

**Overview**

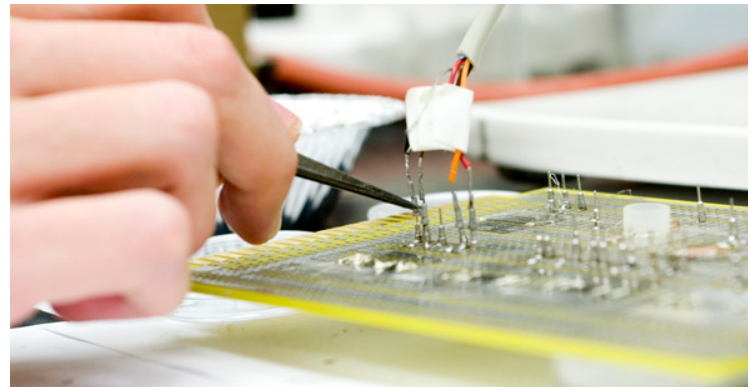
The Office of Technology Commercialization (OTC) completed its third full year of operations. The personnel, tools and processes to manage UT Dallas innovations are well established, and the OTC’s overarching objectives are being met.

These include:

- Evaluating, managing and transferring commercially viable technologies to the market
- Facilitating the creation of UTD startups
- Establishing long-term, collaborative and mutually beneficial relationships with UTD researchers, investors and industry partners through a customer-centric, responsive and flexible operating philosophy
- Assisting in attracting funding for translational research at UTD

The results of OTC’s activities since its inception in April 2008 include:

- 201 new inventions disclosed
- 23 patents issued
- 21 licenses
- 11 new companies formed
  - ◊ More than \$20 million in startup capital raised
  - ◊ \$2.9 million in sponsored research to UTD from startups
  - ◊ 50+ jobs created



**The UT Dallas Venture Development Center**

Given the University’s strong focus on creating new companies, and the need to proactively assist the launch and growth of UT Dallas spinoffs, the OTC led the creation of the UT Dallas Venture Development Center in 2011. The Venture Development Center, completed in August 2011, is a state-of-the-art business incubator that currently houses spinoff companies that are based on UT Dallas technology. The 8,200 square foot facility, located next to campus, provides offices, lab space, central facilities and services to 10 high-growth startups currently housed in the Center.

Venture Development Center staff and its Advisory Board of experienced entrepreneurs and investors team with OTC staff and faculty of the Institute for Innovation and Entrepreneurship to provide mentoring, accounting services, entrepreneurial education, showcase opportunities and connectivity to investors and professional service providers.

**Year-end Statistics With Comparison to Prior Years (Table 1)**

Metric	FY08	FY09	FY10	FY11
Invention Disclosures	28	53	64	49
Patents Applications Filed	26	44	38	47
Patents Issued	3	5	5	10
Licenses	1	4	8	8
Licenses Revenue	\$185,000	\$75,000	\$40,000	\$107,900
Patent Expense Recovery	\$37,000	\$221,000	\$34,562	\$32,528
Startups	1	3	5	2

\* License Revenue and number of licenses are influenced by UTD’s policy to provide a pro bono, royalty-free license (non-exclusive) to companies sponsoring research at UTD.

### National Comparisons (Table 2)

	Average for U.S. Institutions	UT Dallas
No. of Disclosures per \$10 million of research expenditures	4.3	5.3 <sup>2</sup>
Start-ups per \$100 million in research	1	2.2
Licenses per \$10 million in research	0.4	0.84
Licenses per number of disclosures <sup>3</sup>	13.7%	16.3% <sup>3</sup>
Avg. number of TT FTE's for small institutions (\$50 million-\$100 million) <sup>4</sup>	4-5	4.5

<sup>1</sup> Association of University Technology Managers Survey 2008

<sup>2</sup> Based on \$93 million in sponsored research

<sup>3</sup> The number of licenses would be higher were UTD to "count" non-exclusive licenses that are included, pro bono, in Sponsored Research Agreements

<sup>4</sup> Research Management Review Survey - Fall/Winter 09

### Statistical Summary

The following is a yearend summary of OTC's outcomes.

#### Inventions Disclosures:

The 49 disclosures received in 2011 compares favorably to the national average in that it is nearly double the average national disclosure rate per \$10 million in research expenditures. (See Table 2.) The number represents a decrease of 23 percent from the prior year due to an unusually high number of disclosures in 2010.

Licenses: The number of license/option agreements executed in 2011 held pace with the record high of eight for UTD in 2010. UTD's licensing productivity with respect to ratio of licenses per \$10 million in research expenditures is more than double the average for the U.S. (See Table 2.)

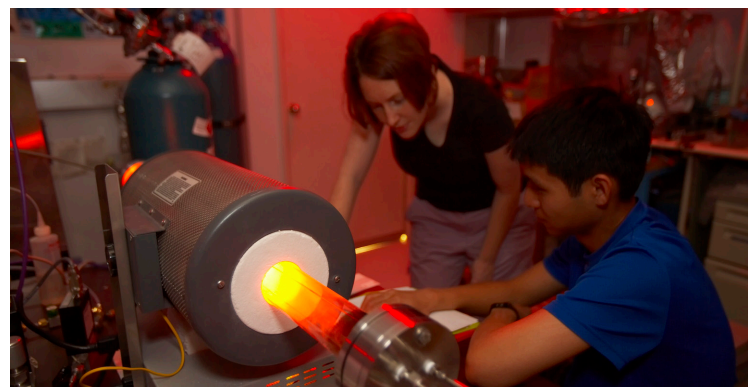
Startups, Jobs: The spinoff of two startups during the year is approximately double the national rate for universities of any size, though the number represents a decrease of three companies from the previous year. The University's continuing spinoff activity spotlights a highly productive startup facilitation program that enhances the commercialization of the University's innovations and in turn influences the economic vitality of the region.



### Status of UTD Startups

Background: The University engages proactively in assisting the creation and development of new enterprises based on UT Dallas technology for the following reasons:

- The transfer of UT Dallas technology from the lab to the private sector may not occur otherwise;
- There is limited local infrastructure or ecosystem to assist UT Dallas student and faculty startups;
- Early stage companies have few financial resources to develop technologies;
- Technology may be too early to attract investors or industry licensees;
- University spinoffs contribute to the economic development of the region, and;
- Non-university funding is required, in most cases, to develop early-stage technology, e.g., through SBIR/STTR grants, ETF financing, NIST grants, etc.



**UT Dallas Startup Activity:** Over the past several years, UTD-affiliated start-up companies have raised more than \$22 million in private financing and government funding, and have created more than 50 high-tech jobs (FTE's) to date. Several of these companies qualified to receive Texas Emerging Technology Fund funding in excess of \$3.5 million, have received over \$11 million in government grant funding, and have funded more than \$2.7 million in sponsored research at UT Dallas. The following are highlights of several UT Dallas spinoff companies.

- 1 Diagtronix**—Lab on a Chip—Point-of-care diagnostics for diabetes, infectious diseases, and other disease states; \$1 million in private funding to date
- 2 EncephRx**—Neuroprotective pharmaceuticals; Alzheimer's and Parkinson's therapies; highly experienced team shepherding this project (SMU-UTD derived invention); \$100,000 in private funding to date
- 3 Cirasys, Inc.**—Universal Power Conversion technology; funding received or committed includes TIF award of \$50,000, SBIR grant of \$150,000 and an ETF award of \$1 million
- 4 MicroTransponder, Inc.**—Created FY07; devices for wireless stimulation of nerves, e.g., for chronic pain modulation, stroke rehabilitation, hearing disorders and anxiety
  - a** Funding to date: \$17 million, includes: private financing of \$11.2 million, \$1.4 million from the ETF financing, and more than \$5 million in government grants
  - b** Research funding received by UTD: \$2 million
  - c** Device in clinical trials for treatment of tinnitus; future treatments planned for epilepsy, Alzheimer's disease, obesity and GI problems
- 5 Interoperate.biz**—Semantics-based rapid migration of legacy computer codes to modern platforms; \$230,000 private funding and \$700,000 from ETF

- 6 Solarno, Inc.**—Solar panel technology; total funding is \$1.99 million; sponsored research to UTD totals \$629,000
- 7 Medical NanoTechnologies, Inc.**—Drug delivery and carbon nanotube toxicity testing; \$500,000 in grant funding; funding \$150,000 for UTD research
- 8 HygeiaTel**—Telemedicine, patient monitoring using low-power, small-footprint, plug-and-play wireless sensor node patches
- 9 Brain Health Strategies, LLC**—Virtual reality therapy; SMART (Strategic Memory and Reasoning Training) training program to improve reasoning, problem solving, and critical-thinking skills for wide spread use (e.g. students, ADHD, brain injured patients)
- 10 MMRA, Inc.**—fMRI head tracking technology; software tracks patient motion, adjusts MRI image resolution; received \$50,000 TIF award
- 11 ZW Corp.**—Net search optimization; early stage
- 12 Speetra, Inc.**—Novel online language training systems for more effective training of employees of multinational companies, universities and other organizations that have ESL employees

### Benefits to the Market

Examples of companies that can have substantial impact on the markets that they address include:

**Diagtronix, Inc.—First in class, effective, noninvasive diagnostics**  
Diagtronix is developing the first truly effective, noninvasive diagnostics capability for real-time diabetes testing and monitoring; predictive testing for heart attacks; cancer monitoring; diagnosis and monitoring of high-risk diseases such as tuberculosis; nutrition monitoring; and other real-time diagnostic and preventive testing. The device is based on proprietary, highly sensitive, semiconductor-based biosensor systems. Diagtronix's platform technology will enable many new medical applications that can be implemented on portable hosts such as smart phones, to be used anywhere, any time.

In addition, potential applications include monitoring and testing for bioterror agents, food-borne pathogens, pesticide levels in food and related applications.

**Cirasys—Universal power conversion chip**

Cirasys uses proprietary control methods that greatly improve the performance and cost of DC power conversion while delivering unmatched simplicity of design and ease of use. Cirasys converters provide on-demand variable voltage, a feature not available from any other manufacturer, which allows designers to create more efficient systems that save power, with no increase in design complexity. Cirasys’ technology is applicable at all power levels, from microelectronics to grid systems. Its applications will permit such benefits as battery optimization for greater efficiency of power usage for electric/hybrid vehicles, electronic devices and wind turbines.

**Microtransponder, Inc.—Wireless and wired systems for treatment of pain and diseases**

MicroTransponder is developing two neurostimulation platforms to treat several neurological disorders. One is an implanted wired neurostimulator that stimulates the vagus nerve for the treatment of tinnitus and post-stroke motor rehabilitation. The second is the SAINT™ System, a wireless neurostimulation device for the treatment of urinary incontinence and chronic pain. Both neurostimulation platforms will be tested in clinical trials to treat the various disorders.

**Brain Health Strategies, LLC.—Novel brain-training tools to enhance educational outcomes**

BrainHealth Strategies, LLC (BHS) has a proprietary, web-based tutoring product called SMART© (Strategic Memory Advanced Reasoning Training) that has the potential to reverse the pervasive, long-term trend in middle and high school students of declining reasoning and cognitive performance. SMART has also been shown to be beneficial in dramatically raising student performance on mandatory graduation tests such as TAKS. SMART is based on more than 25 years of cognitive brain research at The University of Texas at Dallas Center for BrainHealth. SMART teaches students how to think and reason rather than memorize. It also teaches students how to construct novel ideas and solution pathways from facts, in contrast

to the current classroom approach of fact stuffing without depth or context. SMART also has been shown to be effective with adult populations of all ages and abilities, regardless of any health impairments, including traumatic brain injury.

**OTC Initiatives**

The OTC has undertaken several initiatives to advance commercialization of UT Dallas innovations, build the entrepreneurial ecosystem, and educate the DFW community and university researchers and students regarding UT Dallas technology transfer, including:

**Inventor Recognition Luncheon**—This annual event recognizes UT Dallas inventors who disclosed inventions, received patents, created companies and whose technologies were licensed.

**Texas Angel Capital Association Conference**— OTC co-hosted with North Texas Angel Network this annual event that attracts investors and angel groups from around the State.

**Boot Camp in Entrepreneurship and Commercialization**—an annual, day-long conference for students, faculty and entrepreneurs

**SBIR workshop**—for entrepreneurs and faculty

**Seminar on Patent Law Changes**—for faculty and students

**Training Seminar for Kuwaiti Delegation**—for investors, universities and economic development agencies

**TeXchange Meeting**—Hosted by the OTC at UT Dallas, meeting brought many regional business leaders to campus in a showcase/exhibit venue for member companies.

**Venture Development Center, Advisory Board created**—The board, comprising entrepreneurs and investors, mentors companies and provides connectivity to needed resources.