Stanford



Guillem Pratx

Associate Professor of Radiation Oncology (Radiation Physics)

Radiation Oncology - Radiation Physics

Bio

BIO

Guillem Pratx, PhD is an Associate Professor of Radiation Oncology and Medical Physics at Stanford University. Originally from France, he studied engineering at Ecole Centrale Paris, then went on to pursue a Ph.D. in Electrical Engineering from Stanford University, during which time he developed several innovative instruments and algorithms for in vivo cancer imaging. The Physical Oncology Laboratory, which he now leads, investigates how novel physical approaches can solve longstanding problems in oncology. For instance, they use single-cell radionuclide imaging to measure the uptake of clinical PET tracers in heterogeneous cell populations and thus derive a biological interpretation of PET scans that accounts for factors such as cell diversity, microenvironmental factors and cell metabolism. They are also working to develop methods capable of tracking cell migration in vivo at the whole body level. Finally, they are involved in research to elucidate the radiochemical underpinnings of ultra-high dose rate (FLASH) radiotherapy.
Prof. Pratx was named a Damon Runyon Innovator and a Society of Nuclear Medicine Young Investigator. He has published over 90 papers and been principal investigator on grants from the NIH, DoD and CIRM.

ACADEMIC APPOINTMENTS

- Associate Professor, Radiation Oncology - Radiation Physics
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute

HONORS AND AWARDS

- Innovator Award, Damon Runyon Cancer Foundation (2014)
- Young Investigator Award, Society of Nuclear Medicine and Molecular Imaging (2014)
- Radiation Physics Impact Award, Stanford University (2013)
- Young Investigator Award - Semifinalist, World Molecular Imaging Congress (2013)
- Dean's Fellowship, Stanford University (2010)
- Postdoctoral Fellowship, DoD Breast Cancer Research Program (2010)
- Research Seed Grant, American Association of Physicists in Medicine (2010)
- Top Student Paper, IEEE Medical Imaging Conference (2008)
- Bio-X Graduate Fellowship, Stanford University (2006)
- Bradley-Alavi Fellow, Society of Nuclear Medicine (2006)

- NVIDIA Fellowship, NVIDIA Corp (2006)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, AACR (2016 - present)
- Member, AAPM (2014 - present)

PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Electrical Engineering (2010)
- M.S., Stanford University , Electrical Engineering (2006)
- B.S., Ecole Centrale Paris , Engineering (2004)

LINKS

- Lab website: http://pratxlab.stanford.edu

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

The Physical Oncology Lab is interested in making a lasting impact on translational cancer research by building novel physical tools and methods. Current areas of active research are:

i. PET imaging of in vitro cancer models: Single-cell radionuclide assays to assess uptake of clinical PET tracers in heterogeneous cell populations, organoids and other 3D tumor models. The goal is to use these assays to developed improved PET tracers for oncology and develop imaging biomarkers that can scale for patients to tiny organoids and other 3D tumor models.

ii. In vivo cancer imaging and cell tracking. Work in this area is focused on developing novel imaging approaches such as XLCT (which uses X-ray to stimulate optical emission in vivo) and cell tracking with PET tracers for regenerative medicine.

iii. Physical approaches to enhance the therapeutic ratio of radiation therapy, including high-Z nanoparticles and FLASH radiotherapy.

Teaching

COURSES

2026-27

- Biological Principles and Medical Applications of Ionizing Radiation: BMP 253, RADO 253 (Spr)
- Medical Physics Seminar: BMP 256, RADO 256 (Aut, Win, Spr)
- Microfluidics and Organ-on-a-chip in Biomedicine: BIOS 406 (Aut)

2025-26

- Biological Principles and Medical Applications of Ionizing Radiation: BMP 253, RADO 253 (Spr)
- Medical Physics Seminar: BMP 256, RADO 256 (Aut, Win, Spr)
- Microfluidics and Organ-on-a-chip in Biomedicine: BIOS 406 (Aut)

2024-25

- Biological Principles and Medical Applications of Ionizing Radiation: BMP 253, RADO 253 (Spr)
- MEDICAL PHYSICS SEMINAR: BMP 256, RADO 256 (Sum)

2023-24

- Biological Principles and Medical Applications of Ionizing Radiation: BMP 253, RADO 253 (Spr)
- Microfluidics and Organ-on-a-chip in Biomedicine: BIOS 406 (Spr, Sum)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Rohollah Nasiri, Hieu Nguyen

Doctoral Dissertation Advisor (AC)

Dixin Chen

Publications

PUBLICATIONS

- **Ultrasensitive and multiplexed tracking of single cells using whole-body PET/CT.** *Science advances*
  Nguyen, H. T., Das, N., Ricks, M., Zhong, X., Takematsu, E., Wang, Y., Ruvalcaba, C., Mehadji, B., Roncali, E., Chan, C. K., Pratx, G.
  2024; 10 (24): eadk5747
- **Preclinical evaluation of 89Zr-Panitumumab for biology-guided radiotherapy.** *International journal of radiation oncology, biology, physics*
  Natarajan, A., Khan, S., Liang, X., Nguyen, H., Das, N., Anders, D., Malik, N., Oderinde, O. M., Chin, F., Rosenthal, E., Pratx, G.
  2023
- **High-resolution positron emission microscopy of patient-derived tumor organoids.** *Nature communications*
  Khan, S., Shin, J. H., Ferri, V., Cheng, N., Noel, J. E., Kuo, C., Sunwoo, J. B., Pratx, G.
  2021; 12 (1): 5883
- **Multicellular spheroids as in vitro models of oxygen depletion during FLASH irradiation.** *International journal of radiation oncology, biology, physics*
  Khan, S., Bassenne, M., Wang, J., Manjappa, R., Melemenidis, S., Breitkreutz, D. Y., Maxim, P. G., Xing, L., Loo, B. W., Pratx, G.
  2021
- **Instant labeling of therapeutic cells for multimodality imaging.** *Theranostics*
  Nejadnik, H., Jung, K. O., Theruvath, A. J., Kiru, L., Liu, A., Wu, W., Sulchek, T., Pratx, G., Daldrup-Link, H. E.
  2020; 10 (13): 6024–34
- **Whole-body tracking of single cells via positron emission tomography.** *Nature biomedical engineering*
  Jung, K. O., Kim, T. J., Yu, J. H., Rhee, S. n., Zhao, W. n., Ha, B. n., Red-Horse, K. n., Gambhir, S. S., Pratx, G. n.
  2020
- **A computational model of radiolytic oxygen depletion during FLASH irradiation and its effect on the oxygen enhancement ratio.** *Physics in medicine and biology*
  Pratx, G., Kapp, D. S.
  2019
- **Radioluminescence in biomedicine: physics, applications, and models** *PHYSICS IN MEDICINE AND BIOLOGY*
  Klein, J. S., Sun, C., Pratx, G.
  2019; 64 (4)
- **Lactic acid accumulation in the tumor microenvironment suppresses 18F-FDG uptake.** *Cancer research*
  Turkcan, S., Kiru, L., Naczynski, D. J., Sasportas, L. S., Pratx, G.
  2018
- **Towards a droplet radiometric assay for single-cell analysis.** *Analytical chemistry*
  Gallina, M. E., Kim, T. J., Shelor, M., Vasquez, J., Mongersun, A., Kim, M., Tang, S. K., Abbyad, P., Pratx, G.
  2017

- **Modular low-light microscope for imaging cellular bioluminescence and radioluminescence** *NATURE PROTOCOLS*
  Kim, T. J., Turkcan, S., Pratx, G.
  2017; 12 (5): 1055-1076
- **Bright Lu2 O3 :Eu Thin-Film Scintillators for High-Resolution Radioluminescence Microscopy.** *Advanced healthcare materials*
  Sengupta, D., Miller, S., Marton, Z., Chin, F., Nagarkar, V., Pratx, G.
  2015; 4 (14): 2064-2070
- **Single-Cell Tracking With PET Using a Novel Trajectory Reconstruction Algorithm** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Lee, K. S., Kim, T. J., Pratx, G.
  2015; 34 (4): 994-1003
- **Seeing the invisible: Direct visualization of therapeutic radiation beams using air scintillation** *MEDICAL PHYSICS*
  Fahimian, B., Ceballos, A., Tuerkcan, S., Kapp, D. S., Pratx, G.
  2014; 41 (1)
- **Radioluminescence Microscopy: Measuring the Heterogeneous Uptake of Radiotracers in Single Living Cells** *PLOS ONE*
  Pratx, G., Chen, K., Sun, C., Martin, L., Carpenter, C. M., Olcott, P. D., Xing, L.
  2012; 7 (10)
- **Synthesis and Radioluminescence of PEGylated Eu3+-doped Nanophosphors as Bioimaging Probes** *ADVANCED MATERIALS*
  Sun, C., Pratx, G., Carpenter, C. M., Liu, H., Cheng, Z., Gambhir, S. S., Xing, L.
  2011; 23 (24): H195-H199
- **X-Ray Luminescence Computed Tomography via Selective Excitation: A Feasibility Study** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Pratx, G., Carpenter, C. M., Sun, C., Xing, L.
  2010; 29 (12): 1992-1999
- **In Regard to Pratx et al.** *International journal of radiation oncology, biology, physics*
  Pratx, G., Yang, W., Scarpelli, M. L.
  2026; 125 (2): 668-669
- **A parametric study of mechanoporation through microfluidic design to modulate shear, compressive, and adhesion forces and loading rates** *LAB ON A CHIP*
  Gupta, A., Van Zyl, J., Bushey, C., Shankles, P., Amiri, H. A., Pratx, G., Alexeev, A., Sulchek, T.
  2026
- **Critical Shortfall in NIH Support for Medical Physics Research.** *ArXiv*
  Pratx, G., Yang, W., Scarpelli, M. L.
  2026
- **In vivo Positron Emission Particle Tracking (PEPT) of Single Cells Using an Expectation Maximization Algorithm.** *IEEE transactions on medical imaging*
  Nguyen, H. T., Das, N., Nasiri, R., Pratx, G.
  2025; PP
- **Engineering biomimetic tissue barrier models on chips: From design and fabrication to applications in disease modeling and drug screening.** *Biomaterials*
  Nasiri, R., Madadelahi, M., Nikmaneshi, M. R., Gokce, B., Bijarchi, M. A., Shah, S., Tirpáková, Z., Van Gastel, D., Taebnia, N., de Barros, N. R., Zhu, Y., Morcimen, Z. G., Gulicli, et al
  2025; 327: 123739
- **A lung tumor-on-a-chip model recapitulates the effect of hypoxia on radiotherapy response and FDG-PET imaging.** *Lab on a chip*
  Nasiri, R., Kurosu Jalil, M., Ibanez Gaspar, V., Flores Perez, A. S., Nguyen, H. T., Khan, S., Tang, S. K., Yang, Y. P., Pratx, G.
  2025
- **Organ-on-a-chip systems for modeling tumor and normal tissue microenvironments in radiotherapy research.** *Trends in biotechnology*
  Nasiri, R., Sankaranthi, A., Pratx, G.
  2025

- **MRI detection of senescent cells in porcine knee joints with a β-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

- **Color variation in radio-luminescence of P-dots doped with thermally activated delayed fluorescence molecules.** *Physical chemistry chemical physics : PCCP*
  Su, Z., Nguyen, H. T., Liu, Z., Asanuma, D., Yamaji, M., Koshimizu, M., Shigemitsu, H., Tojo, S., Mori, T., Kida, T., Pratx, G., Fujitsuka, M., Osakada, et al
  2025

- **Diffusion-aware compartment model of the cellular uptake of 18F-fluorodeoxyglucose** *Physical Review E*
  Zhong, X., Nguyen, H. T., Takematsu, E., Pratx, G.
  2025; 111 (4)

- **Spatial transcriptomic analysis drives PET imaging of tight junction protein expression in pancreatic cancer theranostics.** *Nature communications*
  Wang, J., Seo, J. W., Kare, A. J., Schneider, M., Pandrala, M., Tumbale, S. K., Raie, M. N., Engudar, G., Zhang, N., Guo, Y., Zhong, X., Ferreira, S., Wu, et al
  2024; 15 (1): 10751

- **Efficient radiolabeling of mesoporous silica nanoparticles for single-cell PET imaging.** *European journal of nuclear medicine and molecular imaging*
  Khan, S., Zhong, X., Das, N., Yu, J. H., Natarajan, A., Anders, D., Pratx, G.
  2024

- **Polyacrylonitrile-Chitosan IPN composite scaffolds that closely mimic the human trabecular bone structure for tissue engineering** *MATERIALS TODAY CHEMISTRY*
  Komankova, L., Broz, A., Hlidkova, H., Hodan, J., Krumbholcova, E., Bacakova, L., Pratx, G., Hruby, M., Vetrik, M.
  2024; 40

- **Single-Cell PET Imaging and Tracking.** *Methods in molecular biology (Clifton, N.J.)*
  Jung, K. O., Pratx, G.
  2024; 2729: 331-340

- **Increased [18F]FDG uptake of radiation-induced giant cells: a single-cell study in lung cancer models** *npj Imaging*
  Das, N., Nguyen, H. T., Lu, W., Natarajan, A., Khan, S., Pratx, G.
  2024; 2: 1-10

- **Efficient and multiplexed tracking of single cells using whole-body PET/CT.** *bioRxiv : the preprint server for biology*
  Nguyen, H. T., Das, N., Wang, Y., Ruvalcaba, C., Mehadji, B., Roncali, E., Chan, C. K., Pratx, G.
  2023

- **Radioluminescence from polymer dots based on thermally activated delayed fluorescence** *NANOSCALE ADVANCES*
  Asanuma, D., Nguyen, H., Liu, Z., Tojo, S., Shigemitsu, H., Yamaji, M., Kawai, K., Mori, T., Kida, T., Pratx, G., Fujitsuka, M., Osakada, Y.
  2023

- **Red, green, and blue radio-luminescent polymer dots doped with heteroleptic tris-cyclometalated iridium complexes.** *RSC advances*
  Liu, Z., Nguyen, H. T., Asanuma, D., Tojo, S., Yamaji, M., Kawai, K., Pratx, G., Fujitsuka, M., Osakada, Y.
  2023; 13 (22): 15126-15131

- **Development of a lensless radiomicroscope for cellular-resolution radionuclide imaging.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
  Klein, J. S., Kim, T. J., Pratx, G.
  2022

- **Real-time optical oximetry during FLASH radiotherapy using a phosphorescent nanoprobe.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Ha, B., Liang, K., Liu, C., Melemenidis, S., Manjappa, R., Viswanathan, V., Das, N., Ashraf, R., Lau, B., Soto, L., Graves, E. E., Rao, J., Loo, et al
  2022

- **Fluorinated diselenide nanoparticles for radiosensitizing therapy of cancer.** *Free radical biology & medicine*
  Vetrik, M., Kucka, J., Kobera, L., Konefal, R., Lobaz, V., Pavlova, E., Bajecny, M., Heizer, T., Brus, J., Sefc, L., Pratx, G., Hruby, M.
  2022
- **3D computational model of oxygen depletion kinetics in brain vasculature during FLASH RT, and its implications for in vivo oximetry experiments.** *Medical physics*
  Cui, S., Pratx, G.
  2022
- **Mechanoporation enables rapid and efficient radiolabeling of stem cells for PET imaging.** *Scientific reports*
  Jung, K. O., Theruvath, A. J., Nejadnik, H., Liu, A., Xing, L., Sulchek, T., Daldrup-Link, H. E., Pratx, G.
  2022; 12 (1): 2955
- **Flow radiocytometry using droplet optofluidics.** *Biosensors & bioelectronics*
  Ha, B., Kim, T. J., Moon, E., Giaccia, A. J., Pratx, G.
  2021; 194: 113565
- **High-resolution radioluminescence microscopy of FDG uptake in an engineered 3D tumor-stoma model.** *European journal of nuclear medicine and molecular imaging*
  Khan, S., Kim, S., Yang, Y. P., Pratx, G.
  2021
- **Microfluidics-Coupled Radioluminescence Microscopy for In Vitro Radiotracer Kinetic Studies.** *Analytical chemistry*
  Kim, T. J., Ha, B., Bick, A. D., Kim, M., Tang, S. K., Pratx, G.
  2021
- **Recent Advances in Positron Emission Particle Tracking: A Comparative Review.** *Reports on progress in physics. Physical Society (Great Britain)*
  Windows-Yule, C. R., Herald, M., Nicusan, L., Wiggins, C., Pratx, G., Manger, S., Odo, E. A., Leadbeater, T., Pellico, J., de Rosales, R., Renaud, A., Govender, I., Carasik, et al
  2021
- **Simultaneous dose and dose rate optimization (SDDRO) of the FLASH effect for pencil-beam-scanning proton therapy.** *Medical physics*
  Gao, H., Liu, J., Lin, Y., Gan, G. N., Pratx, G., Wang, F., Langen, K., Bradley, J. D., Rotondo, R. L., Li, H. H., Chen, R. C.
  2021
- **Noninvasive and Highly Multiplexed Five-Color Tumor Imaging of Multicore Near-Infrared Resonant Surface-Enhanced Raman Nanoparticles In Vivo.** *ACS nano*
  Yu, J. H., Steinberg, I., Davis, R. M., Malkovskiy, A. V., Zlitni, A., Radzyminski, R. K., Jung, K. O., Chung, D. T., Curet, L. D., D'Souza, A. L., Chang, E., Rosenberg, J., Campbell, et al
  2021
- **Identification of Lymphatic and Hematogenous Routes of Rapidly Labeled Radioactive and Fluorescent Exosomes through Highly Sensitive Multimodal Imaging.** *International journal of molecular sciences*
  Jung, K. O., Kim, Y., Chung, S., Lee, C., Rhee, S., Pratx, G., Chung, J., Youn, H.
  2020; 21 (21)
- **High-Z metal-organic frameworks for X-ray radiation-based cancer theranostics.** *Chemistry (Weinheim an der Bergstrasse, Germany)*
  Neufeld, M., Lutzke, A., Pratx, G., Sun, C.
  2020
- **Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration** *PLOS ONE*
  Kim, T., Wang, Q., Shelor, M., Pratx, G.
  2020; 15 (7)
- **Nuclear-targeted gold nanoparticles enhance cancer cell radiosensitization.** *Nanotechnology*
  Ozcelik, S., Pratx, G.
  2020
- **Lanthanide Metal-Organic Frameworks for Multispectral Radioluminescent Imaging.** *ACS applied materials & interfaces*
  Neufeld, M. J., Winter, H., Landry, M. R., Goforth, A. M., Khan, S., Pratx, G., Sun, C.

2020

- **Hard X-ray excited optical luminescence from protein-directed Au-similar to 20 clusters** *RSC ADVANCES*
  Liu, Z., Jung, K., Takahata, R., Sakamoto, M., Teranishi, T., Fujitsuka, M., Pratx, G., Osakada, Y.
  2020; 10 (23): 13824–29
- **Hard X-ray excited optical luminescence from protein-directed Au#20 clusters.** *RSC advances*
  Liu, Z., Jung, K. O., Takahata, R., Sakamoto, M., Teranishi, T., Fujitsuka, M., Pratx, G., Osakada, Y.
  2020; 10 (23): 13824-13829
- **Dependence of fluorodeoxyglucose (FDG) uptake on cell cycle and dry mass: a single-cell study using a multi-modal radiography platform.** *Scientific reports*
  Sung, Y., Tetrault, M., Takahashi, K., Ouyang, J., Pratx, G., Fakhri, G. E., Normandin, M. D.
  2020; 10 (1): 4280
- **Nanoscintillator-Mediated X-Ray Induced Photodynamic Therapy for Deep-Seated Tumors: From Concept to Biomedical Applications.** *Theranostics*
  Sun, W., Zhou, Z., Pratx, G., Chen, X., Chen, H.
  2020; 10 (3): 1296-1318
- **Tb-Doped core-shell-shell nanophosphors for enhanced X-ray induced luminescence and sensitization of radiodynamic therapy.** *Biomaterials science*
  Ren, Y. n., Rosch, J. G., Landry, M. R., Winter, H. n., Khan, S. n., Pratx, G. n., Sun, C. n.
  2020
- **High-Resolution Radioluminescence Microscopy Image Reconstruction via Ionization Track Analysis** *IEEE TRANSACTIONS ON RADIATION AND PLASMA MEDICAL SCIENCES*
  Almasi, S., Pratx, G.
  2019; 3 (6): 660–67
- **PEGylated beta-NaGdF4/Tb@CaF2 Core/Shell Nanophosphors for Enhanced Radioluminescence and Folate Receptor Targeting** *ACS APPLIED NANO MATERIALS*
  Ren, Y., Winter, H., Rosch, J. G., Jung, K., Duross, A. N., Landry, M. R., Pratx, G., Sun, C.
  2019; 2 (6): 3718–27
- **Upconversion Luminescence Imaging of Tumors with EGFR-Affibody Conjugated Nanophosphors** *MRS ADVANCES*
  Badieirostami, M., Carpenter, C., Pratx, G., Xing, L., Sun, C.
  2019; 4 (46-47): 2461–70
- **Radioluminescence Microscopy: A Quantitative Method for Radioisotopic Imaging of Metabolic Fluxes in Living Cancer Cells** *CANCER METABOLISM*
  Sengupta, D., Pratx, G.
  edited by Haznadar, M.
  2019; 1928: 45-53
- **Radioluminescence Microscopy: A Quantitative Method for Radioisotopic Imaging of Metabolic Fluxes in Living Cancer Cells.** *Methods in molecular biology (Clifton, N.J.)*
  Sengupta, D., Pratx, G.
  2019; 1928: 45–53
- **Multiplexed Single-Cell Measurements of FDG Uptake and Lactate Release Using Droplet Microfluidics.** *Technology in cancer research & treatment*
  Sengupta, D., Mongersun, A., Kim, T. J., Mongersun, K., von Eyben, R., Abbyad, P., Pratx, G.
  2019; 18: 1533033819841066
- **Ultra-high dose rate FLASH irradiation may spare hypoxic stem cell niches in normal tissues.** *International journal of radiation oncology, biology, physics*
  Pratx, G. n., Kapp, D. S.
  2019
- **A gold nanoparticle system for the enhancement of radiotherapy and simultaneous monitoring of reactive-oxygen-species formation** *NANOTECHNOLOGY*

Choi, J., Jung, K., Graves, E. E., Pratx, G.
2018; 29 (50)

- **A gold nanoparticle system for enhancement of radiotherapy and simultaneous monitoring of reactive-oxygen-species formation.** *Nanotechnology*
  Choi, J., Jung, K., Graves, E. E., Pratx, G.
  2018
- **Development and MPI tracking of novel hypoxia-targeted theranostic exosomes.** *Biomaterials*
  Jung, K. O., Jo, H., Yu, J. H., Gambhir, S. S., Pratx, G.
  2018; 177: 139–48
- **Flexible optically stimulated luminescence band for 1-D in vivo radiation dosimetry.** *Physics in medicine and biology*
  Kim, T. J., Jung, K., Fahimian, B. P., Pratx, G.
  2018
- **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., Pratx, G.
  2018; 20 (3): 378–87
- **Is Cherenkov luminescence bright enough for photodynamic therapy?** *NATURE NANOTECHNOLOGY*
  Pratx, G., Kapp, D. S.
  2018; 13 (5): 354
- **Development and characterization of a scintillating cell imaging dish for radioluminescence microscopy** *ANALYST*
  Sengupta, D., Kim, T., Almasi, S., Miller, S., Marton, Z., Nagarkar, V., Pratx, G.
  2018; 143 (8): 1862–69
- **In silico optimization of radioluminescence microscopy** *JOURNAL OF BIOPHOTONICS*
  Wang, Q., Sengupta, D., Kim, T., Pratx, G.
  2018; 11 (3)
- **Performance evaluation of F-18 radioluminescence microscopy using computational simulation** *MEDICAL PHYSICS*
  Wang, Q., Sengupta, D., Kim, T. J., Pratx, G.
  2017; 44 (5): 1782-1795
- **Toward a Droplet-Based Single-Cell Radiometric Assay** *Analytical Chemistry*
  Gallina, M. G., Kim, T., et al
  2017: 6472-6481
- **A tale of two photons: radioluminescence and its application in molecular imaging**
  Pratx, G.
  edited by Pogue, B. W., Gioux, S.
  SPIE-INT SOC OPTICAL ENGINEERING.2017
- **Flexible radioluminescence imaging for FDG-guided surgery** *MEDICAL PHYSICS*
  King, M. T., Jenkins, C. H., Sun, C., Carpenter, C. M., Ma, X., Cheng, K., Quynh-Thu Le, Q. T., Sunwoo, J. B., Cheng, Z., Pratx, G., Xing, L.
  2016; 43 (10)
- **Single-Cell Characterization of F-18-FLT Uptake with Radioluminescence Microscopy** *JOURNAL OF NUCLEAR MEDICINE*
  Sengupta, D., Pratx, G.
  2016; 57 (7): 1136-1140
- **Evaluation of a BGO-Based PET System for Single-Cell Tracking Performance by Simulation and Phantom Studies** *MOLECULAR IMAGING*
  Ouyang, Y., Kim, T. J., Pratx, G.
  2016; 15
- **Droplet Microfluidic Platform for the Determination of Single-Cell Lactate Release.** *Analytical chemistry*
  Mongersun, A., Smeenk, I., Pratx, G., Asuri, P., Abbyad, P.

2016; 88 (6): 3257-3263

- **Imaging metabolic heterogeneity in cancer** *MOLECULAR CANCER*
  Sengupta, D., Pratx, G.
  2016; 15
- **Imaging metabolic heterogeneity in cancer.** *Molecular cancer*
  Sengupta, D., Pratx, G.
  2016; 15: 4
- **Endoscopic detection of cancer with lensless radioluminescence imaging and machine vision.** *Scientific reports*
  Türkcan, S., Naczynski, D. J., Nolley, R., Sasportas, L. S., Peehl, D. M., Pratx, G.
  2016; 6: 30737-?
- **Multiscale Framework for Imaging Radio labeled Therapeutics** *MOLECULAR PHARMACEUTICS*
  Natarajan, A., Tuerkcan, S., Gambhir, S. S., Pratx, G.
  2015; 12 (12): 4554-4560
- **Modular platform for low-light microscopy** *BIOMEDICAL OPTICS EXPRESS*
  Kim, T. J., Tuerkcan, S., Ceballos, A., Pratx, G.
  2015; 6 (11): 4585-4598
- **Bright Lu2O3:Eu Thin-Film Scintillators for High-Resolution Radioluminescence Microscopy** *ADVANCED HEALTHCARE MATERIALS*
  Sengupta, D., Miller, S., Marton, Z., Chin, F., Nagarkar, V., Pratx, G.
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- **beta-Radioluminescence Imaging: A Comparative Evaluation with Cerenkov Luminescence Imaging** *JOURNAL OF NUCLEAR MEDICINE*
  King, M. T., Carpenter, C. M., Sun, C., Ma, X., Quynh-Thu Le, Q. T., Sunwoo, J. B., Cheng, Z., Pratx, G., Xing, L.
  2015; 56 (9): 1458-1464
- **Efficient Radioisotope Energy Transfer by Gold Nanoclusters for Molecular Imaging** *SMALL*
  Volotskova, O., Sun, C., Stafford, J. H., Koh, A. L., Ma, X., Cheng, Z., Cui, B., Pratx, G., Xing, L.
  2015; 11 (32): 4002-4008
- **Single-Cell Analysis of [18F]Fluorodeoxyglucose Uptake by Droplet Radiofluidics.** *Analytical chemistry*
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