





## Ramasamy Paulmurugan

Professor (Research) of Radiology (Molecular Imaging Program at Stanford)

Radiology - Rad/Molecular Imaging Program at Stanford

 NIH Biosketch available Online

 Resume available Online

### CONTACT INFORMATION

#### • Alternate Contact

Rhea Lubrin Scott - Administrative Associate

**Email** rheascott@stanford.edu

**Tel** (650) 721-3306

### Bio

---

#### ACADEMIC APPOINTMENTS

- Professor (Research), Radiology - Rad/Molecular Imaging Program at Stanford
- Member, Bio-X
- Member, Stanford Medicine Children's Health Center for IBD and Celiac Disease
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

### Teaching

---

#### COURSES

##### 2025-26

- Biologics, advanced therapeutics and drug delivery methods: TRAM 211 (Aut)

##### 2024-25

- Biologics, advanced therapeutics and drug delivery methods: MED 211 (Aut)

##### 2023-24

- Current Topics in Applied Medicine: MED 211 (Aut)

##### 2022-23

- Current Topics in Applied Medicine: MED 211 (Aut)

#### STANFORD ADVISEES

##### Postdoctoral Faculty Sponsor

Farbod Tabesh, Suresh Thangudu, Goutham Vaidhyanathan Ganesh

## Publications

### PUBLICATIONS

- **NanoLuc-Driven Multiplex Imaging Platforms Incorporating Novel G-series Coelenterazine Variants.** *Bioconjugate chemistry*  
Kamiya, G., Kitada, N., Furuta, T., Thangudu, S., Natarajan, A., Paulmurugan, R., Maki, S. A., Kim, S. B.  
2026
- **Renal cancer early diagnosis using a novel B7-H3 targeted ultrasound contrast imaging**  
Natarajan, A., Baek, J., Paulmurugan, R., Dahl, J.  
AMER ASSOC CANCER RESEARCH.2026
- **Ultrasound-Responsive Cerasome Nanoparticle Improves STING-Driven Immunotherapy in Triple-Negative Breast Cancer.** *ACS applied materials & interfaces*  
Yang, D., Sun, C., He, Y., Wu, R., Li, C., Gong, X., Zhuang, H., Wang, Y., Qin, H., Wang, Y., Li, Q., Paulmurugan, R., Liang, et al  
2026
- **Editorial Response to "Towards a Rigorous Framework Rigorous Framework for Endothelial PD-L1 on Cancer Cells Characterization Using Molecular Ultrasound".** *Ultrasound in medicine & biology*  
Paulmurugan, R., El Kaffas, A.  
2026; 52 (2): 471
- **Scalable Synthesis of Calcium Fluoride Nanoparticles as a Novel Ultrasound Contrast Agent for Imaging Tumor Targeted Delivery of Therapeutics** *CHEMICAL & BIOMEDICAL IMAGING*  
Thangudu, S., Natarajan, A., Mehta, S., Devarakonda, K., Massoud, T. F., Paulmurugan, R.  
2026
- **Enhancing Ultrasound Molecular Imaging: Toward Real-Time RPCA-Based Filtering to Differentiate Bound and Free Microbubbles.** *IEEE transactions on ultrasonics*  
Hashemi, H. S., Hyun, D., Nguyen, N., Baek, J., Natarajan, A., Tabesh, F., Andrzejek, A., Paulmurugan, R., Dahl, J. J.  
2025
- **Structural Characterization and AI-Enhanced Modeling of a Broadly Neutralizing Camelid Antibody Against SARS-CoV-2 Variants** *ADVANCED THERAPEUTICS*  
Hanack, K., Orzel, U., Schlor, A., Mehta, S., Krishnan, A., Filipek, S., Patel, R., Joshi, M., Hoffmann, M., Pohlmann, S., Joshi, C., Liepmann, D., Paulmurugan, et al  
2025
- **Imaging Ligand-Driven PPAR Activities Using Single-Chain Bioluminescent Probes.** *ACS omega*  
Kim, S. B., Furuta, T., Kamiya, G., Maki, S. A., Orioka, M., Watanabe, R., Hiruta, Y., Thangudu, S., Natarajan, A., Paulmurugan, R.  
2025; 10 (30): 33850-33861
- **Imaging Ligand-Driven PPAR Activities Using Single-Chain Bioluminescent Probes** *ACS OMEGA*  
Kim, S., Furuta, T., Kamiya, G., Maki, S. A., Orioka, M., Watanabe, R., Hiruta, Y., Thangudu, S., Natarajan, A., Paulmurugan, R.  
2025
- **Molecular Ultrasound Imaging of PD-L1 Expression on Cancer Endothelial Cells.** *Ultrasound in medicine & biology*  
Sadeghipour, N., Tabesh, F., Natarajan, A., Lutz, A., Paulmurugan, R., Kaffas, A. E.  
2025
- **Correction: Afjei et al. A New Nrf2 Inhibitor Enhances Chemotherapeutic Effects in Glioblastoma Cells Carrying p53 Mutations. Cancers 2022, 14, 6120.** *Cancers*  
Afjei, R., Sadeghipour, N., Kumar, S. U., Pandrala, M., Kumar, V., Malhotra, S. V., Massoud, T. F., Paulmurugan, R.  
2025; 17 (14)
- **Predicting PD-L1 expression status in NSCLC using radiomic analysis of 18 F-FDG-PET/CT images.** *European journal of nuclear medicine and molecular imaging*  
Kiss, F. J., Járó, A. I., Máthé, D., Benedek, C., Madaras, V., Manno-Kovács, A., Bartha, Á. L., Padmanabhan, P., Paulmurugan, R., Regős, E., Györke, T., Szigeti, K.  
2025

- **Autologous extracellular vesicles derived from conjunctival squamous cell carcinoma deliver therapeutic microRNAs to induce apoptosis in originating cancer.** *Journal of materials chemistry. B*  
Thangudu, S., Mehta, S., Dhowre, H. S., Bojic, S., Haghverdi, G., Wu, A. Y., Massoud, T. F., Paulmurugan, R.  
2025
- **Molecular Association Assay Systems for Imaging Protein-Protein Interactions in Mammalian Cells.** *Biosensors*  
Kim, S. B., Furuta, T., Thangudu, S., Natarajan, A., Paulmurugan, R.  
2025; 15 (5)
- **Cross-variant immune shield: computational multiepitope vaccine design against B.617.2 to Omicron sub-lineages in SARS-CoV-2.** *Journal of biomolecular structure & dynamics*  
Thakor, J. M., Panchal, U. V., Patel, D., Filipek, S., Orzeł, U., Paulmurugan, R., Hanack, K., Liepmann, D., Renugopalakrishnan, V., Joshi, C. G., Joshi, M.  
2025: 1-20
- **Noninvasive Bioluminescence Imaging of Serum Albumins in Living Mice.** *ACS chemical biology*  
Kim, S. B., Kamiya, G., Furuta, T., Kitada, N., Thangudu, S., Natarajan, A., Maki, S. A., Paulmurugan, R.  
2025
- **MBFormer: A Transformer model for 3D Time-Series Data Processing to Improve Bound Bubble Detection in Nondestructive Ultrasound Molecular Imaging**  
Baek, J., Lee, J., Hashemi, H. S., Natarajan, A., Tabesh, F., Paulmurugan, R., Dahl, J. J., IEEE  
IEEE.2025
- **Ultrasound Molecular Imaging: A Quantitative Metric for Vascular-Independent Targeted Microbubble Binding**  
Hashemi, H. S., Baek, J., Nguyen, N., Natarajan, A., Tabesh, F., Paulmurugan, R., Dahl, J. J., IEEE  
IEEE.2025
- **Molecular Imaging of Tumor-Infiltrating Lymphocytes in Living Animals Using a Novel mCD3 Fibronectin Scaffold.** *Bioconjugate chemistry*  
Wynter, C., Natarajan, A., John, C., Jain, K., Paulmurugan, R.  
2024
- **Luciferase-Based Reporter System for Investigating GPx4-Mediated Ferroptosis and Its Therapeutic Implications in Diabetes.** *Analytical chemistry*  
Mohanram Ramkumar, K., Thasu Susindran, O., Ganesh, G. V., Kannan, H., Paulmurugan, R.  
2024
- **Pulsed focused ultrasound alters the proteomic profile of the tumor microenvironment in a syngeneic mouse model of glioblastoma.** *Journal of neuro-oncology*  
Chen, H., Koul, D., Zhang, Y., Ghobadi, S. N., Zhu, Y., Hou, Q., Chang, E., Habte, F. G., Paulmurugan, R., Khan, S., Zheng, Y., Graeber, M. B., Herschmann, et al  
2024
- **Regiospecific Coelenterazine Analogs for Bioassays and Molecular Imaging.** *Bioconjugate chemistry*  
Kamiya, G., Kitada, N., Furuta, T., Thangudu, S., Natarajan, A., Paulmurugan, R., Kim, S. B., Maki, S. A.  
2024
- **Restoration of the Lost Human Beta Defensin-1 Protein in Cancer as a Strategy to Improve the Efficacy of Chemotherapy.** *Journal of medicinal chemistry*  
Pandurangi, R., Sekar, T., Paulmurugan, R.  
2024
- **Synthesis, characterization, and application of a biocompatible gene delivery nanocarrier constructed from gold nanostars and a chitosan-cyclodextrin-poly(ethylene imine) graft polymer** *MATERIALS ADVANCES*  
Tabesh, F., Haghverdi, G., Devarakonda, K., Massoud, T. F., Paulmurugan, R.  
2024
- **Enhancing Ultrasound Molecular Imaging: RPCA-Based Filtering to Differentiate Tumor-Bound and Free Microbubbles**  
Hashemi, H. S., Hyun, D., Baek, J., Natarajan, A., Tabesh, F., Paulmurugan, R., Dahl, J. J., IEEE  
IEEE.2024

- **Nondestructive ultrasound molecular imaging based on a neural network approach utilizing post-processed ultrasound images**  
Baek, J., Hyun, D., Nataraj, A., Tabesh, F., Paulmurugan, R., Dahl, J. J., IEEE  
IEEE.2024
- **Ultrasound-assisted targeted delivery of drug-loaded nanoparticles for retinoblastoma treatment**  
Park, J., Mehta, S., Paulmurugan, R., Dahl, J. J., IEEE  
IEEE.2024
- **Corrigendum to 'Molecular Identity Changes of Tumor-Associated Macrophages and Microglia After Magnetic Resonance Imaging-Guided Focused Ultrasound-Induced Blood-Brain Barrier Opening in a Mouse Glioblastoma Model' [Ultrasound in Med & Biol. 49 (2023) 1082-1090]. *Ultrasound in medicine & biology***  
Zhang, Y., Wang, J., Ghobadi, S. N., Zhou, H., Huang, A., Gerosa, M., Hou, Q., Keunen, O., Golebiewska, A., Habte, F. G., Grant, G. A., Paulmurugan, R., Lee, et al  
2023
- **Single-chain multicolor-reporter templates for subcellular localization of molecular events in mammalian cells. *RSC chemical biology***  
Kim, S. B., Paulmurugan, R., Kitada, N., Maki, S. A.  
2023; 4 (12): 1043-1049
- **Protocol for in vitro sonoporation validation using non-targeted microbubbles for human studies of ultrasound-mediated gene delivery. *STAR protocols***  
Zhang, N., Guo, Y., Foiret, J., Tumbale, S. K., Paulmurugan, R., Ferrara, K. W.  
2023; 4 (4): 102723
- **Single-chain multicolor-reporter templates for subcellular localization of molecular events in mammalian cells *RSC CHEMICAL BIOLOGY***  
Kim, S., Paulmurugan, R., Kitada, N., Maki, S. A.  
2023
- **Correction to "Tumor Cell-Derived Extracellular Vesicle-Coated Nanocarriers: An Efficient Theranostic Platform for the Cancer-Specific Delivery of Anti-miR-21 and Imaging Agents". *ACS nano***  
Bose, R. J., Kumar, S. U., Zeng, Y., Afjei, R., Robinson, E., Lau, K., Bermudez, A., Habte, F., Pitteri, S. J., Sinclair, R., Willmann, J. K., Massoud, T. F., Gambhir, et al  
2023
- **Correction to "SP94-Targeted Triblock Copolymer Nanoparticle Delivers Thymidine Kinase-p53-Nitroreductase Triple Therapeutic Gene and Restores Anticancer Function against Hepatocellular Carcinoma in Vivo". *ACS applied materials & interfaces***  
Sukumar, U. K., Rajendran, J. C., Gambhir, S. S., Massoud, T. F., Paulmurugan, R.  
2023
- **Gold-Nanostar-Chitosan-Mediated Delivery of SARS-CoV-2 DNA Vaccine for Respiratory Mucosal Immunization: Development and Proof-of-Principle (vol 15, pg 17582, 2021) *ACS NANO***  
Kumar, U. S. S., Afjei, R., Ferrara, K., Massoud, T. F. F., Paulmurugan, R.  
2023
- **Immune cell identity behind the Ktrans mapping of mouse glioblastoma. *Magnetic resonance imaging***  
Zhang, Y., Keunen, O., Golebiewska, A., Gerosa, M., Wang, J., Ghobadi, S. N., Huang, A., Hou, Q., Habte, F. G., Li, N., Grant, G., Paulmurugan, R., Lee, et al  
2023
- **Enkurin: A novel marker for myeloproliferative neoplasms from platelet, megakaryocyte, and whole blood specimens. *Blood advances***  
Mosale Seetharam, S., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Maecker, H. T., Gotlib, J., Zehnder, J. L., Paulmurugan, R., Krishnan, A.  
2023
- **Synthesis and Evaluation of Clinically Translatable Targeted Microbubbles Using a Microfluidic Device for In Vivo Ultrasound Molecular Imaging. *International journal of molecular sciences***  
Bam, R., Natarajan, A., Tabesh, F., Paulmurugan, R., Dahl, J. J.  
2023; 24 (10)
- **Bright Molecular Strain Probe Templates for Reporting Protein-Protein Interactions. *Sensors (Basel, Switzerland)***  
Kim, S. B., Furuta, T., Kamiya, G., Kitada, N., Paulmurugan, R., Maki, S. A.  
2023; 23 (7)

- **New Frontiers in Three-Dimensional Culture Platforms to Improve Diabetes Research.** *Pharmaceutics*  
Mohandas, S., Gayatri, V., Kumaran, K., Gopinath, V., Paulmurugan, R., Ramkumar, K. M.  
2023; 15 (3)
- **Modulation of Macrophages by In Situ Ligand Bridging** *ADVANCED FUNCTIONAL MATERIALS*  
Kim, S., Thangam, R., Kang, N., Hong, H., Kim, C., Lee, S., Son, S., Lee, H., Tag, K., Min, S., Jeong, D., Hwang, J., Kim, et al  
2023
- **Molecular Identity Changes of Tumor-Associated Macrophages and Microglia After Magnetic Resonance Imaging-Guided Focused Ultrasound-Induced Blood-Brain Barrier Opening in a Mouse Glioblastoma Model.** *Ultrasound in medicine & biology*  
Zhang, Y., Wang, J., Ghobadi, S. N., Zhou, H., Huang, A., Gerosa, M., Hou, Q., Keunen, O., Golebiewska, A., Habte, F. G., Grant, G. A., Paulmurugan, R., Lee, et al  
2023
- **Ligand Coupling and Decoupling Modulates Stem Cell Fate** *ADVANCED FUNCTIONAL MATERIALS*  
Thangam, R., Kim, S., Kang, N., Hong, H., Lee, H., Lee, S., Jeong, D., Tag, K., Kim, K., Zhu, Y., Sun, W., Kim, H., Cho, et al  
2023
- **Enkurin: A novel marker for myeloproliferative neoplasms from platelet, megakaryocyte, and whole blood specimens.** *bioRxiv : the preprint server for biology*  
Seetharam, S. M., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Maecker, H., Gotlib, J., Zehnder, J., Paulmurugan, R., Krishnan, A.  
2023
- **FOXA1/2 depletion drives global reprogramming of differentiation state and metabolism in a human liver cell line and inhibits differentiation of human stem cell-derived hepatic progenitor cells.** *FASEB journal : official publication of the Federation of American Societies for Experimental Biology*  
Warren, I., Moeller, M. M., Guiggey, D., Chiang, A., Maloy, M., Ogoke, O., Groth, T., Mon, T., Meamardoost, S., Liu, X., Thompson, S., Szeplowski, A., Thompson, et al  
2023; 37 (1): e22652
- **Quantitative methods for molecular ultrasound imaging**  
Sadeghipour, N., Tabesh, F., Natarajan, A., Jones, M. A., Chen, X., Paulmurugan, R., Zheng, B., El Kaffas, A.  
edited by Boehm, C., Bottenus, N.  
SPIE-INT SOC OPTICAL ENGINEERING.2023
- **3117- ENKURIN: A NOVEL MARKER FOR MYELOPROLIFERATIVE NEOPLASMS FROM VALIDATED PLATELET, MEGAKARYOCYTE, AND WHOLE BLOOD SPECIMENS (vol 111, pg S103, 2022)** *EXPERIMENTAL HEMATOLOGY*  
Seetharam, S., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Gotlib, J., Zehnder, J., Paulmurugan, R., Krishnan, A.  
2023; 117: 69
- **Near-Infrared Imaging of Steroid Hormone Activities Using Bright BRET Templates.** *International journal of molecular sciences*  
Kim, S., Nishihara, R., Paulmurugan, R.  
2022; 24 (1)
- **Correction: Immunotheranostic microbubbles (IMBs) - a modular platform for dendritic cell vaccine delivery applied to breast cancer immunotherapy.** *Journal of experimental & clinical cancer research : CR*  
Jugniot, N., Dahl, J. J., Paulmurugan, R.  
2022; 41 (1): 357
- **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
- **A New Nrf2 Inhibitor Enhances Chemotherapeutic Effects in Glioblastoma Cells Carrying p53 Mutations.** *Cancers*  
Afjei, R., Sadeghipour, N., Kumar, S. U., Pandrala, M., Kumar, V., Malhotra, S. V., Massoud, T. F., Paulmurugan, R.  
2022; 14 (24)
- **Photoswitchable Microgel for Dynamic Macrophage Modulation.** *Advanced materials (Deerfield Beach, Fla.)*  
Kim, Y., Thangam, R., Yoo, J., Heo, J., Park, J. Y., Kang, N., Lee, S., Yoon, J., Mun, K. R., Kang, M., Min, S., Kim, S. Y., Son, et al

2022: e2205498

- **Immunotheranostic microbubbles (iMBs) - a modular platform for dendritic cell vaccine delivery applied to breast cancer immunotherapy.** *Journal of experimental & clinical cancer research : CR*  
Jugniot, N., Dahl, J. J., Paulmurugan, R.  
2022; 41 (1): 299
- **Large-Scale Functionalized Metasurface-Based SARS-CoV-2 Detection and Quantification.** *ACS nano*  
Ahmed, R., Guimaraes, C. F., Wang, J., Soto, F., Karim, A. H., Zhang, Z., Reis, R. L., Akin, D., Paulmurugan, R., Demirci, U.  
2022
- **Evaluation of Immune Evasion in SARS-CoV-2 Delta and Omicron variants.** *Computational and structural biotechnology journal*  
Chaudhari, A. M., Joshi, M., Kumar, D., Patel, A., Bharat Lokhande, K., Krishnan, A., Hanack, K., Filipek, S., Liepmann, D., Renugopalakrishnan, V., Paulmurugan, R., Joshi, C.  
2022
- **Inhaled Gold Nano-star Carriers for Targeted Delivery of Triple Suicide Gene Therapy and Therapeutic MicroRNAs to Lung Metastases: Development and Validation in a Small Animal Model.** *Advanced therapeutics*  
Liu, Y., Sukumar, U. K., Jugniot, N., Seetharam, S. M., Rengaramachandran, A., Sadeghipour, N., Mukherjee, P., Krishnan, A., Massoud, T. F., Paulmurugan, R.  
2022; 5 (8)
- **A rationally identified panel of microRNAs targets multiple oncogenic pathways to enhance chemotherapeutic effects in glioblastoma models.** *Scientific reports*  
Sadeghipour, N., Kumar, S. U., Massoud, T. F., Paulmurugan, R.  
2022; 12 (1): 12017
- **Inhaled Gold Nano-Star Carriers for Targeted Delivery of Triple Suicide Gene Therapy and Therapeutic MicroRNAs to Lung Metastases: Development and Validation in a Small Animal Model** *ADVANCED THERAPEUTICS*  
Liu, Y., Sukumar, U., Jugniot, N., Seetharam, S., Rengaramachandran, A., Sadeghipour, N., Mukherjee, P., Krishnan, A., Massoud, T. F., Paulmurugan, R.  
2022
- **CD3 and CD8 targeting of ionizable lipid nanoparticles for in vivo mRNA delivery to T cells.**  
Robinson, E. R., Kare, A. J., Kheirloom, A., Inayathullah, M., Tumbale, S. K., Wu, B., Raie, M. N., Seo, J. W., Salazar, F. B., Paulmurugan, R., Wu, A. M., Ferrara, K. W.  
AMER ASSOC CANCER RESEARCH.2022
- **CD3 and CD8 targeting of ionizable lipid nanoparticles for in vivo mRNA delivery to T cells**  
Robinson, E. R., Kare, A. J., Kheirloom, A., Inayathullah, M., Tumbale, S. K., Wu, B., Raie, M. N., Seo, J. W., Salazar, F. B., Paulmurugan, R., Wu, A. M., Ferrara, K. W.  
AMER ASSOC CANCER RESEARCH.2022
- **Biomimetic nanobubbles for triple-negative breast cancer targeted ultrasound molecular imaging.** *Journal of nanobiotechnology*  
Jugniot, N., Massoud, T. F., Dahl, J. J., Paulmurugan, R.  
2022; 20 (1): 267
- **Correction to: The protean world of non-coding RNAs in glioblastoma.** *Journal of molecular medicine (Berlin, Germany)*  
Paulmurugan, R., Malhotra, M., Massoud, Z. T., Massoud, T. F.  
2022
- **Label-free discrimination of tumorigenesis stages using in vitro prostate cancer bone metastasis model by Raman imaging.** *Scientific reports*  
Kar, S., Jaswandkar, S. V., Katti, K. S., Kang, J. W., So, P. T., Paulmurugan, R., Liepmann, D., Venkatesan, R., Katti, D. R.  
2022; 12 (1): 8050
- **Submolecular Tuning of Ligand Size and Spacing for Dynamic Macrophage Modulation.** *Advanced materials (Deerfield Beach, Fla.)*  
Kim, Y., Koo, T. M., Thangam, R., Kim, M. S., Jang, W. Y., Kang, N., Min, S., Kim, S. Y., Yang, L., Hong, H., Jung, H. J., Koh, E. K., Patel, et al  
2022: e2110340
- **FN3 linked nanobubbles as a targeted contrast agent for US imaging of cancer-associated human PD-L1.** *Journal of controlled release : official journal of the Controlled Release Society*

Kumar, U. S., Natarajan, A., Massoud, T. F., Paulmurugan, R.  
2022

- **Receptor-Level Proximity and Fastening of Ligands Modulates Stem Cell Differentiation** *ADVANCED FUNCTIONAL MATERIALS*  
Bae, G., Kim, M., Thangam, R., Koo, T., Jang, W., Yoon, J., Han, S., Yang, L., Kim, S., Kang, N., Min, S., Hong, H., Fu, et al  
2022
- **Local Sound Speed Estimation for Pulse-Echo Ultrasound in Layered Media** *IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL*  
Ali, R., Telichko, A., Wang, H., Sukumar, U. K., Vilches-Moure, J. G., Paulmurugan, R., Dahl, J. J.  
2022; 69 (2): 500-511
- **Contrast Enhanced Ultrasound Molecular Imaging of Spontaneous Chronic Inflammatory Bowel Disease in an Interleukin-2 Receptor alpha-/- Transgenic Mouse Model Using Targeted Microbubbles.** *Nanomaterials (Basel, Switzerland)*  
Wang, H., Vilches-Moure, J. G., Bettinger, T., Cherkaoui, S., Lutz, A., Paulmurugan, R.  
1800; 12 (2)
- **Ultrasound-Guided Microbubble-Mediated Locoregional Delivery of Multiple MicroRNAs Improves Chemotherapy in Hepatocellular Carcinoma.** *Nanotheranostics*  
Wang, H., Hu, Z., Sukumar, U. K., Bose, R. J., Telichko, A., Dahl, J. J., Paulmurugan, R.  
1800; 6 (1): 62-78
- **Manipulating Nanoparticle Aggregates Regulates Receptor-Ligand Binding in Macrophages.** *Journal of the American Chemical Society*  
Kim, Y., Jung, H. J., Lee, Y., Koo, S., Thangam, R., Jang, W. Y., Kim, S. Y., Park, S., Lee, S., Bae, G., Patel, K. D., Wei, Q., Lee, et al  
2022
- **ENKURIN: A NOVEL MARKER FOR MYELOPROLIFERATIVE NEOPLASMS FROM VALIDATED PLATELET, MEGAKARYOCYTE, AND WHOLE BLOOD SPECIMENS**  
Krishnan, A., Seetharam, S., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Gotlib, J., Zehnder, J., Paulmurugan, R.  
ELSEVIER SCIENCE INC.2022: S103
- **One-Channel Microsliding Luminometer for Quantifying Low-Energy Bioluminescent Lights.** *Methods in molecular biology (Clifton, N.J.)*  
Kim, S., Paulmurugan, R.  
2022; 2525: 365-375
- **Quantitative Imaging of Retinoic Acid Activities in Living Mammalian Cells.** *Methods in molecular biology (Clifton, N.J.)*  
Kim, S., Fujii, R., Paulmurugan, R.  
2022; 2525: 111-122
- **Compact Eight-Channel Light-Sensing System for Bioassays.** *Methods in molecular biology (Clifton, N.J.)*  
Kim, S., Hori, S. S., Sadeghipour, N., Sukumar, U. K., Paulmurugan, R.  
2022; 2525: 377-386
- **BRET Sensors for Imaging Membrane Integrity of Microfluidically Generated Extracellular Vesicles.** *Methods in molecular biology (Clifton, N.J.)*  
Paulmurugan, R., Liu, Y., Sukumar, U. K., Kanada, M., Massoud, T. F.  
2022; 2525: 227-238
- **Editorial: Nanomaterials for targeted delivery of therapeutic and imaging agents.** *Frontiers in cell and developmental biology*  
Chockalingam, S., Packirisamy, G., Paulmurugan, R.  
2022; 10: 978690
- **Noninvasive estimation of local speed of sound by pulse-echo ultrasound in a rat model of nonalcoholic fatty liver.** *Physics in medicine and biology*  
Telichko, A. V., Ali, R., Brevett, T., Wang, H., Vilches-Moure, J., Kumar, S. U., Paulmurugan, R., Dahl, J. J.  
1800
- **Engineered Cell-Derived Vesicles Displaying Targeting Peptide and Functionalized with Nanocarriers for Therapeutic microRNA Delivery to Triple-Negative Breast Cancer in Mice.** *Advanced healthcare materials*  
Bose, R. J., Kumar, U. S., Garcia-Marques, F., Zeng, Y., Habte, F., McCarthy, J. R., Pitteri, S., Massoud, T. F., Paulmurugan, R.  
2021: e2101387

- **Expression and purification of a native Thy1-single-chain variable fragment for use in molecular imaging.** *Scientific reports*  
Jugniot, N., Bam, R., Paulmurugan, R.  
2021; 11 (1): 23026
- **Detection and Characterization of Sentinel Lymph Node by Ultrasound Molecular Imaging with B7-H3-Targeted Microbubbles in Orthotopic Breast Cancer Model in Mice.** *Molecular imaging and biology*  
Hu, Z., Bachawal, S. V., Li, X., Wang, H., Wilson, K. E., Li, P., Paulmurugan, R.  
2021
- **Gold-Nanostar-Chitosan-Mediated Delivery of SARS-CoV-2 DNA Vaccine for Respiratory Mucosal Immunization: Development and Proof-of-Principle.** *ACS nano*  
Kumar, U. S., Afjei, R., Ferrara, K., Massoud, T. F., Paulmurugan, R.  
2021
- **Dynamic Ligand Screening by Magnetic Nanoassembly Modulates Stem Cell Differentiation.** *Advanced materials (Deerfield Beach, Fla.)*  
Hong, H., Min, S., Koo, S., Lee, Y., Yoon, J., Jang, W. Y., Kang, N., Thangam, R., Choi, H., Jung, H. J., Han, S., Wei, Q., Yu, et al  
2021: e2105460
- **Camouflaged Hybrid Cancer Cell-Platelet Fusion Membrane Nanovesicles Deliver Therapeutic MicroRNAs to Presensitize Triple-Negative Breast Cancer to Doxorubicin.** *Advanced functional materials*  
Liu, Y., Sukumar, U. K., Kanada, M., Krishnan, A., Massoud, T. F., Paulmurugan, R.  
2021; 31 (41)
- **Magnetic Control and Real-Time Monitoring of Stem Cell Differentiation by the Ligand Nanoassembly.** *Small (Weinheim an der Bergstrasse, Germany)*  
Lee, S., Kim, M. S., Patel, K. D., Choi, H., Thangam, R., Yoon, J., Koo, T. M., Jung, H. J., Min, S., Bae, G., Kim, Y., Han, S., Kang, et al  
2021: e2102892
- **Advances in Engineered Polymer Nanoparticle Tracking Platforms towards Cancer Immunotherapy-Current Status and Future Perspectives.** *Vaccines*  
Thangam, R., Patel, K. D., Kang, H., Paulmurugan, R.  
2021; 9 (8)
- **Camouflaged Hybrid Cancer Cell-Platelet Fusion Membrane Nanovesicles Deliver Therapeutic MicroRNAs to Presensitize Triple-Negative Breast Cancer to Doxorubicin** *ADVANCED FUNCTIONAL MATERIALS*  
Liu, Y., Sukumar, U. K., Kanada, M., Krishnan, A., Massoud, T. F., Paulmurugan, R.  
2021
- **Immunoregulation of Macrophages by Controlling Winding and Unwinding of Nanohelical Ligands** *ADVANCED FUNCTIONAL MATERIALS*  
Bae, G., Jeon, Y., Ko, M., Kim, Y., Han, S., Thangam, R., Kim, W., Jung, H., Lee, S., Choi, H., Min, S., Hong, H., Park, et al  
2021
- **Management of COVID-19: Current Status and Future Prospects.** *Microbes and infection*  
Kabir, M. A., Ahmed, R., Chowdhury, R., Asher Iqbal, S. M., Paulmurugan, R., Demirci, U., Asghar, W.  
2021: 104832
- **Passive Cavitation Mapping by Cavitation Source Localization From Aperture-Domain Signals-Part II: Phantom and In Vivo Experiments** *IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL*  
Telichko, A., Lee, T., Hyun, D., Chowdhury, S., Bachawal, S., Herickhoff, C. D., Paulmurugan, R., Dahl, J. J.  
2021; 68 (4): 1198–1212
- **Ultrasound Triggered Co-Delivery of Therapeutic MicroRNAs and a Triple Suicide Gene Therapy Vector by Using Biocompatible Polymer Nanoparticles for Improved Cancer Therapy in Mouse Models** *ADVANCED THERAPEUTICS*  
Kumar, S., Wang, H., Telichko, A. V., Natarajan, A., Bettinger, T., Cherkaoui, S., Massoud, T. F., Dahl, J. J., Paulmurugan, R.  
2021
- **Diagnosis For COVID-19: Current Status and Future Prospects.** *Expert review of molecular diagnostics*  
Kabir, A., Ahmed, R., Iqbal, S. M., Chowdhury, R., Paulmurugan, R., Demirci, U., Asghar, W.  
2021

- **Remote Switching of Elastic Movement of Decorated Ligand Nanostructures Controls the Adhesion-Regulated Polarization of Host Macrophages** *ADVANCED FUNCTIONAL MATERIALS*  
Thangam, R., Kim, M., Bae, G., Kim, Y., Kang, N., Lee, S., Jung, H., Jang, J., Choi, H., Li, N., Kim, M., Park, S., Kim, et al  
2021
- **Remote Control of Time-Regulated Stretching of Ligand-Presenting Nanocoils In Situ Regulates the Cyclic Adhesion and Differentiation of Stem Cells.** *Advanced materials (Deerfield Beach, Fla.)*  
Min, S., Ko, M. J., Jung, H. J., Kim, W., Han, S., Kim, Y., Bae, G., Lee, S., Thangam, R., Choi, H., Li, N., Shin, J. E., Jeon, et al  
2021: e2008353
- **Ferroptosis inducers are a novel therapeutic approach for advanced prostate cancer.** *Cancer research*  
Ghoochani, A. n., Hsu, E. C., Aslan, M. n., Rice, M. A., Nguyen, H. M., Brooks, J. D., Corey, E. n., Paulmurugan, R. n., Stoyanova, T. n.  
2021
- **Minicircles for a two-step blood biomarker and PET imaging early cancer detection strategy.** *Journal of controlled release : official journal of the Controlled Release Society*  
Robinson, E. R., Gowrishankar, G., D'Souza, A., Kheirulomoom, A., Haywood, T., Hori, S. S., Chuang, H. Y., Zeng, Y., Tumbale, S., Aalipour, A., Beinat, C., Alam, I. S., Sathirachinda, et al  
2021
- **In situ T-cell transfection by anti-CD3-conjugated lipid nanoparticles leads to T-cell activation, migration, and phenotypic shift.** *Biomaterials*  
Kheirulomoom, A., Kare, A. J., Ingham, E. S., Paulmurugan, R., Robinson, E. R., Baikoghli, M., Inayathullah, M., Seo, J. W., Wang, J., Fite, B. Z., Wu, B., Tumbale, S. K., Raie, et al  
2021; 281: 121339
- **A Microfluidics-Based Scalable Approach to Generate Extracellular Vesicles with Enhanced Therapeutic MicroRNA Loading for Intranasal Delivery to Mouse Glioblastomas.** *ACS nano*  
Wang, K., Kumar, U. S., Sadeghipour, N., Massoud, T. F., Paulmurugan, R.  
2021
- **Functionalized Nanomaterials as Tailored Theranostic Agents in Brain Imaging.** *Nanomaterials (Basel, Switzerland)*  
Thangam, R., Paulmurugan, R., Kang, H.  
2021; 12 (1)
- **A Priori Activation of Apoptosis Pathways of Tumor (AAPT) technology: Development of targeted apoptosis initiators for cancer treatment.** *PloS one*  
Pandurangi, R. S., Tomasetti, M. n., Verapazham, S. T., Paulmurugan, R. n., Ma, C. n., Rajput, S. n., Anjanappa, M. n., Nakshatri, H. n.  
2021; 16 (2): e0225869
- **Current status of targeted microbubbles in diagnostic molecular imaging of pancreatic cancer.** *Bioengineering & translational medicine*  
Jugniot, N., Bam, R., Meuillet, E. J., Unger, E. C., Paulmurugan, R.  
2021; 6 (1): e10183
- **Cardio Phenotypic Potential of Mesenchymal Stem Cells.** *Current protocols*  
Peterson, K. M., Franchi, F. n., Olthoff, M. n., Paulmurugan, R. n., Rodriguez-Porcel, M. n.  
2021; 1 (3): e62
- **Functionalized Nanomaterials as Tailored Theranostic Agents in Brain Imaging.** *Nanomaterials (Basel, Switzerland)*  
Thangam, R., Paulmurugan, R., Kang, H.  
2021; 12 (1)
- **A Priori Activation of Apoptosis Pathways of Tumor (AAPT) technology: Development of targeted apoptosis initiators for cancer treatment.** *PloS one*  
Pandurangi, R. S., Tomasetti, M. n., Verapazham, S. T., Paulmurugan, R. n., Ma, C. n., Rajput, S. n., Anjanappa, M. n., Nakshatri, H. n.  
2021; 16 (2): e0225869
- **Current status of targeted microbubbles in diagnostic molecular imaging of pancreatic cancer.** *Bioengineering & translational medicine*  
Jugniot, N., Bam, R., Meuillet, E. J., Unger, E. C., Paulmurugan, R.  
2021; 6 (1): e10183
- **Cardio Phenotypic Potential of Mesenchymal Stem Cells.** *Current protocols*

Peterson, K. M., Franchi, F. n., Olthoff, M. n., Paulmurugan, R. n., Rodriguez-Porcel, M. n.  
2021; 1 (3): e62

- **Acoustically Driven Microbubbles Enable Targeted Delivery of microRNA-Loaded Nanoparticles to Spontaneous Hepatocellular Neoplasia in Canines.** *Advanced therapeutics*  
Kumar, S. U., Telichko, A. V., Wang, H., Hyun, D., Johnson, E. G., Kent, M. S., Rebhun, R. B., Dahl, J. J., Culp, W. T., Paulmurugan, R.  
2020; 3 (12)
- **Acoustically Driven Microbubbles Enable Targeted Delivery of microRNA-Loaded Nanoparticles to Spontaneous Hepatocellular Neoplasia in Canines** *ADVANCED THERAPEUTICS*  
Kumar, S., Telichko, A. V., Wang, H., Hyun, D., Johnson, E. G., Kent, M. S., Rebhun, R. B., Dahl, J. J., Culp, W. T. N., Paulmurugan, R.  
2020
- **Therapeutic Ultrasound Parameter Optimization for Drug Delivery Applied to a Murine Model of Hepatocellular Carcinoma.** *Ultrasound in medicine & biology*  
Telichko, A. V., Wang, H., Bachawal, S., Kumar, S. U., Bose, J. C., Paulmurugan, R., Dahl, J. J.  
2020
- **SARS-CoV-2 Vaccine Development: An Overview and Perspectives.** *ACS pharmacology & translational science*  
Liu, Y., Wang, K., Massoud, T. F., Paulmurugan, R.  
2020; 3 (5): 844–58
- **Bioluminescent Imaging Systems for Assay Developments.** *Analytical sciences : the international journal of the Japan Society for Analytical Chemistry*  
Kim, S., Paulmurugan, R.  
2020
- **Current status of targeted microbubbles in diagnostic molecular imaging of pancreatic cancer** *BIOENGINEERING & TRANSLATIONAL MEDICINE*  
Jugniot, N., Bam, R., Meuillet, E. J., Unger, E. C., Paulmurugan, R.  
2020
- **Delayed Intramyocardial Delivery of Stem Cells after Ischemia Reperfusion Injury in a Murine Model.** *Journal of visualized experiments : JoVE*  
Olthoff, M., Franchi, F., Peterson, K. M., Paulmurugan, R., Rodriguez-Porcel, M.  
2020
- **Structural and Electronic Transport Properties of Fluorographene Directly Grown on Silicates for Possible Biosensor Applications** *ACS APPLIED NANO MATERIALS*  
Sharma, R., Asmara, T., Sahoo, K., Grage, S. L., Zhang, R., Sun, J., Das, S., Ulrich, A. S., Rusydi, A., Aryasomayajula, S., Paulmurugan, R., Liepmann, D., Kumar, et al  
2020; 3 (6): 5399–5409
- **Highly sensitive eight-channel light sensing system for biomedical applications.** *Photochemical & photobiological sciences : Official journal of the European Photochemistry Association and the European Society for Photobiology*  
Kim, S. B., Hori, S. S., Sadeghipour, N., Sukumar, U. K., Fujii, R., Massoud, T. F., Paulmurugan, R.  
2020
- **SP94-Targeted Triblock Copolymer Nanoparticle Delivers Thymidine Kinase-p53-Nitroreductase Triple Therapeutic Gene and Restores Anticancer Function against Hepatocellular Carcinoma in Vivo.** *ACS applied materials & interfaces*  
Sukumar, U. K., Rajendran, J. C., Gambhir, S. S., Massoud, T. F., Paulmurugan, R.  
2020
- **Prostate Cancer Phenotype Influences Bone Mineralization at Metastasis: A Study Using an In Vitro Prostate Cancer Metastasis Testbed.** *JBMR plus*  
Molla, M. S., Katti, D. R., Iswara, J., Venkatesan, R., Paulmurugan, R., Katti, K. S.  
2020; 4 (2): e10256
- **The Myocardial Microenvironment Modulates the Biology of Transplanted Mesenchymal Stem Cells.** *Molecular imaging and biology*  
Franchi, F., Ramaswamy, V., Olthoff, M., Peterson, K. M., Paulmurugan, R., Rodriguez-Porcel, M.  
2020

- **Assessment of Metastatic and Reactive Sentinel Lymph Nodes with B7-H3-Targeted Ultrasound Molecular Imaging: A Longitudinal Study in Mouse Models.** *Molecular imaging and biology*  
Zheng, F. n., Li, P. n., Bachawal, S. V., Wang, H. n., Li, C. n., Yuan, W. n., Huang, B. n., Paulmurugan, R. n.  
2020
- **Sound Speed Estimation in Layered Media Using the Angular Coherence of Plane Waves**  
Ali, R., Maredia, S., Telichko, A., Wang, H., Paulmurugan, R., Vilches-Moure, J., Dahl, J. J.  
edited by Byram, B. C., Ruitter, N. V.  
SPIE-INT SOC OPTICAL ENGINEERING.2020
- **Efficacy of affibody-based ultrasound molecular imaging of vascular B7-H3 for breast cancer detection.** *Clinical cancer research : an official journal of the American Association for Cancer Research*  
Bam, R. n., Lown, P. S., Stern, L. A., Sharma, K. n., Wilson, K. E., Bean, G. R., Lutz, A. M., Paulmurugan, R. n., Hackel, B. J., Dahl, J. n., Abou-Elkacem, L. n.  
2020
- **Reconstructed Apoptotic Bodies as Targeted "Nano Decoys" to Treat Intracellular Bacterial Infections within Macrophages and Cancer Cells.** *ACS nano*  
Bose, R. J., Tharmalingam, N. n., Garcia Marques, F. J., Sukumar, U. K., Natarajan, A. n., Zeng, Y. n., Robinson, E. n., Bermudez, A. n., Chang, E. n., Habte, F. n., Pitteri, S. J., McCarthy, J. R., Gambhir, et al  
2020
- **Spectrochemical Probing of MicroRNA Duplex Using Spontaneous Raman Spectroscopy for Biosensing Applications.** *Analytical chemistry*  
Ravi, P. n., Singh, S. P., Kang, J. W., Tran, S. n., Dasari, R. R., So, P. T., Liepmann, D. n., Katti, K. n., Katti, D. n., Renugopalakrishnan, V. n., Paulmurugan, R. n.  
2020
- **Pathway-specific reporter genes to study stem cell biology.** *Stem cells (Dayton, Ohio)*  
Peterson, K. M., Franchi, F. n., Olthoff, M. n., Chen, I. Y., Paulmurugan, R. n., Rodriguez-Porcel, M. n.  
2020
- **Combating Intracellular Pathogens with Nanohybrid-Facilitated Antibiotic Delivery.** *International journal of nanomedicine*  
Bose, R. J., Tharmalingam, N., Choi, Y., Madheswaran, T., Paulmurugan, R., McCarthy, J. R., Lee, S., Park, H.  
2020; 15: 8437–49
- **Toward the Clinical Development and Validation of a Thy1-Targeted Ultrasound Contrast Agent for the Early Detection of Pancreatic Ductal Adenocarcinoma.** *Investigative radiology*  
Bam, R. n., Daryaei, I. n., Abou-Elkacem, L. n., Vilches-Moure, J. G., Meuliet, E. J., Lutz, A. n., Marinelli, E. R., Unger, E. C., Gambhir, S. S., Paulmurugan, R. n.  
2020
- **Ultrasound-mediated delivery of miRNA-122 and anti-miRNA-21 therapeutically immunomodulates murine hepatocellular carcinoma in vivo.** *Journal of controlled release : official journal of the Controlled Release Society*  
Wischhusen, J. C., Chowdhury, S. M., Lee, T. n., Wang, H. n., Bachawal, S. n., Devulapally, R. n., Afjei, R. n., Sukumar, U. K., Paulmurugan, R. n.  
2020
- **TARGETED POLYIONS ENGINEERED WITH SURFACE miRNAs FOR COMBINED MULTIMODALITY IMAGING AND ENHANCEMENT OF TEMOZOLOMIDE TREATMENT: A NOVEL INTRANASALLY-DELIVERED THERANOSTIC STRATEGY AGAINST GLIOBLASTOMA**  
Sukumar, U., Afjei, R., Massoud, T., Paulmurugan, R.  
OXFORD UNIV PRESS INC.2019: 87–88
- **PRECEDING p53 STABILIZATION USING DOXORUBICIN AUGMENTS PRIMA-1-MEDIATED p53 REFOLDING AND INCREASED CELLULAR APOPTOSIS: EVALUATION OF A SEQUENTIAL COMBINATION THERAPY AGAINST GLIOBLASTOMA**  
Babikir, H., Afjei, R., Paulmurugan, R., Massoud, T.  
OXFORD UNIV PRESS INC.2019: 88
- **Structural determination of Enzyme-Graphene Nanocomposite Sensor Material.** *Scientific reports*  
Rai, D. K., Gurusaran, M., Urban, V., Aran, K., Ma, L., Li, P., Qian, S., Narayanan, T. N., Ajayan, P. M., Liepmann, D., Sekar, K., Alvarez-Cao, M., Escuder-Rodriguez, et al  
2019; 9 (1): 15519

- **Evaluation of integrin alphavbeta6 cystine knot PET tracers to detect cancer and idiopathic pulmonary fibrosis.** *Nature communications*  
Kimura, R. H., Wang, L., Shen, B., Huo, L., Tummers, W., Filipp, F. V., Guo, H. H., Haywood, T., Abou-Elkacem, L., Baratto, L., Habte, F., Devulapally, R., Witney, et al  
2019; 10 (1): 4673
- **Biodegradable polymers for modern vaccine development** *JOURNAL OF INDUSTRIAL AND ENGINEERING CHEMISTRY*  
Bose, R. J. C., Kim, M., Chang, J., Paulmurugan, R., Moon, J. J., Koh, W., Lee, S., Park, H.  
2019; 77: 12–24
- **Biodegradable polymers for modern vaccine development.** *Journal of industrial and engineering chemistry (Seoul, Korea)*  
Bose, R. J., Kim, M., Chang, J. H., Paulmurugan, R., Moon, J. J., Koh, W. G., Lee, S. H., Park, H.  
2019; 77: 12-24
- **Microvesicle-mediated delivery of minicircle DNA results in effective gene-directed enzyme prodrug cancer therapy.** *Molecular cancer therapeutics*  
Kanada, M., Kim, B. D., Hardy, J. W., Bachmann, M. H., Bernard, M. P., Perez, G. I., Zarea, A. A., Ge, T. J., Withrow, A., Ibrahim, S. A., Toomajian, V., Gambhir, S. S., Paulmurugan, et al  
2019
- **Chronic Model of Inflammatory Bowel Disease in IL-10-/- Transgenic Mice: Evaluation with Ultrasound Molecular Imaging.** *Theranostics*  
Wang, H., Vilches-Moure, J. G., Cherkaoui, S., Tardy, I., Alleaume, C., Bettinger, T., Lutz, A., Paulmurugan, R.  
2019; 9 (21): 6031-6046
- **Ultrasound/microbubble-mediated targeted delivery of anticancer microRNA-loaded nanoparticles to deep tissues in pigs.** *Journal of controlled release : official journal of the Controlled Release Society*  
Di Ianni, T., Bose, R. J., Sukumar, U. K., Bachawal, S., Wang, H., Telichko, A., Herickhoff, C., Robinson, E., Baker, S., Vilches-Moure, J. G., Felt, S. A., Gambhir, S. S., Paulmurugan, et al  
2019
- **Intranasal delivery of targeted polyfunctional gold-iron oxide nanoparticles loaded with therapeutic microRNAs for combined theranostic multimodality imaging and presensitization of glioblastoma to temozolomide.** *Biomaterials*  
Sukumar, U. K., Bose, R. J., Malhotra, M., Babikir, H. A., Afjei, R., Robinson, E., Zeng, Y., Chang, E., Habte, F., Sinclair, R., Gambhir, S. S., Massoud, T. F., Paulmurugan, et al  
2019; 218: 119342
- **Molecular Imaging of Retinoic Acids in Live Cells Using Single-Chain Bioluminescence Probes** *ACS COMBINATORIAL SCIENCE*  
Kim, S., Fujj, R., Nishihara, R., Bose, R. J. C., Citterio, D., Suzuki, K., Massoud, T. F., Paulmurugan, R.  
2019; 21 (6): 473–81
- **The protean world of non-coding RNAs in glioblastoma.** *Journal of molecular medicine (Berlin, Germany)*  
Paulmurugan, R., Malhotra, M., Massoud, T. F.  
2019
- **Highly bright and stable NIR-BRET with blue-shifted coelenterazine derivatives for deep-tissue imaging of molecular events in vivo.** *Theranostics*  
Nishihara, R., Paulmurugan, R., Nakajima, T., Yamamoto, E., Natarajan, A., Afjei, R., Hiruta, Y., Iwasawa, N., Nishiyama, S., Citterio, D., Sato, M., Kim, S. B., Suzuki, et al  
2019; 9 (9): 2646-2661
- **Ligand-activated BRET9 imaging for measuring protein-protein interactions in living mice.** *Chemical communications (Cambridge, England)*  
Bae Kim, S. n., Fujii, R. n., Natarajan, A. n., Massoud, T. F., Paulmurugan, R. n.  
2019
- **Chronic Model of Inflammatory Bowel Disease in IL-10(-/-) Transgenic Mice: Evaluation with Ultrasound Molecular Imaging** *THERANOSTICS*  
Wang, H., Vilches-Moure, J. G., Cherkaoui, S., Tardy, I., Alleaume, C., Bettinger, T., Lutz, A., Paulmurugan, R.  
2019; 9 (21): 6031–46
- **In vitro Determination of Rapamycin-triggered FKBP-FRB Interactions Using a Molecular Tension Probe** *ANALYTICAL SCIENCES*  
Kim, S., Nishihara, R., Fujii, R., Paulmurugan, R., Citterio, D., Suzuki, K.  
2019; 35 (1): 71–78

- **Cell-based biosensors: Recent trends, challenges and future perspectives.** *Biosensors & bioelectronics*  
Gupta, N. n., Renugopalakrishnan, V. n., Liepmann, D. n., Paulmurugan, R. n., Malhotra, B. D.  
2019; 141: 111435
- **Near-Infrared Bioluminescence Imaging with a through-Bond Energy Transfer Cassette.** *Chembiochem : a European journal of chemical biology*  
Abe, M. n., Nishihara, R. n., Ikeda, Y. n., Nakajima, T. n., Sato, M. n., Iwasawa, N. n., Nishiyama, S. n., Paulmurugan, R. n., Citterio, D. n., Kim, S. B., Suzuki, K. n.  
2019
- **Molecular Imaging of Retinoic Acids in Live Cells Using Single-Chain Bioluminescence Probes.** *ACS combinatorial science*  
Kim, S. B., Fujii, R. n., Nishihara, R. n., Bose, R. J., Citterio, D. n., Suzuki, K. n., Massoud, T. F., Paulmurugan, R. n.  
2019
- **Highly bright and stable NIR-BRET with blue-shifted coelenterazine derivatives for deep-tissue imaging of molecular events in vivo** *THERANOSTICS*  
Nishihara, R., Paulmurugan, R., Nakajima, T., Yamamoto, E., Natarajan, A., Afjei, R., Hiruta, Y., Iwasawa, N., Nishiyama, S., Citterio, D., Sato, M., Kim, S., Suzuki, et al  
2019; 9 (9): 2646–61
- **Bioengineered stem cell membrane functionalized nanocarriers for therapeutic targeting of severe hindlimb ischemia** *BIOMATERIALS*  
Bose, R. J. C., Kim, B., Arai, Y., Han, I., Moon, J. J., Paulmurugan, R., Park, H., Lee, S.  
2018; 185: 360–70
- **Restoring guardianship of the genome: Anticancer drug strategies to reverse oncogenic mutant p53 misfolding** *CANCER TREATMENT REVIEWS*  
Babikir, H. A., Afjei, R., Paulmurugan, R., Massoud, T. F.  
2018; 71: 19–31
- **in vitro determination of rapamycin-triggered FKBP-FRB interactions using a molecular tension probe.** *Analytical sciences : the international journal of the Japan Society for Analytical Chemistry*  
Kim, S. B., Nishihara, R., Fujii, R., Paulmurugan, R., Citterio, D., Suzuki, K.  
2018
- **Comparison of cell-based assays to quantify treatment effects of anticancer drugs identifies a new application for Bodipy-L-cystine to measure apoptosis** *SCIENTIFIC REPORTS*  
Kumar, N., Atjei, R., Massoud, T. F., Paulmurugan, R.  
2018; 8
- **Comparison of cell-based assays to quantify treatment effects of anticancer drugs identifies a new application for Bodipy-L-cystine to measure apoptosis.** *Scientific reports*  
Kumar, N., Afjei, R., Massoud, T. F., Paulmurugan, R.  
2018; 8 (1): 16363
- **Tumor Cell-Derived Extracellular Vesicle-Coated Nanocarriers: An Efficient Theranostic Platform for the Cancer-Specific Delivery of Anti-miR-21 and Imaging Agents** *ACS NANO*  
Bose, R. J. C., Kumar, S., Zeng, Y., Afjei, R., Robinson, E., Lau, K., Bermudez, A., Habte, F., Pitteri, S. J., Sinclair, R., Willmann, J. K., Massoud, T. F., Gambhir, et al  
2018; 12 (11): 10817–32
- **Intracellular MicroRNA Quantification in Intact Cells: A Novel Strategy based on Reduced Graphene Oxide Based Fluorescence Quenching.** *MRS communications*  
Paulmurugan, R., Ajayan, P. M., Liepmann, D., Renugopalakrishnan, V.  
2018; 8 (3): 642-651
- **Intracellular microRNA quantification in intact cells: a novel strategy based on reduced graphene oxide-based fluorescence quenching** *MRS COMMUNICATIONS*  
Paulmurugan, R., Ajayan, P. M., Liepmann, D., Renugopalakrishnan  
2018; 8 (3): 642–51
- **Multi-organ on a chip for personalized precision medicine** *MRS COMMUNICATIONS*

- Palaninathan, V., Kumar, V., Maekawa, T., Liepmann, D., Paulmurugan, R., Eswara, J. R., Ajayan, P. M., Augustine, S., Malhotra, B. D., Viswanathan, S., Renugopalakrishnan, V., Kumar, D.  
2018; 8 (3): 652–67
- **Bioengineered stem cell membrane functionalized nanocarriers for therapeutic targeting of severe hindlimb ischemia.** *Biomaterials*  
Bose, R. J., Kim, B. J., Arai, Y., Han, I., Moon, J. J., Paulmurugan, R., Park, H., Lee, S.  
2018; 185: 360–70
  - **Longitudinal assessment of ultrasound-guided complementary microRNA therapy of hepatocellular carcinoma** *JOURNAL OF CONTROLLED RELEASE*  
Chowdhury, S., Lee, T., Bachawal, S. V., Devulapally, R., Abou-Elkacem, L., Yeung, T., Wischhusen, J., Tian, L., Dahl, J., Paulmurugan, R., Willmann, J.  
2018; 281: 19–28
  - **Longitudinal assessment of ultrasound-guided complementary microRNA therapy of hepatocellular carcinoma.** *Journal of controlled release : official journal of the Controlled Release Society*  
Chowdhury, S. M., Lee, T., Bachawal, S. V., Devulapally, R., Abou-Elkacem, L., Yeung, T. A., Wischhusen, J., Tian, L., Dahl, J., Paulmurugan, R., Willmann, J. K.  
2018
  - **Ultrasound-guided delivery of thymidine kinase-nitroreductase dual therapeutic genes by PEGylated-PLGA/PIE nanoparticles for enhanced triple negative breast cancer therapy.** *Nanomedicine (London, England)*  
Devulapally, R., Lee, T., Barghava-Shah, A., Sekar, T. V., Foygel, K., Bachawal, S. V., Willmann, J. K., Paulmurugan, R.  
2018; 13 (9): 1051–66
  - **Ultrasound-guided delivery of thymidine kinase-nitroreductase dual therapeutic genes by PEGylated-PLGA/PEI nanoparticles for enhanced triple negative breast cancer therapy** *NANOMEDICINE*  
Devulapally, R., Lee, T., Barghava-Shah, A., Sekar, T. V., Foygel, K., Bachawal, S. V., Willmann, J. K., Paulmurugan, R.  
2018; 13 (9): 1051–66
  - **A protein folding molecular imaging biosensor monitors the effects of drugs that restore mutant p53 structure and its downstream function in glioblastoma cells.** *Oncotarget*  
Paulmurugan, R., Afjei, R., Sekar, T. V., Babikir, H. A., Massoud, T. F.  
2018; 9 (30): 21495–511
  - **Targeted nanoparticle delivery of therapeutic antisense microRNAs presensitizes glioblastoma cells to lower effective doses of temozolomide in vitro and in a mouse model.** *Oncotarget*  
Malhotra, M., Sekar, T. V., Ananta, J. S., Devulapally, R., Afjei, R., Babikir, H. A., Paulmurugan, R., Massoud, T. F.  
2018; 9 (30): 21478–94
  - **Cell membrane-coated nanocarriers: the emerging targeted delivery system for cancer theranostics** *DRUG DISCOVERY TODAY*  
Bose, R. J. C., Paulmurugan, R., Moon, J., Lee, S., Park, H.  
2018; 23 (4): 891–99
  - **Ferumoxylol-based Dual-modality Imaging Probe for Detection of Stem Cell Transplant Rejection.** *Nanotheranostics*  
Li, K. n., Chan, C. T., Nejadnik, H. n., Lenkov, O. D., Wolterman, C. n., Paulmurugan, R. n., Yang, H. n., Gambhir, S. S., Daldrup-Link, H. E.  
2018; 2 (4): 306–19
  - **Ultrasound and microbubble-mediated targeted delivery of drug loaded nanoparticles to porcine liver**  
Di Ianni, T., Bachawal, S., Wang, H., Bose, R. J. C., Sukumar, U. K., Telichko, A., Herickhoff, C., Baker, S., Felt, S. A., Paulmurugan, R., Dahl, J., IEEE  
IEEE.2018
  - **Restoring guardianship of the genome: Anticancer drug strategies to reverse oncogenic mutant p53 misfolding.** *Cancer treatment reviews*  
Babikir, H. A., Afjei, R. n., Paulmurugan, R. n., Massoud, T. F.  
2018; 71: 19–31
  - **Tumor Cell-Derived Extracellular Vesicle-Coated Nanocarriers: An Efficient Theranostic Platform for the Cancer-Specific Delivery of Anti-miR-21 and Imaging Agents.** *ACS nano*  
Jc Bose, R. n., Uday Kumar, S. n., Zeng, Y. n., Afjei, R. n., Robinson, E. n., Lau, K. n., Bermudez, A. n., Habte, F. n., Pitteri, S. J., Sinclair, R. n., Willmann, J. K., Massoud, T. F., Gambhir, et al

2018

- **TARGETED NANOPARTICLE DELIVERY OF THERAPEUTIC ANTIMIR-21 AND ANTIMIR-10B PRESENSITIZES GLIOBLASTOMA TO LOWER EFFECTIVE DOSES OF TEMOZOLOMIDE IN CELLS AND XENOGRAPTS**  
Malhotra, M., Sekar, T., Devulapally, R., Afjei, R., Paulmurugan, R., Massoud, T.  
OXFORD UNIV PRESS INC.2017: 86
- **A MOLECULAR IMAGING BIOSENSOR MONITORS THE EFFECTS OF ANTI-MISFOLDING DRUGS THAT RESTORE MUTANT p53 FUNCTION AND ENHANCE COMBINATION CHEMOTHERAPY FOR GLIOBLASTOMA**  
Paulmurugan, R., Afjei, R., Babikir, H., Sekar, T., Massoud, T.  
OXFORD UNIV PRESS INC.2017: 62
- **A Model-Based Personalized Cancer Screening Strategy for Detecting Early-Stage Tumors Using Blood-Borne Biomarkers** *CANCER RESEARCH*  
Hori, S. S., Lutz, A. M., Paulmurugan, R., Gambhir, S. S.  
2017; 77 (10): 2570-2584
- **RRx-001: a systemically non-toxic M2-to-M1 macrophage stimulating and prosensitizing agent in Phase II clinical trials** *EXPERT OPINION ON INVESTIGATIONAL DRUGS*  
Oronsky, B., Paulmurugan, R., Foygel, K., Scicinski, J., Knox, S. J., Peehl, D., Zhao, H., Ning, S., Cabrales, P., Summers, T. A., Reid, T. R., Fitch, W. L., Kim, et al  
2017; 26 (1): 109-119
- **Engineering Intracellularly Retained Gaussia Luciferase Reporters for Improved Biosensing and Molecular Imaging Applications.** *ACS chemical biology*  
Gaur, S. n., Bhargava-Shah, A. n., Hori, S. n., Afjei, R. n., Sekar, T. V., Gambhir, S. S., Massoud, T. F., Paulmurugan, R. n.  
2017
- **Gemcitabine and Antisense-microRNA Co-encapsulated PLGA-PEG Polymer Nanoparticles for Hepatocellular Carcinoma Therapy** *ACS APPLIED MATERIALS & INTERFACES*  
Devulapally, R., Foygel, K., Sekar, T. V., Willmann, J. K., Paulmurugan, R.  
2016; 8 (49): 33412-33422
- **Molecular Imaging Biosensor Monitors p53 Sumoylation in Cells and Living Mice** *ANALYTICAL CHEMISTRY*  
Sekar, T. V., Foygel, K., Devulapally, R., Kumar, V., Malhotra, S., Massoud, T. F., Paulmurugan, R.  
2016; 88 (23): 11420-11428
- **Dynamic Microenvironment Induces Phenotypic Plasticity of Esophageal Cancer Cells Under Flow** *SCIENTIFIC REPORTS*  
Kocal, G. C., Guven, S., Foygel, K., Goldman, A., Chen, P., Sengupta, S., Paulmurugan, R., Baskin, Y., Demirci, U.  
2016; 6
- **A transgenic mouse model expressing an ER alpha folding biosensor reveals the effects of Bisphenol A on estrogen receptor signaling** *SCIENTIFIC REPORTS*  
Sekar, T. V., Foygel, K., Massoud, T. F., Gambhir, S. S., Paulmurugan, R.  
2016; 6
- **Ultrasound-guided therapeutic modulation of hepatocellular carcinoma using complementary microRNAs.** *Journal of controlled release*  
Mullick Chowdhury, S., Wang, T., Bachawal, S., Devulapally, R., Choe, J. W., Abou Elkacem, L., Yakub, B. K., Wang, D. S., Tian, L., Paulmurugan, R., Willmann, J. K.  
2016; 238: 272-280
- **Tailored Nanoparticle Codelivery of antimiR-21 and antimiR-10b Augments Glioblastoma Cell Kill by Temozolomide: Toward a "Personalized" Anti-microRNA Therapy.** *Molecular pharmaceutics*  
Ananta, J. S., Paulmurugan, R., Massoud, T. F.  
2016; 13 (9): 3164-3175
- **Multimodality Molecular Imaging of Cardiac Cell Transplantation: Part II. In Vivo Imaging of Bone Marrow Stromal Cells in Swine with PET/CT and MR Imaging.** *Radiology*  
Parashurama, N., Ahn, B., Ziv, K., Ito, K., Paulmurugan, R., Willmann, J. K., Chung, J., Ikeno, F., Swanson, J. C., Merk, D. R., Lyons, J. K., Yerushalmi, D., Teramoto, et al  
2016; 280 (3): 826-836

- **Multimodality Molecular Imaging of Cardiac Cell Transplantation: Part I. Reporter Gene Design, Characterization, and Optical in Vivo Imaging of Bone Marrow Stromal Cells after Myocardial Infarction.** *Radiology*  
Parashurama, N., Ahn, B., Ziv, K., Ito, K., Paulmurugan, R., Willmann, J. K., Chung, J., Ikeno, F., Swanson, J. C., Merk, D. R., Lyons, J. K., Yerushalmi, D., Teramoto, et al  
2016; 280 (3): 815-825
- **Pterostilbene-mediated Nrf2 activation: Mechanistic insights on Keap1:Nrf2 interface.** *Bioorganic & medicinal chemistry*  
Bhakkialakshmi, E., Dineshkumar, K., Karthik, S., Sireesh, D., Hopper, W., Paulmurugan, R., Ramkumar, K. M.  
2016; 24 (16): 3378-3386
- **Noninvasive Monitoring of the Mitochondrial Function in Mesenchymal Stromal Cells** *MOLECULAR IMAGING AND BIOLOGY*  
Franchi, F., Peterson, K. M., Paulmurugan, R., Folmes, C., Lanza, I. R., Lerman, A., Rodriguez-Porcel, M.  
2016; 18 (4): 510-518
- **A molecular imaging biosensor detects in vivo protein folding and misfolding** *JOURNAL OF MOLECULAR MEDICINE-JMM*  
Sheahan, A. V., Sekar, T. V., Chen, K., Paulmurugan, R., Massoud, T. F.  
2016; 94 (7): 799-808
- **GHR/PRLR Heteromultimer Is Composed of GHR Homodimers and PRLR Homodimers** *MOLECULAR ENDOCRINOLOGY*  
Liu, Y., Zhang, Y., Jiang, J., Lobie, P. E., Paulmurugan, R., Langenheim, J. F., Chen, W. Y., Zinn, K. R., Frank, S. J.  
2016; 30 (5): 504-517
- **Folate Receptor-Targeted Polymeric Micellar Nanocarriers for Delivery of Orlistat as a Repurposed Drug against Triple-Negative Breast Cancer.** *Molecular cancer therapeutics*  
Paulmurugan, R., Bhethanabotla, R., Mishra, K., Devulapally, R., Foygel, K., Sekar, T. V., Ananta, J. S., Massoud, T. F., Joy, A.  
2016; 15 (2): 221-231
- **Orlistat and antisense-miRNA-loaded PLGA-PEG nanoparticles for enhanced triple negative breast cancer therapy.** *Nanomedicine*  
Bhargava-Shah, A., Foygel, K., Devulapally, R., Paulmurugan, R.  
2016; 11 (3): 235-247
- **Pterostilbene Ameliorates Streptozotocin-Induced Diabetes through Enhancing Antioxidant Signaling Pathways Mediated by Nrf2.** *Chemical research in toxicology*  
Elango, B., Dornadula, S., Paulmurugan, R., Ramkumar, K. M.  
2016; 29 (1): 47-57
- **Temozolomide-loaded PLGA nanoparticles to treat glioblastoma cells: a biophysical and cell culture evaluation** *NEUROLOGICAL RESEARCH*  
Ananta, J. S., Paulmurugan, R., Massoud, T. F.  
2016; 38 (1): 51-59
- **Imaging Histone Methylations in Living Animals** *BIOLUMINESCENCE, 3 EDITION*  
Sekar, T., Paulmurugan, R.  
edited by Kim, S. B.  
2016; 1461: 203-215
- **Theranostic Imaging of Cancer Gene Therapy** *BIOLUMINESCENCE, 3 EDITION*  
Sekar, T., Paulmurugan, R.  
edited by Kim, S. B.  
2016; 1461: 241-254
- **Pterostilbene Ameliorates Streptozotocin-Induced Diabetes through Enhancing Antioxidant Signaling Pathways Mediated by Nrf2** *CHEMICAL RESEARCH IN TOXICOLOGY*  
Elango, B., Dornadula, S., Paulmurugan, R., Ramkumar, K. M.  
2016; 29 (1): 47-57
- **Imaging Histone Methylations in Living Animals.** *Methods in molecular biology (Clifton, N.J.)*  
Sekar, T. V., Paulmurugan, R.  
2016; 1461: 203-215

- **Theranostic Imaging of Cancer Gene Therapy.** *Methods in molecular biology (Clifton, N.J.)*  
Sekar, T. V., Paulmurugan, R.  
2016; 1461: 241-254
- **Engineering cancer microenvironments for in vitro 3-D tumor models** *MATERIALS TODAY*  
Asghar, W., El Assal, R., Shafiee, H., Pitteri, S., Paulmurugan, R., Demirci, U.  
2015; 18 (10): 539-553
- **3-D tumor models.** *Materials today*  
Asghar, W., El Assal, R., Shafiee, H., Pitteri, S., Paulmurugan, R., Demirci, U.  
2015; 18 (10): 539-553
- **Nanoparticle-Delivered Antisense MicroRNA-21 Enhances the Effects of Temozolomide on Glioblastoma Cells** *MOLECULAR PHARMACEUTICS*  
Ananta, J. S., Paulmurugan, R., Massoud, T. F.  
2015; 12 (12): 4509-4517
- **Monitoring the Antioxidant Mediated Chemosensitization and ARE-Signaling in Triple Negative Breast Cancer Therapy** *PLOS ONE*  
Foygel, K., Sekar, T. V., Paulmurugan, R.  
2015; 10 (11)
- **Nrf2 activity as a potential biomarker for the pan-epigenetic anticancer agent, RRx-001.** *Oncotarget*  
Ning, S., Sekar, T. V., Scicinski, J., Oronsky, B., Peehl, D. M., Knox, S. J., Paulmurugan, R.  
2015; 6 (25): 21547-21556
- **Development of a High-Throughput Molecular Imaging-Based Orthotopic Hepatocellular Carcinoma Model.** *Cureus*  
Hwang, G. L., van den Bosch, M. A., Kim, Y. I., Katzenberg, R., Willmann, J. K., Paulmurugan, R., Gambhir, S. S., Hofmann, L.  
2015; 7 (6)
- **Development of a High-Throughput Molecular Imaging-Based Orthotopic Hepatocellular Carcinoma Model** *CUREUS*  
Hwang, G. L., van den Bosch, M. A., Kim, Y. I., Katzenberg, R., Willmann, J. K., Paulmurugan, R., Gambhir, S. S., Hofmann, L.  
2015; 7 (6)
- **Formulation of Anti-miR-21 and 4-Hydroxytamoxifen Co-loaded Biodegradable Polymer Nanoparticles and Their Antiproliferative Effect on Breast Cancer Cells.** *Molecular pharmaceuticals*  
Devulapally, R., Sekar, T. V., Paulmurugan, R.  
2015; 12 (6): 2080-2092
- **Ultrasound-guided delivery of microRNA loaded nanoparticles into cancer** *JOURNAL OF CONTROLLED RELEASE*  
Wang, T., Choe, J. W., Pu, K., Devulapally, R., Bachawal, S., Machtaler, S., Chowdhury, S. M., Luong, R., Tian, L., Khuri-Yakub, B., Rao, J., Paulmurugan, R., Willmann, et al  
2015; 203: 99-108
- **Polymer Nanoparticles Mediated Codelivery of AntimiR-10b and AntimiR-21 for Achieving Triple Negative Breast Cancer Therapy** *ACS NANO*  
Devulapally, R., Sekar, N. M., Sekar, T. V., Foygel, K., Massoud, T. F., Willmann, J. K., Paulmurugan, R.  
2015; 9 (3): 2290-2302
- **Genetically encoded molecular biosensors to image histone methylation in living animals.** *Analytical chemistry*  
Sekar, T. V., Foygel, K., Gelovani, J. G., Paulmurugan, R.  
2015; 87 (2): 892-899
- **Degron protease blockade sensor to image epigenetic histone protein methylation in cells and living animals.** *ACS chemical biology*  
Sekar, T. V., Foygel, K., Devulapally, R., Paulmurugan, R.  
2015; 10 (1): 165-174
- **The emerging role of redox-sensitive Nrf2-Keap1 pathway in diabetes** *PHARMACOLOGICAL RESEARCH*  
Bhakkialakshmi, E., Sireesh, D., Rajaguru, P., Paulmurugan, R., Ramkumar, K. M.  
2015; 91: 104-114

- **Core - shell upconversion nanoparticle - semiconductor heterostructures for photodynamic therapy.** *Scientific reports*  
Dou, Q. Q., Rengaramchandran, A., Selvan, S. T., Paulmurugan, R., Zhang, Y.  
2015; 5: 8252-?
- **The emerging role of redox-sensitive Nrf2-Keap1 pathway in diabetes.** *Pharmacological research*  
Bhakkialakshmi, E., Sireesh, D., Rajaguru, P., Paulmurugan, R., Ramkumar, K. M.  
2015; 91: 104-114
- **Syntheses and Discovery of a Novel Class of Cinnamic Hydroxamates as Histone Deacetylase Inhibitors by Multimodality Molecular Imaging in Living Subjects** *CANCER RESEARCH*  
CHAN, C. T., Qi, J., Smith, W., Paranol, R., Mazitschek, R., West, N., Reeves, R., Chiosis, G., Schreiber, S. L., Bradner, J. E., Paulmurugan, R., Gambhir, S. S.  
2014; 74 (24): 7475-7486
- **Noninvasive Reporter Gene Imaging of Human Oct4 (Pluripotency) Dynamics During the Differentiation of Embryonic Stem Cells in Living Subjects** *MOLECULAR IMAGING AND BIOLOGY*  
Ahn, B., Parashurama, N., Patel, M., Ziv, K., Bhaumik, S., Yaghoubi, S. S., Paulmurugan, R., Gambhir, S. S.  
2014; 16 (6): 865-876
- **Noninvasive reporter gene imaging of human Oct4 (pluripotency) dynamics during the differentiation of embryonic stem cells in living subjects.** *Molecular imaging and biology*  
Ahn, B., Parashurama, N., Patel, M., Ziv, K., Bhaumik, S., Yaghoubi, S. S., Paulmurugan, R., Gambhir, S. S.  
2014; 16 (6): 865-876
- **Dynamic Analysis of GH Receptor Conformational Changes by Split Luciferase Complementation** *MOLECULAR ENDOCRINOLOGY*  
Liu, Y., Berry, P. A., Zhang, Y., Jiang, J., Lobie, P. E., Paulmurugan, R., Langenheim, J. F., Chen, W. Y., Zinn, K. R., Frank, S. J.  
2014; 28 (11): 1807-1819
- **Molecular imaging of RRx-001-induced oxidative stress in Nrf2-luciferase expressing SCC VII tumors in mice**  
Ning, S., Sekar, T., Paulmurugan, R., Scicinski, J., Oronsky, B., Peehl, D., Knox, S. J.  
AMER ASSOC CANCER RESEARCH.2014
- **Correlation of plasma biomarker levels with early-stage tumor viability in an orthotopic ovarian cancer mouse model**  
Hori, S. S., Lutz, A. M., Paulmurugan, R., Gambhir, S. S.  
AMER ASSOC CANCER RESEARCH.2014
- **Monitoring antioxidant induced chemosensitization in triple negative breast cancer cells by Nrf2-luciferase fusion protein**  
Foygel, K., Sekar, T. V., Paulmurugan, R.  
AMER ASSOC CANCER RESEARCH.2014
- **Proteomic Identification of Pterostilbene-Mediated Anticancer Activities in HepG2 Cells.** *Chemical research in toxicology*  
Suganya, N., Bhakkialakshmi, E., Subin, T. S., Krishnamurthi, K., Devi, S. S., Lau, K., Sekar, T. V., Paulmurugan, R., Ramkumar, K. M.  
2014; 27 (7): 1243-1252
- **Quercetin ameliorates tunicamycin-induced endoplasmic reticulum stress in endothelial cells.** *Cell proliferation*  
Suganya, N., Bhakkialakshmi, E., Suriyanarayanan, S., Paulmurugan, R., Ramkumar, K. M.  
2014; 47 (3): 231-240
- **A titratable two-step transcriptional amplification strategy for targeted gene therapy based on ligand-induced intramolecular folding of a mutant human estrogen receptor.** *Molecular imaging and biology*  
Chen, I. Y., Paulmurugan, R., Nielsen, C. H., Wang, D. S., Chow, V., Robbins, R. C., Gambhir, S. S.  
2014; 16 (2): 224-234
- **Therapeutic potential of pterostilbene against pancreatic beta-cell apoptosis mediated through Nrf2.** *British journal of pharmacology*  
Bhakkialakshmi, E., Shalini, D., Sekar, T. V., Rajaguru, P., Paulmurugan, R., Ramkumar, K. M.  
2014; 171 (7): 1747-1757
- **In vivo effects of the pure aryl hydrocarbon receptor antagonist GNF-351 after oral administration are limited to the gastrointestinal tract** *BRITISH JOURNAL OF PHARMACOLOGY*  
Bhakkialakshmi, E., Shalini, D., Sekar, T. V., Rajaguru, P., Paulmurugan, R., Ramkumar, K. M.

2014; 171 (7): 1747-1757

- **Noninvasive Theranostic Imaging of HSV1-sr39TK-NTR/GCV-CB1954 Dual-Prodrug Therapy in Metastatic Lung Lesions of MDA-MB-231 Triple Negative Breast Cancer in Mice.** *Theranostics*

Sekar, T. V., Foygel, K., Ilovich, O., Paulmurugan, R.

2014; 4 (5): 460-474

- **Targeting SUMOylation cascade for diabetes management.** *Current drug targets*

Sireesh, D., Bhakkiyalakshmi, E., Ramkumar, K. M., Rathinakumar, S., Jennifer, P. S., Rajaguru, P., Paulmurugan, R.

2014; 15 (12): 1094-1106

- **Polymer nanoparticles for drug and small silencing RNA delivery to treat cancers of different phenotypes** *WILEY INTERDISCIPLINARY REVIEWS-NANOMEDICINE AND NANOBIO TECHNOLOGY*

Devulapally, R., Paulmurugan, R.

2014; 6 (1): 40-60

- **Polymer nanoparticles for drug and small silencing RNA delivery to treat cancers of different phenotypes.** *Wiley interdisciplinary reviews. Nanomedicine and nanobiotechnology*

Devulapally, R., Paulmurugan, R.

2014; 6 (1): 40-60

- **Targeting SUMOylation Cascade for Diabetes Management** *CURRENT DRUG TARGETS*

Sireesh, D., Bhakkiyalakshmi, E., Ramkumar, K. M., Rathinakumar, S., Jennifer, P. S., Rajaguru, P., Paulmurugan, R.

2014; 15 (12): 1094-1106

- **MicroRNAs - a new generation molecular targets for treating cellular diseases.** *Theranostics*

Paulmurugan, R.

2013; 3 (12): 927-9

- **Noninvasive imaging of hypoxia-inducible factor-1a gene therapy for myocardial ischemia.** *Human gene therapy methods*

Chen, I. Y., Gheysens, O., Li, Z., Rasooly, J. A., Wang, Q., Paulmurugan, R., Rosenberg, J., Rodriguez-Porcel, M., Willmann, J. K., Wang, D. S., Contag, C. H., Robbins, R. C., Wu, et al

2013; 24 (5): 279-288

- **Noninvasive imaging of hypoxia-inducible factor-1a gene therapy for myocardial ischemia.** *Human gene therapy methods*

Chen, I. Y., Gheysens, O., Li, Z., Rasooly, J. A., Wang, Q., Paulmurugan, R., Rosenberg, J., Rodriguez-Porcel, M., Willmann, J. K., Wang, D. S., Contag, C. H., Robbins, R. C., Wu, et al

2013; 24 (5): 279-288

- **H-PCV) Uptake Assay.** *Bio-protocol*

Sekar, T. V., Paulmurugan, R.

2013; 3 (17)

- **A c-Myc Activation Sensor-Based High-Throughput Drug Screening Identifies an Antineoplastic Effect of Nitazoxanide.** *Molecular cancer therapeutics*

Fan-Minogue, H., Bodapati, S., Solow-Cordero, D., Fan, A., Paulmurugan, R., Massoud, T. F., Felsher, D. W., Gambhir, S. S.

2013; 12 (9): 1896-1905

- **Reporter protein complementation imaging assay to screen and study nrf2 activators in cells and living animals.** *Analytical chemistry*

Ramkumar, K. M., Sekar, T. V., Foygel, K., Elango, B., Paulmurugan, R.

2013; 85 (15): 7542-7549

- **Dual-therapeutic reporter genes fusion for enhanced cancer gene therapy and imaging.** *Gene therapy*

Sekar, T. V., FOYGEL, K., Willmann, J. K., Paulmurugan, R.

2013; 20 (5): 529-537

- **The Impact of Oxidative Stress on Islet Transplantation and Monitoring the Graft Survival by Non-Invasive Imaging** *CURRENT MEDICINAL CHEMISTRY*

Ramkumar, K. M., Sekar, T. V., Bhakkiyalakshmi, E., Foygel, K., Rajaguru, P., Berger, F., Paulmurugan, R.

2013; 20 (9): 1127-1146

- **Real time dynamic imaging and current targeted therapies in the war on cancer: a new paradigm.** *Theranostics*  
Paulmurugan, R., Oronsky, B., Brouse, C. F., Reid, T., Knox, S., Scicinski, J.  
2013; 3 (6): 437-447
- **Therapeutic evaluation of microRNAs by molecular imaging.** *Theranostics*  
Sekar, T. V., Mohanram, R. K., Foygel, K., Paulmurugan, R.  
2013; 3 (12): 964-985
- **Therapeutic Evaluation of microRNAs by Molecular Imaging THERANOSTICS**  
Sekar, T. V., Mohanram, R. K., Foygel, K., Paulmurugan, R.  
2013; 3 (12): 953-974
- **A transgenic tri-modality reporter mouse.** *PLoS one*  
Yan, X., Ray, P., Paulmurugan, R., Tong, R., Gong, Y., Sathirachinda, A., Wu, J. C., Gambhir, S. S.  
2013; 8 (8)
- **Noninvasive imaging of hypoxia-inducible factor-1? gene therapy for myocardial ischemia** *Hum Gene Ther Methods.* 2013 Aug 12. [Epub ahead of print]  
LY, C.  
2013
- **FEASIBILITY OF AN INTRAMOLECULAR COMPLEMENTATION STRATEGY FOR SPLIT-REPORTER GENE IMAGING OF DRUGGABLE PROTEIN MISFOLDING IN BRAIN CANCER** *17th Annual Scientific Meeting and Education Day of the Society-for-Neuro-Oncology (SNO)*  
Massoud, T. F., Paulmurugan, R., Gambhir, S. S.  
OXFORD UNIV PRESS INC.2012: 11–11
- **Discovery and validation of small-molecule heat-shock protein 90 inhibitors through multimodality molecular imaging in living subjects** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Chan, C. T., Reeves, R. E., Geller, R., Yaghoubi, S. S., Hoehne, A., Solow-Cordero, D. E., Chiosis, G., Massoud, T. F., Paulmurugan, R., Gambhir, S. S.  
2012; 109 (37): E2476-E2485
- **Cationic versus Neutral Microbubbles for Ultrasound-mediated Gene Delivery in Cancer** *RADIOLOGY*  
Wang, D. S., Panje, C., Pysz, M. A., Paulmurugan, R., Rosenberg, J., Gambhir, S. S., Schneider, M., Willmann, J. K.  
2012; 264 (3): 721-732
- **Oxidative stress-mediated cytotoxicity and apoptosis induction by TiO2 nanofibers in HeLa cells** *EUROPEAN JOURNAL OF PHARMACEUTICS AND BIOPHARMACEUTICS*  
Ramkumar, K. M., Manjula, C., Gnanakumar, G., Kanjwal, M. A., Sekar, T. V., Paulmurugan, R., Rajaguru, P.  
2012; 81 (2): 324-333
- **Intratumoral versus Intravenous Gene Therapy Using a Transcriptionally Targeted Viral Vector in an Orthotopic Hepatocellular Carcinoma Rat Model** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*  
Kim, Y. I., Ahn, B., Ronald, J. A., Katzenberg, R., Singh, A., Paulmurugan, R., Ray, S., Gambhir, S. S., Hofmann, L. V.  
2012; 23 (5): 704-711
- **Noninvasive optical imaging of nitroreductase gene-directed enzyme prodrug therapy system in living animals** *GENE THERAPY*  
Bhaumik, S., Sekar, T. V., DEPUY, J., Klimash, J., Paulmurugan, R.  
2012; 19 (3): 295-302
- **Biodegradable polymer nanocarriers for therapeutic antisense microRNA delivery in living animals.** *Proceedings of SPIE*  
Paulmurugan R, Sekar NM, Sekar TV  
2012; 8232 (1) (Jan 21)
- **Introduction to Cancer Biology** *MOLECULAR IMAGING PROBES FOR CANCER RESEARCH*  
Paulmurugan, R.  
edited by Chen  
2012: 3–27
- **Biodegradable Polymer Nanocarriers for Therapeutic Antisense microRNA Delivery in Living Animals** *Conference on Colloidal Nanocrystals for Biomedical Applications VII*

Paulmurugan, R., Sekar, N. M., Sekar, T. V.  
SPIE-INT SOC OPTICAL ENGINEERING.2012

- **Therapeutic Evaluation of microRNAs by Molecular Imaging.** *Theranostics*  
Sekar TV, Ramkumar KM, Foygel K, Paulmurugan R  
2012: (in press)
- **Ultrasound-Mediated Gene Delivery with Cationic Versus Neutral Microbubbles: Effect of DNA and Microbubble Dose on In Vivo Transfection Efficiency** *THERANOSTICS*  
Panje, C. M., Wang, D. S., Pysz, M. A., Paulmurugan, R., Ren, Y., Tranquart, F., Tian, L., Willmann, J. K.  
2012; 2 (11): 1078-1091
- **Non-invasive Bioluminescence Imaging of Myoblast-Mediated Hypoxia-Inducible Factor-1 Alpha Gene Transfer** *MOLECULAR IMAGING AND BIOLOGY*  
Gheysens, O., Chen, I. Y., Rodriguez-Porcel, M., Chan, C., Rasooly, J., Vaerenberg, C., Paulmurugan, R., Willmann, J. K., Deroose, C., Wu, J., Gambhir, S. S.  
2011; 13 (6): 1124-1132
- **In Vitro and in Vivo Molecular Imaging of Estrogen Receptor alpha and beta Homo- and Heterodimerization: Exploration of New Modes of Receptor Regulation** *MOLECULAR ENDOCRINOLOGY*  
Paulmurugan, R., Tamrazi, A., Massoud, T. F., Katzenellenbogen, J. A., Gambhir, S. S.  
2011; 25 (12): 2029-2040
- **Potent, tumor-specific gene expression in an orthotopic hepatoma rat model using a Survivin-targeted, amplifiable adenoviral vector** *GENE THERAPY*  
Ahn, B., Ronald, J. A., Kim, Y. I., Katzenberg, R., Singh, A., Paulmurugan, R., Ray, S., Hofmann, L. V., Gambhir, S. S.  
2011; 18 (6): 606-612
- **Exploring Gaussia luciferase as a novel secretion system for eukaryotic protein delivery for bacteria-mediated cancer treatment**  
Vu Nguyen, Thuy Phan, Paulmurugan, R., Gambhir, S., Min, J.  
SOC NUCLEAR MEDICINE INC.2011
- **The Fate and Toxicity of Raman-Active Silica-Gold Nanoparticles in Mice** *SCIENCE TRANSLATIONAL MEDICINE*  
Thakor, A. S., Luong, R., Paulmurugan, R., Lin, F. I., Kempen, P., Zavaleta, C., Chu, P., Massoud, T. F., Sinclair, R., Gambhir, S. S.  
2011; 3 (79)
- **Imaging Cellular Receptors in Breast Cancers: An Overview** *CURRENT PHARMACEUTICAL BIOTECHNOLOGY*  
Sekar, T. V., Dhanabalan, A., Paulmurugan, R.  
2011; 12 (4): 508-527
- **Non-Invasive Imaging of Ferucarbotran Labeled INS-1E Cells and Rodent Islets in Vitro and in Transplanted Diabetic Rats** *CURRENT PHARMACEUTICAL BIOTECHNOLOGY*  
Auer, V. J., Bucher, J., Schremmer-Danninger, E., Paulmurugan, R., Maechler, P., Reiser, M. F., Stangl, M. J., Berger, F.  
2011; 12 (4): 488-496
- **Molecular Imaging in Current Pharmaceuticals** *CURRENT PHARMACEUTICAL BIOTECHNOLOGY*  
Paulmurugan, R.  
2011; 12 (4): 458-458
- **Oxidative Stress Mediates the Effects of Raman-Active Gold Nanoparticles in Human Cells** *SMALL*  
Thakor, A. S., Paulmurugan, R., Kempen, P., Zavaleta, C., Sinclair, R., Massoud, T. F., Gambhir, S. S.  
2011; 7 (1): 126-136
- **Noninvasive molecular imaging of c-Myc activation in living mice** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Fan-Minogue, H., Cao, Z., Paulmurugan, R., Chan, C. T., Massoud, T. F., Felsner, D. W., Gambhir, S. S.  
2010; 107 (36): 15892-15897
- **A molecularly engineered split reporter for imaging protein-protein interactions with positron emission tomography** *NATURE MEDICINE*  
Massoud, T. F., Paulmurugan, R., Gambhir, S. S.  
2010; 16 (8): 921-U123

- **Indirect imaging of cardiac-specific transgene expression using a bidirectional two-step transcriptional amplification strategy** *GENE THERAPY*  
Chen, I. Y., Gheysens, O., Ray, S., Wang, Q., Padmanabhan, P., Paulmurugan, R., Loening, A. M., Rodriguez-Porcel, M., Willmann, J. K., Sheikh, A. Y., Nielsen, C. H., Hoyt, G., Contag, et al  
2010; 17 (7): 827-838
- **Antioxidants Improve Early Survival of Cardiomyoblasts After Transplantation to the Myocardium** *MOLECULAR IMAGING AND BIOLOGY*  
Rodriguez-Porcel, M., Gheysens, O., Paulmurugan, R., Chen, I. Y., Peterson, K. M., Willmann, J. K., Wu, J. C., Zhu, X., Lerman, L. O., Gambhir, S. S.  
2010; 12 (3): 325-334
- **A Novel Estrogen Receptor Intramolecular Folding-based Titratable Transgene Expression System** *MOLECULAR THERAPY*  
Paulmurugan, R., Padmanabhan, P., Ahn, B., Ray, S., Willmann, J. K., Massoud, T. F., Biswal, S., Gambhir, S. S.  
2009; 17 (10): 1703-1711
- **Imaging Gene Expression in Human Mesenchymal Stem Cells: From Small to Large Animals** *RADIOLOGY*  
Willmann, J. K., Paulmurugan, R., Rodriguez-Porcel, M., Stein, W., Brinton, T. J., Connolly, A. J., Nielsen, C. H., Lutz, A. M., Lyons, J., Ikeno, F., Suzuki, Y., Rosenberg, J., Chen, et al  
2009; 252 (1): 117-127
- **Comparison of Optical Bioluminescence Reporter Gene and Superparamagnetic Iron Oxide MR Contrast Agent as Cell Markers for Noninvasive Imaging of Cardiac Cell Transplantation** *MOLECULAR IMAGING AND BIOLOGY*  
Chen, I. Y., Greve, J. M., Gheysens, O., Willmann, J. K., Rodriguez-Porcel, M., Chu, P., Sheikh, A. Y., Faranesh, A. Z., Paulmurugan, R., Yang, P. C., Wu, J. C., Gambhir, S. S.  
2009; 11 (3): 178-187
- **Molecular Imaging of Phosphorylation Events for Drug Development** *MOLECULAR IMAGING AND BIOLOGY*  
CHAN, C. T., Paulmurugan, R., Reeves, R. E., Solow-Cordero, D., Gambhir, S. S.  
2009; 11 (3): 144-158
- **Uptake kinetics and biodistribution of C-14-D-luciferin-a radiolabeled substrate for the firefly luciferase catalyzed bioluminescence reaction: impact on bioluminescence based reporter gene imaging** *EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING*  
Berger, F., Paulmurugan, R., Bhaumik, S., Gambhir, S. S.  
2008; 35 (12): 2275-2285
- **Noninvasive Imaging of Therapeutic Gene Expression Using a Bidirectional Transcriptional Amplification Strategy** *MOLECULAR THERAPY*  
Ray, S., Paulmurugan, R., Patel, M. R., Ahn, B. C., Wu, L., Carey, M., Gambhir, S. S.  
2008; 16 (11): 1848-1856
- **Dual-targeted contrast agent for US assessment of tumor angiogenesis in vivo** *RADIOLOGY*  
Willmann, J. K., Lutz, A. M., Paulmurugan, R., Patel, M. R., Chu, P., Rosenberg, J., Gambhir, S. S.  
2008; 248 (3): 936-944
- **The death domain-containing kinase RIP1 regulates p27(Kip1) levels through the PI3K-Akt-forkhead pathway** *EMBO REPORTS*  
Park, S., Ramnarain, D. B., Hatanpaa, K. J., Mickey, B. E., Saha, D., Paulmurugan, R., Madden, C. J., Wright, P. S., Bhai, S., Ali, M. A., Puttapparthi, K., Hu, W., Elliott, et al  
2008; 9 (8): 766-773
- **A human estrogen receptor (ER)alpha mutation with differential responsiveness to nonsteroidal ligands: Novel approaches for studying mechanism of ER action** *MOLECULAR ENDOCRINOLOGY*  
Paulmurugan, R., Tamrazi, A., Katzenellenbogen, J. A., Katzenellenbogen, B. S., Gambhir, S. S.  
2008; 22 (7): 1552-1564
- **Molecular Imaging of Hypoxia-Inducible Factor 1 alpha and von Hippel-Lindau Interaction in Mice** *MOLECULAR IMAGING*  
Choi, C. Y., Chau, D. A., Paulmurugan, R., Sutphin, P. D., Le, Q., Koong, A. C., Zundel, W., Gambhir, S. S., Giaccia, A. J.  
2008; 7 (3): 139-146
- **Monitoring of the biological response to murine Hindlimb ischemia with Cu-64-labeled vascular endothelial growth factor-121 positron emission tomography** *CIRCULATION*

Willmann, J. K., Chen, K., Wang, H., Paulmurugan, R., Rollins, M., Cai, W., Wang, D. S., Chen, I. Y., Gheysens, O., Rodriguez-Porcel, M., Chen, X., Gambhir, S. S.

2008; 117 (7): 915-922

- **RIP1 links inflammatory and growth factor signaling pathways by regulating expression of the EGFR** *CELL DEATH AND DIFFERENTIATION*  
Ramnarain, D. B., Paulmurugan, R., Park, S., Mickey, B. E., Asaithamby, A., Saha, D., Kelliher, M. A., Mukhopadhyay, P., Banani, F., Madden, C. J., Wright, P. S., CHAKRAVARTY, S., Habib, et al  
2008; 15 (2): 344-353
- **US imaging of tumor angiogenesis with microbubbles targeted to vascular endothelial growth factor receptor type 2 in mice** *RADIOLOGY*  
Willmann, J. K., Paulmurugan, R., Chen, K., Gheysens, O., Rodriguez-Porcel, M., Lutz, A. M., Chen, I. Y., Chen, X., Gambhir, S. S.  
2008; 246 (2): 508-518
- **Molecular imaging of the efficacy of heat shock protein 90 inhibitors in living subjects** *CANCER RESEARCH*  
Chan, C. T., Paulmurugan, R., Gheysens, O. S., Kim, J., Chiosis, G., Gambhir, S. S.  
2008; 68 (1): 216-226
- **Combinatorial library screening for developing an improved split-firefly luciferase fragment-assisted complementation system for studying protein-protein interactions** *ANALYTICAL CHEMISTRY*  
Paulmurugan, R., Gambhir, S. S.  
2007; 79 (6): 2346-2353
- **Reporter gene imaging of protein-protein interactions in living subjects** *CURRENT OPINION IN BIOTECHNOLOGY*  
Massoud, T. F., Paulmurugan, R., De, A., Ray, P., Gambhir, S. S.  
2007; 18 (1): 31-37
- **Antibacterial activity of subterranean termites used in South Indian folk medicine.** *Indian Journal of Traditional Knowledge*  
Solavan A, Paulmurugan R, Wilsanand V  
2007; 6(4) (Oct): 559-562
- **Noninvasive monitoring of ligand-dependent VEGF receptor-2 dimerization with split firefly luciferase** *49th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*  
Lee, P., Chan, C., Hua, A., Paulmurugan, R., Chan, D., Gambhir, S., Le, Q., Giaccia, A.  
ELSEVIER SCIENCE INC.2007: S96-S97
- **An intramolecular folding sensor for imaging estrogen receptor-ligand interactions** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Paulmurugan, R., Gambhir, S. S.  
2006; 103 (43): 15883-15888
- **Visualization of telomerase reverse transcriptase (hTERT) promoter activity using a trimodality fusion reporter construct** *JOURNAL OF NUCLEAR MEDICINE*  
Padmanabhan, P., Otero, J., Ray, P., Paulmurugan, R., Hoffman, A. R., Gambhir, S. S., Biswal, S., Ulaner, G. A.  
2006; 47 (2): 270-277
- **Split luciferase complementation assay for studying interaction of proteins x and y in living mice.** *CSH Protoc*  
Paulmurugan R, Ray P, De A, Chan CT, Gambhir SS  
2006; Nov1(6) (10.1101/): pdb.prot4596
- **Split luciferase complementation assay for studying interaction of proteins x and y in cells.** *CSH protocols*  
Paulmurugan, R., Ray, P., De, A., Chan, C. T., Gambhir, S. S.  
2006; 2006 (6)
- **Split luciferase complementation assay for studying interaction of proteins x and y in living mice.** *CSH protocols*  
Paulmurugan, R., Ray, P., De, A., Chan, C. T., Gambhir, S. S.  
2006; 2006 (6)
- **Molecular imaging of HIF-1 alpha and pVHL interaction in living subjects using firefly luciferase complementation - Improvement over the Renilla luciferase system** *48th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*  
Choi, C. Y., Paulmurugan, R., Chan, D. A., Sutphin, P. D., Le, Q., Koong, A., Gambhir, S. S., Giaccia, A. J.  
ELSEVIER SCIENCE INC.2006: S48-S49

- **Effect of the subterranean termite used in the South Indian folk medicine.** *Indian Journal of Traditional Knowledge*  
Solavan A, Paulmurugan R, Wilsanand V  
2006; 5(3) (Jul): 376-9
- **Split luciferase complementation assay for studying interaction of proteins x and y in cells.** *CSH Protoc*  
Paulmurugan R, Ray P, De A, Chan CT, Gambhir SS  
2006; Nov1;(6) (10.1101/): pdb.prot4596
- **Effects of epigenetic modulation on reporter gene expression: implications for stem cell imaging.** *FASEB journal*  
Krishnan, M., Park, J. M., Cao, F., Wang, D., Paulmurugan, R., Tseng, J. R., Gonzalgo, M. L., Gambhir, S. S., Wu, J. C.  
2006; 20 (1): 106-108
- **Effects of epigenetic modulation on reporter gene expression: implications for stem cell imaging** *FASEB JOURNAL*  
Krishnan, M., Park, J. M., Cao, F., Wang, D. X., Paulmurugan, R., Tseng, J. R., Gonzalgo, M. L., Gambhir, S. S., Wu, J. C.  
2005; 19 (12): 106-?
- **Novel fusion protein approach for efficient high-throughput screening of small molecule-mediated protein-protein interactions in cells and living animals** *CANCER RESEARCH*  
Paulmurugan, R., Gambhir, S. S.  
2005; 65 (16): 7413-7420
- **Imaging protein-protein interactions in living subjects** *TRAC-TRENDS IN ANALYTICAL CHEMISTRY*  
Paulmurugan, R., Ray, P., De, A., CHAN, C. T., Gambhir, S. S.  
2005; 24 (5): 446-458
- **Firefly luciferase enzyme fragment complementation for imaging in cells and living animals** *ANALYTICAL CHEMISTRY*  
Paulmurugan, R., Gambhir, S. S.  
2005; 77 (5): 1295-1302
- **Imaging protein-protein interactions in living subjects.** *TRAC: Trends in Analytical Chemistry*  
Paulmurugan R, Ray P, De A, Chan C, Gambhir SS  
2005; 24(5): 446-458
- **Molecular imaging of HIF-1 alpha and pVHL interaction in vivo: The study of structure/function relationship guiding HIF-1 alpha and pVHL** *47th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology*  
Choi, C. Y., Paulmurugan, R., Ghambir, S., Koong, A. C., Le, Q. T., Giaccia, A. J.  
ELSEVIER SCIENCE INC.2005: S133-S134
- **Novel bidirectional vector strategy for amplification of therapeutic and reporter gene expression** *HUMAN GENE THERAPY*  
Ray, S., Paulmurugan, R., Hildebrandt, I., Iyer, M., Wu, L., Carey, M., Gambhir, S. S.  
2004; 15 (7): 681-690
- **Molecular imaging of homodimeric protein-protein interactions in living subjects.** *FASEB journal*  
Massoud, T. F., Paulmurugan, R., Gambhir, S. S.  
2004; 18 (10): 1105-1107
- **Molecular imaging of homodimeric protein-protein interactions in living subjects** *FASEB JOURNAL*  
Massoud, T. F., Paulmurugan, R., Gambhir, S. S.  
2004; 18 (7): 1105-?
- **MicroPET imaging of Cre-loxP-mediated conditional activation of a herpes simplex virus type 1 thymidine kinase reporter gene** *GENE THERAPY*  
Sundaresan, G., Paulmurugan, R., Berger, F., Stiles, B., Nagayama, Y., Wu, H., Gambhir, S. S.  
2004; 11 (7): 609-618
- **Molecular imaging of drug-modulated protein-protein interactions in living subjects** *CANCER RESEARCH*  
Paulmurugan, R., Massoud, T. F., Huang, J., Gambhir, S. S.  
2004; 64 (6): 2113-2119
- **Impact of physico-chemical parameters on the microbial population and its nature in a major retting zone of Kerala, S. India.** *International Journal of Environmental Studies, UK*

Paulmurugan R, Thomas S, Nair SC, Das MR  
2004; 61(5): 595-597

- **Traditional therapeutic uses of animals among tribal population of Tamil Nadu.** *Indian Journal of Traditional Knowledge*  
Solavan A, Paulmurugan R, Wilsanand V, Ranjith Sing AJA  
2004; 3(2) (Apr): 198-205
- **Loss of expression, and mutations of Smad 2 and Smad 4 in human cervical cancer** *ONCOGENE*  
Maliekal, T. T., Antony, M. L., Nair, A., Paulmurugan, R., Karunagaran, D.  
2003; 22 (31): 4889-4897
- **Monitoring protein-protein interactions using split synthetic renilla luciferase protein-fragment-assisted complementation** *ANALYTICAL CHEMISTRY*  
Paulmurugan, R., Gambhir, S. S.  
2003; 75 (7): 1584-1589
- **Noninvasive imaging of protein-protein interactions in living subjects by using reporter protein complementation and reconstitution strategies** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Paulmurugan, R., Umezawa, Y., Gambhir, S. S.  
2002; 99 (24): 15608-15613
- **Noninvasive quantitative imaging of protein-protein interactions in living subjects** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Ray, P., Pimenta, H., Paulmurugan, R., Berger, F., Phelps, M. E., Iyer, M., Gambhir, S. S.  
2002; 99 (5): 3105-3110
- **Simple radioactive assay for the estimation of DNA breaks** *JOURNAL OF APPLIED TOXICOLOGY*  
Nair, R. S., Paulmurugan, R., Singh, A. J.  
2002; 22 (1): 19-23
- **Distribution of HCH residues in the Kuttanad wetland ecosystem of Kerala.** *Inter. J. Ecology and Environmental Science*  
Harikrishnan K, George S, Thomas S, Paulmurugan R, Das MR  
2001; 7(1): 105-109
- **Studies on the water quality of Kuttanad wetland ecosystem of Kerala.** *Pollution Research*  
Thomas S, Harikrishnan K, George S, Paulmurugan R, Das MR  
2001; 20(1) (62): 138-148
- **Duplex RT-PCR for simultaneous detection of hepatitis A and hepatitis E virus isolated from drinking water samples** *JOURNAL OF ENVIRONMENTAL MONITORING*  
Jothikumar, N., Paulmurugan, R., Padmanabhan, P., Sundari, R. B., Kamatchiammal, S., Rao, K. S.  
2000; 2 (6): 587-590
- **Pollution and infectious diseases.** *Science, India*  
Thomas S, Paulmurugan R  
2000; 3: 39-42
- **Drinking water quality status of Kottarakara area, Kollam District, Kerala.** *Indian J. Environ. & Ecoplanning*  
Thomas S, Nair SC, Paulmurugan R  
2000; 3(1): 143-145
- **Spatio temporal distribution and ecology of benthos in the Kuttanad wetland ecosystem.** *Pollution Research*  
Thomas S, George S, Harikrishnan K, Paulmurugan R, Mundayoor S, Das MR  
1999; 18(3): 235-243
- **A study on the distribution and ecology of phytoplankton in the Kuttanad wetland ecosystem, Kerala.** *Pollution Research*  
Harikrishnan K, Thomas S, George S, Paulmurugan R, Mundayoor S, Das MR  
1999; 18(3): 261-269
- **Distribution of heavy metals in Kuttanad wetland ecosystem of Kerala, India.** *Inter. J. Ecology and Environmental Science*  
George S, Harikrishnan K, Thomas S, Paulmurugan R, Mundayoor S, Das MR

1999; 25: 91-95

- **Membrane-impregnated probe for simultaneous PCR amplification and detection** *WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY*  
Jothikumar, N., Khanna, P., Paulmurugan, R., Padmanabhan, P.  
1998; 14 (6): 933-934
- **Analysis of human immune response to potential hepatitis C viral epitopes.** *Acta Virologica*  
Khanna A, Poduri CD, Paulmurugan R, Kumar S, Sugunan VS, Shenoy KT, Das MR  
1998; 42: 141-145
- **Membrane impregnated probe for simultaneous PCR amplification and detection.** *World Journal of Microbiology and Biotechnology*  
Jothikumar N, Khanna P, Paulmurugan R, Padmanabhan P  
1998; 14: 933-934
- **A SIMPLE DEVICE FOR THE CONCENTRATION AND DETECTION OF ENTEROVIRUS, HEPATITIS-E VIRUS AND ROTAVIRUS FROM WATER SAMPLES BY REVERSE TRANSCRIPTION-POLYMERASE CHAIN-REACTION** *JOURNAL OF VIROLOGICAL METHODS*  
Jothikumar, N., Khanna, P., Paulmurugan, R., Kamatchiammal, S., Padmanabhan, P.  
1995; 55 (3): 401-415
- **Concentration and detection of rota virus in water samples using polymerase chain reaction during a gastroenteries epidemic outbreak in Madras city.** *International Journal of Environmental Studies*  
Jothikumar N, Khanna P, Kamatchiammal S, Paulmurugan R, Saravanadevi S, Padmanabhan P, Kuganandham P  
1994; 46: 323-327
- **DETECTION OF HEPATITIS-E VIRUS IN RAW AND TREATED WASTE-WATER WITH THE POLYMERASE CHAIN-REACTION** *APPLIED AND ENVIRONMENTAL MICROBIOLOGY*  
Jothikumar, N., Aparna, K., Kamatchiammal, S., Paulmurugan, R., Saravanadevi, S., Khanna, P.  
1993; 59 (8): 2558-2562
- **Rapid detection of waterborne viruses using the polymerase chain reaction and a gene probe.** *Intervirolgy*  
Jothikumar N, Khanna P, Kamatchiammal S, Paulmurugan R  
1991; 34: 184-191