

**SUBMITTED BY:**

**STEPHEN M. LANIER  
VICE PRESIDENT FOR RESEARCH**

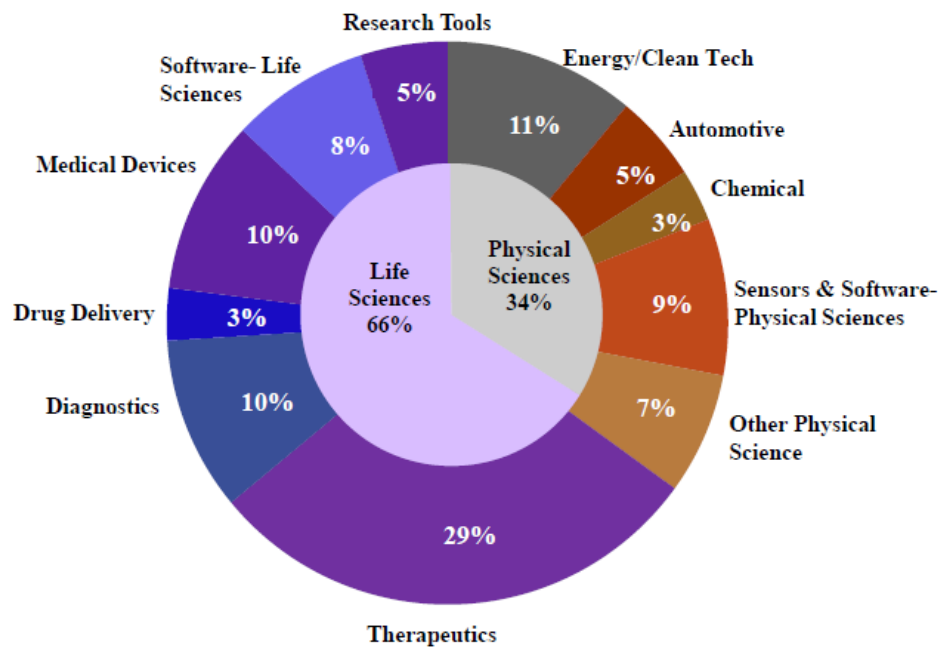
**TECHNOLOGY COMMERCIALIZATION  
FISCAL YEAR 2014  
INFORMATIONAL REPORT**

During 2014, the office of Technology Commercialization (TC) engaged in significant expansion in restructuring in order to provide the necessary resources and services to stimulate innovation and commercialization at WSU.

- John Shallman was appointed as the senior director of licensing in May 2014. Mr. Shallman was formerly the director of commercialization at William Beaumont Health System and had previously served as the life sciences sector development manager at the Michigan Economic Development Corporation. The appointment of Mr. Shallman brings senior leadership to the licensing staff and expands the number of licensing professionals to be more commensurate with that of peer institutions.
- The recruitment Ken Massey, Ph.D. as the senior director of venture development establishes a dedicated venture development capacity within the office. Dr. Massey has prior experience in academia and industry and most recently was managing director of MicroDose Life Sciences and its associated venture capital fund, LifeLine Ventures.
- Dennis Blanchette has served as president and CEO of a number of companies and is currently assisting WSU as a part time Mentor-in-Residence assisting faculty in the development of the strategic focus and execution strategies for the advancement of new start-up companies. Mr. Blanchette's focus is in software and digital technologies.
- Technology Commercialization was awarded \$820,398 from the New Economy Initiative for the second year of funding of the ERA (Expertise, Resources and Awareness) initiative. The funding supports the activities of the "Technology Development Incubator." (Proof-of-Concept funding and Innovation Fellows program.) Outcomes of the program to date include the launch of two start-up companies and the execution of a co-development agreement with an industry partner and three companies in early stage business formation.
- Technology Commercialization received approximately \$45,000 as matching funds from the MEDC Technology Transfer Talent Network to support the Mentors-in Residence, Innovation Fellows and internship programs.

## METRICS

- During the last two years, the average number of invention disclosures has increased to 25% above that of the previous four-year average. The goal is to increase the invention disclosures submissions by 15% per year for the next three years. The distribution of invention disclosures is as indicated below:



- Deal flow has been re-established with eight licenses executed in 2014 and with the number of licenses projected to grow at least 25% in the coming year. In 2014, the majority of the agreements were exclusive licenses, including licenses to two start-up companies.
- License revenue has been declining as a result of patent expirations, decreased royalty income from aging license agreements and prior stagnant deal flow. The recent growth in the number of licenses is expected to generate increased license revenue in the upcoming years.
- A total of 18 patents were issued in 2014, with 16 being issued by the USPTO. The issued patents were in the field of life sciences, materials and cleantech.

## TECHNOLOGY COMMERCIALIZATION HIGHLIGHTS

- Under the auspices of the Technology Development Incubator, the office of Technology Commercialization released Requests for Proposals for Proof-of-Concept

funding in spring and fall 2014. In total, 84 Letters of Intent were received, 46 applicants were invited to submit full proposals and 11 applications were funded for a total of \$275,000. The average award of \$25,000 provides for prototyping and validation studies. The awards are based on market opportunity of the technology and proposals are reviewed and ranked by representatives from industry and the investment community.

- WSU launched two new start-up companies:

1. *Detroit Materials, Inc.* (Exclusive License executed 4/14/2014). The company was launched with SBIR funding from the National Science Foundation and early stage investment from the Detroit Innovate Fund.

2. *Functional Fluidics, LLC* (Exclusive license executed 10/4/2014). The company is receiving revenue as a result of service contracts. The WSU Mentor-in-Residence assigned to this project has joined the company as Chief Operating Officer. The ability to provide early management to the company aided significantly in the company's receipt of revenue generating service contracts.

- RetroSense Therapeutics, a WSU start-up company, is a world leader in optogenetic approaches to vision restoration. Retrosense is focusing on the development of therapeutics for retinitis pigmentosa and dry age-related macular degeneration. There are currently no drugs approved in the U.S. for the treatment of such conditions. Retrosense recently announced a \$6 million in Series A financing. Retrosense also received Orphan Drug status for its first-in-class gene therapy. In November 2014, Retrosense was selected by Therapeutic Area Partnerships as a "Top Project to Watch: Most Licensable Products." Retrosense's lead compound is based on research and technology developed by Dr. Zhuo-Hua Pan in the Department of Anatomy and Cell Biology and the Kresge Eye Institute.
- As a direct result of the Technology Development Incubator (TDI) funding and/or industry feedback and mentoring from the TDI, two National Institutes of Health R21 proposals as well as a National Science Foundation grant have recently been awarded (total funding exceeding \$850,000). Such funding is instrumental for the further technical development and validation which provides improved opportunity for commercialization of the technology.
- Technology Commercialization has continued its campus outreach effort and conducted five "Conversations with Commercialization" breakfast meetings including presentations on "How your science succeeds as a high tech business," "Meet the Tech Commercialization Team," "Commercializing Software and Healthcare IT," "How to write an SBIR/STTR," and "So you want to start a company?" More than 400 participants attended the events.

- In December, 2014, Technology Commercialization and Xconomy co-hosted a highly successful VIP networking reception and dinner which gathered an exclusive group of local, successful startup founders to share their personal "entrepreneurial journey"—including the good, the bad, and the ugly—with notable start-up founders still scaling up. The goal of the event was to network, inspire, and share lessons learned.
- Six postdoctoral fellows completed the TDI inaugural Innovation Fellows program in September 2014. The program is designed to educate and nurture the next generation of entrepreneurial scientists. Each fellow is paired with an industry mentor for the development of the commercialization plans and the pitch deck related to their project technology. One fellow is already engaged with a WSU start-up company and a second recently completed the i2i I Corps program at the University of Michigan Medical School.
- Three undergraduate students were sponsored by Technology Commercialization to participate in the Venturewell (formerly NCIIA) University Innovation Fellows (UIF) program. UIF is an NSF funded program directed by Stanford University and VentureWell. Nationwide, only 168 students have completed the program to date. The three WSU students, Nikolas Upton, Siwatu Sanders, and Pradeep Bhat, graduated from the program in October, 2014. John SantaLucia, a WSU entrepreneur and professor of Chemistry served as the faculty mentor.

**Wayne State University  
Technology Commercialization  
Summary Statistics, FY 2009 - 2014**

**Technology commercialization summary statistics**

Measure	FY2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Disclosures	41	37	72	58	68	61
Patent applications (U.S.)	51	55	43	61	48	33
Patent applications (foreign)	27	5	33	31	34	14
Patents issued (U.S.)	10	6	7	19	10	16
Patents issued (foreign)	15	2	12	6	2	2
Patent expenses <sup>1</sup>	\$961,159	\$903,005	\$1,452,550	\$1,286,050	\$1,209,789	\$1,277,781
Licenses (Options & Licenses)	5	7	12	3	5	8
Start-up companies	0	4	4	0	0	1
Revenues	\$666,229	\$527,800	\$1,059,049	\$913,490	\$502,570	\$456,336

*Source: WSU Technology Commercialization*