CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP130702

Project Title:
Noninvasive skin cancer diagnosis using multi-modal spectroscopy

Award Mechanism:
Individual Investigator

Principal Investigator:
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Entity:
The University of Texas at Austin

Lay Summary:

The current diagnosis and study of skin cancer is problematic as it depends on surgical excision. Millions of biopsies are performed every year on benign skin lesions, and limited physician access causes a delay in melanoma diagnosis and treatment. Clinical research on skin cancer treatment is difficult, since a surgical biopsy will often change the course of lesion progression. We propose to fundamentally change the diagnosis and treatment of skin cancer by developing a quick, noninvasive “optical biopsy” device that images the biology of the tumor itself. This would place a screening tool for skin cancer where one currently does not exist, akin to a mammogram for breast cancer. This device could be used clinically to decide treatment course and allow researchers to monitor a tumors’ response to medical treatment in vivo. Ultimately, this device would save lives through early detection and reduce cost and morbidity by avoiding unnecessary biopsy.