



## CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:  
R1007

Project Title:  
Recruitment of First-Time, Tenure-Track Faculty Members

Award Mechanism:  
Recruitment of First-Time, Tenure-Track Faculty Members

Principal Investigator:  
Qin, Lidong

Entity:  
The Methodist Hospital Research Institute

### Lay Summary:

Prostate cancer represents the most prevalent male malignancy and ranks the second most frequent cause of cancer death, after lung cancer, in the US. Despite its high incidence and prevalence, many uncertainties related to prostate cancer diagnosis and management still remain. There is mounting evidence that a substantial proportion of men with screen-detected prostate cancer would otherwise have not known about the disease during their life in the absence of screening. In these men cancer treatment may not be beneficial. Here at Texas, we are developing lab-on-a-chip devices that are proposed to do the malignancy assessment on prostate biopsy samples. Each chip contains 10,000 tiny chambers and dozens of micron sized protein measurement barcodes under each chamber. Samples will be loaded up into the micro-chip and molecular level information from each individual cell will be recorded. The data is analyzed by computer programs and statistic results tell the stage of a patient's disease. This study will provide insights into prostate cancer at different disease stages and yield understanding of the molecular networks involved in the disease to facilitate prostate cancer prevention and treatment.