

Stanford



Uday Kumar Sukumar

Postdoctoral Research Fellow, Radiology

CONTACT INFORMATION

- **Alternate Contact**

UDAY KUMAR

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Bio

BIO

With an interdisciplinary background of nano-science and biotechnology, my research interest lies in exploring nano-enabled approaches for targeted delivery of microRNA therapeutics and suicide genes to cancer cells (Hepatocarcinoma or Glioblastoma). Synonymous to the quote "seeing is believing", I go a step further to combine these therapeutic approaches with diagnostic nano-materials (hybrid metal/metal oxide nano-particles and carbon dots) and dyes to track and image spatio-temporal therapeutic response of tumor. In short, formulation and assessment of theragnostic nano-material is the crux of my research.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Indian Institute of Technology, Roorkee (2017)
- Master of Technology, Indian Institute of Technology, Roorkee (2012)
- Bachelor of Technology, Anna University (2010)

STANFORD ADVISORS

- Ramasamy Paulmurugan, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **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
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- **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*
Je Bose, R., Uday 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
- **Synthesis and bio-evaluation of xylan-5-fluorouracil-1-acetic acid conjugates as prodrugs for colon cancer treatment** *CARBOHYDRATE POLYMERS*
Sauraj, Kumar, S., Gopinath, P., Negi, Y.

2017; 157: 1442–50

- **Multifunctional carbon dots as efficient fluorescent nanotags for tracking cells through successive generations** *JOURNAL OF MATERIALS CHEMISTRY B*
Bhushan, B., Kumar, S., Gopinath, P.
2016; 4 (28): 4862–71
- **Bioactive Core-Shell Nanofiber Hybrid Scaffold for Efficient Suicide Gene Transfection and Subsequent Time Resolved Delivery of Prodrug for Anticancer Therapy** *ACS APPLIED MATERIALS & INTERFACES*
Sukumar, U., Packirisamy, G.
2015; 7 (33): 18717–31
- **Controlled delivery of bPEI-nicosamide complexes by PEO nanofibers and evaluation of its anti-neoplastic potentials** *COLLOIDS AND SURFACES B-BIOINTERFACES*
Kumar, S., Gopinath, P.
2015; 131: 170–81