

# The Office of Technology Management

UNIVERSITY OF TEXAS  ARLINGTON

Tech ID: UTA 07-35

## Apparatus for Guidance of Laparoscopic Procedures

INVENTOR: Dr. Hanli Liu

### TECHNOLOGY NEED

According to American Cancer Society, it is estimated that about 250,000 new cases of prostate cancer are diagnosed every year in the United States. It is the most commonly diagnosed non-skin cancer and the second leading cause of cancer death. Too many times this disease calls for organ removal; a surgery that has drastic side effects. An added risk to this procedure, and to other surgical procedures that remove cancerous tissue, is that removal of the tumors can be hindered by a clinician's inability to distinguish between cancerous and healthy tissue. Thus, another procedure is required to remove the remaining affected tissue.

### INVENTION DESCRIPTION/SOLUTION

UTA researchers have developed an optical sensing system that allows clinicians to more effectively differentiate between healthy and cancerous tissue during an operation. This should decrease positive surgical margins, or the amount of times that a single patient must go under the knife. This sensing system can also be used to direct other laparoscopic surgical procedures, such as a cholecystectomy.

### APPLICATIONS

- Laparoscopic Surgery
- Cancer Treatment

### KEY BENEFITS

- Increases clinician's ability to differentiate between healthy and cancerous tissue
- Guides laparoscopic surgery
- Decreases patient risk by decreasing surgical margins
- Increases surgeon's precision during operation

### STAGE OF DEVELOPMENT

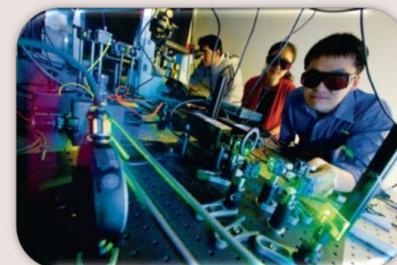
Prototyped and Tested

### INTELLECTUAL PROPERTY STATUS

Granted: US8649849 B2

### PUBLICATION

Livingston, Edward H., et al. "In vivo spectroscopic characterization of porcine biliary tract tissues: first step in the development of new biliary tract imaging devices." *Annals of biomedical engineering* 37.1 (2009): 201-209.



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