



Over the past year, CTTC continued to seek out new ways to bring services and support to our researchers, and to the Vanderbilt community broadly. In this summary report for FY15, we have highlighted several programs that have had measurable impact for our innovators over the past twelve months.

First among these is the launch and scale up of the Medical Device Regulatory Affairs Program (MDRAP), developed to assist researchers in better understanding regulatory challenges associated with their research activities involving medical devices. Soon after launch MDRAP quickly took on dozens of medical device and medical software projects that regulatory issues impact. Vanderbilt is one of a handful of research universities possessing this type of in-house regulatory expertise, to the extent that Vanderbilt is now getting national attention for this program.

Robert F. Labadie, M.D., Ph.D



We have also made great strides in our support for entrepreneurship. In recent times Vanderbilt has seen substantial interest in entrepreneurship among its faculty and students, and CTTC has facilitated the creation of a number of new ventures, launched to develop and commercialize Vanderbilt innovations. One of the programs we have embraced is the NSF's I-Corps program, which is designed to help researcher-entrepreneurs test their ideas with potential real-world customers. Although many start-ups can realize a great deal of value over time, they are not always the optimal approach for commercializing new technologies, and programs such as this can help us and our inventors make the most effective and informed decisions with respect to commercialization routes.

2014 NEXT Award winner InvisionHeart Inc.

In all of this new activity, we continue to stay true to our core function - helping Vanderbilt innovators in bringing their inventions to practical application for the benefit of society. In this report, we highlight our core metrics and our inventors' satisfaction scores for FY15. Due to year-over-year volatility in metrics for our industry, we traditionally report both FY totals and a three-year average. Should you have any questions about our metrics, our programs, or our operations, please do not hesitate to contact us.

Commercialization Impact

In the academic technology transfer arena, most programs experience significant fluctuation in year-over-year metrics data. For this reason, university licensing offices often report core metrics in three year running averages.

Vanderbilt research contributes to products that meaningfully advance public benefit in many areas, including novel educational courseware and evaluation tools, engineering and robotics advances, and healthcare through higher quality of care, improved patient outcomes and decreased healthcare expenses. The chart to the right is Vanderbilt's Technology Commercialization core metrics average over the last three years and totals for FY15. These numbers represent a substantial increase in productivity over historical tech transfer metrics. The average number of licenses is nearly twice as many as the previous three year average.

| Core Metrics | 3 yr average FY13-FY15 | FY15 |
|---------------------|---------------------------|------|
| Inventions Reviewed | 181/yr | 179 |
| Licenses Executed | 94/yr | 98 |
| Revenue Generated | 13.8M/yr | 9M |
| U.S. Patents Issued | 47/yr | 54 |
| Startups Formed | 7/yr | 10 |

MDRAP

Medical Device Regulatory Affairs Program

The Medical Device Regulatory Affairs Program (MDRAP) was launched this past year to support the efforts of faculty developing medical devices. MDRAP provides Vanderbilt researchers with insight into the regulatory pathway and hurdles for their medical devices, early regulatory product develop guidance, training and education on FDA regulation, and hands-on support for device development projects. MDRAP is actively supporting several research teams and is helping with the goal of bringing innovative medical devices from Vanderbilt into the US market.

Papyrus is the name of the MDRAP initiative for bringing design controls commonly used in industry into the academic realm. Papyrus is essentially a quality management system for academic medical device development that documents the design and testing efforts in a manner that meets FDA regulatory requirements and that can stand up to an FDA audit. Faculty are provided a framework for creating a Design History File for their medical device projects. A well-documented Design History File is critical for progressing to clinical testing of investigational devices. This project is first of its kind in the US and will result in faster approval times to enter the clinic, as well as vastly improved data to share with potential medical device licensing and collaboration partners.

Entrepreneurship

In FY15, CTTC furthered efforts to advance entrepreneurship at Vanderbilt University. CTTC helped launch 10 Vanderbilt-related new ventures which raised over five million dollars in external investment. Half of these new companies were vetted through our community Entrepreneurship Advisory Council prior to launch.

Additionally, CTTC brought the Innovation Corps (I-Corps) program sponsored by the National Science Foundation to Vanderbilt. The I-Corps program presents unique opportunities to accelerate innovation and new venture creation throughout Vanderbilt by focusing on customer development, an under-developed facet of startup companies' businesses. CTTC fosters, facilitates, champions and actively participates in Vanderbilt's efforts in the I-Corps program. With the help of CTTC, NSF's I-Corps program generated nearly half a million dollars for Vanderbilt.

FY15

10
Vanderbilt-Related
New Ventures

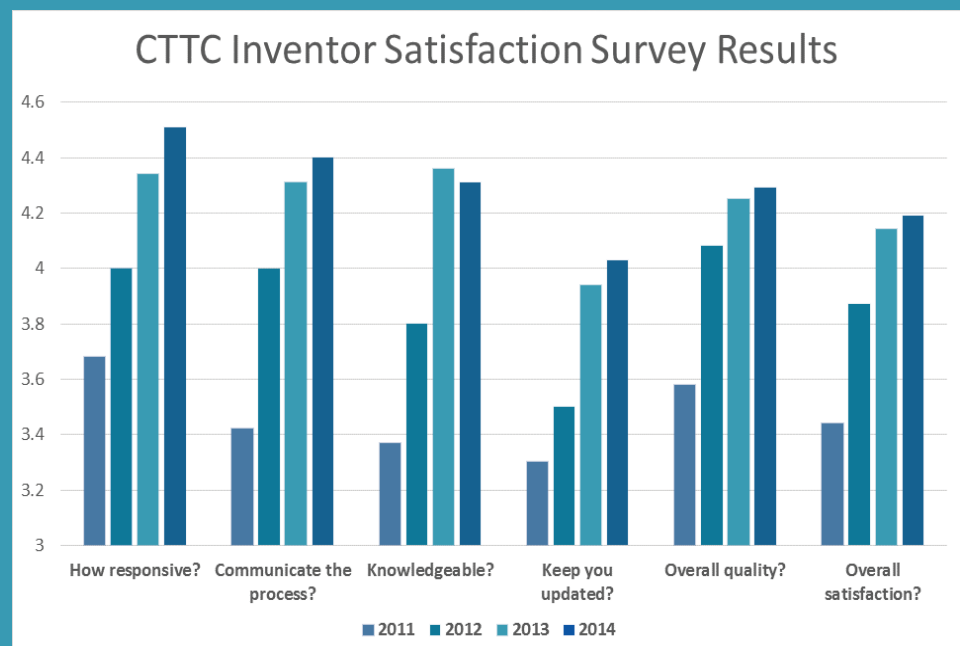
\$5 Million
External Investment

\$490K
Generated by
NSF I-Corps

Inventor Satisfaction

Inventor Satisfaction Survey

Each year in the fall, CTTC hosts an Inventor Satisfaction Survey to assess Vanderbilt's inventors' level of satisfaction with our office and the services provided. The fall 2014 survey showed improvements in almost all areas surveyed, including responsiveness, communication throughout the commercialization process, and overall quality and satisfaction.



The Numbers

FY15 HIGHLIGHTS

| | Fiscal Year 2015 |
|---|------------------|
| Financial Data | |
| Revenue | \$9,052,391 |
| Sponsored Research Related to Licensed Technologies | \$ 11,044,587 |
| Disclosures/Sources | |
| New invention disclosures | 179 |
| First-time Vanderbilt disclosure submitters | 152 |
| Total individual Vanderbilt submitters | 329 |
| Total different departments, divisions, institutes & centers represented by submitters of new disclosures | 70 |
| Patent Applications and Patents | |
| U.S. patent applications filed | 187 |
| U.S. patents issued | 54 |
| Agreements | |
| Licenses and Options Executed | 98 |
| Vanderbilt-Related New Ventures | 10 |
| Material Transfer Agreements (MTA) Reviewed | 955 |
| Incoming materials | 668 |
| Outgoing materials | 287 |
| Confidentiality Agreements Executed | 103 |
| End-User Licenses Executed | 167 |
| Research Support Activities | |
| Sponsored Research/Collaboration Agreements Reviewed | 56 |
| Clinical Trial Agreements Reviewed | 30 |

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