



Kvar Black



Dominic Fullenkamp

Kvar Black and **Dominic Fullenkamp** have received **Ruth M Kirschstein** NRSA Predoctoral Fellowships to support their PhD research.

This project seeks to anchor cancer targeting structures to metallic nanoparticles with biomimetic adhesive peptides to create dual-modal agent for diagnostic contrast imaging and photothermal ablation of oral squamous cell carcinoma. Potentially, oral surgeons could identify and destroy malignant, metastatic cells with a single microendoscopic optical system.

Kvar's study is entitled "Targeting metastatic oral cancer with dual-modal metallic nanoparticles" and involves the design of gold nanorods capable of both imaging and hyperthermally treating oral squamous cell carcinoma.

Dominic's project is entitled "Mussel-inspired self-healing hydrogels for vascular tissue repair" and involves fundamental mechanochemical studies of mussel byssal thread self-healing mechanisms and the design of synthetic polymer mimics of these proteins.