



## Laura Jean Pisani, Ph.D.

Physical Science Research Scientist, Radiology - Diagnostic Radiology

 NIH Biosketch available Online

---

### Bio

#### CURRENT ROLE AT STANFORD

Associate Director of Stanford Center for Innovation in In vivo Imaging (SCi3), Radiology

Member, Molecular Imaging Program at Stanford

---

### Professional

#### PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, AAPM (1993 - present)
- Member, ISMRM (2002 - present)

---

### Publications

#### PUBLICATIONS

- **Correction: Dual-enzyme activated theranostic nanoparticles for image-guided glioblastoma therapy.** *Scientific reports*  
Varniab, Z. S., Chang, E., Wang, J., Duwa, R., Suryadevara, V., Wu, W., Kumar, M., Liang, T., Khatoun, Z., Morais, G. R., Falconer, R., Shi, Y., Tikhomirov, et al  
2026; 16 (1): 4475
- **A novel therapeutic strategy using a single non-toxic agent that produces consistent long-term control of orthotopic experimental glioblastomas**  
Khojasteh, A., Pisani, L., Kiebish, M., Cao, T., Nagpal, S., Nastke, M., Adamson, P., Beinat, C., Gesta, S., Hurd, R., Spielman, D., Recht, L.  
OXFORD UNIV PRESS INC.2025: v452-v453
- **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
- **MRI detection of senescent cells in porcine knee joints with a  $\beta$ -galactosidase responsive Gd-chelate.** *Npj imaging*  
Nernekli, K., Mangarova, D. B., Suryadevara, V., Hajipour, M., Tang, J. H., Wang, J., Liang, T., Harris, M., Ueyama, T., Lyons, J. K., Moseley, M. E., Roudi, R., Pisani, et al  
2025; 3 (1): 18
- **Dual-enzyme activated theranostic nanoparticles for image-guided glioblastoma therapy.** *Scientific reports*  
Shokri Varniab, Z., Chang, E., Wang, J., Duwa, R., Suryadevara, V., Wu, W., Kumar, M., Liang, T., Khatoun, Z., Morais, G. R., Falconer, R., Shi, Y., Tikhomirov, et al  
2025; 15 (1): 13540
- **Multimodal imaging approach to track theranostic nanoparticle accumulation in glioblastoma with magnetic resonance imaging and intravital microscopy.** *Nanoscale*

- Saladino, G. M., Mangarova, D. B., Nernekli, K., Wang, J., Annio, G., Varniab, Z. S., Khatoon, Z., Ribeiro Morais, G., Shi, Y., Chang, E., Pisani, L. J., Tikhomirov, G., Falconer, et al  
2025
- **High Shear Stress Reduces ERG Causing Endothelial-Mesenchymal Transition and Pulmonary Arterial Hypertension.** *Arteriosclerosis, thrombosis, and vascular biology*  
Shinohara, T., Moonen, J. R., Chun, Y. H., Lee-Yow, Y. C., Okamura, K., Szafron, J. M., Kaplan, J., Cao, A., Wang, L., Guntur, D., Taylor, S., Isobe, S., Dong, et al  
2024
  - **A Novel Mouse Model for Cerebral Inflammatory Demyelination in X-Linked Adrenoleukodystrophy: Insights into Pathogenesis and Potential Therapeutic Targets.** *Annals of neurology*  
Hashemi, E., Srivastava, I. N., Aguirre, A., Yoseph, E. T., Kaushal, E., Awani, A., Ryu, J. K., Akassoglou, K., Talebian, S., Chu, P., Pisani, L., Musolino, P., Steinman, et al  
2024
  - **Reproducibility and repeatability of quantitative T2 and T2\* mapping of osteosarcomas in a mouse model.** *European radiology experimental*  
Roudi, R., Pisani, L. J., Pisani, F., Liang, T., Daldrup-Link, H. E.  
2024; 8 (1): 74
  - **Two-Photon Intravital Microscopy of Glioblastoma in a Murine Model.** *Journal of visualized experiments : JoVE*  
Nernekli, K., Mangarova, D. B., Shi, Y., Varniab, Z. S., Chang, E., Tikenogullari, O. Z., Pisani, L., Tikhomirov, G., Wang, G., Daldrup-Link, H. E.  
2024
  - **A Novel Mouse Model for Cerebral Inflammatory Demyelination in X-Linked Adrenoleukodystrophy: Insights into Pathogenesis and Potential Therapeutic Targets** *Annals of Neurology*  
Hashemi, E., Srivastava, I., Aguirre, A., Yoseph, E. T., Van Haren, K. P.  
2024
  - **A novel mouse model of cerebral adrenoleukodystrophy highlights NLRP3 activity in lesion pathogenesis.** *bioRxiv : the preprint server for biology*  
Hashemi, E., Narain Srivastava, I., Aguirre, A., Tilahan Yoseph, E., Kaushal, E., Awani, A., Kyu Ryu, J., Akassoglou, K., Talebian, S., Chu, P., Pisani, L., Musolino, P., Steinman, et al  
2023
  - **Novel Clinically Translatable Iron Oxide Nanoparticle for Monitoring Anti-CD47 Cancer Immunotherapy.** *Investigative radiology*  
Roudi, R., Pisani, L., Pisani, F., Kiru, L., Daldrup-Link, H. E.  
2023
  - **Measurement of Tumor T2\* Relaxation Times after Iron Oxide Nanoparticle Administration.** *Journal of visualized experiments : JoVE*  
Ramasamy, S. K., Roudi, R., Morakote, W., Adams, L. C., Pisani, L. J., Moseley, M., Daldrup-Link, H. E.  
2023
  - **Tumor protease-activated theranostic nanoparticles for MRI-guided glioblastoma therapy.** *Theranostics*  
Huang, C. H., Chang, E., Zheng, L., Raj, J. G., Wu, W., Pisani, L. J., Daldrup-Link, H. E.  
2023; 13 (6): 1745-1758
  - **Multimodal In Vivo Tracking of Chimeric Antigen Receptor T Cells in Preclinical Glioblastoma Models.** *Investigative radiology*  
Wu, W. E., Chang, E., Jin, L., Liu, S., Huang, C., Kamal, R., Liang, T., Aissaoui, N. M., Theruvath, A. J., Pisani, L., Moseley, M., Stoyanova, T., Paulmurugan, et al  
2022
  - **Brain iron deposition after Ferumoxytol-enhanced MRI: A study of Porcine Brains.** *Nanotheranostics*  
Theruvath, A. J., Aghighi, M. n., Iv, M. n., Nejadnik, H. n., Lavezo, J. n., Pisani, L. J., Daldrup-Link, H. E.  
2020; 4 (4): 195–200
  - **GABA Measurement in a Neonatal Fragile X Syndrome Mouse Model Using 1H-Magnetic Resonance Spectroscopy and Mass Spectrometry.** *Frontiers in molecular neuroscience*  
Reyes, S. T., Mohajeri, S. n., Krasinska, K. n., Guo, S. G., Gu, M. n., Pisani, L. n., Rosenberg, J. n., Spielman, D. M., Chin, F. T.  
2020; 13: 612685

- **Nanoparticle enhanced MRI can monitor macrophage response to CD47 mAb immunotherapy in osteosarcoma.** *Cell death & disease*  
Mohanty, S., Yerneni, K., Theruvath, J. L., Graef, C. M., Nejadnik, H., Lenkov, O., Pisani, L., Rosenberg, J., Mitra, S., Cordero, A. S., Cheshier, S., Daldrup-Link, H. E.  
2019; 10 (2): 36
- **Magnetic Resonance Imaging of Tumor-Associated Macrophages: Clinical Translation** *CLINICAL CANCER RESEARCH*  
Aghighi, M., Theruvath, A. J., Pareek, A., Pisani, L. L., Alford, R., Muehe, A. M., Sethi, T. K., Holdsworth, S. J., Hazard, F. K., Gratzinger, D., Luna-Fineman, S., Advani, R., Spunt, et al  
2018; 24 (17): 4110–18
- **A novel theranostic strategy for MMP-14 expressing glioblastomas impacts survival**  
Mohanty, S., Chen, Z., Li, K., Morais, G., Klockow, J., Yerneni, K., Pisani, L., Chin, F., Mitra, S., Cheshier, S., Chang, E., Gambhir, S., Rao, et al  
AMER ASSOC CANCER RESEARCH.2018
- **Magnetic Resonance Imaging of Tumor Associated Macrophages: Clinical Translation.** *Clinical cancer research : an official journal of the American Association for Cancer Research*  
Aghighi, M. n., Theruvath, A. J., Pareek, A. n., Pisani, L. n., Alford, R. n., Muehe, A. M., Sethi, T. K., Holdsworth, S. J., Hazard, F. K., Gratzinger, D. n., Luna-Fineman, S. n., Advani, R. H., Spunt, et al  
2018
- **Ferumoxytol Is Not Retained in Kidney Allografts in Patients Undergoing Acute Rejection.** *Molecular imaging and biology*  
Aghighi, M., Pisani, L., Theruvath, A. J., Muehe, A. M., Donig, J., Khan, R., Holdsworth, S. J., Kambham, N., Concepcion, W., Grimm, P. C., Daldrup-Link, H. E.  
2017
- **Detection of Stem Cell Transplant Rejection with Ferumoxytol MR Imaging: Correlation of MR Imaging Findings with Those at Intravital Microscopy.** *Radiology*  
Daldrup-Link, H. E., Chan, C., Lenkov, O., Taghavigarmestani, S., Nazekati, T., Nejadnik, H., Chapelin, F., Khurana, A., Tong, X., Yang, F., Pisani, L., Longaker, M., Gambhir, et al  
2017: 161139-?
- **Alk5 inhibition increases delivery of macromolecular and protein-bound contrast agents to tumors.** *JCI insight*  
Daldrup-Link, H. E., Mohanty, S., Ansari, C., Lenkov, O., Shaw, A., Ito, K., Hong, S. H., Hoffmann, M., Pisani, L., Boudreau, N., Gambhir, S. S., Coussens, L. M.  
2016; 1 (6)
- **Speeding up PET/MR for cancer staging of children and young adults.** *European radiology*  
Aghighi, M., Pisani, L. J., Sun, Z., Klenk, C., Madnawat, H., Fineman, S. L., Advani, R., von Eyben, R., Owen, D., Quon, A., Moseley, M., Daldrup-Link, H. E.  
2016: -?
- **Imaging Tumor Necrosis with Ferumoxytol.** *PloS one*  
Aghighi, M., Golovko, D., Ansari, C., Marina, N. M., Pisani, L., Kurlander, L., Klenk, C., Bhaumik, S., Wendland, M., Daldrup-Link, H. E.  
2015; 10 (11)
- **Assessment of elastin deficit in a marfan mouse aneurysm model using an elastin-specific magnetic resonance imaging contrast agent.** *Circulation. Cardiovascular imaging*  
Okamura, H., Pisani, L. J., Dalal, A. R., Emrich, F., Dake, B. A., Arakawa, M., Onthank, D. C., Cesati, R. R., Robinson, S. P., Milanesi, M., Kotek, G., Smit, H., Connolly, et al  
2014; 7 (4): 690-696
- **Severe Impairment of Axonal Transport in Acute Experimental Anterior Ischemic Optic Neuropathy**  
Ma, J., Shariati, M., Pisani, L., Pestilli, F., Dougherty, B., Perry, L., Lee, G., Contag, C., Wandell, B. A., Liao, Y.  
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2014
- **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
- **Ferumoxytol: a new, clinically applicable label for stem-cell tracking in arthritic joints with MRI.** *Nanomedicine*

- Khurana, A., Nejadnik, H., Chapelin, F., Lenkov, O., Gawande, R., Lee, S., Gupta, S. N., Aflakian, N., Derugin, N., Messing, S., Lin, G., Lue, T. F., Pisani, et al  
2013; 8 (12): 1969-1983
- **Evaluation of the novel USPIO GEH121333 for MR imaging of cancer immune responses.** *Contrast media & molecular imaging*  
Shi, Q., Pisani, L. J., Lee, Y. K., Messing, S., Ansari, C., Bhaumik, S., Lowery, L., Lee, B. D., Meyer, D. E., Daldrup-Link, H. E.  
2013; 8 (3): 281-288
  - **Intravenous Ferumoxytol Allows Noninvasive MR Imaging Monitoring of Macrophage Migration into Stem Cell Transplants** *RADIOLOGY*  
Khurana, A., Nejadnik, H., Gawande, R., Lin, G., Lee, S., Messing, S., Castaneda, R., Derugin, N., Pisani, L., Lue, T. F., Daldrup-Link, H. E.  
2012; 264 (3): 803-811
  - **Infection of pregnant mice with *Listeria monocytogenes* induces fetal bradycardia** *PEDIATRIC RESEARCH*  
Hardy, J., Kirkendoll, B., Zhao, H., Pisani, L., Luong, R., Switzer, A., McConnell, M. V., Contag, C. H.  
2012; 71 (5): 539-545
  - **Bioluminescence and Magnetic Resonance Imaging of Macrophage Homing to Experimental Abdominal Aortic Aneurysms** *MOLECULAR IMAGING*  
Miyama, N., Dua, M. M., Schultz, G. M., Kosuge, H., Terashima, M., Pisani, L. J., Dalman, R. L., McConnell, M. V.  
2012; 11 (2): 126-134
  - **Improvements in Parallel Imaging Accelerated Functional MRI Using Multiecho Echo-Planar Imaging** *MAGNETIC RESONANCE IN MEDICINE*  
Schmiedeskamp, H., Newbould, R. D., Pisani, L. J., Skare, S., Glover, G. H., Pruessmann, K. P., Bammer, R.  
2010; 63 (4): 959-969
  - **Restricted field of view magnetic resonance imaging of a dynamic time series** *MAGNETIC RESONANCE IN MEDICINE*  
Pisani, L., Bammer, R., Glover, G.  
2007; 57 (2): 297-307
  - **Assessment of MR thermometry during high intensity ultrasound ablation of the canine prostate** *5th International Symposium on Therapeutic Ultrasound*  
Pauly, K. B., Rieke, V., Pisani, L., Sommer, G., Bouley, D., Diederich, C., Ross, A., Nau, W., Kinsey, A., Dumoulin, C., Watkins, R.  
AMER INST PHYSICS.2006: 76-80
  - **Effects of spatial and temporal resolution for MR image-guided thermal ablation of prostate with transurethral ultrasound** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Pisani, L. J., Ross, A. B., Diederich, C. J., Nau, W. H., Sommer, F. G., Glover, G. H., Butts, K.  
2005; 22 (1): 109-118
  - **Setup error in radiotherapy: On-line correction using electronic kilovoltage and megavoltage radiographs** *40th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology*  
Pisani, L., Lockman, D., Jaffray, D., Yan, D., Martinez, A., Wong, J.  
ELSEVIER SCIENCE INC.2000: 825-39