# **Start-up Numbers** 72

Georgia-based active companies total companies companies: 31 pharma, 17 device, 6 diagnostic, 9 software, 9 other

in non-diluted funding private investment capital 24 companies received venture capital funding

from merger & acquisitions

9 companies merged or acquired

companies that went public \$314 million in public investment capital





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Linda Kesselring, MBA **Operations** Director

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EMORY **Office of Technology** Transfer

## Annual Report 2015



### 1985 - 2015

Celebrating 30 Years of Technology Transfer & Commercialization

# **Office Numbers** 3,232

license agreements

2,671 **U.S.** patent applications

242

exclusive license agreements

609

issued U.S. patents

products to market

licensing revenue



### Office of Technology Transfer



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

Thirty years ago technology transfer was just an experiment. The country embarked upon a pretty novel approach outlined in the Bayh-Dole Act – putting ownership of innovations in the hands of the university. That birthed the profession of technology transfer.

Thirty years ago here at Emory the seeds of technology transfer began fairly simply with no dedicated staff but rather through an existing office, Office of Sponsored Programs, and perhaps under the infamous moniker of "other duties as assigned." Since that inauspicious beginning the office has evolved significantly to become a well-known and sophisticated program.

At Emory, there has been a number of significant new products, such as our HIV drugs, that have reached the market and since FY15 the university has generated over <sup>s</sup>854M in licensing revenue. That revenue is important because it helps support, build, and invest in scientific research and education. You can't have a strong program in technology transfer without investing in research.

# 1985

- □ 1st issued patent: a degassing process for removing oxygen; Isiah Warner, PhD
- □ 1st start-up founded: CytRx a co. focused on research & development in the oncology field: Virinder Nohria, MD & Michael Benatar, MBChB, MS, DPhil
- 1st Intellectual Property Policy adopted
- □ 1st dedicated OTT staff person hired: Vincent LaTerza, as the first director
- □ 1st major product QuantEm<sup>™</sup> receives approval and reaches the market

- How many OTT staff have been Emory alumni? 11 People
- How many students have been through our office? 100 People
- How many staff have been through our office? 53 People
- What is the office mascot? A river otter

# 1993

- □ 1st start-up with equity: AtheroGenics a co. focused on treatment of chronic inflammatory diseases; R. Wayne Alexander, MD, PhD
- □ 1st HIV antiretroviral drug: Epivir® (3TC); Dennis Liotta, PhD & Raymond Schinazi, PhD
- □ Start-up Triangle founded: IPO in 1996, purchased by Gilead in 2003 for \$464M
- OTT becomes an independent office
- Emory Cardiac Toolbox approval; a suite of tools used with SPECT myocardial perfusion studies: Ernest Garcia, PhD

What's the largest number of Emory contributors on a single disclosure?

- 14 contributors on a software disclosure
- In what country was the first foreign patent issued to Emory? South Africa, in 1993 for a pharmaceutical compound
- Outside of the U.S., in how many countries does Emory have issued patents? 91 countries

## **Celebrating 30 Years of Technology Transfer & Commercialization**

2000

- ClearGlide® approval: less invasive vein harvesting for heart bypass; Alan Lumsden, MD & Felmont Eaves, MD
- HIV antiretroviral drug: Emtriva® (FTC); Dennis Liotta, PhD & Raymond Schinazi, PhD
- OTT receives 1.000th disclosure: Derivation of multi-potential progenitor cells; Edmund Waller, MD, PhD & Cynthia Giver, PhD
- □ 25th start-up founded: RFS Pharma: a company focused on new drugs to treat viral infections
- OTT introduces its product pipeline, one of first academic offices to adopt industry-line pipeline

What are the shortest and longest time between disclosure and exclusive license agreement? Shortest: 29 days: medical: device Longest: 5,899 days: therapeutic

Where is the farthest start-up geographically from Atlanta? Gauteng, South Africa; Atlanta to Gauteng is 8430 miles

- Monetization: Emory sells rights to FTC for \$540M the largest academic deal at the time
- OTT launches its semi-annual breakfast club for CEOs, venture capitalists & entrepreneurs to hear about Emory technologies
- RFS Pharma joins both the NASDAQ & Russell 3000 first Emory start-up to do such; in 2004 merges with Cocrystal Pharma
- □ NeuroStar TMS Theraphy® is 5th in CNN's Top 10 Health Innovations of 2009

Where is the farthest licensee geographically? (exclusive or non-exclusive) Melbourne, Victoria, Australia; Atlanta to Melbourne is 9682 miles

What is the smallest royalty payment received in the past ten years? \$5.84 from EMD Millipore

## 2010

- OTT launches the Emory Patent Group one of a handful of offices with internal counsel
- ArcticFront<sup>®</sup> receives approval: a catheter for ablation of pulmonary veins; Jonathan Langberg, MD
- Emory is Top Contributor to Drug Discovery, according to new national study
- Emory start-up NeuroTrack, focused on Alzheimer's, wins health start-up at SXSW
- Obizur drug receives approval: treatment for acquired hemophilia: Pete Lollar, MD

In how many countries has OTT done business, excluding the U. S.? 29 for exclusive/ non-exclusive license agreements

In how many states in the U.S. has OTT done business? 35 for exclusive/non-exclusive license agreements

In my view, I believe strongly that our success as a program centers on the number of products that have reached the market with our assistance. The efforts of the technology transfer office complete the cycle of investing in research and helps to improve people's lives.

I choose to end this year of celebration with a story that demonstrates the positive impact of the high risk, high reward business we are in but also to highlight the results of perseverance over time. A drug that received FDA approval last year was originally disclosed to the office in the 1990s. It was spun out into a start-up company in 1998. The start-up partnered with a large pharma company. Eventually that large pharma partner picked-up the technology. That large pharma eventually lost interest and spun the technology out to a new start-up. That start-up continued to pursue its development, until they lost all their funding and went bankrupt. The technology returned to the large pharma who then sold it through an asset purchase arrangement. The buyer was the company that ultimately got FDA approval for the drug. Our office, including many staff over the years, had to work alongside our various licensees through all the many ups and downs in order for that product to find its way to the marketplace. Our investigator played a key role in feedback to all the companies. The companies came to the institution looking for concessions. We pushed back hard on them and exercised the due diligence provisions in the licensee. After more than 20 years, we had an overnight success; the technology became a drug on the market, which is saving lives. That's life in technology transfer and we love what we do. We look forward to the next thirty years of helping shepherd innovations from the lab to society.