Southeast TechInventures

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Southeast TechInventures (STI) is a technology innovation company focused on developing and transitioning the most promising technologies from university labs to the commercial marketplace.
STI Business Model
Innovation through Partnership

STI Business Model

University

Inventor

IP

STI
Innovation through Partnership

STI Business Model

University
Inventor

Government

Grant Money

STI

IP

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STI CONFIDENTIAL
Small Business Innovation Research/Small Business Technology Transfer

Federal Gov invested > $30 billion (100,000+ awards)

Spurs economic development – keeps US ahead of technology development curve

High-risk, high-payoff research that leads to a commercial product

U.S. based, < 500 employees, > 50% individually-owned

Proof of Concept $150K

Prototype Development $750K-$1M+

Hit Ratio – 10%-15% (national average)
## SBIR Agencies

- Department of Agriculture
- Department of Commerce Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services
- Department of Homeland Security Department of Transportation
- Environmental Protection Agency
- NASA
- National Science Foundation
Innovation through Partnership

STI Business Model

University
Inventor

IP

Government

Grant
Money

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STI CONFIDENTIAL
Innovation through Partnership

STI Business Model

University  
Inventor

Government

STI

IP

Grant Money

IP License  
“Early Look”

Revenues

Industry Partner Program

Corp  
VC

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Innovation through Partnership

**STI Business Model**

- **University**
- **Inventor**
- **Government**
- **STI**
- **Investors**
- **Industry Partner Program**
  - Corp
  - VC

**Flow of Value**
- IP
- Funding
- Equity
- IP License “Early Look”
- Revenues
STI Business Model

- University
  - Inventor
  - IP
  - Grant Money
- Government
- NewCo
  - Services
  - Revenues
- Investors
  - Funding
  - Equity
- Industry Partner Program
  - Corp
  - VC
- IP License “Early Look”

Innovation through Partnership
STI Business Model

University | Inventor
---|---
IP | Funding
---|---
Revenues | Investors
---|---
Government | NewCo
---|---
Grant Money | $$$
---|---
Services | IP License “Early Look”
---|---
NewCo Exit | Industry Partner Program
---|---

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Companies acquired by larger companies

High-performance, non-invasive imaging solutions. Identify, Diagnose and Treat Ophthalmic Diseases at early stages.

Advanced Liquid Logic – Microfluidics, Lab-on-a-chip technology
New Drug for treatment of Acute Myeloid Leukemia (AML)
• Advance to the clinic a novel candidate, F10, a decamer of 5'-fluoro-2’-deoxyuridine 5’-O-monophosphate (FdUMP) as a less toxic alternative to existing chemotherapeutics.

Type II Diabetes and Fatty Liver Disease
• Novel approaches to increase peroxisome biogenesis in humans – resulting in superior treatments for diabetes and metabolic syndrome.

Microglassification
• Protein/antibody preservations; micro and nano-shere technology; in many cases competes with lyophilization
**AgTI – An innovation lab for advancing promising university agricultural technologies**

**Edison Agrosciences** is an agricultural biotechnology company dedicated to engineering plant-based production of industrial materials, with a primary focus on the development of alternative rubber crops from sunflowers.

**Rx Maker**- develops crops, soils, and weather algorithms that will be used to create new data layers. These new data layers will be used to drive selection of crops, crop varieties, fertilizer nutrients, soil amendments, and biological products as well as their respective application rates to agricultural production fields.
Trends in Sponsored Program Awards, FY97-FY15

[Bar chart showing trends in sponsored program awards from FY97 to FY15, with specific values for each year. The chart includes a legend indicating ARRA (shown for years exceeding 1% of total award dollars) and Annual Awards.]
FY15 Sponsors by category

- Federal: 66%
- Non-UNC Edu/Res Orgs: 9%
- Business and Industry: 7%
- Foundations: 7%
- State: 6%
- Nonprofit: 3%
- Associations: 1%
- Local Government: 1%
- Other: <1%
## Commercialization in FY15

<table>
<thead>
<tr>
<th>Doctoral Granting Institutions</th>
<th>Invention Disclosures</th>
<th>US Patents Issued</th>
<th>Licenses or Options Executed</th>
<th>Start-ups</th>
<th>License Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU</td>
<td>56</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>$144,997.00</td>
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<tr>
<td>NCA&amp;TSU</td>
<td>19</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>$33,500.00</td>
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<tr>
<td>NCSU</td>
<td>291</td>
<td>20</td>
<td>139</td>
<td>12</td>
<td>$7,601,069.33</td>
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<tr>
<td>UNCCH</td>
<td>136</td>
<td>48</td>
<td>51</td>
<td>9</td>
<td>$2,975,335.43</td>
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<tr>
<td>UNCC</td>
<td>47</td>
<td>7</td>
<td>12</td>
<td>4</td>
<td>$37,297.81</td>
</tr>
<tr>
<td>UNCG</td>
<td>16</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>$62,391.00</td>
</tr>
<tr>
<td>All other Institutions (ASU/FSU/NCCU/UNCW)</td>
<td>16</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>$31,663.93</td>
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</tbody>
</table>
Trends in Commercialization, FY12-FY15

<table>
<thead>
<tr>
<th></th>
<th>Invention Disclosures</th>
<th>US Patents Issued</th>
<th>Licenses or Options Executed</th>
<th>Start-ups</th>
<th>License Income</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FY15 Totals</strong></td>
<td>576</td>
<td>90</td>
<td>218</td>
<td>31</td>
<td>$10,886,254.50</td>
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<tr>
<td><strong>FY14 Totals</strong></td>
<td>467</td>
<td>97</td>
<td>212</td>
<td>31</td>
<td>$15,927,896.60</td>
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<tr>
<td><strong>FY13 Totals</strong></td>
<td>449</td>
<td>85</td>
<td>197</td>
<td>30</td>
<td>$10,735,866.79</td>
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<tr>
<td><strong>FY12 Totals</strong></td>
<td>532</td>
<td>91</td>
<td>149</td>
<td>17</td>
<td>$8,977,254.00</td>
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</tbody>
</table>
## FY15 Sponsors by category

<table>
<thead>
<tr>
<th>Unites States Federal Government</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>5738 - National Science Foundation (NSF)</td>
<td>$115,449,435.00</td>
</tr>
<tr>
<td>5670 - Department of Agriculture (USDA)</td>
<td>$46,823,094.65</td>
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<tr>
<td>5522 - Department of Defense (DOD)</td>
<td>$48,847,051.42</td>
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<tr>
<td>5500 - US Department of Education (DOED)</td>
<td>$77,360,405.30</td>
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<tr>
<td>5453 - Department of Energy (DOE)</td>
<td>$25,035,048.00</td>
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<tr>
<td>5285 - Department of Health and Human Services (DHHS)</td>
<td>$54,968,655.82</td>
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<tr>
<td>5332 - National Institutes of Health (NIH)</td>
<td>$434,265,028.43</td>
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<tr>
<td>5262 - Agency for International Development (USAID)</td>
<td>$53,295,011.00</td>
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<table>
<thead>
<tr>
<th>Foundation</th>
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<tbody>
<tr>
<td>State of North Carolina</td>
<td>$27,920,353.21</td>
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<tr>
<td>All other states</td>
<td>$69,078,441.31</td>
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</table>

<table>
<thead>
<tr>
<th>Nonprofit Organization</th>
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</thead>
<tbody>
<tr>
<td>State of North Carolina</td>
<td>$13,828,950.38</td>
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<tr>
<td>All other states</td>
<td>$24,891,045.91</td>
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</table>

<table>
<thead>
<tr>
<th>Association</th>
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</thead>
<tbody>
<tr>
<td>All other states</td>
<td>$14,031,845.01</td>
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</table>

<table>
<thead>
<tr>
<th>Local Government</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State of North Carolina</td>
<td>$6,939,438.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational and Research Institutions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State of North Carolina</td>
<td>$36,974,082.09</td>
</tr>
<tr>
<td>All other states</td>
<td>$89,605,612.98</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State Government</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State of North Carolina</td>
<td>$73,783,008.61</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Business and Industry</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>State of North Carolina</td>
<td>$21,842,255.97</td>
</tr>
<tr>
<td>All other states</td>
<td>$73,669,640.68</td>
</tr>
</tbody>
</table>
## University Innovation Council Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reward and Encourage Innovation and Entrepreneurship</strong></td>
<td>Develop university policies and reward systems that recognize achievements in innovation and entrepreneurship</td>
</tr>
<tr>
<td><strong>Develop NC Technology Advancement Pathways (NC TAP)</strong></td>
<td>Streamlined, collaborative mechanism for technology transfer services within the UNC System; this would include an internet-based system for sharing technology transfer tools and related resources</td>
</tr>
<tr>
<td><strong>NC Technology Advancement Capitalization (NC TAC) Program</strong></td>
<td>Provide funding and a process for technology proof of concept, validation, and commercialization activities for technologies developed by North Carolina universities</td>
</tr>
<tr>
<td><strong>Innovation Fellowship (IF) Program</strong></td>
<td>A statewide, competitive fellowship program enabling recent graduates or postdocs who are startup founders or early stage hires to transition to full-time role in a startup</td>
</tr>
<tr>
<td><strong>Tell the University Innovation Story</strong></td>
<td>Build awareness of university innovation and entrepreneurship by telling stories and sharing statistics about the conversion of university research into products, processes, and services that deliver social and economic value</td>
</tr>
</tbody>
</table>
THANK YOU