**Annual Report 2016**

**Industry Contracting by the Numbers**

- **1,089 Total Agreements**
- **$35.4M** in Industry Funding
- **3%** License Agreements
- **12%** RDA’s
- **14%** Outgoing MTA’s
- **61%** Incoming MTA’s
- **13% Other**
- **1%** Non-Industry CTA’s
- **1%** Non-Industry Research Agreements
- **21%** CTA’s
- **26%** Research Services
- **37%** CDA’s

**Emory Patent Group**

- **1,055 Total Agreements**
- **$20M** in Clinical Research
- **$1.1M** in Other
- **30%** Research Services
- **24%** Industry Contracting
- **10%** Patent Applications & Issued
- **116/17** Patent Applications
- **249 Patents Issued
- **50%** Industry Funding

**Technology Transfer by the Numbers**

- **3%** License Agreements
- **12%** RDA’s
- **14%** Outgoing MTA’s
- **61%** Incoming MTA’s
- **13% Other**
- **1%** Non-Industry CTA’s
- **1%** Non-Industry Research Agreements
- **21%** CTA’s
- **26%** Research Services
- **37%** CDA’s

**Patent Applications & Issued**

- **116/17** Patent Applications
- **249 Patents Issued
- **3%** License Agreements
- **12%** RDA’s
- **14%** Outgoing MTA’s
- **61%** Incoming MTA’s
- **13% Other**
- **1%** Non-Industry CTA’s
- **1%** Non-Industry Research Agreements
- **21%** CTA’s
- **26%** Research Services
- **37%** CDA’s

**AUTM Reportable Agreements**

- **116/17** Patent Applications
- **249 Patents Issued
- **3%** License Agreements
- **12%** RDA’s
- **14%** Outgoing MTA’s
- **61%** Incoming MTA’s
- **13% Other**
- **1%** Non-Industry CTA’s
- **1%** Non-Industry Research Agreements
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- **37%** CDA’s
Building Corporate Relations, One Project at a Time.

Todd Sherer, PhD
Executive Director
Office of Technology Transfer
Emory University

362 projects were a very productive year for the Office of Technology Transfer (OTT) at Emory University. The Office has developed a strong and durable relationship with Emory's Industry Office, the Office of Clinical Research, and Emory's Industry Office. We continue to be the go-to source for industry and to more holistically assist entrepreneurs.

In the new year the staff are eager to take on new challenges, in particular for the Office of Technology Transfer. For the Office of Technology Transfer, 2016 proved to be a very productive year as the Office closed on a combined office with Emory's Industry Office. We completed our first year as a combined office with Emory's Industry Office. We completed our first year as a combined office with Emory's Industry Office.

It is important to note that our success in these endeavors is due to the support of the academic research community at Emory. The Office of Technology Transfer continues to be an important component in advancing our technology to the market.

We look forward to working with industry and to more holistically assist entrepreneurs. We remain hopeful that 2017 will bring new opportunities for the Office of Technology Transfer.

Metaclipse & Emory NIH grant

A research team from Emory University and Metaclipse Therapeutics Corp. are continuing efforts to develop a novel cancer vaccine immunotherapy targeting triple negative breast cancer (TNBC). TNBC is highly aggressive and is characterized by multiple unique, specific gene mutations, which makes it difficult to treat at a wide scale. These will have a potential solution to this problem through the incorporation of immunostimulatory molecules. Using the approach to preclinical trials, the vaccine is modified through the incorporation of immunostimulatory molecules. This approach allows every vaccine to be tailored to the individual patient's own tumor.

Metaclipse has received funding from the National Institutes of Health's (NIH) Preclinical 1300 project as well as grants from the Georgia Research Alliance Venture Loan program and the Coulter Foundation. Encouraging the results have so far, the National Cancer Institute has awarded Metaclipse and Emory a T32 Grant. The grant is poised to provide the necessary immunotherapy and unveil a clinical trial strategy.

Emory spinning out OEG

The Emory Genetics Laboratory (EGG), a former component of the Department of Human Genetics within the School of Medicine, developed a minimally invasive approach for non-invasive prenatal testing (NIPT) and other genetic testing. Additionally, Emory was also the first in Georgia and among the first in the U.S. to perform a whole genome sequencing test.

This venture is hoped that our success in these endeavors is due to the support of the academic research community at Emory. The staff are eager to take on new challenges, in particular for the Office of Technology Transfer.

We look forward to working with industry and to more holistically assist entrepreneurs. We remain hopeful that 2017 will bring new opportunities for the Office of Technology Transfer.

Clinical trial for pacemaker

It is estimated that there are 3 million people living with pacemakers worldwide. A recent international clinical trial proved the safety and efficacy of the first minimally invasive cardiac pacemaker on the market today: the Micro Transcatheter Pacing System (TPS). More than 170 patients participated with 80% being the top Q4 earnings

Emory physicians were the first in Georgia and among the first in the U.S. to perform a whole genome sequencing test. This innovative approach allows every vaccine to be tailored to the individual patient's own tumor.

These tests improve patient outcomes through more accurate diagnosis, prognosis, treatment recommendations, and targeted therapy approaches.

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Emory physicians were the first in Georgia and among the first in the U.S. to perform a whole genome sequencing test. This innovative approach allows every vaccine to be tailored to the individual patient's own tumor.
Metabolic & Emory NIH grant

A research team from Emory University and Metabolic Therapies Corporation is combining forces to develop a novel cancer vaccine immunotherapy targeting triple negative breast cancer (TNBC). TNBC is highly aggressive and is characterized by multiple unique, specific gene mutations, which makes it difficult to treat at all stages. Through years of research, they have found a potential solution to the problem of TNBC. The vaccine will be a combination of the vaccine against the TNBC associated membrane proteins and the vaccine against the associated membrane proteins of the TNBC cell. The vaccine will be manufactured through the incorporation of immunostimulatory molecules. This approach allows every vaccine to be tailored to the individual's specific needs and helps to overcome the most effective treatment possible.

Metabolic has received funding from a National Institutes of Health (NIH) Phase 1/2a as well as seed grants from the Georgia Research Alliance Venture Lab program and the Emory Office of Technology Transfer. Given the encouraging results seen to date, the National Cancer Institute has awarded Emory and Metabolic a €1.4 million Phase 1 grant to pursue this vaccine immunotherapy and to design a clinical trial strategy.

Emory spawning out OEG

The Emory Neuroimaging Laboratory (ENL), a former component of the Department of Human Neurosciences within the School of Medicine, is a leader in molecular, preclinical, and clinical imaging for brain and cerebrovascular diseases and disorders. ENL currently provides testing services to over 350 institutional clients, but a recent joint venture with Emory University Neurological Institute (EUNI) will expand greatly.

ENL provides bioanalytical testing and genomics services at a global level, and is currently focused on neurological disorders. Thus far, the National Cancer Institute has awarded Emory a grant to design a clinical trial and to develop a new vaccine immunotherapy platform. This approach allows each vaccine to be tailored to the individual's specific needs and helps to overcome the most effective treatment possible.

ENL has received funding from a National Institutes of Health (NIH) Phase 1/2a as well as seed grants from the Georgia Research Alliance Venture Lab program and the Emory Office of Technology Transfer. Given the encouraging results seen to date, the National Cancer Institute has awarded Emory a €1.4 million Phase 1 grant to pursue this vaccine immunotherapy and to design a clinical trial strategy.

Clinical trial for pacemaker

It is estimated that there are 3.3 million people living with pacemakers worldwide. A recent international clinical trial proved the safety and efficacy of the first minimally invasive cardiac pacemaker on the market today: the Mitra Transcatheter Pacemaker System (TPS). More than 700 patients participated with minimal risk for the top-of-the-line device. Emory physicians were in the first 20% to perform this operation, and more than 700 patients have been implanted since.

The TPS is a novel pacemaker that does not require an incision, making it an entirely non-invasive procedure. The device is designed to be implanted through the femoral vein, but unlike other pacemakers, the TPS can be placed in any form of veins or "devices." Additionally, implantation of TPS does not require an operation, making it a safe option for patients. However, with minimal surgical incision, there is no significant risk associated with the procedure. Thus far, there have been no reports of complications, which is significantly better than the 45% who require pacemaker procedures.

TPS is known as thrombosis, which is the formation of clots in the blood vessels. It is caused by abnormal blood coagulation and can lead to the formation of blood clots that can travel to the heart, lungs, or brain. It can also cause blockages of blood vessels, which can lead to heart attacks, strokes, or organ failures.

TPS is also known as a "leadless" pacemaker, which means it has no leads or wires connecting it to the heart. Instead, it is implanted directly into the heart muscle. This allows for a more natural and less invasive approach to pacemaker therapy. Additionally, TPS can be easily reprogrammed and adjusted as needed, which is a significant advantage over traditional pacemakers.

As the TPS technology advances, it is expected to become a safe alternative for patients. The TPS is currently being studied in clinical trials, and the results are expected to be released in the near future.
Building Corporate Relations, One Project at a Time

**Research**

**Metaclice & Emory NIH grant**
A research team from Emory University and Metaclice Therapeutics Corp. are continuing to develop a novel cancer vaccine immunotherapy targeting triple-negative breast cancer (TNBC). TNBC is highly aggressive and is characterized by multiple unique, specific gene signatures, which makes it difficult to treat and a wide scale. Researchers have found a potential solution to this problem with a novel approach that targets the vaccine to the unique subsets of breast cancer tumors that have been deteced in patients with specific breast cancers. The vaccine is modified through the incorporation of immunostimulatory molecules. This approach allows each vaccine to be tailored to an individual’s personalized genetic profile to promote the most effective treatment possible.

Metaclice has received funding from a National Institutes of Health (NIH) Phase I/IIa as well as grants from the Georgia Research Alliance Venture Lab program and the Coulter Foundation. Even the encouraging results seen by the National Cancer Institute have added Emory and Metaclice to our pipeline. The vaccine’s progress is now closer to market with the potential to meet upcoming clinical trials.

**Emory spining out OEG**
The Emory Generates Laboratory (EGL), a former component of the Department of Human Genetics within the School of Medicine, is a leader in molecular, biochemical, and genotypic testing and commercial genetic diseases and disorders. EGL currently provides testing services to over 1100 institutional clients, but a recent joint venture with Soera Science Financial will greatly expand its reach.

EGL provides bio-analitical testing and genetics services at a global level, and in a newly acquired controlling interest in ESI, Soera, regulatory approval, EGL will be able to deliver Genetico Diagnostics, LLC. These tools will allow EGL to provide services to clients globally. EGL has long been a leader in novel genetic testing technologies, when bringing new tools to market before other groups. EGL offers a wide range of services, from genome testing to disease screening. These team offers patients outcomes through the use of advanced diagnostic, prognostic, forensic management, and targeted drug therapy approaches.

**Clinical trial using allogeneic stem cells for Alzheimer’s**
Emory University and Stemedica Therapeutics Corp. are combining forces to develop a novel cancer vaccine immunotherapy targeting triple-negative breast cancer (TNBC). TNBC is highly aggressive and is characterized by multiple unique, specific gene signatures, which makes it difficult to treat and a wide scale. Researchers have found a potential solution to this problem with a novel approach that targets the vaccine to the unique subsets of breast cancer tumors that have been detected in patients with specific breast cancers. The vaccine is modified through the incorporation of immunostimulatory molecules. This approach allows each vaccine to be tailored to an individual’s personalized genetic profile to promote the most effective treatment possible.

For more details, please refer to the Emory News. The vaccine’s progress is now closer to market with the potential to meet upcoming clinical trials.

**Clinical trial for pacemaker**
It is estimated that there are 3 million people living with pacemakers worldwide. A recent international clinical trial that proved the safety and efficacy of the new, minimally invasive cardiac pacemaker on the market today: the Micro Transcatheter Pacing System (TPS). More than 150 patients participated with 178 being the top enrolling U.S. site.

Emory physicians were the first in Georgia and among the few in the U.S. to utilize the Micro TPS last year. Approximately 20% of patients experienced no major complications, which is significantly higher than the 65% who receive typical pacemakers.

The TPS is one tenth the size of the typical pacemaker—making it not only smaller, but also easier to implant through the femoral vein, but unlike other pacemakers, the TPS does not utilize any forms of venous or “lead” access. Additionally, implantation of TPS does not require an incision, making it a truly “leadless” procedure. Without venous or surgical incision, there is no risk of infection associated with the TPS. As of 2023, the TPS surpasses 400,000 implanted every year, the TPS is poised to become a standard-of-care for patients.