Stanford

Michelle L. James

Associate Professor of Radiology (Molecular Imaging Program at Stanford) and of Neurology and Neurological Sciences (Neurology Research)

Radiology - Rad/Molecular Imaging Program at Stanford

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Radiology - Rad/Molecular Imaging Program at Stanford
- Associate Professor, Neurology and Neurological Sciences
- Member, Bio-X
- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Alavi-Mandell Award, Society of Nuclear Medicine and Molecular Imaging (2019)
- Basic Science Teacher of the Year Award, Radiology, Stanford University (2019)
- Exceptional Mentor Award, American Medical Women's Association (2018)
- SNMMI Journal of Nuclear Medicine Editor's Choice - Best Article Award, Society of Nuclear Medicine and Molecular Imaging (2016)
- Suffrage Science Award, Medical Research Council (2016)
- Alavi-Mandell Award, Society of Nuclear Medicine and Molecular Imaging (2015)
- First Prize Poster & Abstract Award, TSPO Symposium on Microglia Imaging & Biology - Manchester, UK, - (2014)
- Poster Presentation Award, World Molecular Imaging Congress - Savannah, Georgia, - (2013)
- Travel Fellowship, Alzheimer's Association International Conference - Boston, USA, - (2013)
- Travel Award, World Molecular Imaging Congress - Kyoto, Japan, - (2010)
- Travel Award, International Symposium on Radiopharmaceutical Sciences - Aachen, Germany, - (2007)
- Best Oral Presentation Award, Royal Australian Chemistry Institute Drug Design Conference, - (2006)
- Australian Postgraduate Award, - (2005-2008)
- John A Lamberton Research Scholarship, - (2005-2008)
- Travel Award, International Symposium on Radiopharmaceutical Sciences - Iowa, USA, - (2005)
- First Class Honours in Pharmacology, - (2004)
- University Medal, The University of Sydney (2004)
- Dean's Honour List, - (2003)
- Roland H. Thorp Prize in Pharmacology, - (2003)

PROFESSIONAL EDUCATION

- Ph.D., University of Sydney , Pharmacology (2008)

- B.S., University of Sydney , Pharmacology/Medicinal Chemistry (2004)

LINKS

- My Lab Site: http://med.stanford.edu/jameslab.html
- LinkedIn: https://www.linkedin.com/in/michelle-l-james-93a44a14/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The primary aim of my lab is to enable early detection and precision treatment of brain diseases by developing translational molecular imaging agents for visualizing neuroimmune interactions underlying conditions such as Alzheimer's disease, multiple sclerosis, and stroke.

We are researching how the brain and its resident immune cells interact with the peripheral immune system at very early, through to late stages of disease. Our approach involves the discovery, characterization, and validation of clinically relevant immune cell biomarkers, followed by the design of novel positron emission tomography (PET) radiotracers specifically targeting these biomarkers. After preclinical validation, we translate promising imaging probes to the clinic for monitoring disease progression and response to immunomodulatory drugs.

Teaching

COURSES

2025-26

- Probes and Applications for Multi-modality Molecular Imaging of Living Subjects: BIOE 224, BMP 224, RAD 224 (Win)

2024-25

- Probes and Applications for Multi-modality Molecular Imaging of Living Subjects: BIOE 224, BMP 224, RAD 224 (Win)

2023-24

- Probes and Applications for Multi-modality Molecular Imaging of Living Subjects: BIOE 224, BMP 224, RAD 224 (Win)

2022-23

- Probes and Applications for Multi-modality Molecular Imaging of Living Subjects: BIOE 224, BMP 224, RAD 224 (Win)

STANFORD ADVISEES

Doctoral Dissertation Advisor (AC)

Renesmee Kuo, Samantha Reyes

Publications

PUBLICATIONS

- **TREM1-PET imaging maps whole-body innate immune responses in a mouse model of metastatic melanoma.** *Scientific reports*
  Falk, I. N., Chaney, A. M., Verma, R., Kuo, R. C., Reyes, S., Carlson, M., Kalita, M., Azevedo, C., Jackson, I. M., Green, J., Alam, I. S., Tran, A., Pant, et al
  2026
- **A radiolabeled dendrimer non-invasively identifies and tracks innate immune cell activation in a mouse model of experimental autoimmune encephalomyelitis.** *Nature communications*
  Kuo, R. C., Carlson, M. L., Reyes, S. T., Nagy, S. C., Kalita, M., Alam, I. S., Malik, N., Jackson, I. M., Acosta, C. J., Falk, I. N., Azevedo, E. C., Zhang, Y., Nichols, et al
  2026

- **¹⁸F-MGX-110S detects proinflammatory innate immune responses in human cells and Alzheimer's disease mice with high sensitivity**
  Kalita, M., Kuo, R., Reyes, S., Straniero, V., Nagy, S., D'Moore, D., Sundar, M., Setiadi, A., Mak, S., Tuffley, G., Pandrala, M., Marsango, S., Alam, et al
  ELSEVIER SCIENCE INC.2025

- **B7-H4 ImmunoPET Imaging Tracks Tumor-Associated Macrophage Changes in Prostate Cancer.** *Molecular pharmaceutics*
  Kumar, M., Singh, S. B., Vasyliv, I., Habte, F., Kalita, M., Alam, I. S., Koladiya, A., Dai, S. Y., James, M., Rao, J., Beziere, N., Daldrup-Link, H. E.
  2025

- **Advancing In Vivo Detection of T-Cell Function: Development and Preclinical Evaluation of 89Zr-Ivuxolimab, a Human OX40 PET Tracer.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Kalita, M., Kuo, R. C., Reyes, S. T., Colburg, D. R., Falk, I. N., Anders, D., Vermesh, O., Hayee, S., Azevedo, E. C., Nagy, S. C., Deal, E. M., Chen, A. A., Kong, et al
  2025

- **Revealing the suppressors: A new PET imaging approach for detecting MDSCs before and after immunotherapy in a model of brain metastases**
  Kuo, R., Verma, R., Reyes, S., Nagy, S., Kalita, M., D'moore, D., Ehsani, A., Pisani, L., Alam, I., Milligan, G., Lim, M., James, M.
  SOC NUCLEAR MEDICINE INC.2025

- **[18F]Flurimedrimer, a Novel Nanomedicine Radiotracer, Selectively Targeting Activated Microglia in Human Brain**
  Moradi, F., Dunn, J., James, M., Malik, N., Park, J., Korn, R., El-Shaafey, N., Lomen-Hoerth, C., Shah, V., Cleland, J.
  SOC NUCLEAR MEDICINE INC.2025

- **Early detection and tracking of activated macrophages and microglia in a mouse model of multiple sclerosis using [18F]OP-801 PET imaging before and after a novel immunomodulatory drug**
  Kuo, R., Carlson, M., Malik, N., Reyes, S., Nagy, S., Kalita, M., Alam, I., Jackson, I., Beinat, C., Acosta, C., Falk, I., Azevedo, C., Avci, et al
  SOC NUCLEAR MEDICINE INC.2024

- **Illuminating pro-inflammatory myeloid cells in a murine model of multiple sclerosis using a new 18F-labeled GPR84-targeted radiotracer**
  Reyes, S., Kalita, M., Kuo, R., Straniero, V., Marsango, S., Pandrala, M., Malik, N., Jain, P., Suigo, L., Nagy, S., Wu, T., Valoti, E., Milligan, et al
  SOC NUCLEAR MEDICINE INC.2024

- **Development and comparison of two novel PET tracers for imaging proinflammatory receptor GPR84 in human cells and tissues**
  Nagy, S., Kalita, M., Jackson, I., Reyes, S., Kuo, R., Malik, N., Pandrala, M., Zhang, B., Marsango, S., Straniero, V., Suigo, L., Valoti, E., Alam, et al
  SOC NUCLEAR MEDICINE INC.2024

- **TREM1 disrupts myeloid bioenergetics and cognitive function in aging and Alzheimer disease mouse models.** *Nature neuroscience*
  Wilson, E. N., Wang, C., Swarovski, M. S., Zera, K. A., Ennerfelt, H. E., Wang, Q., Chaney, A., Gauba, E., Ramos Benitez, J. A., Le Guen, Y., Minhas, P. S., Panchal, M., Tan, et al
  2024

- **Aruna Bodapati Gambhir, 1962-2023** *JOURNAL OF NUCLEAR MEDICINE*
  Behrenbruch, C., Iagaru, A., James, M. L.
  2024; 65 (3): 498

- **PET Imaging of Innate Immune Activation Using 11C Radiotracers Targeting GPR84.** *JACS Au*
  Kalita, M., Park, J. H., Kuo, R. C., Hayee, S., Marsango, S., Straniero, V., Alam, I. S., Rivera-Rodriguez, A., Pandrala, M., Carlson, M. L., Reyes, S. T., Jackson, I. M., Suigo, et al
  2023; 3 (12): 3297-3310

- **Application of Machine Learning Driven Computational Approaches for Novel CNS PET Tracer Development**
  Jackson, I., Luo, A., Webb, E., Zhang, B., Guo, A., Nagy, S., Shao, X., Kuo, R., Carlson, M., Alam, I., Rodriguez, A., Winton, W., Stauff, et al
  ELSEVIER SCIENCE INC.2023: S40-S41

- **Development and Initial Assessment of [18F]OP-801: a Novel Hydroxyl Dendrimer PET Tracer for Preclinical Imaging of Innate Immune Activation in the Whole Body and Brain.** *Molecular imaging and biology*
  Carlson, M. L., Jackson, I. M., Azevedo, E. C., Reyes, S. T., Alam, I. S., Kellow, R., Castillo, J. B., Nagy, S. C., Sharma, R., Brewer, M., Cleland, J., Shen, B., James, et al
  2023

- **Development of [18F]DASA-10 for enhanced imaging of pyruvate kinase M2.** *Nuclear medicine and biology*
  Kendirli, M. T., Malek, R., Silveira, M. B., Acosta, C., Zhang, S., Azevedo, C., Nagy, S. C., Habte, F., James, M. L., Recht, L. D., Beinat, C.
  2023; 124-125: 108382

- **PET imaging of TREM1 identifies CNS-infiltrating myeloid cells in a mouse model of multiple sclerosis.** *Science translational medicine*
  Chaney, A. M., Cropper, H. C., Jain, P., Wilson, E., Simonetta, F., Johnson, E. M., Alam, I. S., Patterson, I. T., Swarovski, M., Stevens, M. Y., Wang, Q., Azevedo, C., Nagy, et al
  2023; 15 (702): eabm6267

- **Clinical Radiosynthesis and Translation of [18F]OP-801: A Novel Radiotracer for Imaging Reactive Microglia and Macrophages.** *ACS chemical neuroscience*
  Jackson, I. M., Carlson, M. L., Beinat, C., Malik, N., Kalita, M., Reyes, S., Azevedo, E. C., Nagy, S. C., Alam, I. S., Sharma, R., La Rosa, S. A., Moradi, F., Cleland, et al
  2023

- **Development and initial evaluation of a novel 11C-labeled PET tracer to image GPR84 expressing-myeloid cells during neuroinflammation**
  Kalita, M., Park, J., Hayee, S., Marsango, S., Carlson, M., Reyes, S., Nagy, S., Straniero, V., Pandrala, M., Jackson, I., Alam, I., Valoti, E., Milligan, et al
  SOC NUCLEAR MEDICINE INC.2023

- **Is There a Role of Artificial Intelligence in Preclinical Imaging?** *Seminars in nuclear medicine*
  Kuper, A., Blanc-Durand, P., Gafita, A., Kersting, D., Fendler, W. P., Seibold, C., Moraitis, A., Luckerath, K., James, M. L., Seifert, R.
  2023

- **Imaging CD19+ B Cells in an Experimental Autoimmune Encephalomyelitis Mouse Model using Positron Emission Tomography.** *Journal of visualized experiments : JoVE*
  Reyes, S. T., Azevedo, E. C., Cropper, H. C., Nagy, S., Deal, E. M., Chaney, A. M., James, M. L.
  2023

- **Multimodal imaging of capsid and cargo reveals differential brain targeting and liver detargeting of systemically-administered AAVs.** *Biomaterials*
  Seo, J. W., Ajenjo, J., Wu, B., Robinson, E., Raie, M. N., Wang, J., Tumbale, S. K., Buccino, P., Anders, D. A., Shen, B., Habte, F. G., Beinat, C., James, et al
  2022: 121701

- **ICOS ImmunoPET Enables Visualization of Activated T Cells and Early Diagnosis of Murine Acute Gastrointestinal GvHD.** *Blood advances*
  Xiao, Z., Alam, I. S., Simonetta, F., Chen, W., Scheller, L., Murty, S., Lohmeyer, J. K., Lopes Ramos, T. L., James, M. L., Negrin, R. S., Gambhir, S. S.
  2022

- **Engineering genetically-encoded synthetic biomarkers for breath-based cancer detection**
  Vermesh, O., D'Souza, A., Alam, I., Wardak, M., McLaughlin, T., El Rami, F., Sathirachinda, A., Bell, J., Pitteri, S., James, M., Hori, S., Gross, E., Gambhir, et al
  AMER ASSOC CANCER RESEARCH.2022

- **In Silico Approaches for Addressing Challenges in CNS Radiopharmaceutical Design.** *ACS chemical neuroscience*
  Jackson, I. M., Webb, E. W., Scott, P. J., James, M. L.
  2022

- **Radiosynthesis and initial preclinical evaluation of [11C]AZD1283 as a potential P2Y12R PET radiotracer.** *Nuclear medicine and biology*
  Jackson, I. M., Buccino, P. J., Azevedo, E. C., Carlson, M. L., Luo, A. S., Deal, E. M., Kalita, M., Reyes, S. T., Shao, X., Beinat, C., Nagy, S. C., Chaney, A. M., Anders, et al
  2022

- **TRACKING INNATE IMMUNE ACTIVATION IN A MOUSE MODEL OF PARKINSON'S DISEASE USING TREM1 AND TSPO PET TRACERS.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Lucot, K. L., Stevens, M. Y., Bonham, T. A., Azevedo, E. C., Chaney, A. M., Webber, E. D., Jain, P., Klockow, J. L., Jackson, I. M., Carlson, M. L., Graves, E. E., Montine, T. J., James, et al
  2022

- **Whole-body PET imaging of T cell response to Glioblastoma.** *Clinical cancer research : an official journal of the American Association for Cancer Research*

Nobashi, T. W., Mayer, A. T., Xiao, Z., Chan, C. T., Chaney, A. M., James, M. L., Gambhir, S. S.
2021

- **A Clinical PET Imaging Tracer ([18F]DASA-23) to Monitor Pyruvate Kinase M2 Induced Glycolytic Reprogramming in Glioblastoma.** *Clinical cancer research : an official journal of the American Association for Cancer Research*
  Beinat, C., Patel, C. B., Haywood, T., Murty, S., Naya, L., Castillo, J. B., Reyes, S. T., Phillips, M., Buccino, P., Shen, B., Park, J. H., Koran, M. E., Alam, et al
  2021

- **A new in silico approach to revolutionize CNS PET tracer design and enhance translational success**
  Jackson, I., Luo, A., Webb, E., Stevens, M., Scott, P., James, M.
  ELSEVIER SCIENCE INC.2021: S24-S25

- **Sanjiv Sam Gambhir (1962-2020).** *Nature biomedical engineering*
  Wu, A. M., James, M. L., Kodukulla, M. I.
  2021

- **Hippocampal subfield imaging and fractional anisotropy show parallel changes in Alzheimer's disease tau progression using simultaneous tau-PET/MRI at 3T.** *Alzheimer's & dementia (Amsterdam, Netherlands)*
  Carlson, M. L., Toueg, T. N., Khalighi, M. M., Castillo, J., Shen, B., Azevedo, E. C., DiGiacomo, P., Mouchawar, N., Chau, G., Zaharchuk, G., James, M. L., Mormino, E. C., Zeineh, et al
  2021; 13 (1): e12218

- **Simultaneous FDG-PET/MRI detects hippocampal subfield metabolic differences in AD/MCI.** *Scientific reports*
  Carlson, M. L., DiGiacomo, P. S., Fan, A. P., Goubran, M., Khalighi, M. M., Chao, S. Z., Vasanawala, M., Wintermark, M., Mormino, E., Zaharchuk, G., James, M. L., Zeineh, M. M.
  2020; 10 (1): 12064

- **Neuroinflammation PET imaging: Current opinion and future directions.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Jain, P., Chaney, A., Carlson, M. L., Jackson, I. M., Rao, A., James, M. L.
  2020

- **Physiological blood-brain transport is impaired with age by a shift in transcytosis.** *Nature*
  Yang, A. C., Stevens, M. Y., Chen, M. B., Lee, D. P., Stahli, D., Gate, D., Contrepois, K., Chen, W., Iram, T., Zhang, L., Vest, R. T., Chaney, A., Lehallier, et al
  2020

- **PET/MR imaging of sigma-1 receptor pinpoints previously undetectable abnormalities in chronic pelvic pain**
  Yoon, D., Fast, A., Shen, B., James, M. L., Lum, D., Biswal, S.
  SOC NUCLEAR MEDICINE INC.2020

- **Visualizing innate immune activation in a mouse model of Parkinson's disease using a highly specific TREM1-PET tracer.**
  Lucot, K., Stevens, M., Jain, P., Bonham, T., Webber, E., Klockow, J., Azevedo, E., Chaney, A., Graves, E., Montine, T., James, M.
  SOC NUCLEAR MEDICINE INC.2020

- **TREM1-PET imaging of pro-inflammatory myeloid cells distinguishes active disease from remission in Multiple Sclerosis**
  Chaney, A., Wilson, E., Jain, P., Cropper, H., Swarovski, M., Lucot, K., Vogel, H., Andreasson, K., James, M. L.
  SOC NUCLEAR MEDICINE INC.2020

- **Demarcation of Sepsis-Induced Peripheral and Central Acidosis with pH-Low Insertion Cyclic (pHLIC) Peptide.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Henry, K. E., Chaney, A. M., Nagle, V. L., Cropper, H. C., Mozaffari, S., Slaybaugh, G., Parang, K., Andreev, O., Reshetnyak, Y. K., James, M. L., Lewis, J. S.
  2020

- **Positron emission tomography imaging of novel AAV capsids maps rapid brain accumulation.** *Nature communications*
  Seo, J. W., Ingham, E. S., Mahakian, L. n., Tumbale, S. n., Wu, B. n., Aghevlian, S. n., Shams, S. n., Baikoghli, M. n., Jain, P. n., Ding, X. n., Goeden, N. n., Dobreva, T. n., Flytzanis, et al
  2020; 11 (1): 2102

- **Quantitative PET in the 2020s: A Roadmap.** *Physics in medicine and biology*
  Meikle, S. R., Sossi, V. n., Roncali, E. n., Cherry, S. R., Banati, R. n., Mankoff, D. A., Jones, T. n., James, M. L., Sutcliffe, J. n., Ouyang, J. n., Petibon, Y. n., Ma, C. n., El Fakhri, et al
  2020

- **On the consensus nomenclature rules for radiopharmaceutical chemistry - Reconsideration of radiochemical conversion.** *Nuclear medicine and biology*
  Herth, M. M., Ametamey, S. n., Antuganov, D. n., Bauman, A. n., Berndt, M. n., Brooks, A. F., Bormans, G. n., Choe, Y. S., Gillings, N. n., Häfeli, U. O., James, M. L., Kopka, K. n., Kramer, et al
  2020; 93: 19–21

- **Development of a CD19 PET tracer for detecting B cells in a mouse model of multiple sclerosis.** *Journal of neuroinflammation*
  Stevens, M. Y., Cropper, H. C., Lucot, K. L., Chaney, A. M., Lechtenberg, K. J., Jackson, I. M., Buckwalter, M. S., James, M. L.
  2020; 17 (1): 275

- **Radionuclide Imaging for Neuroscience: Current Opinion and Future Directions.** *Molecular imaging*
  Gee, A. D., Herth, M. M., James, M. L., Korde, A., Scott, P. J., Vasdev, N.
  2020; 19: 1536012120936397

- **Histologic evaluation of activation of acute inflammatory response in a mouse model following ultrasound-mediated blood-brain barrier using different acoustic pressures and microbubble doses.** *Nanotheranostics*
  Pascal, A. n., Li, N. n., Lechtenberg, K. J., Rosenberg, J. n., Airan, R. D., James, M. L., Bouley, D. M., Pauly, K. B.
  2020; 4 (4): 210–23

- **Sanjiv Sam Gambhir (November 23, 1962-July 18, 2020).** *Molecular imaging and biology*
  James, M. n., Iagaru, A. n.
  2020

- **Training the next generation of radiopharmaceutical scientists.** *Nuclear medicine and biology*
  Gee, A. D., Andersson, J. n., Bhalla, R. n., Choe, Y. S., Dick, D. W., Herth, M. M., Hostetler, E. D., Jáuregui-Haza, U. J., Huang, Y. Y., James, M. L., Jeong, J. M., Korde, A. n., Kuge, et al
  2020; 88-89: 10–13

- **Tau PET imaging with 18F-PI-2620 in aging and neurodegenerative diseases.** *European journal of nuclear medicine and molecular imaging*
  Mormino, E. C., Toueg, T. N., Azevedo, C. n., Castillo, J. B., Guo, W. n., Nadiadwala, A. n., Corso, N. K., Hall, J. N., Fan, A. n., Trelle, A. N., Harrison, M. B., Hunt, M. P., Sha, et al
  2020

- **Longitudinal translocator protein-18 kDa-positron emission tomography imaging of peripheral and central myeloid cells in a mouse model of complex regional pain syndrome** *PAIN*
  Cropper, H. C., Johnson, E. M., Haight, E. S., Cordonnier, S. A., Chaney, A. M., Forman, T. E., Biswal, A., Stevens, M. Y., James, M. L., Tawfik, V. L.
  2019; 160 (9): 2136–48

- **[F-18]-SuPAR: A Radiofluorinated Probe for Noninvasive Imaging of DNA Damage-Dependent Poly(ADP-ribose) Polymerase Activity** *BIOCONJUGATE CHEMISTRY*
  Shuhendler, A. J., Cui, L., Chen, Z., Shen, B., Chen, M., James, M. L., Witney, T. H., Bazalova-Carter, M., Gambhir, S. S., Chin, F. T., Graves, E. E., Rao, J.
  2019; 30 (5): 1331–42

- **[F-18]-SuPAR: A Radiofluorinated Probe for Noninvasive Imaging of DNA Damage-Dependent Poly(ADP-ribose) Polymerase Activity** *BIOCONJUGATE CHEMISTRY*
  Shuhendler, A. J., Cui, L., Chen, Z., Shen, B., Chen, M., James, M. L., Witney, T. H., Bazalova-Carter, M., Gambhir, S. S., Chin, F. T., Graves, E. E., Rao, J.
  2019; 30 (5): 1331–42

- **Radiolabeling and pre-clinical evaluation of a first-in-class CD19 PET Tracer for imaging B cells in multiple sclerosis**
  Stevens, M., Cropper, H., Jackson, I., Chaney, A., Lechtenberg, K., Buckwalter, M., James, M. L.
  SOC NUCLEAR MEDICINE INC.2019

- **Microglial Modulation as a Target for Chronic Pain: From the Bench to the Bedside and Back.** *Anesthesia and analgesia*
  Haight, E. S., Forman, T. E., Cordonnier, S. A., James, M. L., Tawfik, V. L.

2019; 128 (4): 737–46

- **Microglial Modulation as a Target for Chronic Pain: From the Bench to the Bedside and Back** *ANESTHESIA AND ANALGESIA*
  Haight, E. S., Forman, T. E., Cordonnier, S. A., James, M. L., Tawfik, V. L.
  2019; 128 (4): 737–46

- **Peripheral TREM1 responses to brain and intestinal immunogens amplify stroke severity** *Nature Immunology*
  Liu, Q., Johnson, E., et al
  2019

- **Longitudinal TSPO-PET imaging of peripheral and central myeloid cells in a mouse model of complex regional pain syndrome.** *Pain*
  Cropper, H. C., Johnson, E. M., Haight, E. n., Cordonnier, S. A., Chaney, A. M., Forman, T. E., Biswal, A. n., Stevens, M. Y., James, M. L., Tawfik, V. L.
  2019

- **Positron emission tomography imaging of activated T cells by targeting OX40 reveals spatiotemporal immune dynamics and predicts response to in situ tumor vaccination**
  Mayer, A. T., Alam, I. S., Sagiv-Barfi, I., Wang, K., Vermesh, O., Czerwinski, D. K., Johnson, E. M., James, M. L., Levy, R., Gambhir, S. S.
  AMER ASSOC CANCER RESEARCH.2018

- **PET Imaging of Neuroinflammation Using [11C]DPA-713 in a Mouse Model of Ischemic Stroke.** *Journal of visualized experiments : JoVE*
  Chaney, A. M., Johnson, E. M., Cropper, H. C., James, M. L.
  2018

- **TSPO-PET Imaging Using [18F]PBR06 is a Potential Translatable Biomarker for Treatment Response in Huntington's Disease: Preclinical Evidence with the p75NTR Ligand LM11A-31.** *Human molecular genetics*
  Simmons, D. A., James, M. L., Belichenko, N. P., Semaan, S., Condon, C., Kuan, J., Shuhendler, A. J., Miao, Z., Chin, F. T., Longo, F. M.
  2018

- **[18F]FSPG-PET reveals increased cystine/glutamate antiporter (xc-) activity in a mouse model of multiple sclerosis.** *Journal of neuroinflammation*
  Hoehne, A., James, M. L., Alam, I. S., Ronald, J. A., Schneider, B., D'Souza, A., Witney, T. H., Andrews, L. E., Cropper, H. C., Behera, D., Gowrishankar, G., Ding, Z., Wyss-Coray, et al
  2018; 15 (1): 55

- **[18F]FSPG-PET reveals increased cystine/glutamate antiporter (xc-) activity in a mouse model of multiple sclerosis** *Journal of Neuroinflammation*
  Hoehne, A., James, M. L., Alam, I. S., Ronald, J., Schneider, B., D'Souza, A., Witney, T. H., Andrews, L., Cropper, H., Behera, D., Gowrishankar, G., Ding, Z., Wyss-Coray, et al
  2018; 15 (1)

- **Successful treatment of chronic knee pain following localization by a sigma-1 receptor radioligand and PET/MRI: a case report** *JOURNAL OF PAIN RESEARCH*
  Cipriano, P., Lee, S., Yoon, D., Shen, B., Tawfik, V., Curtin, C., Dragoo, J. L., James, M., Mccurdy, C., Chin, F., Biswal, S.
  2018; 11: 2353–56

- **PET Imaging of Neuroinflammation Using [11C]DPA-713 in a Mouse Model of Ischemic Stroke** *JoVE*
  Chaney, A., Johnson, E. M., Cropper, H. C., James, M. L.
  2018

- **11C-DPA-713 versus 18F-GE-180: A preclinical comparison of TSPO-PET tracers to visualize acute and chronic neuroinflammation in a mouse model of ischemic stroke.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Chaney, A. n., Cropper, H. C., Johnson, E. M., Lechtenberg, K. J., Peterson, T. C., Stevens, M. Y., Buckwalter, M. S., James, M. L.
  2018

- **Imaging activated T cells predicts response to cancer vaccines.** *The Journal of clinical investigation*
  Alam, I. S., Mayer, A. T., Sagiv-Barfi, I. n., Wang, K. n., Vermesh, O. n., Czerwinski, D. K., Johnson, E. M., James, M. L., Levy, R. n., Gambhir, S. S.
  2018

- **Multimodal assessment of SERS nanoparticle biodistribution post ingestion reveals new potential for clinical translation of Raman imaging** *BIOMATERIALS*
  Campbell, J. L., SoRelle, E. D., Ilovich, O., Liba, O., James, M. L., Qiu, Z., Perez, V., Chan, C. T., de la Zerda, A., Zavaleta, C.

2017; 135: 42-52

- **Human umbilical cord plasma proteins revitalize hippocampal function in aged mice** *NATURE*
  Castellano, J. M., Mosher, K. I., Abbey, R. J., McBride, A. A., James, M. L., Berdnik, D., Shen, J. C., Zou, B., Xie, X. S., Tingle, M., Hinkson, I. V., Angst, M. S., Wyss-Coray, et al
  2017; 544 (7651): 488-?

- **F]DASA-23 for Imaging Tumor Glycolysis Through Noninvasive Measurement of Pyruvate Kinase M2.** *Molecular imaging and biology*
  Beinat, C., Alam, I. S., James, M. L., Srinivasan, A., Gambhir, S. S.
  2017

- **[F-18]GE-180 PET Detects Reduced Microglia Activation After LM11A-31 Therapy in a Mouse Model of Alzheimer's Disease** *THERANOSTICS*
  James, M. L., Belichenko, N. P., Shuhendler, A. J., Hoehne, A., Andrews, L. E., Condon, C., Nguyen, T. V., Reiser, V., Jones, P., Trigg, W., Rao, J., Gambhir, S. S., Longo, et al
  2017; 7 (6): 1422-1436

- **Visualizing Nerve Injury in a Neuropathic Pain Model with [(18)F]FTC-146 PET/MRI.** *Theranostics*
  Shen, B. n., Behera, D. n., James, M. L., Reyes, S. T., Andrews, L. n., Cipriano, P. W., Klukinov, M. n., Lutz, A. B., Mavlyutov, T. n., Rosenberg, J. n., Ruoho, A. E., McCurdy, C. R., Gambhir, et al
  2017; 7 (11): 2794–2805

- **Imaging B cells in a mouse model of multiple sclerosis using (64)Cu-Rituximab-PET.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  James, M. L., Hoehne, A. n., Mayer, A. T., Lechtenberg, K. n., Moreno, M. n., Gowrishankar, G. n., Ilovich, O. n., Natarajan, A. n., Johnson, E. M., Nguyen, J. n., Quach, L. n., Han, M. n., Buckwalter, et al
  2017

- **Further validation to support clinical translation of [(18)F]FTC-146 for imaging sigma-1 receptors.** *EJNMMI research*
  Shen, B., James, M. L., Andrews, L., Lau, C., Chen, S., Palner, M., Miao, Z., Arksey, N. C., Shuhendler, A. J., Scatliffe, S., Kaneshige, K., Parsons, S. M., McCurdy, et al
  2015; 5 (1): 49-?

- **PET imaging of tumor glycolysis downstream of hexokinase through noninvasive measurement of pyruvate kinase M2.** *Science translational medicine*
  Witney, T. H., James, M. L., Shen, B., Chang, E., Pohling, C., Arksey, N., Hoehne, A., Shuhendler, A., Park, J., Bodapati, D., Weber, J., Gowrishankar, G., Rao, et al
  2015; 7 (310): 310ra169-?

- **Microglial Malfunction: The Third Rail in the Development of Alzheimer's Disease.** *Trends in neurosciences*
  Mhatre, S. D., Tsai, C. A., Rubin, A. J., James, M. L., Andreasson, K. I.
  2015; 38 (10): 621-636

- **PET Imaging of Translocator Protein (18 kDa) in a Mouse Model of Alzheimer's Disease Using N-(2,5-Dimethoxybenzyl)-2-18F-Fluoro-N-(2-Phenoxyphenyl)Acetamide.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  James, M. L., Belichenko, N. P., Nguyen, T. V., Andrews, L. E., Ding, Z., Liu, H., Bodapati, D., Arksey, N., Shen, B., Cheng, Z., Wyss-Coray, T., Gambhir, S. S., Longo, et al
  2015; 56 (2): 311-316

- **Antiviral drug ganciclovir is a potent inhibitor of microglial proliferation and neuroinflammation.** *journal of experimental medicine*
  Ding, Z., Mathur, V., Ho, P. P., James, M. L., Lucin, K. M., Hoehne, A., Alabsi, H., Gambhir, S. S., Steinman, L., Luo, J., Wyss-Coray, T.
  2014; 211 (2): 189-198

- **PET Imaging of Stroke-Induced Neuroinflammation in Mice Using [F-18]PBR06** *MOLECULAR IMAGING AND BIOLOGY*
  Lartey, F. M., Ahn, G., Shen, B., Cord, K., Smith, T., Chua, J. Y., Rosenblum, S., Liu, H., James, M. L., Chernikova, S., Lee, S. W., Pisani, L. J., Tirouvanziam, et al
  2014; 16 (1): 109-117

- **Evaluation of s-1 receptor radioligand 18F-FTC-146 in rats and squirrel monkeys using PET.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  James, M. L., Shen, B., Nielsen, C. H., Behera, D., Buckmaster, C. L., Mesangeau, C., Zavaleta, C., Vuppala, P. K., Jamalapuram, S., Avery, B. A., Lyons, D. M., McCurdy, C. R., Biswal, et al

2014; 55 (1): 147-153

- **A F-18-Labeled Saxitoxin Derivative for in Vivo PET-MR Imaging of Voltage-Gated Sodium Channel Expression Following Nerve Injury** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Hoehne, A., Behera, D., Parsons, W. H., James, M. L., Shen, B., Borgohain, P., Bodapati, D., Prabhakar, A., Gambhir, S. S., Yeomans, D. C., Biswal, S., Chin, F. T., Du Bois, et al
  2013; 135 (48): 18012-18015

- **A (18)F-Labeled Saxitoxin Derivative for in Vivo PET-MR Imaging of Voltage-Gated Sodium Channel Expression Following Nerve Injury.** *Journal of the American Chemical Society*
  Hoehne, A., Behera, D., Parsons, W. H., James, M. L., Shen, B., Borgohain, P., Bodapati, D., Prabhakar, A., Gambhir, S. S., Yeomans, D. C., Biswal, S., Chin, F. T., Bois, et al
  2013; 135 (48): 18012-18015

- **Colony-stimulating factor 1 receptor (CSF1R) signaling in injured neurons facilitates protection and survival** *JOURNAL OF EXPERIMENTAL MEDICINE*
  Luo, J., Elwood, F., Britschgi, M., Villeda, S., Zhang, H., Ding, Z., Zhu, L., Alabsi, H., Getachew, R., Narasimhan, R., Wabl, R., Fainberg, N., James, et al
  2013; 210 (1): 157-172

- **Integrin-Targeted Molecular Imaging of Experimental Abdominal Aortic Aneurysms by 18F-labeled Arg-Gly-Asp Positron-Emission Tomography** *CIRCULATION: CARDIOVASCULAR IMAGING*
  Kitagawa, T., Kosuge, H., Chang, E., James, M. L., Yamamoto, T., Shen, B., Chin, F. T., Gambhir, S. S., Dalman, R. L., McConnell, M. V.
  2013; 1 (6): 950-956

- **New Positron Emission Tomography (PET) Radioligand for Imaging sigma-1 Receptors in Living Subjects** *JOURNAL OF MEDICINAL CHEMISTRY*
  James, M. L., Shen, B., Zavaleta, C. L., Nielsen, C. H., Mesangeau, C., Vuppala, P. K., Chan, C., Avery, B. A., Fishback, J. A., Matsumoto, R. R., Gambhir, S. S., McCurdy, C. R., Chin, et al
  2012; 55 (19): 8272-8282

- **A MOLECULAR IMAGING PRIMER: MODALITIES, IMAGING AGENTS, AND APPLICATIONS** *PHYSIOLOGICAL REVIEWS*
  James, M. L., Gambhir, S. S.
  2012; 92 (2): 897-965

- **Preclinical Evaluation of Raman Nanoparticle Biodistribution for their Potential Use in Clinical Endoscopy Imaging** *SMALL*
  Zavaleta, C. L., Hartman, K. B., Miao, Z., James, M. L., Kempen, P., Thakor, A. S., Nielsen, C. H., Sinclair, R., Cheng, Z., Gambhir, S. S.
  2011; 7 (15): 2232-2240

- **[F-18]FTC-146: A novel and highly selective PET ligand for visualizing sigma-1 receptors in living subjects** *8th International Symposium on Functional Neuroreceptor Mapping of the Living Brain*
  James, M. L., Shen, B., Zavaleta, C., Berganos, R. A., Mesangeau, C., Shaikh, J., Gambhir, S. S., Matsumoto, R. R., McCurdy, C. R., Chin, F. T.
  ACADEMIC PRESS INC ELSEVIER SCIENCE.2010: S123–S124

- **[C-11]-DPA-713 and [F-18]-DPA-714 as New PET Tracers for TSPO: A Comparison with [C-11]-(R)-PK11195 in a Rat Model of Herpes Encephalitis** *MOLECULAR IMAGING AND BIOLOGY*
  Doorduin, J., Klein, H. C., Dierckx, R. A., James, M., Kassiou, M., De Vries, E. F.
  2009; 11 (6): 386-398

- **Initial Evaluation of C-11-DPA-713, a Novel TSPO PET Ligand, in Humans** *JOURNAL OF NUCLEAR MEDICINE*
  Endres, C. J., Pomper, M. G., James, M., Uzuner, O., Hammoud, D. A., Watkins, C. C., Reynolds, A., Hilton, J., Dannals, R. F., Kassiou, M.
  2009; 50 (8): 1276-1282

- **Comparative Evaluation of the Translocator Protein Radioligands C-11-DPA-713, F-18-DPA-714, and C-11-PK11195 in a Rat Model of Acute Neuroinflammation** *JOURNAL OF NUCLEAR MEDICINE*
  Chauveau, F., Van Camp, N., Dolle, F., Kuhnast, B., Hinnen, F., Damont, A., Boutin, H., James, M., Kassiou, M., Tavitian, B.
  2009; 50 (3): 468-476

- **Radiosynthesis of [F-18]DPA-714, a selective radioligand for imaging the translocator protein (18 kDa) with PET** *JOURNAL OF LABELLED COMPOUNDS & RADIOPHARMACEUTICALS*
  Damont, A., Hinnen, F., Kuhnast, B., Schollhorn-Peyronneau, M., James, M., Luus, C., Tavitian, B., Kassiou, M., Dolle, F.
  2008; 51 (7-8): 286-292

- **DPA-714, a new translocator protein-specific ligand: Synthesis, radiofluorination, and pharmacologic characterization** *JOURNAL OF NUCLEAR MEDICINE*
  James, M. L., Fulton, R. R., Vercoullie, J., Henderson, D. J., Garreau, L., Chalon, S., Dolle, F., Selleri, S., Guilloteau, D., Kassiou, M.
  2008; 49 (5): 814-822

- **C-11-DPA-713: A novel peripheral benzodiazepine receptor PET ligand for in vivo imaging of neuroinflammation** *JOURNAL OF NUCLEAR MEDICINE*
  Boutin, H., Chauveau, F., Thominiaux, C., Gregoire, M., James, M. L., Trebossen, R., Hantraye, P., Dolle, F., Tavitian, B., Kassiou, M.
  2007; 48 (4): 573-581

- **Development of Ligands for the Peripheral Benzodiazepine Receptor** *CURRENT MEDICINAL CHEMISTRY*
  James, M. L., Selleri, S., Kassiou, M.
  2006; 13 (17): 1991-2001

- **Improved synthesis of the peripheral benzodiazepine receptor ligand [C-11]DPA-713 using [C-11]methyl triflate** *APPLIED RADIATION AND ISOTOPES*
  Thominiaux, C., Dolle, F., James, M. L., Bramoulle, Y., Boutin, H., Besret, L., Gregoire, M. C., Valette, H., Bottlaender, M., Tavitian, B., Hantraye, P., Selleri, S., Kassiou, et al
  2006; 64 (5): 570-573

- **Synthesis and in vivo evaluation of a novel peripheral benzodiazepine receptor PET radioligand** *BIOORGANIC & MEDICINAL CHEMISTRY*
  James, M. L., Fulton, R. R., Henderson, D. J., Eberl, S., Melkle, S. R., Thomson, S., Allan, R. D., Dolle, F., Fulham, M. J., Kassiou, M.
  2005; 13 (22): 6188-6194