

Researcher Information Form

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Research Interest (1-2 Sentences):

- 1) Development of engineered microbiota to treat cancers as well as facilitate early detection of cancer through liquid biopsy and nuclear imaging.
- 2) Explore combination strategies to treat and monitor cancers through synergistic action of conventional drugs with radiopharmaceuticals.

Unique Resources/Techniques:

Radiochemistry, bioconjugation, Nuclear Imaging, Microbial engineering, Integrated cell imaging multi modal plate reader

Representative Publications (5 Maximum, May use Hyperlink):

Kotagiri N, Cooper ML, Rettig M, Egbulefu C, Prior J, Cui G, Karmakar P, Zhou M, Yang X, Sudlow G, Marsala L, Chanswangphuwana C, Lu L, Habimana-Griffin L, Shokeen M, Xu X, Weilbaecher K, Tomasson M, Lanza G, DiPersio JF, Achilefu S. Radionuclides transform chemotherapeutics into phototherapeutics for precise treatment of disseminated cancer. *Nat Commun*. 2018 Jan 18;9(1):275.

Kotagiri N, Sudlow GP, Akers WJ, Achilefu S. Breaking the depth dependency of phototherapy with Cerenkov radiation and low-radiance-responsive nanophotosensitizers. *Nat Nanotechnol*. 2015 Apr;10(4):370-9.

Kotagiri N, Niedzwiedzki DM, Ohara K, Achilefu S. Activatable probes based on distance-dependent luminescence associated with Cerenkov radiation. *Angew Chem Int Ed Engl*. 2013 Jul 22;52(30):7756-60. PubMed PMID: 23765506; PubMed Central PMCID: PMC3891931.

Kotagiri N, Li Z, Xu X, Mondal S, Nehorai A, Achilefu S. Antibody quantum dot conjugates developed via copper-free click chemistry for rapid analysis of biological samples using a microfluidic microsphere array system. *Bioconjug Chem*. 2014 Jul 16;25(7):1272-81.