By The Numbers

OTT Fiscal Year 2014

Technology				Revenue
65 drug discovery & therapeutics; 59 medical device & related; 46 biotechnology; 55 other	Collaboration Turn around 6.8 days; All time low	IP Protection 35 issued U. S. patents; All time high	Agreements 8 exclusive; 3 start-ups	^{\$} 1.1м to Univ.; ^{\$} 530к to Schools: ^{\$} 875к to Depts; ^{\$} 799к to Labs ^{\$} 2.2м to Inventors
225	683	157	40	^{\$} 9.8M
Total Disclosures	Material Transfer Agreements	U. S. Patent Applications	Licensing Agreements	Licensing Revenue



EMORY UNIVERSITY

Office of Technology Transfer

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EMORY UNIVERSITY Office of **Technology** Transfer

Annual Report 2014

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Technology Transfer

Start-up Snapshot

Demographics				Impact
53 still active 44	Private ^{\$} 85M in non-dilutive funding	Activity 9 companies involved	Public ^{\$} 314 _M in public investment	1,200 employees total, at employment peak
72	^{\$} 1B	^{\$} 13B	10	30
Total Companies	Private Investment Capital	Mergers & Acquisitions	Companies that went Public	Products





Start-up Highlights - 30 Years of Supporting Innovation

Office of Technology Transfer



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

Start-ups a Success

Results from the first comprehensive survey of Emory University's 72 startup companies are in. This survey was several years in the making and is the most complete report to date on Emory's start-ups and their economic and societal impact.

We are pleased to report that these start-ups have been very successful, from attracting funding and going public, to getting products to market, and creating job in Atlanta and elsewhere.

Emory OTT spins out an average of three to six companies per year and approximately 80 percent of the total 72 companies were created since 2000.

Virtually Better, Inc.

is an Emory/GA Tech start-up, founded in 1998, that develops virtual reality treatments for anxiety disorders such as public speaking, fear of flying, fear of heights, and post-traumatic stress disorder (PTSD). The virtually reality treatment consists of simulated environments where patients are exposed to a virtual environment containing the feared situation rather than taking the patient into the actual environment or having the patient imagine the stimulus. The Emory inventor is Barbara Rothbaum, PhD, psychiatry.



Triangle Pharmaceuticals

licensed FTC (emtricitabine) from Emory in 1996 and was purchased by Gilead Sciences in 2002 for \$464 million. Gilead currently has six drugs on the market which contain FTC, five of which are combo therapies. In 2006 the FDA approved Atripla®, a combo therapy, as the first once-a-day, single tablet regimen for HIV. In 2012 the FDA approved the use of Truvada®, a combo therapy, by uninfected people at high risk for the AIDS virus as a prophylactic, becoming the first HIV drug to be approved for preventative use. The Emory inventors are Dennis Liotta, PhD, chemistry & Raymond Schinazi, PhD, pediatrics.



Neuronetics

is an Emory start-up, founded in 2001, which developed the NeuroStar® system for the treatment of depression. It is the only company to have an FDA approved, non-invasive treatment for depression in patients who have not benefited from prior antidepressant treatment. FDA approval was received in 2008. The NeuroStar® system uses transcranial magnetic stimulation (TMS) therapy, a non-invasive form of neuro-modulation. The company has received venture capital funding of more than \$128M. The Emory inventor is Charles Epstein MD, neurology.



Emory's 1st start-up, in 1985, was with CytRx which is focused on oncology and still in business.

Velocity Medical Solutions

was an Emory start-up, founded in 2007, that developed an advanced multi-modality imaging platform built for radiation treatment planning. VelocityAl[™] is a suite of oncology-focused products combining multi-modality image management and advanced visualization to facilitate oncology or other clinical specialty workflow. It received FDA 510K approval in 2008. The company received funding from the Georgia Research Alliance (GRA) and was acquired by Varian Medical Systems in 2014. The Emory inventors are Tim Fox, MD & Ian Crocker, MD, radiation oncology.



QUE Oncology

is a start-up formed in 2013 through a collaboration between Emory University and, UniQuest, the University of Queensland's research commercialization company. The company's focus is on drug discovery through developing novel drug candidates to treat cancer and the sideeffects of cancer treatment. The lead project is a technology licensed from Emory, for hot flashes that result in women with breast cancer receiving anti-estrogen treatments, and is currently in Phase I clinical trials. The company has received funding from the Georgia Research Alliance (GRA). The Emory inventor is Dennis Liotta, PhD, chemistry.

Clearside Biomedical

is an Emory/GA Tech start-up, founded in 2012, focused on the improved delivery of ophthalmic therapeutics into distinct compartments of the eye via tissue targeted micro-injections. The company has received funding from the Georgia Research Alliance (GRA) as well as over \$28M in venture capital funding. Their lead product is in Phase III clinical trials. The Emory inventor is Henry Edelhauser, PhD, ophthalmology.



Centripital, Inc.

is a not-for-profit corporation, formed in 2013, whose mission is to train hospital professionals to work together in high-functioning and patient-centered teams. Centripital's care model, ACU-SBIR[™], has been associated with decreased hospital mortality and length of stay, and increased patient satisfaction. The company licenses out its training materials and know-how to healthcare systems and third parties who provide teamwork training and support to hospitals, physicians, nurses, and trainees. The Emory inventor is Jason Stein, MD, hospital medicine.

Cambium Medical Technologies

was founded, in 2014, with a proprietary method to manufacture a standardized allogeneic platelet lysate. The company is developing novel bloodderived therapeutics that augment the body's natural regenerative capacity. Cambium's lead product is a topical solution for ophthalmologic indications associated with corneal disease, in particular Keratoconjunctivitis sicca (KCS) or dry eye syndrome. The company's preclinical FDA mandated *in vivo* animal testing has been funded by its Pacific Rim partner, Gwowei Technology, and the Georgia Research Alliance (GRA). The Emory inventors are lan Copland, PhD, radiation oncology; Jacques Galipeau, MD, and Edmund Waller, MD, PhD, hematology oncology; and John Roback, MD, PhD, pathology.





Universities are under increasing political pressure to assert, measure, and improve their impact on national wellbeing, with attention primarily on economic growth, job creation, and competitiveness. Policymakers also want universities to be more responsive to market forces. more entrepreneurial, and more attuned to the needs of industry.

From discovering natural anti-tumor compounds, to developing new drugs to treat hepatitis C, tuberculosis, or Parkinson's disease, to creating safe and effective HIV vaccines, to inventing devices to improve heart surgery, Emory start-ups demonstrate daily the impact of academic research on our lives.

There is often the perception that conflict of interest rules for academics are so restrictive that faculty inventions and university start-ups can no longer be successful. A key take-away from this report is that that's just not true.

As more emphasis is placed on return on research investment, university start-ups continue to be an efficient, effective way to get promising innovations out there for the world to benefit.

We hope you join us in celebrating our start-up success and enjoy reading about our future promise.