



Education

B.S. Chemical Engineering, 2017, Drexel University

Ph.D Materials Science and Engineering, 2024, University of Delaware

Areas of Expertise

- Cell & Tissue Engineering
- Drug Delivery & Nanomedicine

Research Areas

- Hydrogel synthesis and engineering
- Nanomedicine
- Protein and small molecule delivery
- Microgel fabrication via flow-focusing microfluidics

Areas of Special Interest

Dr. Palmese's research focuses on developing and engineering hybrid hydrogel systems for the controlled delivery of multiple therapeutic species including small molecules and growth factors. A focus of her research is engineering and characterizing synthetic matrices that are capable of protecting and releasing therapeutic cargo in a defined manner. Taking advantage of strategies such as click-chemistry, solid-phase peptide synthesis, and synthesis of liposomal drug carriers, she engineers both bulk hydrogels and microgels capable of delivering cargo for eventual application in areas such as vascular disease, cancer, and wound healing,

Selected Publications

LL Palmese, M Fan, RA Scott, H Tan, KL Kiick, Multi-stimuli-responsive, liposome-crosslinked poly(ethylene glycol) hydrogels for drug delivery, *Journal of Biomaterials Science Polymer Edition*, **2021**, 32, 635-656.

LL Palmese, RK Thapa, MO Sullivan, K.L. Kiick, Hybrid hydrogels for biomedical applications, *Current Opinion in Chemical Engineering*, **2019**, 24, 143-157

LL Palmese, PJ LeValley, L Pradhan, AL Parsons, JS Oakey, M Abraham, SM D'Addio, AM Kloxin, Y Liang, KL Kiick, Injectable liposome-containing click hydrogel microparticles for release of macromolecular cargos, *Soft Matter*, **2024**, 20, 1736-1745.