

CURRICULUM VITAE

Dr. Federica Pisaneschi



1 Short CV

Dr. Federica Pisaneschi is currently an Assistant Professor in the Center for Translational Cancer Research at the Brown Foundation Institute of Molecular Medicine for the Prevention of Human Diseases (IMM) at The University of Texas Health Science Center at Houston.

Dr. Pisaneschi started her career as a synthetic organic chemist earning her master's degree and Ph.D. at the University of Florence (Italy). She then remained in Florence with a postdoctoral fellowship before being hired as a postdoctoral research associate at Hammersmith Hospital, Imperial College London (UK). At Imperial College, she worked at the Comprehensive Cancer Imaging Center (CCIC), where she developed several PET agents. Among those, ^{18}F -Fluoropivalic acid, a reporter of lipid metabolism, has advanced to the clinic and is currently in Phase IIa-III clinical trial. In 2015, she moved to the USA and joined MD Anderson Cancer Center where she worked until March of 2023. At MD Anderson, she continued in the research and development of new radiopharmaceuticals, enabled R&D radiochemistry research, and helped faculty add radiochemistry and PET to their programs. At MD Anderson, 4- ^{18}F fluoronaphthol, a first in class reporter on myeloid cell activation and one of the topics of today's talk, was developed. ^{18}F -4FN is currently in Phase 0-I clinical trial.

Her research has focused on expanding the use of PET to guide personalized medicine by developing new radiopharmaceuticals and using known, less-common radiopharmaceuticals in mechanism-based innovative molecular imaging applications. She has successfully contributed to the field of chemistry, radiochemistry and radiopharmaceuticals discovery with 50+ peer-reviewed publications, seven patents and 80+ reports at international meetings. She is deeply involved with the World Molecular Imaging Society (WMIS) and the Society of Radiopharmaceutical Sciences (SRS), especially regarding Diversity Equity and Inclusion (DEI) and education.

She is now building a new team of radiopharmaceuticals developers and molecular imagers at UTHealth Houston. Current projects in her lab are focused on imaging of neuroinflammation and neurodegeneration, phenotyping metabolic reprogramming of prostate cancer, targeted radiotherapy and development of novel ^{18}F -labeling strategies.

2 Bibliometric data

<https://orcid.org/0000-0002-1989-4417>

<https://scholar.google.com/citations?user=yz4TSpUAAAAJ&hl=en>

3 Selection of the 10 most relevant publications and/or patents

1. UT MD Anderson Cancer Center, Piwnica-Worms D, Gammon S. **Pisaneschi F**, Anti-B7-H3 monoclonal antibody and methods of use thereof, WO2021101991
2. Engel BJ, Paolillo V, Uddin MdN, Gonzalez KA, McGinnis KM, Sutton MN, Grindel BJ, Gores GJ, Piwnica-Worms D, Beretta L, **Pisaneschi F**, Gammon ST, Millward ST. Gender Differences in a Mouse Model of Hepatocellular Carcinoma Revealed by Multi-modal Imaging. *Cancers* **2023**, *15*(15), 3787.
3. Pollard AC, Paolillo V, Radaram B, Qureshy S, Li L, Maity T, Wang L, Uddin MN, Wood CG, Karam JA, Pagel MD, Piwnica-Worms D, Millward SW, Fowlkes NW, Norton W, Engel BJ, **Pisaneschi F**, Zacharias NM. PET/MR Imaging of a Lung Metastasis Model of Clear Cell Renal Cell Carcinoma with (2S,4R)-4-[¹⁸F]Fluoroglutamine. *Mol Imaging Biol*, **2022**, *24*, 959–972.
4. **Pisaneschi F**, Gammon ST, Paolillo V, Qureshy SA, Piwnica-Worms D. Imaging of innate immunity activation in vivo with a redox-tuned PET reporter. *Nat Biotechnol* **2022**, *40*, 965-973
5. **Pisaneschi F**, Viola NT. Development and Validation of a PET/SPECT Radiopharmaceutical in Oncology. *Mol Imaging Biol* **2022**, *24* (1), 1-7
6. **Pisaneschi F**, Kelderhouse LE, Hardy A, Engel BJ, Mukhopadhyay U, Gonzalez-Lepera C, Gray JP, Ornelas A, Takahashi TT, Roberts RW, Fiocco SV, Piwnica-Worms D, Millward SW. Automated, Resin-Based Method to Enhance the Specific Activity of Fluorine-18 Clicked PET Radiotracers. *Bioconjugate Chem* **2017**, *28* (2), 583-589
7. Biagiotti G, Fedeli S, Tuci G, Luconi L, Giambastiani G, Brandi A, **Pisaneschi F**, Cicchi S, Paoli P. Combined therapies with nanostructured carbon materials: there is room still available at the bottom. *J Mat Chem B* **2018**, *6* (14), 2022-2035
8. Engel BJ, Gammon ST, Chaudhari R, Lu Z, **Pisaneschi F**, Yang H, Ornelas A, Yan V, Kelderhouse L, Najjar AM, Tong WP, Zhang S, Piwnica-Worms D, Bast RC, Millward SW. Caspase-3 Substrates for Noninvasive Pharmacodynamic Imaging of Apoptosis by PET/CT. *Bioconjugate Chem* **2018**, *29* (9), 3180-3195
9. **Pisaneschi F**, Witney TH, Iddon L, Aboagye EO. Synthesis of [¹⁸F]fluoro-pivalic acid: an improved PET imaging probe for the fatty acid synthesis pathway in tumours. *Med Chem Comm* **2013**, *4*, 1350-1353
10. **Pisaneschi F**, Nguyen QD, Shamsaei E, Glaser M, Robins E, Kaliszczak M, Smith, G, Spivey AC, Aboagye EO. Development of a new epidermal growth factor receptor positron emission tomography imaging agent based on the 3-cyanoquinoline core: Synthesis and biological evaluation. *Bioorg Med Chem* **2010**, *18* (18), 6634-6645