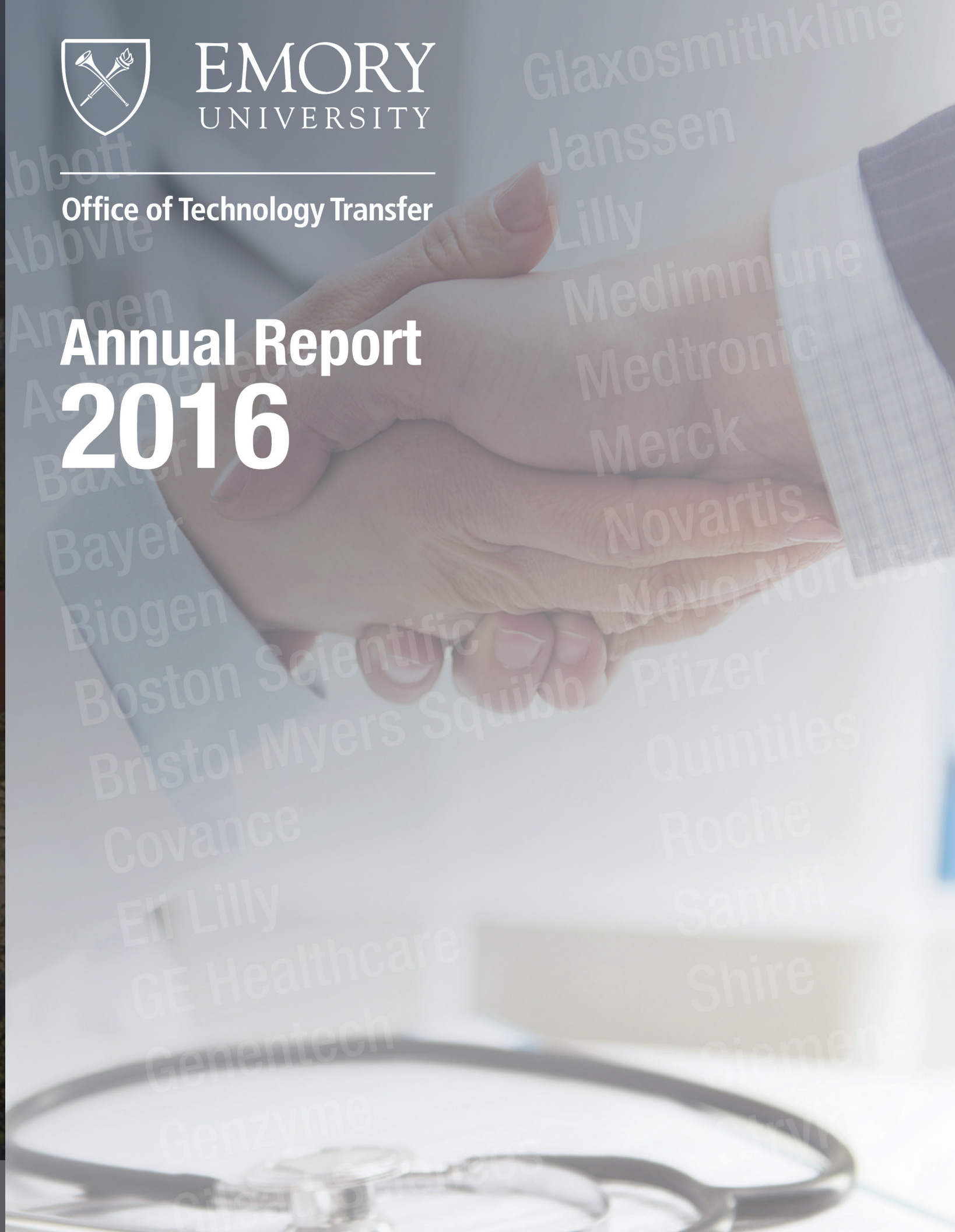
EMORY UNIVERSITY

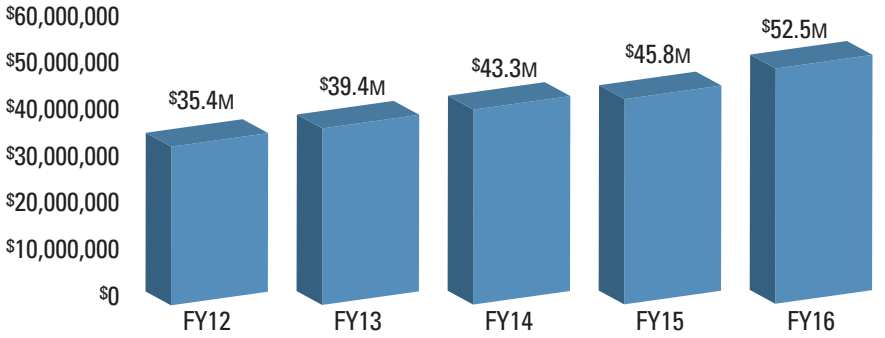
Office of Technology Transfer

Annual Report 2016

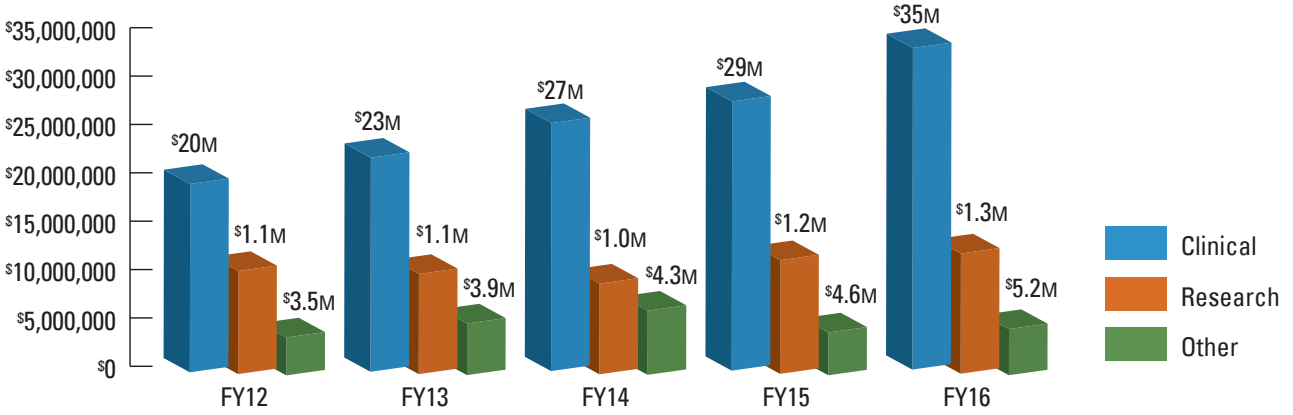


Industry Contracting by the Numbers

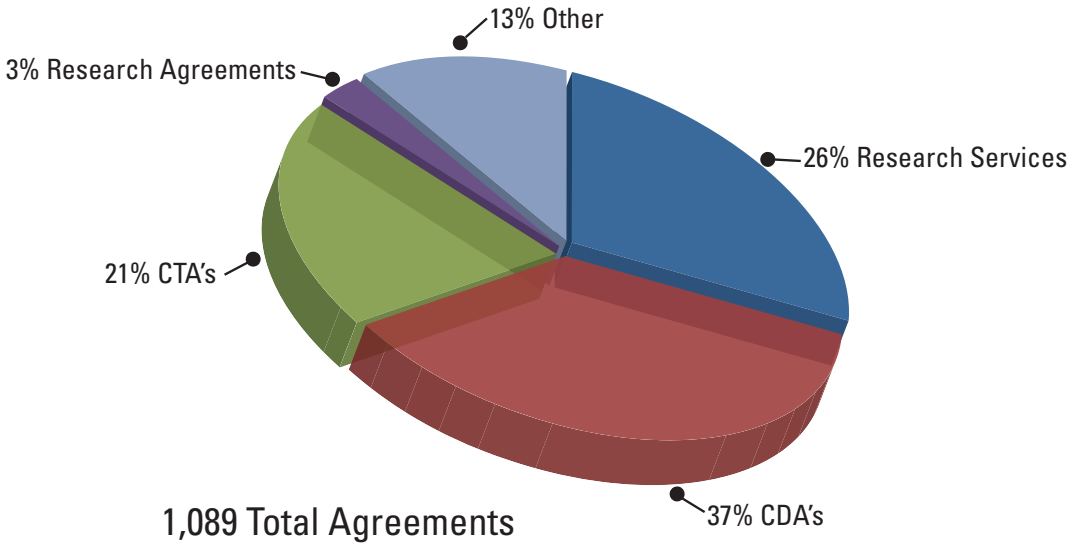
Industry Funding



Industry Funding by Type

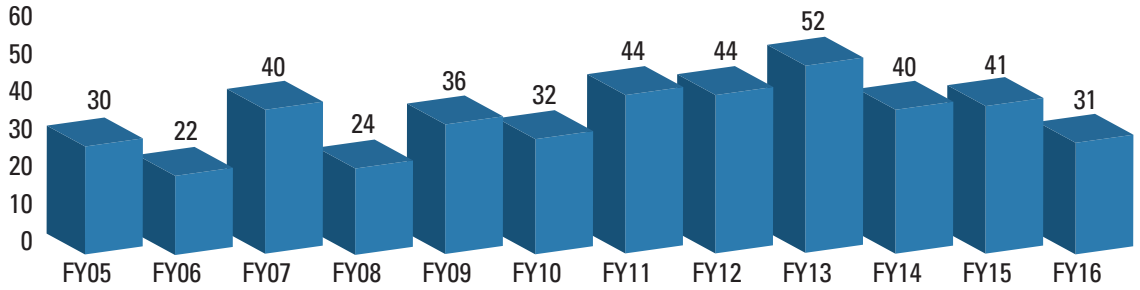


Network of Outgoing Industry Agreements



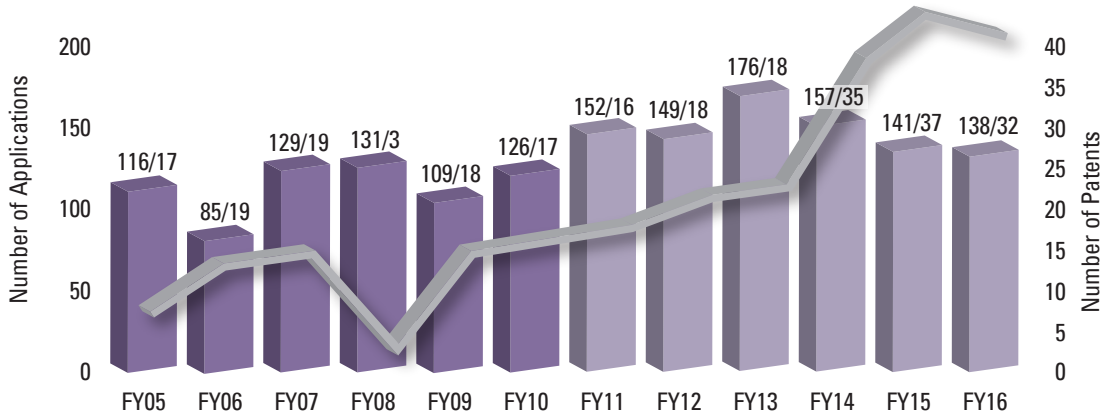
Technology Transfer by the Numbers

AUTM Reportable Agreements



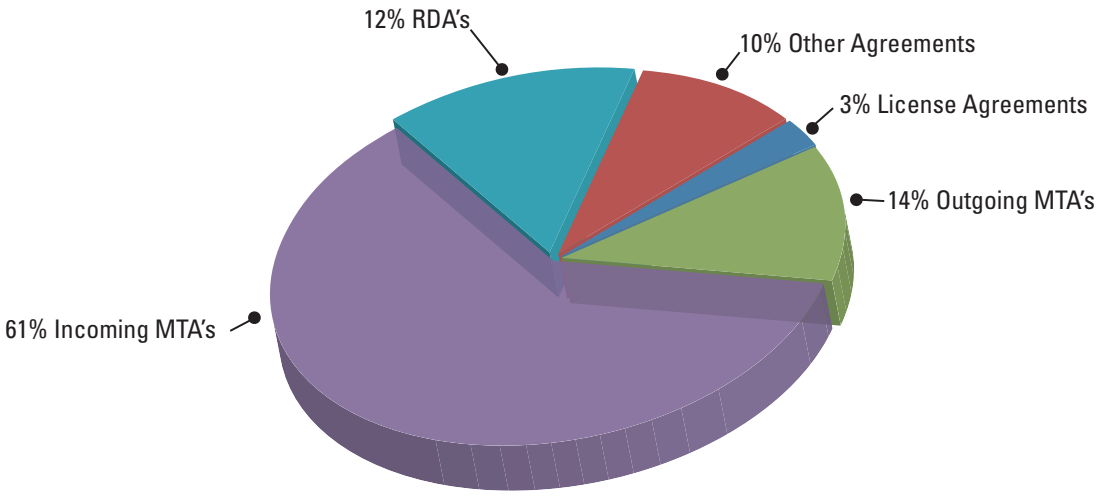
Patent Applications & Issued

1609 Patent Applications • 249 Patents Issued



EPG created FY11

Network of Technology Agreements



1,055 Total Agreements

EMORY UNIVERSITY

Office of Technology Transfer

Todd Sherer, PhD
Assoc. VP for Research, Executive Director

2016 proved to be a very productive year for the Office of Technology Transfer. For starters, we completed our first year as a combined office with Emory's Industry Contracting Group. Altogether we executed a total of 2,144 contracts -- most of them with industry --on Emory's behalf. While material transfer and confidentiality agreements far outnumber other contract types, it is those other contracts that take the most time and effort to negotiate.

Not only have the two offices gotten to know each other much better, but we created additional tools that have improved our ability to more effectively manage our business. Industry funding continues to be crucial component in the support of the academic research enterprise and in 2016 we saw an all-time high of $52.5M in funding from companies. Of this total, $35.5M was received in support of clinical work needed for the approval of new therapies and medical devices.

Focusing on products, Emory sub-licensee Blue Earth Diagnostics, received FDA approval for Axumin™ to diagnose recurrent prostate cancer. This technology was invented and disclosed in 1995 by Mark Goodman, PhD from our Department of Radiology. On a similar note, Baxalta received European approval to market Obizur™ for acquired hemophilia this past year (U.S. FDA approval was received in 2014). This drug was invented by Pete Lollar, MD and disclosed in 1992. Both of these stories highlight the long, risky approval process for new health care products.

Emory start-ups had a successful year as well; notably, Clearside Biomedical enrolled its first patient in their Phase 3 trial for the treatment of macular edema and Neurotrack, raised $6.5M of venture funding. Additionally in 2016, NeurOp was named one of the five most interesting start-ups at JP Morgan's Healthcare Conference in San Francisco while Accuitis closed a $1M preferred, angel financing round. We remain hopeful that these companies can bring new products to market in the coming years.

In the new year the staff are eager to take on new challenges, in particular working to expand of our collaborations with industry. We look forward to leveraging expanded opportunities with industry and to more holistically assist and facilitate industry's support of Emory research. Additionally, these synergies will better enable us to help technologies find translational research support, provide added licensing opportunities for promising technology, and to support the development of new start-up companies—all with the goal of advancing our technology to the market.

Building Corporate Relations, One Project at a Time.

research testing

Metaclipse & Emory NIH grant

A research team from Emory University and Metaclipse 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 mutations, which makes it difficult to treat on a wide scale. Researchers have found a potential solution to this problem through the use of individualized treatment; the vaccine utilizes tumor membrane vesicles that have been harvested from the patient's own tumor. Using protein transfer methods, the vaccine is modified through the incorporation of immunostimulatory molecules. This approach allows every vaccine to be tailored to a patient's individual gene mutation to promote the most effective treatment possible.

Metaclipse has received funding from a National Institutes of Health (NIH) Phase I SBIR as well as seed grants from the Georgia Research Alliance Venture Lab program and the Coulter Foundation. Given the encouraging results seen so far, the National Cancer Institute has awarded Emory and Metaclipse a $2.4 million, five-year grant to pursue this vaccine immunotherapy and to design a clinical trial strategy.

Emory spinning out EGL

The Emory Genetics Laboratory (EGL), a former component of the Department of Human Genetics within the School of Medicine, is a leader in molecular, biochemical, and cytogenetic testing for rare and common genetic diseases and disorders. EGL currently provides testing services to over 400 institutional clients, but a recent joint venture with Eurofins Scientific (Eurofins) will greatly expand its reach.

Eurofins provides bio-analytical testing and genomic services at a global level, and it recently acquired controlling interest in EGL. Soon, pending regulatory approvals, EGL will be dubbed EGL Genetic Diagnostics, LLC. This venture will enable EGL to provide services to clients globally. EGL has long been a leader in novel genetic testing technologies, often bringing new tests to market before other groups. EGL offers a wide range of services, from prenatal testing to exome sequencing. These tests improve patient outcomes through more accurate diagnosis, prognosis, disease management, and targeted drug therapy approaches.

treatment

Trial using allogeneic stem cells for Alzheimer's

Emory University and the University of California, Irvine are the first sites to enroll patients in a clinical trial for a stem cell based treatment for dementia. At this stage, forty participants with mild to moderate dementia due to Alzheimer's will be enrolled in the randomized, single-blind, placebo-controlled study to assess the efficacy, safety, and tolerability of the allogenic stem cell treatment. The treatment itself was developed by Stemedica Cell Technologies, Inc. and its subsidiary, Stemedica International.

There are few treatments available for the management of dementia, and stem cell treatment options have promising preliminary results. The enrollment process for the study began in July of 2016, and researchers hope to have insight into the treatment's efficacy in the near future. If this Phase IIa trial is successful researchers could be one step closer to a treatment for a disease with few options.

med device

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 smallest, minimally invasive cardiac pacemaker on the market today: the Micra Transcatheter Pacing System (TPS). More than 700 patients participated with Emory being the top enrolling U.S. site. Emory physicians were the first in Georgia and among the first in the U.S. to begin implanting the Micra TPS last year. Approximately 96% of patients experienced no major complications, which is significantly higher than the 45% who receive typical pacemakers.

The TPS is one tenth the size of the typical pacemaker—making it about the same size as a large pill. It is implanted through the femoral vein, but unlike other pacemaker surgeries, the TPS does not utilize any forms of wires or "leads." Additionally, implantation of TPS does not require an incision, making it an entirely non-invasive procedure. Without wires or surgical incision, there is decreased risk associated with TPS. With upwards of 600,000 pacemakers implanted every year, the TPS is poised to become a safe alternative for patients.

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