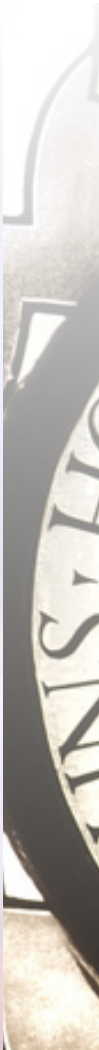
JOHNS HOPKINS UNIVERSITY | Technology Transfer

bringing the benefits of discovery to the world

FY10 ANNUAL REPORT

bringing the benefits of discovery to the world




VERITAS VOS


OPEN


JOHNS HOPKINS UNIVERSITY

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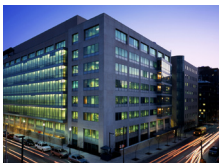


School of Nursing Building photo by Bill Denison

bringing the benefits of discovery to the world

A WORD FROM THE EXECUTIVE DIRECTOR

Wesley D. Blakeslee, JD, CLP, Executive Director

As is stated in our mission statement, this Technology Transfer office exists to facilitate liaisons with parties interested in bringing JHU research and discoveries to the marketplace. We work closely with our researchers as well as with external entities. Our success is measured in various ways, including faculty satisfaction, operating metrics and financial results. For the fourth year in a row, we have significantly advanced our mission and have achieved record results in all of our measurements.

Marketing and Outreach

During this past fiscal year, Montserrat Capdevila joined JHTT as its first ever Director of Sales and Marketing. Through her efforts as well as the efforts of our entire staff, our office and our technologies have substantially increased their outside recognition. We have introduced a new JHTT web site with advanced search capabilities. We have become very active in the social media arena, with profiles on LinkedIn, Facebook and Twitter. We released the "JHTT app" for the iPhone and iPad, which allows easy access for office updates and technology notifications. We have hosted many companies to visit our University and to meet specific researchers. Finally, we have offered many continuing education and entrepreneurial programs for our faculty and these have been very well received.

Product Development

We work actively with our licensees and track the JHU technology based products that are either in the market or in development. This number is increasing substantially each year. While the 2009-2010 economy was a challenge to us as well as to our licensees, we are seeing companies continue to invest in promising technologies.

Patent Management

Our annual expenditure for patent prosecution and maintenance exceeds $7 million and is steadily growing in line with our number of active technologies. Our law firm partners provide excellent patent work while helping us to contain costs. Over this past year, we created an in-house legal team for patent work. Jeffrey Childers and Guido Galvez joined our team in January 2010. They have built excellent relationships with key faculty, have produced high quality patent filings and have enabled us to save money. We also converted our annuity payments to in-house over the past year, further improving service while saving money.

"JHTT, there's an app for that"

Start-Up Companies

This year Elizabeth Good joined our office as our first dedicated Director of Ventures, focused on enabling start-up companies based on JHU technologies. Despite the challenging funding environment, we achieved our goal of ten new start-ups this year.

Operational and Financial Metrics

For the fourth year in a row we set new records for our office in invention disclosures, license agreements, material transfer agreements and total revenue. We completed ten new start-up companies during the year which was on target with our plan. Finally and most importantly, the level of faculty satisfaction with our office has never been higher.

The economy remains a challenge for our office. While we forecast an increase in our financial and operational metrics for FY11, achieving these numbers will be difficult. However, we will continue to work hard to maximize our opportunities and strive to be among the leaders in technology transfer.

Mission
Vision

mission

The Johns Hopkins Technology Transfer Office (JHTT) acts as the University's intellectual property administration center, serving Johns Hopkins researchers as a licensing, patent and technology commercialization office. We facilitate liaisons with parties interested in bringing JHU research and discoveries to the marketplace for the public good.

vision

JHTT aims to be the commercial ambassador of new technologies developed at Johns Hopkins, helping inventors fulfill their intellectual and commercial potential. The office exists to facilitate collaborations among researchers, companies, entrepreneurs, and economic development organizations that are interested in developing University innovations into commercial products for the benefit of humanity.

JHTT AT A GLANCE-FY10

10
New Company
Start-ups

$12m
Total
Revenue

2,895
Material
Transfer Agreements

JHTT AT A GLANCE-FY10

355
Invention Disclosures

1,350
Organizational Partners Worldwide

104
New Licenses

1,921
Active Patents

partnerships

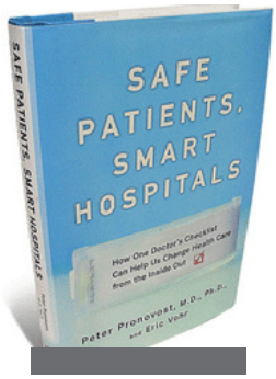
translating the discoveries of the future

agreements

YEAR IN REVIEW

JHTT features

Hospital Safety First!



Johns Hopkins critical care specialist and 2008 MacArthur Fellowship recipient, Dr. Peter Pronovost, has released his book titled "Safe Patients, Smart Hospitals: How One Doctor's Checklist Can Help us Change Health Care from the Inside Out."

Dr. Pronovost's five-part check list has decreased the rate of unnecessary death by 90% in hospitals across America. In his book, Dr. Pronovost shares his own experiences as well as anecdotal stories from his colleagues at Johns Hopkins and other hospitals, showcasing to readers how small changes can make a huge difference in patient care.

Top Licensing Deal for the Johns Hopkins University School of Education

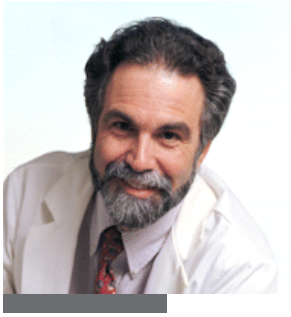
During FY10 the Johns Hopkins University School of Education (JHUSOE) solidified their relationship with their long time partner Pearson Education Inc. The JHUSOE granted Pearson the worldwide exclusive rights to market their Teacher Compass software and trademark, a customizable online teacher evaluation and coaching tool designed by Johns Hopkins University's Center for Technology in Education (CTE). For the past nine years, CTE and Pearson have worked closely with K-12 school partners to build, test and refine Teacher Compass. The result of this user-guided development process is an evaluation tool that's easier to use, more efficient for administrators, and more effective at helping teachers improve their performance.

Nobel Prize Win by Dr. Carol Greider

Dr. Carol Greider

Johns Hopkins Daniel Nathans Professor and Director of Molecular Biology and Genetics Carol W. Greider, won the 2009 Nobel Prize in Medicine jointly with Elizabeth H. Blackburn and Jack W. Szostak for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase. So far, 33 faculty affiliated with Johns Hopkins University have received a Nobel Prize.

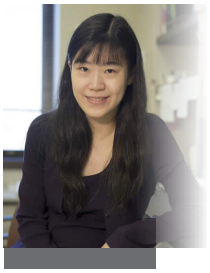
Johns Hopkins Institute for Cell Engineering Director Receives Canada Gairdner Award



Dr. Gregg Semenza

Gregg Semenza, M.D., Ph.D., the C. Michael Armstrong Professor of Pediatrics, and member of the McKusick-Nathans Institute of Genetic Medicine, is one of seven recipients of the prestigious 2010 Canada Gairdner Awards; Canada's only international science prizes.

2009 NIH Director's Pioneer Award Winner

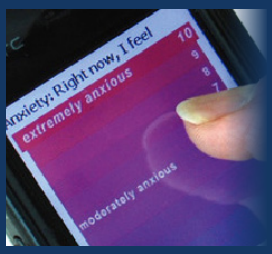


Dr. Jin Zhang

Johns Hopkins associate professor of pharmacology, molecular sciences, neuroscience, and oncology, Dr. Jin Zhang, was one of the 18 recipients of the 2009 NIH Director's Pioneer Award. The award confers $2.5 million in direct funding over five years to develop a novel technology for venturing inside cells and manipulating single molecules in their "native" habitat. The technology would offer scientists new tools to see how molecules act inside living cells and to manipulate those actions.

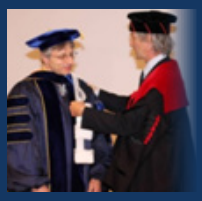
JHTT features

Licensing Deal With the Health Central Network



The online Health Central Network has entered into a license agreement to develop a technology conceived by Dr. Adam Kaplin, Principle Psychiatric Consultant to the Johns Hopkins Multiple Sclerosis and Transverse Myelitis Centers of Excellence. The technology, Mood 24/7, is a text message mood tracking tool. The user receives daily text messages on their mobile phone asking them to rate their mood. The user then responds to the text message with a simple mood rating. The ratings are recorded, kept confidential, and made available to the user. Documenting moods over time can provide valuable information to physicians and mental health care professionals.

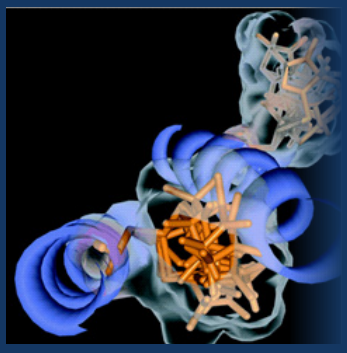
Johns Hopkins Inventors Awarded Prestigious European Honorary Doctorates



Dr. Craig Montell

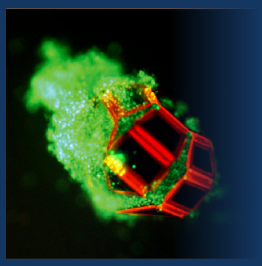
Dr. Andrew P. Feinberg, King Fahd Professor of Molecular Medicine and director of the Center for Epigenetics, received an honorary doctorate from the Karolinska Institute of Sweden. Dr. Craig Montell, professor of biological chemistry and member of the Center for Sensory Biology at Johns Hopkins, received his honorary doctorate from the Katholieke Universiteit Leuven in Belgium.

License With DxS for Cancer Biomarker



DxS, a wholly owned subsidiary of Netherlands holding company Qiagen N.V., acquired a license to use Johns Hopkins PI3K biomarker in the development of new real-time and endpoint PCR-based companion diagnostics for cancer therapies.

Smart Medicine: Self Assembling 3D Platforms



Johns Hopkins researchers have created millimeter sized tools that contort on command, clamping shut or popping open in response to specific chemical cues. The smart devices are able to pick up and put down objects less than 1/500th of an inch across and may one day be used to biopsy a liver, prop open an artery or deliver a drug to a particular site.

Guided Care Recognized

Dr. Chad Boult

The Guided Care project, led by Dr. Chad Boult, has been awarded the 2009 Medical Economics Award for Innovation in Practice Improvement from the American Academy of Family Physicians (AAFP), the Society of Teachers of Family Medicine (STFM) and Medical Economics magazine. Guided Care is a model for comprehensive medical care for people who suffer from multiple chronic conditions. Johns Hopkins has licensed the copyright and service mark rights to employers of Guided Care nurses, small medical practices, hospital systems, government agencies and foreign governments.

PECASE Award Winner

Dr. Pablo A. Celnik

Dr. Celnik was awarded the "Presidential Early Career Award for Scientists and Engineers (PECASE)", the highest honor bestowed by the U.S. government to outstanding scientists and engineers beginning their independent careers. Dr. Celnik's research is focused on understanding the mechanisms underlying motor learning and motor recovery after brain lesions, and on developing and testing new strategies to enhance motor recovery after stroke.

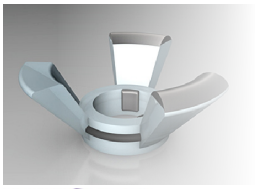
JHTT features

Bring on the "SUDS": Attacking Hospital Acquired Infections

Dr. Bola Asiyanbola

Dr. Bola Asiyanbola's latest invention, a "Self Cleaning Unit for the Decontamination of Small Instruments (SUDS)", is a 7-foot-tall, shower-cubicle-shaped device that automatically sanitizes all sorts of hard-to-clean equipment. Studies show that SUDS is able to disinfect used emergency-room equipment and that it can remain free of gram-positive bacteria for two full days after cleaning, even after the equipment was returned to the Emergency Department and reused. The invention holds tremendous promise in the fight against hospital acquired infections.

Early Labor Detector Success in Nationwide Business Plan Competitions



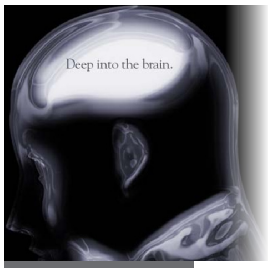
CervoCheck is a device that accurately detects key indications of early labor to allow the timely prevention of preterm birth. The technology was develop by Dr. Abimbola Aina-Mumuney, an assistant professor of maternal fetal medicine in the Johns Hopkins School of Medicine and as well as Karin Hwang, Chris Courville, Deepika Sagaram and Rose Huan; all recent graduate students from the Johns Hopkins Center for Innovation and Design Masters Program.

The team placed first in the University of California San Francisco Business Plan Competition; won second-place honors in business plan contests sponsored by the University of Texas at Arlington and Noetic Technologies, and placed third in the University of Louisville Cardinal Challenge and the Johns Hopkins University Business Plan Competition. CervoCheck is now established in the Emerging Technology Center in Baltimore.

Fyodor Biotechnologies Corp. Awarded a Biotechnology Commercialization Grant

The Maryland Biotechnology Center awarded $200,000 to Fyodor Biotechnologies Corp. a Hopkins start-up focused on the research, development and manufacture of innovative diagnostic and biopharmaceutical products that are targeted to large emerging "frontier" markets in Africa. The award will help Fyodor commercialize their proprietary malaria urine test, which was developed by Johns Hopkins School of Public Health microbiologist Dr. David Sullivan.

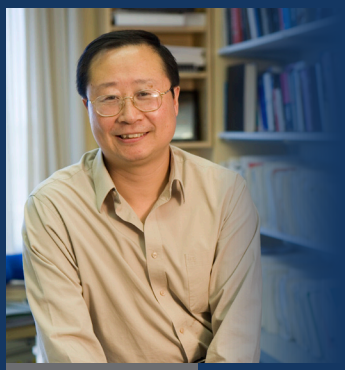
BSI: Translating Neuro-Discoveries



The recently launched Johns Hopkins Brain Sciences Institute's NeuroTranslational Program- a program designed to help Johns Hopkins scientists translate basic scientific discoveries into small molecule neurotherapeutics- entered into a licensing agreement with the pharmaceutical company Eisai Inc. Under the terms of the agreement, Eisai has granted BSI non-exclusive U.S. rights to utilize Eisai's GCPII technology to generate GCPII inhibitor molecules for diseases of the central nervous system, including peripheral neuropathy, Alzheimer's disease, stroke, ALS, neurodegeneration and other disorders in humans. BSI will be responsible for the research and preclinical development activities. Eisai will have an exclusive option to license molecules generated using the GCPII technology.

JHTT features

New Way to Fight TB



Dr. Jun Liu

Johns Hopkins scientists have identified a potent class of compounds that inhibit methionine aminopeptidase (MetAP), an essential enzyme found in organisms ranging from bacteria to humans. Dr. Jun Liu and his team showed that Inhibition of MetAP in a test tube blocks TB growth and could prove to be a new way to attack TB.

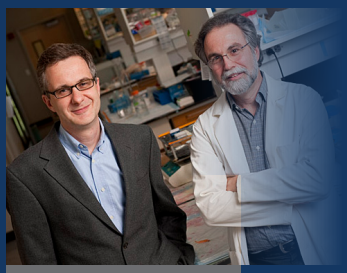
Second Generation HPV Vaccines Licensed to Shantha Biotech

Shantha Biotech part of the Sanofi Aventis group entered into a worldwide agreement to develop second-generation HPV vaccines that protect against more HPV types and cost less to produce. The technology was co-developed by Dr. Richard Roden, Johns Hopkins associate professor of pathology, in conjunction with scientists at the National Cancer Institute. Shantha Biotech will manufacture the vaccine for clinical trials in India and at the University of Alabama in Birmingham.

ChemCORE Receives NIH Roadmap Grant

ChemCORE, a core facility designed to screen large numbers of compounds using robotic tools, received the NIH Roadmap grant to establish an Ion Channel Center. The award designates Hopkins, and specifically ChemCORE, as a national resource for screening compounds that may interact with ion channels. For the six-year project, Dr. Min Li's team has received $18 million in Roadmap funds, plus about $3 million in corporate sponsorships. ChemCORE has also begun collaboration with Corning Inc. The company has given the lab a beta version of a new high-throughput instrument for use in its screening assays, along with funding to test out the new tool.

NCI Award to Unravel the Physics of Cancer



Dennis Wirtz and Gregg Semenza

Researchers from the Johns Hopkins Institute for NanoBioTechnology were awarded a $14.8 million grant from the National Cancer Institute to launch a research center aimed at unraveling the physical underpinnings that drive the growth and spread of cancer. The new Johns Hopkins Engineering in Oncology Center at INBT includes eleven Johns Hopkins faculty members affiliated with the INBT and four investigators from partner universities.

Leading the Way to Oncoimmunotherapeutics

Johns Hopkins Professor of Pathology, Medicine and Oncology, Jonathan Schneck, has designed bead-based Artificial Antigen Presenting Cells (aAPCs) that can increase the activity and effectiveness of tumor-specific T-lymphocytes needed to fight tumors. This revolutionary technology has the competitive ability to target multiple antigens simultaneously, helping to clear tumors more effectively. The technology also has the potential of being applied to treat autoimmune disease, transplant rejection and viral infections.

BioMed Valley Discoveries Enters Into Licensing Deal

The Missouri based translational research & development company, BioMed Valley Discoveries, Inc., has licensed a technology co-developed by renowned Johns Hopkins inventors Bert Vogelstein, Martin Pomper, Kenneth Kinzler, Chetan Bettegowda, Catherine Foss and Shibin Zhou. The technology provides a specific method for imaging bacteria in vivo, allowing for the detection of bacterial lesions and clinical diagnosis of the infection.

JHTT and the Johns Hopkins Carey Business School

This year marked the beginning of a relationship between JHTT and The Johns Hopkins Carey Business School. JHTT helped identify a number of faculty-developed technologies that are ripe for commercialization and that would benefit from more in-depth market studies. These innovations were used as case studies for the MBA students in programs titled Discovery to Market and Competitive Strategies. This pilot program included discoveries from primary inventors George Sgouros (vaccine delivery), Kieren Marr (antifungal diagnostic device), Stephen Meltzer (esophageal cancer biomarkers), Gary Posner (therapeutic vitamin analogs), Craig Townsend (biosynthesis of antibiotics), and Lori Brando and Bob Yolken (therapeutic compounds for schizophrenia). At the close of their studies, student teams prepared and presented recommendations on go-to-market strategy options that could include spin-out as a new firm, spin-in to an existing company, license, or a strategic alliance.

Lieber Institute Establishes at the Johns Hopkins Bioscience Park

The Lieber Institute for Brain Development, a neuroscience research institute dedicated to developing novel treatments, diagnostic tests and insights into disorders arising from abnormalities in brain development, will establish a permanent research facility at the Science + Technology Park at Johns Hopkins. Working alongside the Hopkins Brain science institute scientists, the Institute will focus on developing new and improved diagnostics and medical therapies to prevent and treat schizophrenia and related conditions. The Lieber Institute joins a growing cluster of institutional organizations and life science companies at the Science + Technology Park including: the Johns Hopkins Institute for Basic Biomedical Sciences, the Johns Hopkins Bloomberg School of Public Health, the Hopkins Brain Science Institute and the Howard Hughes Medical Institute.

science + technology park at Johns Hopkins

The Lieber Institute
FOR TRANSLATIONAL NEUROSCIENCE

JHTT Patent Services

JHTT established an in-house patent group to improve management of the JHTT patent portfolio while reducing cost. The group operates as an integrated law firm providing counsel and prosecution services to Johns Hopkins faculty and licensing staff. Moreover, JHTT has transferred the management of all patent annuities payments in-house.

External Outreach: Launch of the JHTT app

JHTT launched the first tech transfer app at the BIO International Convention in Chicago. The free app can be downloaded from the App Store and it is available for both the iPhone and iPad. The app provides a new door into JHTT's inventions, researchers and social media sites. In FY10 the app received a 5 star rating by iTunes.

Information Systems: New Technology Database Feature

A new sign-up feature was developed for the JHTT technology database (*www.jhttonline.jhu.edu*). Users are now able to sign-up and create a personalized profile, indicating their technology preferences. When a new technology of interest is added to the database, the user will immediately receive an email update.

Faculty Outreach: Hopkins BioMatch

Click to Play

To help foster faculty entrepreneurship, JHTT organized a speed-dating event in which 12 Johns Hopkins Inventors "dated" 12 business entrepreneurs. The purpose of the BioMatch was to train scientists in the art of giving a successful elevator pitch.

Material Transfer Agreements

Tangible research materials embody tacit knowledge of enormous value. Sharing these materials with other academic institutions, nonprofit organizations and commercial entities, thus promoting Johns Hopkins University's research imperative, is achieved through material transfer agreements (MTAs).

Successfully negotiated MTAs also provide JHU investigators with essential proprietary materials and technologies at little or no expense. MTAs significantly reduce research costs, bolster grant applications, and enable scientific research and publication. The MTA team in our Tech Transfer Office has continued to adapt to an ever changing market and regulatory landscape brought on by economic challenges and technological advances.

Our specific initiatives from the past year include:

- Created a wiki-style resource to share key knowledge assets among JHTT and other JHU offices to improve negotiation effectiveness across the university;
- Extended our utilization of high volume repositories to allow for fast-track processing of popular research materials;
- Increased the number of master agreements in place for select materials from corporate entities;
- Implemented standard procedures to improve effective compliance with applicable export control obligations;
- Established systematic review and assessment to ensure responsible stewardship of biospecimens and scarce research materials;

While the overall volume of activity in the MTA group increased from FY09 to FY10, as shown in the table below, the growth rate moderated from the previous year.

However, the initiatives and improvements noted above allowed us to handle our increased volume over the past year without increasing our staff size while also reducing our average turnaround to 10.4 days. Again, over ninety percent of our agreements were completed in 30 days or less during the year. In fiscal year 2011, we look forward to building upon the progress we made in 2010.

Statistics:

	2008	2009	2010
Requests received	2274	2725	2873
MTAs processed	2231	2821	2896
Inbound	906	994	1018
Outbound	1262	1825	1868
Consortium	63	2	10
Total	2231	2821	2896
Not for profit	1999	2588	2694
For profit	232	233	202
Total	2231	2821	2896

JHTT start-ups

JHU continued its pace of spinning out companies in FY10 despite the economic climate. Once again, JHTT was able to meet our goal of 10 new start-ups. The funding environment still proved to be challenging for both new and existing JHU spin-offs, but that has not tempered the enthusiasm of many entrepreneurs and inventors. Universities and start-ups have had to look to non-traditional sources of capital to get their ventures off the ground since traditional early-stage venture and angel capital financing has slowed dramatically. JHU's start-ups this year illustrate this trend well. This year's companies raised capital through various methods – grants, economic development focused funds, angels, accelerators, and traditional venture capital. Below are some highlights:

Acylin Therapeutics, Inc. was launched by the Accelerator Corporation during FY10 and its Series A Preferred Stock financing of Acylin Therapeutics, Inc. was announced in December 2010. The Company's intellectual property was developed by Philip A. Cole, M.D., Ph.D. at Johns Hopkins University School of Medicine and Ronen Marmorstein, Ph.D. at The Wistar Institute.

AgeneBio, Inc. a neuroscience pharmaceutical company, based on discoveries made by Dr. Michela Gallagher raised $300,000 from BioCrossroads' Indiana Seed Fund in May 2010. More recently, it was awarded a large grant by the Alzheimer's Drug Discovery Foundation.

Kala Pharmaceuticals took in $2 million in a first round of equity financing in December 2009. Kala is based on work done by Dr. Justin Hanes, a professor of chemical and biomolecular engineering at JHU. Kala recently added $3 million more in November 2010.

Seguro Surgical, Inc. licensed an abdominal packing platform technology from JHU in Sept. 2009 and launched the company with initial funding of $400,000. Seguro announced their initial product launch of Lap Pak in October 2010.

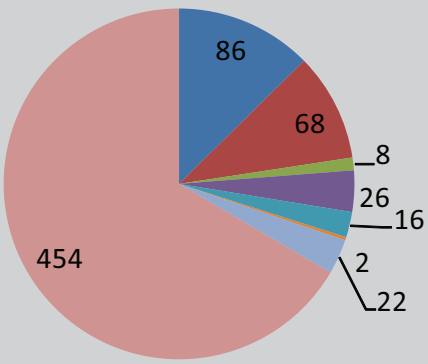
product pipeline

This fiscal year, we are pleased to provide an updated version of our product pipeline that reflects the commitment by industry to develop the licensed JHU technologies as well as continue to increase industry's product pipelines. Our product pipeline reflects 682 products that are either on the market or in development as of June, 2010. We have observed an increase in every category of product development that our licensees have undertaken, including the number of products that were introduced to the market over this fiscal year.

Of the 682 products in our product pipeline, 564 products primarily research tools, are currently on the market, with 70 products currently in development. Currently, of products that are subject to the regulatory process, one product is in a Phase III clinical trial, 21 products are now in Phase II clinical trials and 22 products are in Phase I clinical trials. This speaks to the maturing of our technologies, our licensees' steady progression through the regulatory process and the promise of future therapeutics, diagnostics, and devices that will serve to improve patient care.

All of these products are a tangible translation of JHU intellectual property and represent a measurable direct benefit of both the research conducted at JHU and the efforts by Johns Hopkins Technology Transfer.

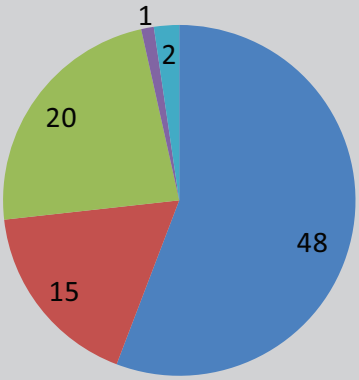
Total product classification



- Therapeutics
- Diagnostics
- Device PMA
- Device 510K
- Software
- Service
- Other
- Research Tools

Total = 682

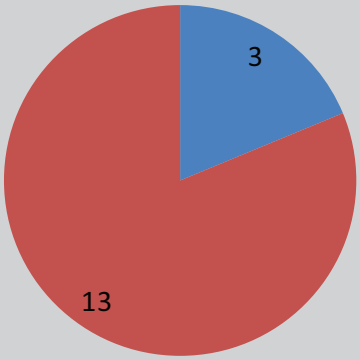
therapeutics



- Preclinical
- Phase 1
- Phase 2
- Phase 3
- Market

Total = 86

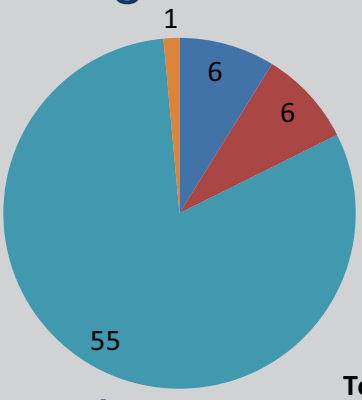
software



- In Development
- Market

Total = 16

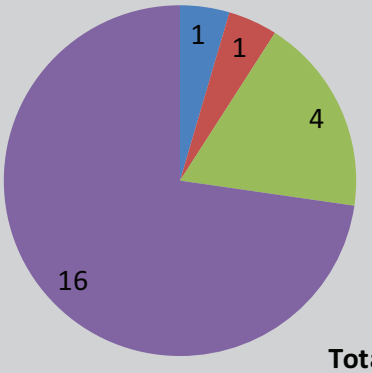
diagnostics



- Preclinical
- Phase 1
- Market
- In Development

Total = 68

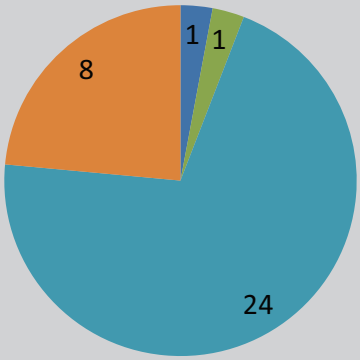
other



- PreClinical
- Phase 1
- In Development
- Market

Total = 22

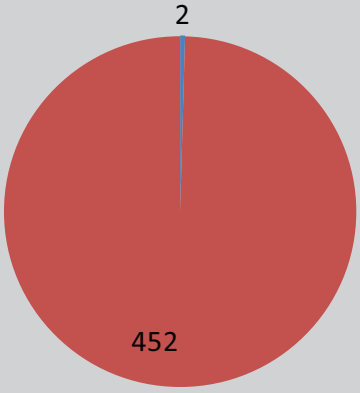
devices



- Preclinical
- Phase 2
- Market
- In Development

Total = 34

research tools



- In Development
- Market

Total = 454

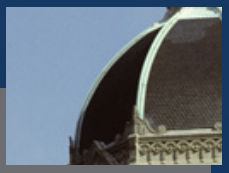
research

increasing IP on the map of discovery

success

Photo by Will Kirk

APPENDIX



Financials

summary

Our Technology Transfer office recorded very strong operating results for fiscal year 2010. We experienced record-high metrics in numerous categories for the fourth year in a row. We began FY10 with very aggressive targets. Worldwide economic conditions created concern over those targets, but in the end our financial figures and metrics are up in almost every category. Our office has enjoyed very stable staffing over the past three years and the increasing skill of our staff is reflected in our productivity metrics as well as the service that we are able to provide to our faculty.

Operating Statistics

We received 355 invention disclosures during the course of the year, the highest number ever and a slight increase over last year. This reflects an increased focus on commercialization in every school coupled with active interactions between researchers and our staff. We completed 571 patent filings during the year and had 44 US patents issued. By fiscal year-end, there were a total of 1,921 issued and 3,825 pending patents. We executed 104 new license agreements and 51 amendments in FY10, a 21% increase over last year. We received 2,873 new material transfer requests and completed 2,895 material transfer agreements during FY10, a 2.7% increase over last year. Our MTA's took an average of 10.32 days to complete, the best we have ever performed in this metric and a significant improvement over the 11.69 days it took last year. During the course of FY10, we averaged 11.5 full time equivalent licensing staff and we ended the year with 47 people working in our office.

Financial

The Technology Transfer office earned over $11.9 million in licensing revenue and received nearly $4.3 million in patent expense reimbursements during FY10. In addition, our new FY10 license agreements included $3.1 million in research funding for the University. Finally, in FY10 we collected $467,011 in proceeds from equity sales.

Our top-line revenue surpassed our FY10 plan by 5.7%. Our net spending on patent expenses was nearly 11% below plan, reflecting savings earned by our new in-house patent counsel group coupled with licensee reimbursements that were 20% better than plan. Our net income for the year surpassed our plan by 35%.

revenue

We collected $11.946 million in licensing revenue during FY10, significantly higher than our $11.3 million budget. Of this $11.9 million total, we received $3.1 million from the 104 new agreements signed during FY10 and $8.8 million from agreements signed in prior years.

In addition to measuring upfront fees generated by new license agreements, we also measure the total contract value ("TCV") of these agreements. TCV is defined as all scheduled and milestone payments, excluding the value of equity and anticipated product sale royalties, that have been or will be received from an agreement over its first 10 years. Of course, we may never see these payments should the licensee cease to pursue product development and terminate the license agreement. However, we believe that measuring TCV is useful as it indicates the potential future revenue that we will see from our new agreements. The TCV of our 104 new agreements was $31.2 million, significantly better than our $20.8 million FY09 figure.

Comparison of FY09 to FY10 by Income Category

	FY09	FY10	Difference
Royalties	$5,634	$6,777	$1,143
License Fees	$3,838	$4,424	$586
Extraordinary	$2,109	$0	($2,109)
Administrative Fees	$639	$745	$106
	$12,221	$11,946	($275)

Financials

patent expenses and reimbursements

Patent expenses totaled $7.2 million for the year. Reimbursements received in FY10 totaled $4.265 million. At 59% of incurred expense, our reimbursement rate is much better than the industry average as reported by AUTM.

We have analyzed our patent expenses on technology cases for which we are not receiving licensee reimbursement. As the table below shows, over the past four years we have incurred only 3.4% of our patenting cost in the first year of a technology case's life.

Cases between 1 and 3 years old, when we would typically be converting provisional patents, account for over 48% of our total expense. About 48% of our total patent costs have been spent on older cases. This is especially interesting when compared with the age of the technology cases that are being licensed.

Analysis of Patent Expenses for Unlicensed Cases by Age of Case (000)

Age of Case When Patent Expense was Paid

Fiscal Year	Total	<1 year	1-3 years	4-6 years	7-10 years	>10 years
FY 2010	$3,173	$151	$1,236	$769	$749	$268
FY 2009	$3,592	$130	$1,840	$664	$ 607	$351
FY 2008	$2,661	$ 21	$1,373	$674	$433	$160
FY 2007	$3,048	$121	$1,594	$607	$585	$141
4-year Total	**$12,474**	**$423**	**$6,043**	**$2,714**	**$2,374**	**$920**
Percent		**3.4%**	**48.4%**	**21.8%**	**19.0%**	**7.4%**

operating expenses

FY10 office expenses totaled $5.55 million and the breakdown of these expenses is shown in the table below.

(000)	FY08	FY09	FY10
Salaries	$3,272	$3,488	$3,825
Benefits	$1,025	$1,055	$1,125
Other Office Expenses	$1,115	$830	$876
Credits	$(300)	$(294)	$(279)
Total Office Expenses	**$5,112**	**$5,079**	**$5,547**

APPENDIX

Financials

distributions

JHTT distributes income it receives each year in accordance with the University's intellectual property policy. Prior to FY07, we performed these distributions annually after the close of the fiscal year. Starting with the first quarter of FY07, we moved to quarterly distributions. We distributed $11.260 million during FY10, slightly less than FY09.

FY09 and FY10 Income Distributions (000)

Distributed to	FY09	FY10	Change
Inter-Institutional (incl. HHMI)	$911	$919	$8
Inventor	$3,539	$3,610	$71
Inventor Research Accounts	$1,423	$1,409	$(14)
Departments	$1,431	$1,424	$(7)
Schools	$3,473	$3,358	$(115)
University	$566	$540	$(26)
Total	**$11,343**	**$11,260**	**$(83)**

disclosures

We received 355 invention disclosures in FY10, a slight increase over last year and, for the fourth year in a row, a record number for this University. We had targeted 350 invention disclosures for the year. We have devoted significant time to improving our processes to assist faculty with the disclosure reporting and, in some cases, to help with start-up companies being formed around the new technology. The table below shows FY10 invention disclosures broken down by school versus FY09.

During FY10, 372 first time inventors and 76 first-time principal investigators were listed on inventions disclosed to our office. While many of these first-time inventors were post-docs or graduate students, we are pleased to see the widening interest in technology commercialization and entrepreneurial activities by our faculty.

FY09 versus FY10 Invention Disclosures by School

School	FY09	FY10
Bloomberg School of Public Health	18	26
Krieger School of Arts and Sciences	20	18
School of Medicine	265	254
Whiting School of Engineering	41	50
School of Education	0	0
Other	8	7
Total	**352**	**355**

Financials

licensing

We executed 104 new license and option agreements in FY10. We also completed 52 amendments, 206 confidentiality agreements and 26 inter-institutional and other agreements during the year. We are very pleased with these results, as the economy made licensing especially challenging during the past year. Some of our more significant licensing accomplishments included:

- Completed an exclusive license agreement with an upfront license fee of $1 million.
- Signed an enforcement license with a company that was infringing on JHU patent rights. This agreement included an upfront license fee of over $300,000.
- Executed new agreements with nearly $31 million Total Contract Value.
- Secured over $3 million in research funding through new JHTT agreements.

For FY10, we had set a goal to create 10 start-up companies based on our technology and we met this goal. Initial funding of these companies is lower than in past years, reflecting current economic conditions. Seven of these companies are based in Maryland.

We have analyzed our new license agreements to study the age of the technology cases (inventions) that we are licensing. In this analysis, we calculated the time from initial disclosure of the invention to the execution date of the license agreement. Our analysis revealed the following:

Age of Case Licensed (in years)

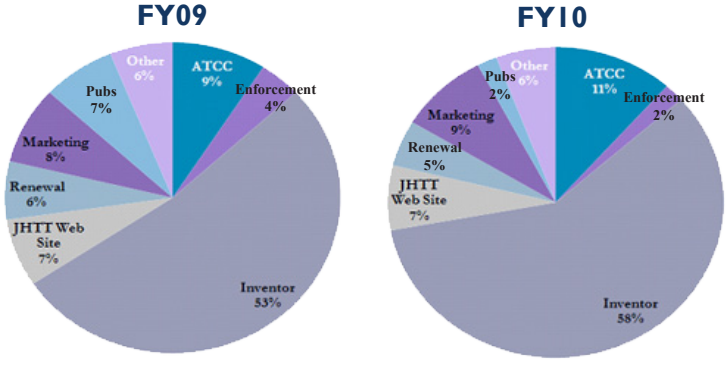
Fiscal Year	Agreements Completed	Cases Licensed	< 1	1-3	4-6	7-10	> 10
FY 2010	104	144	34	36	27	30	17
FY 2009	99	172	21	62	40	28	21
FY 2008	92	153	22	61	34	16	20
FY 2007	79	121	14	43	32	14	18
4-year Total	374	590	91	202	133	88	76
			15.4%	34.2%	22.5%	14.9%	12.9%
Average Cases Licensed per Agreement			1.58				

From this analysis, we can see that only about 1/6 of the cases licensed over the last four years were less than one year old. Often these licenses resulted from industry sponsored research where the sponsor took a license or were follow-on technologies to cases previously licensed. We can also see that almost 28% of the cases that were licensed over the past four years were 7+ years old at the time they were licensed.

During FY10, we tracked the source of the lead for each license agreement and option that we signed. We started tracking this lead information in order to help us gauge the effectiveness of the various marketing approaches that we are taking.

The FY10 results are shown below in comparison to FY09.

Source of Lead for License & Option Agreements



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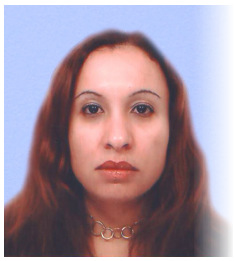

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