ, Yang H, Klein RS, and Tu Z. Imaging sphingosine-1-phosphate Receptor 2 *in vivo* using a C-11 labeled S1PR2 radioligand. Poster presentation, Mallinckrodt Institute of Radiology Research Symposium. Mar 24, 2015, Washington University in St. Louis.

36. Wang Y, Yue X, Kiesewetter D, Lu J, Teng G, Niu G, Chen X. Reduced TSPO expression after AMD3100 treatment in mouse stroke model: A PET study with [^{18}F]DPA-714. Poster presentation, SNMMI Annual Meeting. June 7-11, 2014, St. Louis, USA.

37. Yue X, Zhu L, Kiesewetter DO, Wang Z, Ma Ying, Chen X. Detection of enzyme activity by ^{19}F MRI/MRS using a novel fluorous activatable probe. Poster presentation, World Molecular Imaging Congress. September 18-21, 2013, Savannah, USA.

38. Wang Z, Yue X, Wang Y, Rong P, Kiesewetter DO, Niu G, Chen X. A novel fluorine dendron based nanoprobe for tracking of mesenchymal stem cells with integrated ^{19}F MRI and fluorescence imaging. Oral presentation, World Molecular Imaging Congress. September 18-21, 2013, Savannah, USA.

39. Wang Y, Yue X, Teng G.-J, Niu G, Chen X. PET imaging of neuroinflammation in rat TBI model with a radio-labeled TSPO ligand DPA-714. Poster presentation, World Molecular Imaging Congress. September 18-21, 2013, Savannah, USA.

40. Wu C, Yue X, Lang L, Li F, Niu G, Chen X. Macrophage targeted PET imaging of muscular inflammation using ^{18}F-DPA-714 and ^{18}F-FAl-NOTA-PRGD$_2$. Poster presentation, World Molecular Imaging Congress. September 18-21, 2013, Savannah, USA.

41. Hammoud DA, Lee DE, Lentz MR, Yue X, Ibrahim WG, Denaro F, Peterson KL, Jagoda E, Choyke P, Kassiou M, Reid W. Imaging neuroinflammation using PET with ^{18}F-DPA714 in an animal model of HIV infection. Poster presentation, World Molecular Imaging Congress. September 18-21, 2013, Savannah, USA.

42. Yue X, Kiesewetter DO, Chen X. Development of a new ^{18}F-radiolabeled thiol-specific prosthetic group using a two-step one-pot strategy. Poster presentation, 20th International Symposium on Radiopharmaceutical Sciences. May 12-17, 2013, Jeju, Korea.

43. Yue X, Kiesewetter DO, Guo J, Sun Z, Zhang X, Zhu L, Niu G, Ma Y, Chen X. Development of a new thiol site-specific prosthetic group and its conjugation with [cys^{40}]-exendin-4 for insulinoma targeting. Oral presentation, 20th International Symposium on Radiopharmaceutical Sciences. May 12-17, 2013, Jeju, Korea.

44. Yue X, Qing F.-L. Metal-mediated *gem*-difluoroallylation of *N*-acylhydrazones: highly efficient synthesis of *α*, *α*-difluorohomoallylic amines, Oral presentation, 10th National Symposium of Fluorine Chemistry, October 10-14, 2008, Wuhan, P. R. China.

45. Yue X, Wu Y.-Y, Qing F.-L. Synthesis of novel 2', 3'-dideoxy-6', 6'-difluoro-3'-thionucleosides. Poster presentation, 9th National Symposium of Fluorine Chemistry, October 13-17, 2006, Wuhu, P. R. China.

BOOKS CHAPTERS

1. Chiral Drugs: Chemistry and Biological Action, edited by Guo-Qiang Lin, Qi-Dong You, Jie-Fei Cheng. 2011 John Wiley & Sons Inc, Online ISBN: 9781118075647, DOI: 10.1002/9781118075647. Chapter 5, Fluorine-Containing Chiral Drugs, Qiu X.-L, Yue X, Qing F.-L. 195 – 251.

2. In Vivo Nuclear Molecular Imaging in Drug Development and Pharmacological Research. Yue X, Ed. ISBN 978-3-0365-7390-8 (PDF). Https://doi.org/10.3390/books978-3-0365-7390-8.

REVIEWER FOR INTERNATIONAL JOURNALS

2013 Organic & Biomolecular Chemistry
2014 Synthesis
2014 European Journal of Organic Chemistry
2014-2015 Bioorganic & Medical Chemistry
2015 Nuclear Medicine and Biology
2015-2018 Egyptian Journal of Radiology and Nuclear Medicine
2018 Journal of Medicinal Chemistry
2017-2022 BMC Medical Imaging
2014-2021 Tetrahedron
2014-2021 Tetrahedron Letters
2020-2023 Cancers
2020-2021 Applied Radiation and Isotopes
2021 Diagnostics
2021 Metabolites
2021-2023 Pharmaceuticals
2021-2023 International Journal of Molecular Sciences
2022 Biomedicines
2022 Tomography
2023 Journal of Labelled Compounds and Radiopharmaceuticals
2023 Journal of Nuclear Medicine

RESEARCH SUPPORT

NIH R21EB032025 X Yue (PI) 07/15/2021 – 04/30/2024
$568,000

Development and Evaluation of Radiotracers for PET Imaging Angiotensin-Converting Enzyme 2 (ACE2)
In this proposal, we will develop and validate a PET imaging probe that can be used to *in vivo* detect the expression and distribution of the entry receptor of the SARS-CoV-2 virus that causes COVID-19. The

newly developed PET probe will serve as an investigative tool to answer why COVID-19 patients with comorbid conditions have much higher mortality rates. In addition, the PET probe may be developed for diagnostic purposes in COVID-19 patients in the future.

Nemours Supplemental Fund X Yue (PI) 01/01/2023 – 12/31/2023
$187,286

The supplemental fund from Nemours is to support the new faculty for neurotheranostics research at Nemours Children's Hospital, Delaware.

P20 GM103446 Duncan (PI) 07/01/2022 – 04/30/2024
$170,400

INBRE Pilot: Neurofibromatosis type 1 imaging using a fluorine-18 labeled tryptophan tracer
The major goals of this study are to use a fluorine-18 labeled tryptophan radiotracer to detect and differentiate NF1 in an animal model, and validate the biomarkers in NF1.
Role: Project PI

1R01 CA263216-01A1 Langhans (PI) 02/14/2022 – 01/31/2027
$1657,318

The major goal of this project is to develop a tunable three-dimensional cell culture platform that is compatible with automated high-throughput screening for targeting an oncogenic signaling pathway that serves as a central integrator of information from the tumor microenvironment in pediatric brain tumors.
Role: Collaborator

Completed Research Project

2P20GM103653-06 Schneider (PI) 01/01/2020 – 08/31/2021
PET imaging of neuroinflammation in abusive head trauma with [^{18}F]GE180 – A preclinical pilot study (Pilot Grant Funding for MRI on UD Campus, COBRE)
The goal of this study is to use PET and MRI multiple modalities to detect neuroinflammation in an abusive head trauma animal model.
Role: Project PI

U54 GM104941 Hicks (PI) 07/01/2021 – 06/30/2022
$78,000

Neurofibromatosis type 1 imaging using a fluorine-18 labeled tryptophan tracer
The major goals of this study are to use a fluorine-18 labeled tryptophan radiotracer to detect and differentiate neurofibromatosis type 1 (NF1) in an animal model.
Role: Project PI

P20GM1034 Stanhope (PI) 01/06/2022 – 4/30/2022
$9,866

Delaware INBRE Faculty Start-up (FASTAR) Award
The goal of this award is to purchase a high-performance liquid chromatography fraction collector for new radiotracer metabolite and stability analysis.
Role: Project PI

P20 GM103446 Duncan (PI) 12/03/2019 – 04/30/2022

$135,368

Magnetic resonance elastography in characterization of pediatric gliomas

The major goals of this study are to compare the stiffness of gliomas with stiffness of uninvolved contralateral white matter, and determine the relationship of tumor stiffness with tumor grade, genetic alterations and proliferation index (ki 67 index), and to determine the relationship between tumor stiffness, diffusion weighted imaging data (ADC) and tumor grade.

Role: Co-Investigator

R01NS075527 Z Tu (PI) 06/15/2011 – 05/31/16

PET probes for imaging of the vesicular acetylcholine transporter

The goal of this project is to develop a PET tracer for clinical imaging of vesicular acetylcholine transporter (VAChT). Depletion in VAChT levels has been associated with the onset and severity of dementia progression.

Role: Staff Scientist

PATENTS

1. Yu YB, Yue X. Dendrimers and methods of preparing same through proportionate branching. Application number US 13/752,482, US patent number: US9133114 B2, issue date: September 15, 2015.
2. Tu Z, Li J, Yue X, Kotzbauer P. Alpha-synuclein ligands. Application number US 15/393,673, US patent number: US10300155 B2, issue date: May 28, 2019.
3. Tu Z, Kotzbauer P, Yue X, Dhavale DD. Alpha-synuclein ligands. Application number 16/277,643, Publication number US 2019/ 0256492 A1, publication date: August 22, 2019.

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Self-nomination for Sigma Xi Representatives on Nominations in the Mid-Atlantic Region

Position Statement

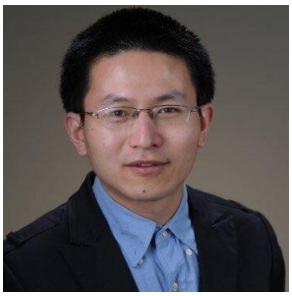
I am firmly committed to upholding the principles of meritocracy and inclusivity in the nomination process as Sigma Xi's Mid-Atlantic Region representative. My vision for this role is based on the belief that our society's strength lies in its leadership quality and diversity. I believe interdisciplinary collaborations are indispensable for innovative research and leadership in a fast-growing community. I envision a transparent, dynamic, and equitable nomination process that identifies and encourages emerging scientific leaders from all backgrounds to lead our society. My philosophy centers on the importance of fairness, impartiality, and a dedication to promoting excellence in scientific research.

Throughout my research career, I have consistently advocated for fairness and transparency in scientific research and promotion. My leadership roles within academic institutions and healthcare organizations have given me a deep understanding of recognizing and nurturing talent. I serve on the Research Associate Satisfaction Committee at Nemours and regularly participate in the selection process for the Standard of Excellence Award and the Professional Excellence Award. I also serve on the Nemours Summer Undergraduate Program selection committee, a member of the World Molecular Imaging Congress Grant Subcommittee, and faculty research at Thomas Jefferson University. I actively participate in these committees and initiatives to create equitable opportunities for scientists at various career stages and backgrounds. The leadership roles have demonstrated my ability to identify outstanding individuals.

I am honored to be a new member of Sigma Xi. The opportunity gives me invaluable experience and insights into the structures of our society and equips me with the knowledge needed to contribute effectively to the Committee on Nominations. My extensive network of professional contacts within the Mid-Atlantic Region allows me to tap into a diverse talent pool. By fostering collaboration and leveraging this network, we can identify and nominate individuals who will lead Sigma Xi with distinction.

I have actively supported initiatives to increase diversity and inclusion in scientific leadership roles. I am committed to ensuring that the nomination process reflects our commitment to these values. I am enthusiastic about the opportunity to serve as the Mid-Atlantic Region Representative on the Committee on Nominations. I am dedicated to maintaining an open, transparent, and equitable nomination process, ensuring that Sigma Xi continues to thrive by selecting the best and brightest to lead us into the future. Thank you for considering my candidacy, and I look forward to contributing to our society.

Biography



Dr. Yue is a Research Scientist and Lab Head at the Department of Radiology, Nemours Children's Health, Delaware, and a Research Assistant Professor of Pediatrics at the Thomas Jefferson University. He also holds an affiliate Assistant Professor position at the Department of Psychological and Brain Sciences, University of Delaware. Dr. Yue obtained his Ph.D. degree from the Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences. Dr. Yue received his molecular imaging training, particularly PET imaging, from NIH and Washington University in St. Louis. Dr. Yue's lab focuses on developing radioactive imaging agents for preclinical research and clinical translation for brain disorders. He has successfully translated several radioactive imaging agents into clinical investigations. Dr. Yue received Ursula Mary Kocemba-Slosky, Ph.D. best ACNM Nuclear Medicine Research Abstract in 2020 and the NIH/NIBIB Trailblazer Award in 2021. His research was also supported by the Delaware CTR ACCEL pilot award, Delaware INBRE Faculty Start-up award, Delaware INBRE pilot project award, and the Nemours Foundation. Dr. Yue has published over 50 papers with more than 2000 citations.