

## **RIMS FINAL REPORT of 12/15/01**

**ID: ER62280**

### **TITLE: Establishment of the Center for Biomedical Technology Innovation**

#### **Orthopedic Devices**

The development of a knee prototype that would allow more flex and rotation has been delayed at this time until additional funding can be found for design modifications and additional testing. Potential orthopedic manufacturers are still being sought for this project.

The Patellar Alignment and Cutting Guide and Zero Retrofit, on the other hand, have received US patents (see attached), have been used successfully in clinical trials, and we are presently in negotiations with an orthopedic manufacturing company for the sale of these devices.

#### **Hybrid Vector and Method Resulting in Protein Overproduction by Eukaryotic Cells**

The two patent holders of this process are academicians at the Louisiana State University Health Sciences Center-Shreveport. After an initial favorable market analysis, a license to further develop this patent was obtained. Most recently, an updated and more in-depth market analysis, including the evaluation of starting a new start-up company to manufacture and sell the product, has been requested. Assuming favorable results, production of a few milligrams of FGF will be distributed to pharmaceutical companies for assessment.

#### **Surgical Simulator**

Plans to develop and patent this device have not begun and future development will be outside the realm of CBTI.

#### **CBTI as an Incubator for Start-Up Companies**

The Center for Biomedical Technology Innovation is evolving into a regional incubator for attracting new businesses to the area. It has been the start-up temporary location for two (2) new business brought to the area by the Biomedical Research Foundation thus far. Three (3) other new start-ups companies are presently located in the Incubator facility. Plans/-renovations are presently underway to add a wet lab facility as another incubator facility to attract even more businesses to our region to create jobs and economic growth.

DOE Patent Clearance Granted

*MP Dvorscak*

*Feb 4 2002*  
Date

Mark P. Dvorscak

(630) 252-2393

E-mail: mark.dvorscak@ch.doe.gov

Office of Intellectual Property Law

DOE Chicago Operations Office

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Innovation****Voice-activated, computer-assisted surgical robotics**

Robotics in the operating room project continues to be one of the great successes of CBTI. The FDA Clinical Cholecystectomy Trials with Celeste M. Hollands, MD, Chief of Pediatric Surgery at Louisiana State University Health Sciences Center – Shreveport as the Principal Investigator, began with our first patient on February 20, 2001 – the very first human case ever performed! To-date, six (6) cases have been completed with additional patients still being sought.

New interest in medical robotics continues to grow. The Urology department at LSUHSC-Shreveport is nearing completion of their ureteroureterostomy study in pigs and additional protocols are being determined. The Cardiothoracic, Oral and Maxillofacial, Otolaryngology, Head/Neck, and Radiology Departments, as well as medical residents and students, are training on ZEUS and developing additional procedures and new protocols for robotic use. Dr. Hollands continues her ongoing research in the field of pediatrics.

Articles (newspaper and journal) and abstracts pertaining to robotic studies are attached.

**Through transmission ultrasonic 3-D holography for diagnostic imaging**

Although CBTI was not the recipient of the Susan B. Komen Foundation grant, announced in September 2000, Advanced Diagnostics, Inc. continues its second phase of investigations – early detection of breast cancer.

**CBTI's Scibermed™ Virtual Institute (SVI)**

Commercial sponsors and partners continue to be sought for this ComputerWorld/-Smithsonian Institute award winning Internet site. One potential international partnership was lost due to the recent downtrend of all Internet companies. Additional merge/partner/buy-out discussions for commercialization have been held but at the present time no proposals are pending.

**Laser Oxygenation Tomography**

Due to a series of unfortunate events, this project has been delayed. A private corporation recruited the post-doctoral fellow and the computer-interface programmer, who had further advanced the project. In addition, one of the Principal Investigators had a serious illness that kept him from participating on the project for several months. Other academicians need to be recruited to perform some of the basic science benchwork and as well as additional funding is required to continue this project.