



UNIVERSITY OF  
**TEXAS**  
ARLINGTON

OFFICE OF TECHNOLOGY  
MANAGEMENT

## Batteryless Endoluminal Sensing Telemeter (BEST™)

UTA (07-06)

### Technology Need:

According to recent findings, 60% of the adult population will experience acid reflux, also known as gastroesophageal reflux disease (GERD), within a 12 month period and 20-30% will have weekly symptoms. Current diagnosis of GERD requires transnasal insertion of a catheter with electrodes connected to an external power supply into the patient's esophagus. This method is not only bulky but is known to cause discomfort to patients. A miniature wireless device that does not require a tethered connection is therefore preferred.

### Solution/ Offering:

To address this issue, researchers at UT Arlington have developed a Batteryless Endoluminal Sensing Telemeter (BEST), a wireless, battery-free sensor able to give readings almost instantaneously using radio frequency identification (RFID) technology. Due to its unique properties, BEST allows a comfortable, safe, cost-effective, disposable yet accurate screening method for clinical practice in diagnosis of GERD and distinguishing between the reflux of acidic and non acidic material.



### Value Proposition:

- ✓ Battery-less
- ✓ Wireless
- ✓ Small in size
- ✓ Better accuracy
- ✓ Biocompatible packaging: no rejection for human body
- ✓ Miniaturization
- ✓ Longer implantation
- ✓ Comfortable for patients

### Industrial application:

- ✓ GERD screening

### Patent Status:

- ✓ Licensing Available
- ✓ [US20080234599](#)

### Current Stage:

- ✓ Prototype



### Meet the Inventor



Dr. Chiao is a Professor in the Department of Electrical Engineering, UT Arlington. Chiao is a prime example of a Renaissance man: His interests and expertise span a wide spectrum of research activities and artistic pursuits – esophageal reflux, MEMS, children's books, wireless devices, optical fibers, paper cutting, pain management, classical music, millimeter-wave sensors, engineering education, and more.

### Contacts:

Rakesh V. Pandit  
202 E. Border Street, Suite 102  
Arlington, TX 76019  
P 817.272.1132  
F 817.272.5808

[rpandit@uta.edu](mailto:rpandit@uta.edu)  
[otm@uta.edu](mailto:otm@uta.edu)