



EMORY  
UNIVERSITY

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**Office of  
Technology Transfer**

Gateway to Discovery,  
Innovation, and Products

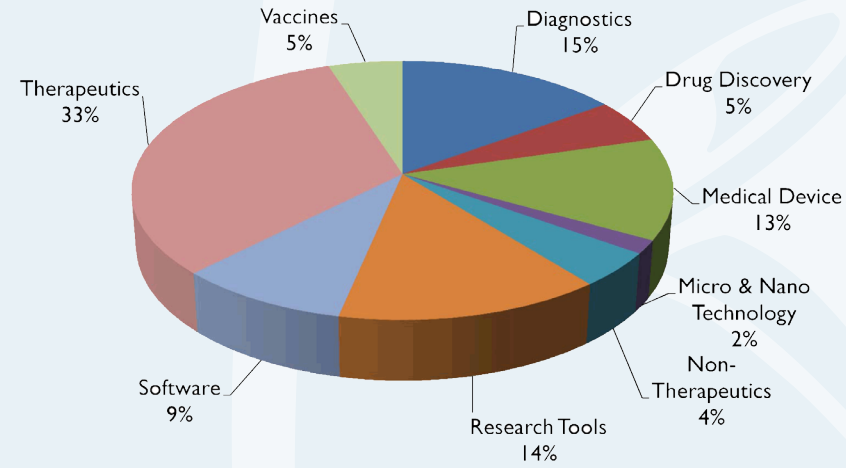
Annual  
Report  
2011

# Technology Transfer By The Numbers

**1138**  
Active Technologies

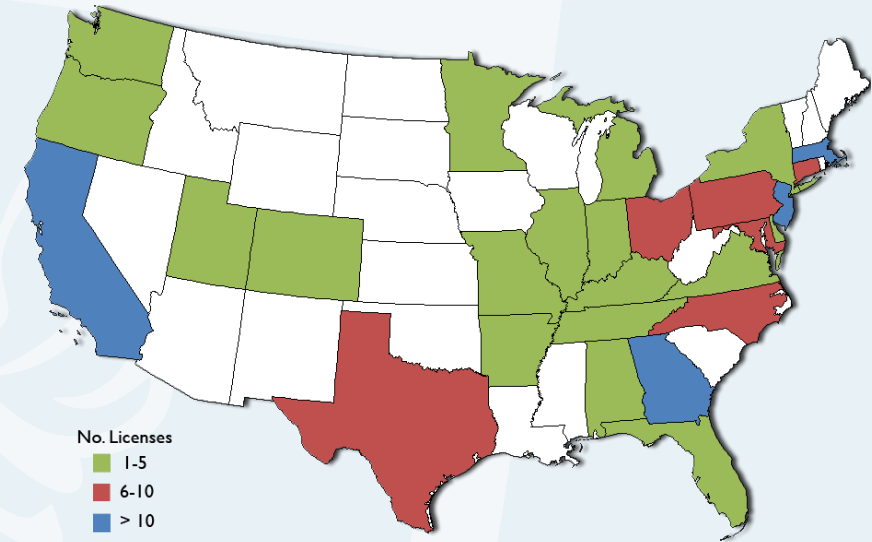
## Diversity of Discovery

Invention Disclosures by Type

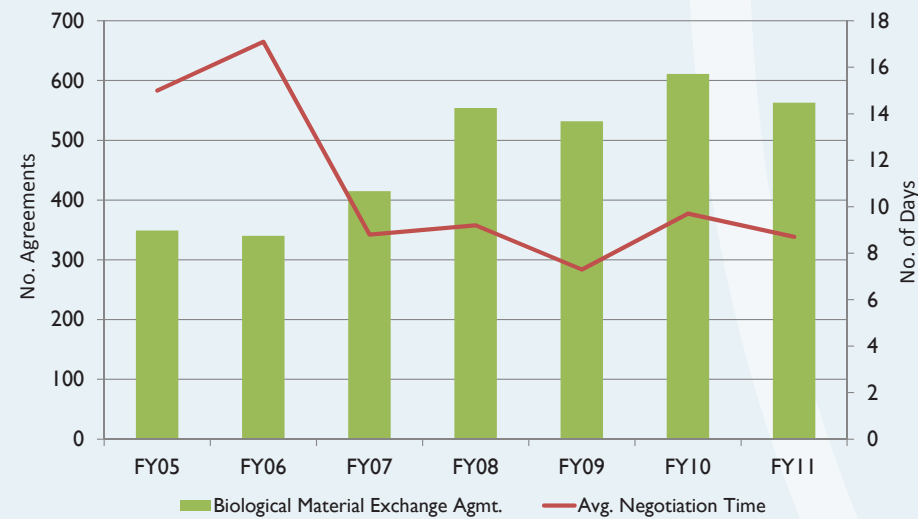


**258**  
Unique Partners

## Emory Corporate Licenses in the US Alone

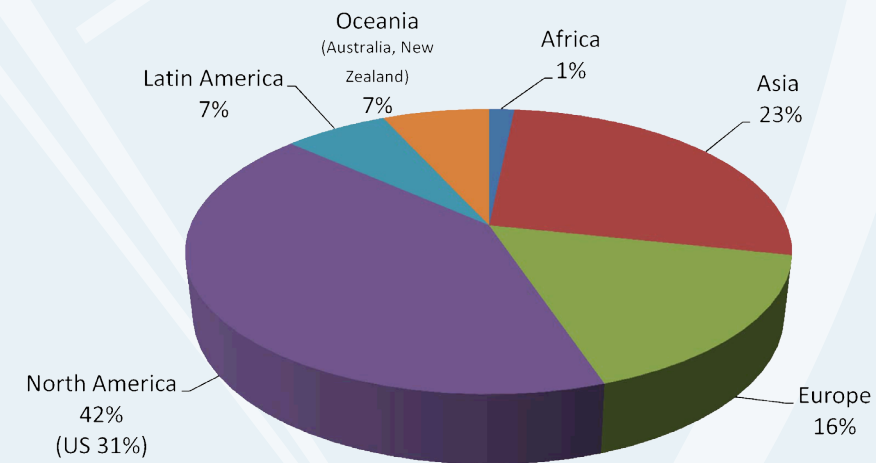


## Commitment to Service



**9**  
Days Average  
Agmt. Turnaround

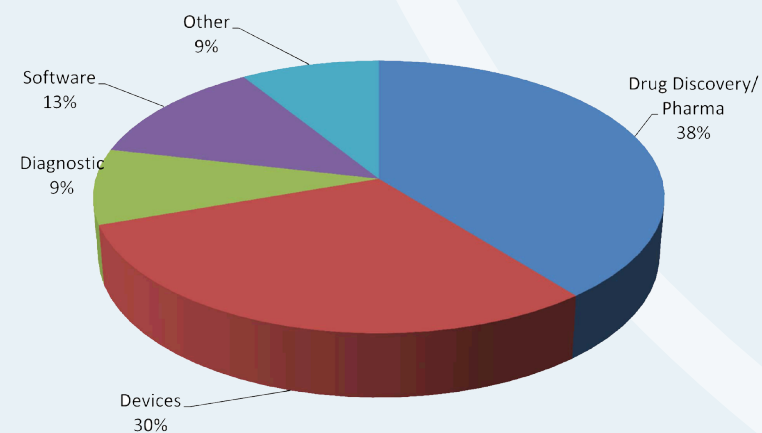
## Intellectual Property Around the Globe



**999**  
Pending Patent  
Applications

## Launching Technology from the Lab

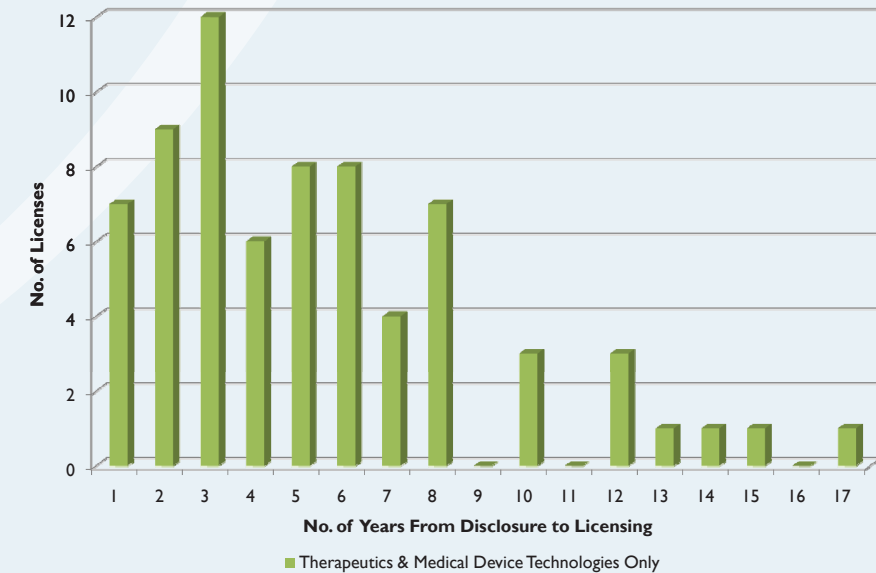
Start-up by Field



**56**  
Emory Start-ups

**5.5**  
Years on Average  
to License

## Success Takes Time





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Office of Technology Transfer



Todd Sherer, PhD  
Assoc. VP for Research,  
Director

Like wind, sun, or water, the untapped energy in human innovation is unlimited. Medical breakthroughs and new technologies require not just top minds working toward creative solutions, but large doses of imagination, courage, dedication, and teamwork. Emory's Office of Technology Transfer is the University's hub for patent protection, marketing, license negotiation, and start-ups. It's also a conduit for public and private partnerships, researchers and investors, industry and the academy. It is a space where bold ideas become reality. Join us!

# Imagination

... Creativity, Ingenuity, Vision

## Light activated

Reducing bacterial and viral germs with a broad-spectrum agent that is generated when exposed to visible light, SERQET™ technology was developed by Gordon Churchward, PhD, and Stephen Michielsen, PhD at North Carolina State University. LAAMScience Inc., which licensed the technology, recently won a Bill & Melinda Gates Foundation grant to bring SERQET™ to reusable feminine hygiene products in countries where most women cannot afford single-use disposables. LAAMScience's SERQET™ Wipes were made available to German retailers in fall 2011, opening the door to other markets. SERQET™ is currently used in respirator masks, surgical masks, cleaning wipes, and dishwashing towels.



Gordon Churchward, MD

## Mosquito collector

Collecting mosquitoes with an aspirator is vital for research that can reduce infectious diseases spread by insects, such as malaria and West Nile virus. The simple, low-cost ProkoPack™ aspirator, invented by Gonzalo Vazquez-Prokopec, PhD, and Uriel Kitron, PhD, has been proven to have comparable performance to the widely used CDC backpack aspirator, while being easier to use in the field. The ProkoPack is lighter, retains its charge longer, and is easier to assemble and maneuver. "Now it is used in all continents but Antarctica," says Vazquez-Prokopec.



Field Testing the ProkoPack™

# Courage

... Bold, Brave, Fearless

## Simplified catheter



Catheter Prototype

When the heart is stopped for cardiopulmonary bypass surgery, the heart muscle must be protected, usually by temperature reduction and the injection of a paralyzing solution. Conventional techniques require the use of a catheter lumen and several surgical tools. Emory's Jakob Vinten-Johansen,

PhD, has invented a simplified antegrade cardioplegia catheter delivery system that is applicable to newer, minimally invasive surgical techniques and eliminates much of the clutter around the operating site, improving surgeon visibility. The catheter also has a pressure port to monitor delivery pressure and vent air bubbles, and is easily removable while sutures are left intact.



Jakob Vinten-Johansen, PhD

## Brain injury



Donald Stein, PhD

Two pivotal clinical trials of the hormone progesterone as a treatment for traumatic brain injury (TBI) have grown out of years of research by Donald Stein, PhD. BHR Pharma, LLC is conducting the SyNAPSe® Phase III global clinical trial of BHR-100, a progesterone formulation, as a neuroprotective agent. The trial will involve about 1,200 patients who have had a severe closed-head trauma, including

victims of automobile crashes, domestic abuse, sports injuries, falls, and other accidents, at more than 100 trauma centers in about 20 countries. David Wright, MD, is leading the National Institute of Neurological Disorders and Stroke sponsored ProTECT III trial, which will enroll 1,140 brain injury patients at 32 medical centers around the country. Previous trials suggest about a 50 percent lower mortality in the progesterone-treated patients compared to those given a placebo.



David Wright, MD

# Determination

... Conviction, Dedication, Persistence

## Blood clotting



Pete Lollar, MD

A new treatment for a type of hemophilia developed by Emory's Pete Lollar, MD, has been granted orphan drug status by the European Commission (It had previously been granted orphan drug designation by the FDA.) Hemophilia is a bleeding disorder caused by low levels or the absence of a protein called a coagulation factor, essential for blood clotting. The drug OBI-1, which has undergone intensive

clinical trials, is designed to treat individuals with hemophilia who have developed inhibitory antibodies against human Factor VIII and can no longer respond to treatment with the coagulation factor. The drug was licensed to Ipsen, and in 2010, Ipsen and Inspiration Biopharmaceuticals entered into a strategic partnership to develop and commercialize a portfolio of hemophilia products, including OBI-1.



Red Blood Cells

## PKU goes mobile



Prototype PKU App



Rani Singh, PhD, RD

Careful monitoring of their diet is essential for people with phenylketonuria (PKU), a rare condition in which one is born without the ability to properly break down an amino acid found in foods that contain protein. Emory's development of a phenylketonuria iPhone mobile application will help patients manage their health and diets in easy, convenient ways, says Rani Singh, PhD, RD, inventor of the PKU

food list booklet on which the mobile app is based. Too much of the amino acid phenylalanine in the body can be very harmful to the central nervous system and cause serious brain damage. The app will provide immediate feedback to those with PKU through features such as a tracking system for phenylalanine concentrations in blood and diet, an interface with the USDA food database and a unit exchange system for easy tracking and counting.

# Teamwork

... Alliance, Collaboration, Partnership

## Eye of the microneedle

Ophthalmologists often need to deliver medication to the back of a patient's eye, and an Emory researcher and colleagues have been awarded a US patent for an improved microneedle to do just that. Emory's Henry Edelhauser, PhD, Georgia Tech's Mark Prausnitz, PhD, and former Georgia Tech graduate student Ninghao Jiang invented a hollow-tubed microneedle much smaller than currently used needles, which will result in less patient discomfort. The hole created by the microneedle is shown to heal in just 3 hours. This microneedle technology can be used to inject medication directly into the eye, particularly the back of the eye, for age-related macular degeneration, diabetic retinopathy, diabetic edema, or glaucoma. This could eliminate the need to put drops in the eyes every day for other ocular conditions, a real chore for some patients.



Eye Surgery

## On a beating heart

An Emory and Georgia Tech medical device start-up company, Apica Cardiovascular, developed a system to simplify and standardize the technique for opening and closing a beating heart during cardiac surgery. Apica, which was founded by Vinod Thourani, MD, Ajit Yoganathan, PhD, and Georgia Tech's Jorge Jimenez, PhD, recently received a \$5.1 million investment. The company is working to develop the system, which makes the procedure for delivering therapeutic devices to the heart, including aortic and mitral valves, more routine and expands the use of surgical techniques that do not require stopping the heart. The company was named Emory's Startup Company of 2010.



Vinod Thourani, MD

## Mission

We support the University's mission through comprehensive management of Emory innovations to maximize the benefit to the University and to humanity.

Therefore the office is committed to:

- Working with researchers to acquire the knowledge, expertise, and resources to successfully navigate the complexities of protecting intellectual property and securing commercial licensing deals.
- Collaborating with researchers and industry to build and nurture partnerships that move ideas from the lab to the marketplace.
- Developing commercialization strategies that benefit both Emory and our industry partners while maximizing benefit to the public and return on investment.
- Creatively negotiating with industry partners for the best possible license terms and aggressively managing agreements to ensure that licensees honor their terms and obligations.



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## Office of Technology Transfer

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### Director's Office

Todd Sherer, PhD  
Assoc. VP for Research,  
Director

Linda Kesselring, MBA  
Director of Operations

Susanne Hollinger, PhD, JD  
Assoc. Director,  
Chief IP Officer

Connie Newsome  
Senior Program Assoc.,  
Executive Assistant

Kevin Lei, MS, MBA  
Assoc. Director,  
VentureLab Director

### Licensing

J. Cale Lennon, III, PhD, MBA  
Assistant Director

Cory Acuff, PhD  
Senior Licensing Assoc.

Cliff Michaels, PhD  
Licensing Assoc.

Chris Paschall, PhD  
Licensing Assoc.

Panya Taysavang, MBA  
Licensing Assoc.

Vacant  
Marketing Assoc.

Doreen Nebane-Ambe, PhD  
Compliance Assoc.

Vacant  
MTA Specialist

### Emory Patent Group

Randi Isaacs, JD  
Patent Counsel

Jim Mason, MS, JD  
Patent Counsel

Winsome Dunn, MBA  
Paralegal

### Administration & Finance

Lauran Fechte  
Senior Financial Analyst

Maritta Allison  
Senior Accountant

Tamisa Wilson  
Administrative Assistant

Ashley Myers, CPT  
Program Associate

