

Stanford



Frederick T. Chin, Ph.D.

Assistant Professor (Research) of Radiology (Molecular Imaging)
Radiology - Rad/Molecular Imaging Program at Stanford

CONTACT INFORMATION

• Administrative Contact

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Bio

ACADEMIC APPOINTMENTS

- Assistant Professor (Research), Radiology - Rad/Molecular Imaging Program at Stanford
- Member, Bio-X
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Member, Stanford Neurosciences Institute, (2013- present)
- Member, Stanford Neuro-Oncology Program, (2013- present)
- Member, Stanford Bio-X Program, (2013- present)
- Member, Non-Human Use Radiation Safety Committee, Stanford University, Stanford, CA USA, (2011- present)
- Member, Administrative Panel on Radiological Safety, Stanford University, Stanford, CA USA, (2009- present)
- Member, Radioactive Drug Research Committee, Stanford University, Stanford, CA USA, (2005- present)
- Member, Molecular Imaging Program at Stanford, (2005- present)
- Head, Cyclotron Radiochemistry, Stanford University School of Medicine, Department of Radiology, Stanford, CA USA, (2005- present)

HONORS AND AWARDS

- Phi Beta Kappa, Indiana University, Bloomington, IN USA (1990)
- "Excellence in Teaching" Award, Indiana University - Purdue University at Indianapolis, Indianapolis, IN USA (1998)
- Physical Scientist Research Award, Indiana University School of Medicine, Department of Radiology, Indianapolis, IN USA (1998)
- LBNL Research Fellowship, Lawrence Berkeley National Laboratory, Berkeley, CA USA (2001-2002)
- NIH Intramural Research Fellowship, National Institutes of Health, Bethesda, MD USA (2002-2005)
- NIH Fellow Award for Research Excellence, National Institutes of Health, Bethesda, MD USA (2003, 2004)

PROFESSIONAL EDUCATION

- Ph.D., Purdue University, W. Lafayette, IN , Organic Chemistry/Radiochemistry (2000)
- B.S. with Honors, Indiana University, Bloomington, IN , Chemistry (1991)

LINKS

- Radiochemistry Facility: http://mips.stanford.edu/aboutus/facilities/lucas_expansion/radiochemistry.html
- My Research Lab site: <http://med.stanford.edu/chinlab.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Our group's primary objectives are:

1) Novel radioligand and radiotracer development.

We will develop novel PET (Positron Emission Tomography) imaging agents with MIPS and Stanford faculty as well as other outside collaborations including academia and pharmaceutical industry. Although my personal research interests will be to discover and design of candidate probes that target molecular targets in the brain, our group focus will primarily be on cancer biology and gene therapy. In conjunction with our state-of-the-art imaging facility, promising candidates will be evaluated by PET-CT/MR imaging in small animals and primates. Successful radioligands and/or radiotracers will be extended towards future human clinical applications.

2) Designing new radiolabeling techniques and methodologies.

We will aim to design new radiolabeling techniques and methodologies that may have utility for future radiopharmaceutical development in our lab and the general radiochemistry community.

3) Radiochemistry production of routine clinical tracers.

Since we also have many interests with many Stanford faculty and outside collaborators, our efforts will also include the routine radiochemistry production of many existing radiotracers for human and non-human use. Our routine clinical tracers will be synthesized in custom-made or commercial synthetic modules (i.e. GE TRACERlab modules) housed in lead-shielded cells and be distributed manually or automatically (i.e. Comecer Dorothea) to our imagers.

CLINICAL TRIALS

- 18F-FDOPA PET/CT or PET/MRI in Measuring Tumors in Patients With Newly-Diagnosed or Recurrent Gliomas, Not Recruiting
- 68Ga DOTA-TATE PET/CT in Somatostatin Receptor Positive Tumors, Not Recruiting
- [18F]FTC-146 PET/MRI in Healthy Volunteers and in CRPS and Sciatica, Not Recruiting
- A Comprehensive Study to Isolate Tumor-initiating Cells From Human Epithelial Malignancies, Not Recruiting
- Assessing the Suitability of an Imaging Probe for Use in Clinical Cell and Gene Therapy Trials in Cancer and Rheumatoid Arthritis, Not Recruiting
- Exploration of Tumor Accumulation of BAY94-9392 in Patients With Cancer, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Kenneth Hettie

Postdoctoral Research Mentor

Kenneth Hettie

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)

Publications

PUBLICATIONS

- **Efficient synthesis of carbon-11 labelled acylsulfonamides using [11C]CO carbonylation chemistry.** *Chemical communications (Cambridge, England)*
van der Wildt, B., Shen, B., Chin, F. T.
2019
- **Near-Infrared Fluorescent Rosol Dye Tailored toward Lymphatic Mapping Applications** *ANALYTICAL CHEMISTRY*
Hettie, K. S., Klockow, J. L., Glass, T. E., Chin, F. T.
2019; 91 (4): 3110–17
- **In Vivo Translation of the CIRPI System---Revealing Molecular Pathology of Rabbit Aortic Atherosclerotic Plaques.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Zaman, R., Yousufi, S., Chibana, H., Ikeno, F., Long, S. R., Gambhir, S. S., Chin, F. T., McConnell, M. V., Xing, L., Yeung, A.
2019
- **Identifying Hypoperfusion in Moyamoya Disease With Arterial Spin Labeling and an [15O]-Water Positron Emission Tomography/Magnetic Resonance Imaging Normative Database.** *Stroke*
Fan, A. P., Khalighi, M. M., Guo, J., Ishii, Y., Rosenberg, J., Wardak, M., Park, J. H., Shen, B., Holley, D., Gandhi, H., Haywood, T., Singh, P., Steinberg, et al
2019: STROKEAHA118023426
- **Striatal dopamine deficits predict reductions in striatal functional connectivity in major depression: a concurrent 11C-raclopride positron emission tomography and functional magnetic resonance imaging investigation.** *Translational psychiatry*
Hamilton, J. P., Sacchet, M. D., Hjørnevik, T., Chin, F. T., Shen, B., Kampe, R., Park, J. H., Knutson, B. D., Williams, L. M., Borg, N., Zaharchuk, G., Camacho, M. C., Mackey, et al
2018; 8 (1): 264
- **A [11 C] CO dispensing system for rapid screening of carbonylation reactions.** *Journal of labelled compounds & radiopharmaceuticals*
van der Wildt, B., Shen, B., Chin, F. T.
2018
- **A Dual-Modality Hybrid Imaging System Harnesses Radioluminescence and Sound to Reveal Molecular Pathology of Atherosclerotic Plaques** *SCIENTIFIC REPORTS*
Zaman, R. T., Yousefi, S., Long, S. R., Saito, T., Mandella, M., Qiu, Z., Chen, R., Contag, C. H., Gambhir, S. S., Chin, F. T., Khuri-Yakub, B. T., McConnell, M. V., Shung, et al
2018; 8: 8992
- **18F-EF5 Pet-Based Imageable Hypoxia Predicts for Local Control in Tumors Treated With Conformal Radiotherapy**
Qian, Y., Liu, Y., Von Eyben, R., Carter, J. N., Pollom, E. L., Harris, J. P., Prionas, N. D., Binkley, M. S., Simmons, A., Diehn, M., Chin, F. T., Shultz, D. B., Brown, et al
ELSEVIER SCIENCE INC.2018: E17–E18
- **Single-Cell Imaging Using Radioluminescence Microscopy Reveals Unexpected Binding Target for [18F]HFB** *MOLECULAR IMAGING AND BIOLOGY*
Kiru, L., Kim, T., Shen, B., Chin, F. T., Prax, G.
2018; 20 (3): 378–87
- **THE FRAGILE X BRAIN: A PET/MR CASE STUDY**
Gade, S., Gade, S., Shen, B., Jung, J., Lee, B., Kim, S., Fung, L., Chin, F.
OXFORD UNIV PRESS INC.2018: S713
- **[F-18] 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
- **Imaging cellular pharmacokinetics of F-18-FDG and 6-NBDG uptake by inflammatory and stem cells** *PLOS ONE*
Zaman, R. T., Tuerkcan, S., Mahmoudi, M., Saito, T., Yang, P. C., Chin, F. T., McConnell, M. V., Xing, L.
2018; 13 (2): e0192662
 - **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
 - **18F-EF5 PET-based Imageable Hypoxia Predicts Local Recurrence in Tumors Treated With Highly Conformal Radiation Therapy.** *International journal of radiation oncology, biology, physics*
Qian, Y., Von Eyben, R., Liu, Y., Chin, F. T., Miao, Z., Apte, S., Carter, J. N., Binkley, M. S., Pollom, E. L., Harris, J. P., Prionas, N. D., Kissel, M., Simmons, et al
2018
 - **Comprehensive Examination of the GABAergic System in Adults With Autism by Simultaneous [18F] Flumazenil-Positron Emission Tomography and Magnetic Resonance Spectroscopy**
Fung, L., Flores, R., Liu, K., Gu, M., Spielman, D., Chin, F., Hardan, A.
NATURE PUBLISHING GROUP.2017: S206–S207
 - **Production of diverse PET probes with limited resources: 24 F-18-labeled compounds prepared with a single radiosynthesizer** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Collins, J., Waldmann, C. M., Drake, C., Slavik, R., Ha, N. S., Sergeev, M., Lazari, M., Shen, B., Chin, F. T., Moore, M., Sadeghi, S., Phelps, M. E., Murphy, et al
2017; 114 (43): 11309–14
 - **F-FTC-146 in humans.** *Journal of nuclear medicine*
Hjørnevik, T., Cipriano, P. W., Shen, B., Hyung Park, J., Gulaka, P., Holley, D., Gandhi, H., Yoon, D., Mitra, E. S., Zaharchuk, G., Gambhir, S. S., McCurdy, C. R., Chin, et al
2017
 - **[F]FTC-146.** *Molecular imaging and biology*
Shen, B., Park, J. H., Hjørnevik, T., Cipriano, P. W., Yoon, D., Gulaka, P. K., Holly, D., Behera, D., Avery, B. A., Gambhir, S. S., McCurdy, C. R., Biswal, S., Chin, et al
2017
 - **Image-derived input function estimation on a TOF-enabled PET/MR for cerebral blood flow mapping.** *Journal of cerebral blood flow and metabolism*
Khalighi, M. M., Deller, T. W., Fan, A. P., Gulaka, P. K., Shen, B., Singh, P., Park, J., Chin, F. T., Zaharchuk, G.
2017: 271678X17691784-?
 - **GABA-Edited 1H MRS with Robust Macromolecule Suppression** *Magnetic Resonance in Medicine*
Gu, M., Hurd, R., Noeske, R., Baltusis, L., Hancock, R., Sacchet, M. D., Gotlib, I. H., Chin, F. T., Spielman, D.
2017; In Press
 - **PET/MRI Imaging of Peripheral Neural Sigma-1 Receptor Expression in a Neuropathic Pain Model.** *Theranostics*
Shen, B., Behera, D., James, M. L., Mavlyutov, T., Ruoho, A., Borgohain, P., Andrews, L., Patankar, M., McCurdy, C. R., Biswal, S., Chin, F. T.
2017; In press
 - **Quantification of Highly Selective Sigma-1 Receptor Antagonist CM304 using Liquid Chromatography Tandem Mass Spectrometry and its application to a Pre-clinical Pharmacokinetic Study.** *Drug testing and analysis*
Avery, B. A., Vuppala, P. K., Jamalapuram, S., Sharma, A., Mesangeau, C., Chin, F. T., McCurdy, C. R.
2016
 - **receptor.** *EJNMMI research*
Palner, M., Beinat, C., Banister, S., Zanderigo, F., Park, J. H., Shen, B., Hjoernevik, T., Jung, J. H., Lee, B. C., Kim, S. E., Fung, L., Chin, F. T.
2016; 6 (1): 80-?
 - **Effects of common anesthetic agents on [F-18] flumazenil binding to the GABA(A) receptor** *EJNMMI RESEARCH*
Palner, M., Beinat, C., Banister, S., Zanderigo, F., Park, J. H., Shen, B., Hjoernevik, T., Jung, J. H., Lee, B. C., Kim, S. E., Fung, L., Chin, F. T.

2016; 6

- **In vivo assessment of behavioral recovery and circulatory exchange in the peritoneal parabiosis model** *SCIENTIFIC REPORTS*
Castellano, J. M., Palner, M., Li, S., Freeman, G. M., Andy Nguyen, A., Shen, B., Stan, T., Mosher, K. I., Chin, F. T., de Lecea, L., Luo, J., Wyss-Coray, T.
2016; 6
- **Spectrum of Ga-68-DOTA TATE Uptake in Patients With Neuroendocrine Tumors** *CLINICAL NUCLEAR MEDICINE*
Moradi, F., Jamali, M., Barkhodari, A., Schneider, B., Chin, F., Quon, A., Mitra, E. S., Iagaru, A.
2016; 41 (6): E281-E287
- **Striatal dopamine D2/3 receptor regulation by stress inoculation in squirrel monkeys.** *Neurobiology of stress*
Lee, A. G., Nechvatal, J. M., Shen, B., Buckmaster, C. L., Levy, M. J., Chin, F. T., Schatzberg, A. F., Lyons, D. M.
2016; 3: 68-73
- **Pilot Comparison of Ga-68-RM2 PET and Ga-68-PSMA-11 PET in Patients with Biochemically Recurrent Prostate Cancer** *JOURNAL OF NUCLEAR MEDICINE*
Minamimoto, R., Hancock, S., Schneider, B., Chin, F. T., Jamali, M., Loening, A., Vasanawala, S., Gambhir, S. S., Iagaru, A.
2016; 57 (4): 557-562
- **Pilot Preclinical and Clinical Evaluation of (4S)-4-(3-[18F]Fluoropropyl)-L-Glutamate (18F-FSPG) for PET/CT Imaging of Intracranial Malignancies.** *PloS one*
Mitra, E. S., Koglin, N., Mosci, C., Kumar, M., Hoehne, A., Keu, K. V., Iagaru, A. H., Mueller, A., Berndt, M., Bullich, S., Friebe, M., Schmitt-Willich, H., Gekeler, et al
2016; 11 (2)
- **[C-11]Ascorbic and [C-11]dehydroascorbic acid, an endogenous redox pair for sensing reactive oxygen species using positron emission tomography** *CHEMICAL COMMUNICATIONS*
Carroll, V. N., Truillet, C., Shen, B., Flavell, R. R., Shao, X., Evans, M. J., VanBrocklin, H. F., Scott, P. J., Chin, F. T., Wilson, D. M.
2016; 52 (27): 4888-4890
- **Efficient automated syntheses of high specific activity 6-[(18) F]fluorodopamine using a diaryliodonium salt precursor.** *Journal of labelled compounds & radiopharmaceuticals*
Neumann, K. D., Qin, L., Vavere, A. L., Shen, B., Miao, Z., Chin, F. T., Shulkin, B. L., Snyder, S. E., DiMagno, S. G.
2016; 59 (1): 30-34
- **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-?
- **Biodistribution of the (18)F-FPPRGD2 PET radiopharmaceutical in cancer patients: an atlas of SUV measurements.** *European journal of nuclear medicine and molecular imaging*
Minamimoto, R., Jamali, M., Barkhodari, A., Mosci, C., Mitra, E., Shen, B., Chin, F., Gambhir, S. S., Iagaru, A.
2015; 42 (12): 1850-1858
- **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-?
- **Bright Lu203:Eu Thin-Film Scintillators for High-Resolution Radioluminescence Microscopy** *ADVANCED HEALTHCARE MATERIALS*
Sengupta, D., Miller, S., Marton, Z., Chin, F., Nagarkar, V., Pratz, G.
2015; 4 (14): 2064-2070
- **F-18-EF5 PET Is Predictive of Response to Fractionated Radiotherapy in Preclinical Tumor Models** *PLOS ONE*
Ali, R., Apte, S., Vilalta, M., Subbarayan, M., Miao, Z., Chin, F. T., Graves, E. E.
2015; 10 (10)
- **A Systematic Comparison of 18F-C-SNAT to Established Radiotracer Imaging Agents for the Detection of Tumor Response to Treatment.** *Clinical cancer research*
Witney, T. H., Hoehne, A., Reeves, R. E., Ilovich, O., Namavari, M., Shen, B., Chin, F. T., Rao, J., Gambhir, S. S.

2015; 21 (17): 3896-3905

- **Preclinical Kinetic Analysis of the Caspase-3/7 PET Tracer 18F-C-SNAT: Quantifying the Changes in Blood Flow and Tumor Retention After Chemotherapy.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Palner, M., Shen, B., Jeon, J., Lin, J., Chin, F. T., Rao, J.
2015; 56 (9): 1415-1421
- **Single-Cell Analysis of [18F]Fluorodeoxyglucose Uptake by Droplet Radiofluidics.** *Analytical chemistry*
Türkcan, S., Nguyen, J., Vilalta, M., Shen, B., Chin, F. T., Pratz, G., Abbyad, P.
2015; 87 (13): 6667-6673
- **Ether analogues of DPA-714 with subnanomolar affinity for the translocator protein (TSPO)** *EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY*
Banister, S. D., Beinat, C., Wilkinson, S. M., Shen, B., Bartoli, C., Selleri, S., Da Pozzo, E., Martini, C., Chin, F. T., Kassiou, M.
2015; 93: 392-400
- **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
- **Validation of 64Cu-DOTA-rituximab injection preparation under good manufacturing practices: a PET tracer for imaging of B-cell non-Hodgkin lymphoma.** *Molecular imaging*
Natarajan, A., Arksey, N., Iagaru, A., Chin, F. T., Gambhir, S. S.
2015; 14
- **Validation of 64Cu-DOTA-rituximab injection preparation under good manufacturing practices: a PET tracer for imaging of B-cell non-Hodgkin lymphoma.** *Molecular imaging*
Natarajan, A., Arksey, N., Iagaru, A., Chin, F. T., Gambhir, S. S.
2015; 14
- **18F-EF5 PET Is Predictive of Response to Fractionated Radiotherapy in Preclinical Tumor Models.** *PloS one*
Ali, R., Apte, S., Vilalta, M., Subbarayan, M., Miao, Z., Chin, F. T., Graves, E. E.
2015; 10 (10)
- **The Relationship Between Serial [(18) F]PBR06 PET Imaging of Microglial Activation and Motor Function Following Stroke in Mice** *MOLECULAR IMAGING AND BIOLOGY*
Lartey, F. M., Ahn, G., Ali, R., Rosenblum, S., Miao, Z., Arksey, N., Shen, B., Colomer, M. V., Rafat, M., Liu, H., Alejandre-Alcazar, M. A., Chen, J. W., Palmer, et al
2014; 16 (6): 821-829
- **A Radiofluorinated Divalent Cystine Knot Peptide for Tumor PET Imaging** *MOLECULAR PHARMACEUTICS*
Jiang, L., Kimura, R. H., Ma, X., Tu, Y., Miao, Z., Shen, B., Chin, F. T., Shi, H., Gambhir, S. S., Cheng, Z.
2014; 11 (11): 3885-3892
- **F-18-FPPRGD2 PET/CT: Pilot Phase Evaluation of Breast Cancer Patients** *RADIOLOGY*
Lagaru, A., Mosci, C., Shen, B., Chin, F. T., Mitra, E., Telli, M. L., Gambhir, S. S.
2014; 273 (2): 549-559
- **Comparison of Two Site-Specifically F-18-Labeled Affibodies for PET Imaging of EGFR Positive Tumors** *MOLECULAR PHARMACEUTICS*
Su, X., Cheng, K., Jeon, J., Shen, B., Venturin, G. T., Hu, X., Rao, J., Chin, F. T., Wu, H., Cheng, Z.
2014; 11 (11): 3947-3956
- **Fully Automated Production of Diverse 18F-Labeled PET Tracers on the ELIXYS Multireactor Radiosynthesizer Without Hardware Modification.** *Journal of nuclear medicine technology*
Lazari, M., Collins, J., Shen, B., Farhoud, M., Yeh, D., Maraglia, B., Chin, F. T., Nathanson, D. A., Moore, M., van Dam, R. M.
2014; 42 (3): 203-210
- **Synthesis and evaluation of candidate PET radioligands for corticotropin-releasing factor type-1 receptors.** *Nuclear medicine and biology*
Lodge, N. J., Li, Y., Chin, F. T., Dischino, D. D., Zoghbi, S. S., Deskus, J. A., Mattson, R. J., Imaizumi, M., Pieschl, R., Molski, T. F., Fujita, M., Dulac, H., Zaczek, et al

2014; 41 (6): 524-535

- **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
- **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; 6 (6): 950-956
- **Positron emission tomography imaging of drug-induced tumor apoptosis with a caspase-triggered nanoaggregation probe.** *Angewandte Chemie (International ed. in English)*
Shen, B., Jeon, J., Palner, M., Ye, D., Shuhendler, A., Chin, F. T., Rao, J.
2013; 52 (40): 10511-10514
- **18F-fluorobenzoate-labeled cystine knot peptides for PET imaging of integrin $\alpha v \beta 6$.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Hackel, B. J., Kimura, R. H., Miao, Z., Liu, H., Sathirachinda, A., Cheng, Z., Chin, F. T., Gambhir, S. S.
2013; 54 (7): 1101-1105
- **F-18-Fluorobenzoate-Labeled Cystine Knot Peptides for PET Imaging of Integrin $\alpha v \beta 6$** *JOURNAL OF NUCLEAR MEDICINE*
Hackel, B. J., Kimura, R. H., Miao, Z., Liu, H., Sathirachinda, A., Cheng, Z., Chin, F. T., Gambhir, S. S.
2013; 54 (7): 1101-1105
- **Improved [F-18]FEAU radiosynthesis on different automated radiochemistry platforms**
Shen, B., Lazari, M., Maraglia, B., Collier, L., Hammond, K., Moore, M., van Dam, R. M., Chin, F. T.
WILEY-BLACKWELL.2013: S471-S471
- **An efficient and site-specific F-18-labeling of biomolecules using a novel prosthetic group F-18-cyanobenzothiazole ([F-18]CBT)**
Jeon, J., Shen Bin, B., Su Xinhui, X. H., Cheng Zhen, Z., Rao Jianghong, J. H., Chin, F. T.
WILEY-BLACKWELL.2013: S177-S177
- **Synthesis and initial evaluation of [F-18]CAIP for PET imaging of caspase-3 activity in apoptosis**
Jeon Jongho, J. H., Shen Bin, B., Palner, M., Ye Deju, D. J., Chin, F. T., Rao, J.
WILEY-BLACKWELL.2013: S375-S375
- **[F-18]CAIP a smart PET tracer for imaging caspase-3 induced Apoptosis**
Shen Bin, B., Jeon, J., Palner, M., Tong Ling, L., Felsher, D., Gambhir, S. S., Chin, F. T., Rao Jianghong, J. H.
WILEY-BLACKWELL.2013: S6-S6
- **No-carrier-added [18F]fluoroarenes from the radiofluorination of diaryl sulfoxides.** *Chemical communications*
Chun, J., Morse, C. L., Chin, F. T., Pike, V. W.
2013; 49 (21): 2151-2153
- **[F-18]CAIP: a novel PET tracer for imaging caspase-3-initiated apoptosis in treated tumors** *AACR/SNMMI Joint Conference on State-of-the-Art Molecular Imaging in Cancer Biology and Therapy*
Palner, M., Shen, B., Jeon, J., Ye, D., Shuhendler, A., Chin, F. T., Rao, J.

SOC NUCLEAR MEDICINE INC.2013: 20–20

- **Dissection of the role of the tumor microenvironment in oncogene addiction by ex vivo and in situ imaging** *AACR/SNMMI Joint Conference on State-of-the-Art Molecular Imaging in Cancer Biology and Therapy*
Tong, L., Jeon, J., Shen, B., Jianghong, R., Chin, F., Gambhir, S., Felsher, D.
SOC NUCLEAR MEDICINE INC.2013: 25–25
- **Synthesis of ligand-functionalized water-soluble [F-18]YF3 nanoparticles for PET imaging** *NANOSCALE*
Xiong, L., Shen, B., Behera, D., Gambhir, S. S., Chin, F. T., Rao, J.
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