## Coulter Program Performance 2014-2018

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<th>2015</th>
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<th>2017</th>
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**4.4x Follow On Funding Over 4 Years**

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<tbody>
<tr>
<td>Awarded</td>
<td>$4.6 M</td>
<td>$20.3 M</td>
<td>$3.8 M</td>
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<tr>
<td>Follow On Funding</td>
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<tr>
<td>Follow On Investment</td>
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### The Coulter Process

#### IDEA GENERATION
- Unmet Needs
- Customer Discovery
- Multi-disciplinary Team

#### RISK ASSESSMENT
- Market Analysis
- Intellectual Property
- Regulatory

#### PROJECT SELECTION
- End Users
- Industry
- VCs / Angels
- Entrepreneurs

#### RISK REDUCTION
- Programs
- Management Entrepreneurs in Residence
- Operating Reviews
- Critical Milestones

#### FOLLOW ON FUNDING
- License
- Business Plan
- Management
- Entrepreneurs In Residence

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**Coulter Translational Program**

Visit our website [www.coulter.gatech.edu](http://www.coulter.gatech.edu) for more information and contact us with any questions or to schedule a meeting.

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Christine Wessels
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**Pilot Success at Georgia Tech and Emory**

- **$4.6 M** Total Awarded
- **$20.3 M** Follow On Funding
- **$3.8 M** Follow On Investment

---

**COULTER TRANSLATIONAL PROGRAM**

A partnership with the Biomedical Engineering Department at Emory University and Georgia Institute of Technology
It is my pleasure to share with you our first-ever Annual Report for the Georgia Tech Emory-Coulter Translational Fund. Four years into the piloting of the Coulter Process, we’re excited to share the tremendous impact this program has had across both campuses as we move into the next era of connectedness, transparency, and impact for this program.

Early on, it was the prerogative of the Coulter Foundation to raise their industry best practices and implement them across academic institutions to increase and accelerate the commercialization of medical technologies. Through the lens of innovation and industry expertise, a process was created to allow for systematic identification of the most promising commercial opportunities and structured execution of commercially relevant initiatives to increase the attractiveness of these technologies to industry, experienced entrepreneurs, and investors. This is accomplished using teams of industry-expert resources to create regulatory, reimbursement, and development go-to-market strategies.

The Georgia Tech-Emory Coulter Fund was founded to bridge the gap for early-stage technologies emanating from our universities. Since 2014, we have invested over $450 million in 28 “seed-stage” technologies. Our selection process is rigorous, with less than 10% of applicants receiving funding, following due diligence with outside experts in the field as well as venture capital advisors. We are proud of the results: the group has gone on to attract $20.3 million in follow-on funding, including $3.8 million in funding from venture capital and high net worth individuals, resulting in 15 start-ups formed from portfolio technologies seeking to address unmet medical needs.

Launch of the Coulter Commercialization Program, A record 561 scouting and consultations meetings with 70 faculty members. Project-specific support in collaboration with 70 faculty members. Initial visits of 96-half-a-Coulter-funded medical devices to enhance fire safety in procedure rooms, now licensed to Jackson Medical.

Several portfolio technologies recognized at Emory University as the “Innovation of the Year” (EMRGE, Eaves), and “Significant Event of the Year” (Sanguina, Lam).

“Working with the Coulter Translational Program helped launch my idea from a research project to a commercial venture. My Coulter mentors helped me view the project through the eyes of investors, and, by doing so, developed it in ways I could not have done on my own.”

Rebecca Levit, MD
Assistant Professor, Division of Cardiology, Emory University

A reliable and intuitive solution that reduces the risk of false and bias attributed to flow-optic light cables.

* The Coulter Team provided funding, guidance on steps forward and connections to experts who provided great advice and had been down the road we are traveling.*

James Rains, PE
Professor of the Practice
Wallace H. Coulter Biomedical Engineering Department
Georgia Tech & Emory University

Consultations Since 2014

The Coulter Program Expenses and Impact

SELECT COULTER SUCCESS STORIES

15 start-ups formed from Coulter funded projects:

- CarmeRad
- FMP
- Sanguina
- Rapedex
- Jackson Medical
- MetaDiag
- Covansx
- FraudScope
- CellArx
- EMRGE
- NeopDrx
- Marpe Therapeutics
- CellFile
- Cambium
- Nyia

“Waste and abuse. Detecting healthcare fraud, with the road we are traveling.”

Rebecca Levit, MD
Assistant Professor, Division of Cardiology, Emory University

Some highlights from FY17-18 include:

- 15 start-ups formed from Coulter funded projects
- Platform device for targeted delivery of cardiac therapeutics
- A reliable and intuitive solution that reduces the risk of false and bias attributed to flow-optic light cables.

The Coulter Program has a high capital efficiency. Approximately 74% of the $1.5M FY17-18 expenditures are applied directly to project support and commercialization. The remainder of the budget goes towards interinstitutional educational initiatives, external support during the diligence process, project management, and program management.

Once projects are funded, we meet regularly to provide guidance and expertise on steps towards commercialization. Approximately 115 hours are spent per team during each funding cycle, which includes one-on-one meetings, project management, and consulting resources for regulatory and market analysis.

Beyond our annual funding cycle, we meet year-round with teams requesting insight well on commercialization pathways. We connect them with our resources and provide next steps to prepare them for funding consideration.
Shawna Khouri

Managing Director of the Coulter Translational Program

It is my pleasure to share with you our first-ever Annual Report for the Georgia Tech-Emory Coulter Translational Fund. Four years into the life of the Coulter Process, we’re excited to share the tremendous impact this program has had across both campuses as we move into the next era of connectedness, transparency, and impact for this program.

Early on, it was the prerogative of the Coulter Foundation to raise their industry best practices and implement them within academic institutions to increase and accelerate the commercialization of medical technologies. Through the lens of investment and industry experts, a process was created to allow for systematic identification of the most promising commercial opportunities and structured execution of commercially viable innovations to increase the attractiveness of these technologies to industry, experienced entrepreneurs, and investors. This is accomplished using teams of industry-expert resources to create regulatory, reimbursement, and development go-to-market strategies.

The Georgia Tech-Emory Coulter Fund was founded years ago to bridge the gap for early stage technologies emanating from our universities. Since 2014, we have invested over $4.6 million in 35 “pre-seed” technologies. Our selection process is rigorous, with less than 10% of applicants receiving funding, following due diligence with outside experts in the field as well as venture capital advisors. We are quite proud of the results: the group has gone on to attract $20.3 million in follow on funding, including $3.8 million in funding from venture capital and high net worth individuals, resulting in 15 start-ups and two licenses to industry partners. Perhaps most importantly, in this short time three portfolio technologies seeking to address spinal cord injury and its secondary complications

Several portfolio technologies recognized at Emory University as the “Innovation of the Year” (BioPace, Cho & Santangelo), “Start-up of the Year” (Nyra, FE Marpe Therapeutics), and “Significant Event of the Year” (Sanguina, Lam) in a 6 month interval to move forward very quickly. Our project allowed us to detect healthcare fraud, AI-assisted platform for detecting healthcare fraud, waste and abuse. The interest, energy and focus of key skill sets around our project allowed us to move forward very quickly in a 6 month interval to potential industry partners. 

Mushair Ahmed, PhD
CEO, FraudScope
Former Georgia Tech Graduate Student

Our selection process is rigorous, with less than 10% of applicants receiving funding, following due diligence with outside experts in the field as well as venture capital advisors. We are quite proud of the results: the group has gone on to attract $20.3 million in follow on funding, including $3.8 million in funding from venture capital and high net worth individuals, resulting in 15 start-ups and two licenses to industry partners. Perhaps most importantly, in this short time three portfolio technologies have entered the market. We connect them with area resources and provide next steps to prepare them for funding consideration.

Select Coulter Success Stories

**Gorami**
Platform device for targeted delivery of cardiac therapeutics
- The Coulter Team provided funding, guidance on steps forward and connections to experts who provided great advice and had been down the road we are traveling.
- James Rosle, PhD
Professor of the Practice
Wallace H. Coulter Biomedical Engineering Department
Georgia Tech & Emory University

**Jackson Medical**
AI-assisted platform for detecting healthcare fraud, waste and abuse.
- The Coulter Team provided funding, guidance on steps forward and connections to experts who provided great advice and had been down the road we are traveling.
- Musheer Ahmed, PhD
CEO, FraudScope
Former Georgia Tech Graduate Student

In addition to the demonstrated efficacy of the process, the Coulter program is highly capital efficient. Approximately 74% of the $1.5M FY17-18 expenditures are applied directly to project support and commercialization. The remainder of the budget goes towards interinstitutional educational initiatives, external support during the diligence process, project management, and program management.

Launch of the Coulter Commercialization Teams in 2017 provided a catalyst for the market to discover the opportunities within our academic institutions to further develop and bring innovative medical technologies.

Select Coulter Success Stories

15 start-ups featuring Coulter technologies: CoraRad, FLPA, SengaGen, Jackson Medical, MetaStop, Covance, FraudScope, CoraArt, EMRISE, NephDi, Marie Therapeutics, CellFIE, Cambium, Nyra

Several portfolio technologies recognized at Emory University as the “Innovation of the Year” (BioPace, Cho & Santangelo), “Significant Event of the Year” (Sanguina, Lam) and “Start-up of the Year” (Nyra, FE Marpe Therapeutics).

In addition to the demonstrated efficacy of the process, the Coulter program is highly capital efficient. Approximately 74% of the $1.5M FY17-18 expenditures are applied directly to project support and commercialization. The remainder of the budget goes towards educational initiatives, external support during the diligence process, project management, and program management.

Consultations Since 2014

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<thead>
<tr>
<th>2014</th>
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The Coulter Program Expenses and Impact

- Project Direct Add: $1,547,415
- Project Post Award, Regulatory, Qualification & Transactional Activities: $57,300
- Education, Events, & Program: $1,028,695
- Other: $1,054,038

Once projects are funded, we meet approximately to provide guidance and expertise on steps towards commercialization. Roughly 105 hours are spent per team during each funding cycle, which includes due diligence meetings, project management, and consulting resources for regulatory and market analysis.

Beyond our annual funding cycle, we meet year-round with teams requesting insight and commercialization pathways. We connect them with area resources and provide next steps to prepare them for funding consideration.

Thank you to everyone for a year of unprecedented growth and successful delivery of university technologies to fundable start-up and industry partners. I would like to acknowledge the hard work of the Coulter Translational Program and the tremendous support we have received from our community within Emory University and Georgia Institute of Technology as well as our external network.

Shawna Khouri
Managing Director of the Coulter Translational Program

Shawna Khouri
Select Coulter Success Stories

15 start-ups formed from Coulter funded projects:

- CaneRad
- EMPR
- Sanguina
- Rapexida
- JackMan Medical
- MetaClipse
- Canvass
- FraudScope
- CanXra
- EMRGE
- NeopDx
- Marie Therapeutics
- CellFi
- Cambium
- Nyia

*Working with the Coulter Translational Program helped launch my idea from a research project to a commercial venture. My Coulter mentors helped me view the project through the eyes of investors, and by doing so, developed in my mind I could not have done on my own.*

Rebecca Levelt, MD
Assistant Professor, Division of Cardiology, Emory University

Launch of the Coulter Commercialization Series, a nine-session educational effort open to the community to teach the principles to anyone trying to commercialize medical technologies. A record 76 consultations and consultation meetings with 76 faculty members.

Several portfolio successes recognized at Emory University as the “Innovator of the Year” (Jackson Medical, Gonzales), “Significant Event of the Year” (Sanguina, Lam) and “Start-up of the Year” (CameRad, Eaves), and “Significant Event of the Year” (BioPace, Cho & Santangelo).

Thank you to everyone for a year of unprecedented growth and successful delivery of university technologies to potential industry partners. We would like to acknowledge the hard work of the Coulter Fund team and the tremendous support we have received from our community within Emory University and Georgia Institute of Technology as well as our external network.

Shawna Khouri
Managing Director of the Coulter Translational Program

The Coulter Program Expenses and Impact

In addition to the demonstrated efficacy of the process, the Coulter program is highly capital efficient. Approximately 74% of the $15.7M FY17-18 expenditures are applied directly to project support and commercialization. The remainder of the budget greatly enhances institutional educational initiatives, external support during the diligence process, project management, and program management.

Beyond our annual funding cycle, we meet regularly to provide guidance and expertise on steps towards commercialization. Approximately 115 hours per year are spent per team during each funding cycle, which includes one-on-one meetings, project management, and consulting resources for regulatory and market analyses.

COULTER TRANSLATIONAL PROGRAM - ANNUAL REPORT 2018

Consultations Since 2014

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<th>Year</th>
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<th>Average per funded team</th>
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The Coulter Program Fund Resource Allocation

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<th>Project Planning</th>
<th>Educational Events</th>
<th>Program Management</th>
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<td></td>
<td>54%</td>
<td>26%</td>
<td>25%</td>
<td>10%</td>
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Once projects are funded, we meet regularly to provide guidance and expertise on steps towards commercialization. Approximately 115 hours per year are spent per team during each funding cycle, which includes one-on-one meetings, project management, and consulting resources for regulatory and market analyses.

COULTER TRANSLATIONAL PROGRAM - ANNUAL REPORT 2018
## Coulter Program Performance 2014-2018

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<tr>
<th>YEAR</th>
<th>GEORGIA TECH</th>
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<td>PROJECTS</td>
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<td>START-UPS</td>
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<td>LICENSES</td>
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<td>ON MARKET</td>
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### Pilot Success at Georgia Tech and Emory

- **4.4x Follow On Funding Over 4 Years**
- **$4.6 M** total awarded in 2014
- **$20.3 M** Follow On Funding
- **$3.8 M** Follow On Investment
- **$4.6 M** Total $ Awarded in 2018

### The Coulter Process

- **IDEA GENERATION**
  - Unmet Needs
  - Customer Discovery
  - Multi-disciplinary Team

- **RISK ASSESSMENT**
  - Market Analysis
  - Intellectual Property
  - Regulatory

- **PROJECT SELECTION**
  - End Users
  - Industry
  - VCs / Angels
  - Entrepreneurs

- **RISK REDUCTION**
  - Program Management
  - Entrepreneur In Residence
  - Operating Reviews
  - Intellectual Property

- **FOLLOW ON FUNDING**
  - License
  - Business Plan
  - Management

### COULTER TRANSLATIONAL PROGRAM

Visit our website [www.coulter.gatech.edu](http://www.coulter.gatech.edu) for more information and contact us with any questions or to schedule a meeting.

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Christine Wassale  
Program Coordinator  
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### Financial Summary

- **$4.6 M** total awarded in 2014
- **$20.3 M** Follow On Funding
- **$3.8 M** Follow On Investment

### A partnership with the Biomedical Engineering Department at Emory University and Georgia Institute of Technology
## Coulter Program Performance 2014-2018

<table>
<thead>
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<th>EMORY</th>
<th>GEORGIA TECH</th>
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### Project Success at Georgia Tech and Emory

4.4x Follow On Funding Over 4 Years

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<th>2018</th>
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<td>Total $ Awarded</td>
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<tr>
<td>Follow On Funding</td>
<td>$3.8 M</td>
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<tr>
<td>Follow On Investment</td>
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### The Coulter Process

1. **Idea Generation**
   - Unmet Needs
   - Customer Discovery
   - Multi-disciplinary Team

2. **Risk Assessment**
   - Market Analysis
   - Intellectual Property

3. **Project Selection**
   - End Users
   - Industry
   - VCs / Angels
   - Entrepreneurs

4. **Risk Reduction**
   - Program Management
   - Entrepreneurs In Residence
   - Operating Reviews
   - Critical Milestones

5. **Follow On Funding**
   - License
   - Business Plan
   - Management

## Coulter Translational Program

Visit our website [www.coulter.gatech.edu](http://www.coulter.gatech.edu) for more information and contact us with any questions or to schedule a meeting.

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Christine Wassale
Program Coordinator
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### Funding Summary

- **Total $ Awarded**: $4.6 M
- **Follow On Funding**: $20.3 M
- **Follow On Investment**: $3.8 M