



Sanjiv Sam Gambhir, MD, PhD

Virginia and D.K. Ludwig Professor for Clinical Investigation in Cancer Research and Professor, by courtesy, of Materials Science and Engineering

Radiology - Rad/Molecular Imaging Program at Stanford

 NIH Biosketch available Online

CONTACT INFORMATION

• Alternate Contact

Elizabeth Gill - Executive Assistant

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Bio

ACADEMIC APPOINTMENTS

- Professor, Radiology - Rad/Molecular Imaging Program at Stanford
- Professor (By courtesy), Materials Science and Engineering
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Stanford Cancer Institute
- Faculty Fellow, Stanford ChEM-H
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Head, Nuclear Medicine Division, (2003-2011)
- Division Chief, Molecular Imaging Program at Stanford (MIPS), (2003- present)
- Professor, Department of Radiology and Bio-X Program, (2003- present)
- Member, Bio-X Program, (2004- present)
- Professor (By courtesy), Bioengineering, (2005- present)

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HONORS AND AWARDS

- Benedict Cassen Prize, Society of Nuclear Medicine and Molecular Imaging (2018)
- NAI Fellow, National Academy of Inventors (2016)
- J. Allyn Taylor International Prize in Medicine, The Robarts Research Institute (2015)
- AAAS Fellow, American Association for the Advancement of Science (2014)
- AAISCR Lifetime Achievement Award, American Association of Indian Scientists in Cancer Research (AAISCR, Inc.) (2014)

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BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Advisory Committee, Harvard/Massachusetts General Hospital - Center for New Probe Development (2017 - present)
- External Advisory Board, Center for BioMedical Imaging (CIBM) (2017 - present)
- Faculty Search Committee, Chair Search, Dept. of Pathology, Stanford University (2015 - 2015)
- Early Detection Initiative Committee, Oregon Health & Science University (2014 - present)
- Stanford Medicine Campaign Advisory Committee, Stanford University (2012 - present)
- External Advisory Board for Spatial Systems Biomedicine, Oregon Health & Science University (2011 - present)

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PROFESSIONAL EDUCATION

- Ph.D., UCLA Medical Scientist Training Program , Biomathematics (1990)
- M.D., UCLA , Medical Scientist Training Program (1993)
- B.S., Arizona State University , Physics (1983)

PATENTS

- S.S. Gambhir, I. Frocken, M. Gebauer, O. Illovich, R. Kimura, J. Kruip, C. Lange, A. Natarajan, S. Sarkar. "United States Patent 9,844,607 Immuno Imaging Agent for Use with Antibody-Drug Conjugate Therapy.", Leland Stanford Junior University, Dec 19, 2017
- S.S. Gambhir, B.C. Ahn, S. Bhaumik, N. Parashurama, R. Paulmurugan, S. Yaghoubi. "United States Patent 9,719,146 Composition and Method for Imaging Stem Cells.", Leland Stanford Junior University, Aug 1, 2017
- S.S. Gambhir, F. Chin, M. L. James, C. McCurdy, C. Mesangeau, B. Shen. "United States Patent 9,604,926 Highly Selective Sigma Receptor Radioligands.", Leland Stanford Junior University, Mar 28, 2017
- S.S. Gambhir, E. Chang, N. Hughes, P. Mallick, C. Nielsen, L. Xu. "United States Patent 9,588,122 Immuno Imaging Agent for Use with Antibody-Drug Conjugate Therapy", Leland Stanford Junior University, Mar 7, 2017
- S.S. Gambhir, J.A. Ronald. "United States Patent 9,534,248 Tumor-Specific Minicircles for Cancer Screening.", Leland Stanford Junior University, Jan 3, 2017

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LINKS

- Department of Radiology: <http://radiology.stanford.edu>
- Molecular Imaging Program at Stanford: <http://mips.stanford.edu>
- Canary Center @ Stanford: <http://canarycenter.stanford.edu>
- My Lab Site: <http://mips.stanford.edu/research/mmil.html>
- Precision Health and Integrated Diagnostics Center at Stanford (PHIND): <https://med.stanford.edu/phind.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My laboratory is developing imaging assays to monitor fundamental cellular/molecular events in living subjects including patients. Technologies such as positron emission tomography (PET), optical (fluorescence, bioluminescence, Raman), ultrasound, and photoacoustic imaging are all under active investigation.

Imaging agents for multiple modalities including small molecules, engineered proteins, and nanoparticles are under development and being clinically translated. Our goals are to detect cancer early and to better manage cancer through the use of both in vitro diagnostics and molecular imaging. Strategies are being tested in small animal models and are also clinically translated.

In the early detection setting we are exploring multiple strategies that are pushing the limits of the fewest numbers of detectable cancer cells. The goal is to intercept cancer early so that patient outcomes can be markedly improved.

For the management of cancer we are focused on using imaging to optimize stratification of cancer patients, predicting response to therapy, and monitoring response to therapy and recurrence. We are particularly interested in cell based therapies and immunotherapies where molecular imaging can help optimize these therapies.

When we are successful the role of cost-effective diagnostics in cancer will be markedly enhanced with better patient outcomes.

CLINICAL TRIALS

- 18F-FSPG PET/CT in Diagnosing Early Lung Cancer in Patients With Lung Nodules, Recruiting
- [18F]DASA-23 and PET Scan in Evaluating Pyruvate Kinase M2 Expression in Patients With Intracranial Tumors or Recurrent Glioblastoma and Healthy Volunteers, Recruiting
- Detection of Graft Versus Host Disease With [18F]F-AraG, Recruiting
- Integrin Alpha-v-Beta and [18F]-R01-MG-F2 PET/CT in Measuring Response in Patients With Pancreatic Cancer and Healthy Volunteers, Recruiting
- Pilot 3D Contrast-Enhanced Ultrasound Imaging to Predict Treatment Response in Liver Metastases, Recruiting
- The Baseline Study, Recruiting

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Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

David Anders, Hamed Arami, Stephanie Balters, Rakesh Bam, Corinne Beinat, Fadi El Rami, Hadas Frostig, Moustafa Gabr, Thomas Haywood, David Huland, Brian Lee, Cheng Liu, Ivana Martinic, Chirag Patel, Martin Schneider, Idan Steinberg, Mirwais Wardak, Zunyu Xiao, Aimen Zlitni, weiyu chen

Doctoral Dissertation Advisor (AC)

Amin Aalipour, Sarah Hooper, Aaron Mayer, Surya Murty, Elise Robinson

Postdoctoral Research Mentor

David Anders, Hamed Arami, Corinne Beinat, Thomas Haywood, David Huland, Idan Steinberg, Mirwais Wardak, Aimen Zlitni

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Informatics (Phd Program)

Publications

PUBLICATIONS

- **Evaluation of Glycolytic Response to Multiple Classes of Anti-glioblastoma Drugs by Noninvasive Measurement of Pyruvate Kinase M2 Using [18F]DASA-23.** *Molecular imaging and biology : MIB : the official publication of the Academy of Molecular Imaging*
Beinat, C., Patel, C. B., Xie, Y., Gambhir, S. S.
2019
- **Proceedings - Pathways for Successful Translation of New Imaging Agents and Modalities: Phase III Studies.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Gambhir, S. S., Shankar, L. K., Rosenthal, E., Warram, J. M., Ghesani, M. V., Hope, T. A., Jacobs, P. M., Jacobson, G. B., Wilson, T., Siegel, B. A.
2019
- **Miniature gold nanorods for photoacoustic molecular imaging in the second near-infrared optical window.** *Nature nanotechnology*
Chen, Y., Zhao, Y., Yoon, S. J., Gambhir, S. S., Emelianov, S.

2019

- **Detection of Premalignant Gastrointestinal Lesions Using Surface-Enhanced Resonance Raman Scattering-Nanoparticle Endoscopy.** *ACS nano*
Harmsen, S., Rogalla, S., Huang, R., Spaliviero, M., Neuschmelting, V., Hayakawa, Y., Lee, Y., Tailor, Y., Toledo-Crow, R., Kang, J. W., Samii, J. M., Karabeber, H., Davis, et al
2019; 13 (2): 1354–64
- **In Vivo Translation of the CIRPI System---Revealing Molecular Pathology of Rabbit 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

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