big dreams.
bigger results.

Research and Economic Development
Board of Curators Meeting
January 29, 2010

Michael F. Nichols
VP Research & Economic Development
Role of Research & Econ. Dev

• Facilitate and accelerate transfer of Research results to IP assets to commercial markets
• Negotiate and execute agreements in a timely manner
• Encourage faculty and student entrepreneurship and company formation
• Manage IP and Research Park assets of University
• Ensure compliance with federal regulations and reporting requirements
Classic Portfolio

UMKC

MST

Research

IP Commercialization

Research Parks

UMSL

MU

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### Accountability Measures
#### UM System Totals and Peer Avg.

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures</th>
<th>FY06</th>
<th>FY07</th>
<th>FY07 Peer Avg.</th>
<th>FY08</th>
<th>FY08 Peer Avg.</th>
<th>FY09</th>
<th>FY09 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED</td>
<td>Economic Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Number of invention disclosures received</td>
<td>107</td>
<td>124</td>
<td>164</td>
<td>137</td>
<td>159</td>
<td>161</td>
<td>145</td>
</tr>
<tr>
<td>2</td>
<td>Percentage of invention disclosures on which a new patent application was filed</td>
<td>36%</td>
<td>50%</td>
<td>55%</td>
<td>39%</td>
<td>62%</td>
<td>28%</td>
<td>36%</td>
</tr>
<tr>
<td>3</td>
<td>Number of US patents issued</td>
<td>15</td>
<td>22</td>
<td>28</td>
<td>20</td>
<td>26</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>Total license/option agreement income</td>
<td>$2,371,287</td>
<td>$4,672,823</td>
<td>$11,032,830</td>
<td>$6,713,233</td>
<td>$13,085,852</td>
<td>$10,400,726</td>
<td>$9,200,000</td>
</tr>
<tr>
<td>5</td>
<td>Number of license/option agreements that generated income</td>
<td>28</td>
<td>47</td>
<td>138</td>
<td>40</td>
<td>135</td>
<td>51</td>
<td>37</td>
</tr>
<tr>
<td>6</td>
<td>License/option agreement income per dollar of net patent prosecution expenses</td>
<td>$3.49</td>
<td>$7.56</td>
<td>$10.75</td>
<td>$6.74</td>
<td>$11.79</td>
<td>$9.80</td>
<td>$8.07</td>
</tr>
<tr>
<td>7</td>
<td>Number of startups created around university technologies</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Number of license/option agreements executed</td>
<td>17</td>
<td>21</td>
<td>52</td>
<td>65</td>
<td>43</td>
<td>77</td>
<td>71</td>
</tr>
</tbody>
</table>

**FY09 Record Highs:**
- Number of invention disclosures received
- Number of license/option agreements that generated income
- Total license/option agreement income
- Number of license/option agreements executed

[UMSYSTEM.EDU](https://www.umsystem.edu)
# AUTM and CMU Comparisons

<table>
<thead>
<tr>
<th></th>
<th>All Schools</th>
<th>UM System</th>
<th>CMU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovery (Disclosures)</td>
<td>1 per $2.5M</td>
<td>1 per $1.9M</td>
<td>1 per 1.87M</td>
</tr>
<tr>
<td>Licenses &amp; Options</td>
<td>1 per $9.6M</td>
<td>1 per $4.0M</td>
<td>1 per 9.9M</td>
</tr>
<tr>
<td>Start-ups</td>
<td>1 per 88.0M</td>
<td>1 per $77.0M</td>
<td>1 per 22.8M</td>
</tr>
</tbody>
</table>

AUTM = Association of University Technology Managers  
CMU = Carnegie Mellon University
Team and Streamlined Process

LICENSE AGREEMENTS

- System Marketing/Bus. Dev. Group
- System Intellectual Property/ Business Law Group
- Negotiation Team
  - Campus Case Mgr.
  - Marketing Member
  - IP Legal Member

Market and Intellectual Property Analyses

- Campus Case Manager
  - Disclosures
  - Research & Technology Liaison (MU)
- Campus Case Manager
  - Disclosures
  - Research & Technology Liaison (MS&T)
- Campus Case Manager
  - Disclosures
  - Research & Technology Liaison (UMKC)
- Campus Case Manager
  - Disclosures
  - Research & Technology Liaison (UMSL)

MU Office of Research
MS&T Office of Research
UMKC Office of Research
UMSL Office of Research

Economic Development Council

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Improve time to market results

Avg. No. of Days from Disclosure Receipt to License Agreement:

3 years 365 days
## Investment Ranking Form

**Disclosure #:**

**Category:**

**Date Completed:**

**Disclosure Title:**

**Completed By:**

**Initials:**

### Technical Merit: (select one for each)

<table>
<thead>
<tr>
<th>Availability of data supporting invention</th>
<th>None</th>
<th>Preliminary</th>
<th>In vitro data</th>
<th>In vivo data</th>
<th>Both</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of prototype</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addresses significant shortcomings of the field</td>
<td></td>
<td>Low</td>
<td>Average</td>
<td>High</td>
<td>Exceptional</td>
<td>Yes</td>
</tr>
<tr>
<td>Innovation vs. limitation</td>
<td></td>
<td>Low</td>
<td>Average</td>
<td>High</td>
<td>Very</td>
<td>Very</td>
</tr>
</tbody>
</table>

### Is it a core/platform/stand-alone technology?

- None
- Use w/other IP
- Improvement
- Stand-alone
- Platform

### Have rights to this technology been pre-assigned to a third party?

Select...

### Number of co-owner institutions

Select...

### Source of funding (e.g., corporate, federal, state, etc.)

Select...

### Material Transfer Agreements, Memorandums of Understanding, etc.

Select...

### Number of inventors/authors

Select...

**Total Score:** 0  
**Scale:** None = 1  Low = 2  Average = 3  High = 4  Exceptional = 5

### Additional Comments:

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**Research Effort: (select one for each attribute)**

[TO BE COMPLETED BY CAMPUS CASE MANAGER]
OUR RESEARCH TO JOBS MISSION

Total externally sponsored research funding
MU $231M
UMKC $ 44M
ROLLA $ 38M
STLOU $ 30M
UMS $ 5M
Total $308M

Research supports 10,000 jobs
UMSYSTEM.EDU
Our Commercialization Facilities
MISSOURI RESEARCH PARK

- Located in St. Charles County
- 17 tenants, 2 federal agencies
- $786 million in economic impact
- Supports nearly 2,000 jobs in park & 4,500 community

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DISCOVERY RIDGE

- Located in Columbia
- Potential for 25,000 jobs regionally
- $3.5 billion impact over 25 years
- ABC Labs growing to 500 employees
TECHNOLOGY PARK – Ft. Leonard Wood

- Phase 1 – 12 acres
- Today Revenues over $1M
- 188 jobs in park; 412 jobs in community
- Phase 2 – 50 acres
- Potential impact of $44 million
- 10,000 new jobs in community

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INNOVATION PARK

• Located in Rolla
• 60 acres
• $45 million in revenues in 12 years
• $1 billion in economic impact in same timeframe

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MISSOURI PLANT SCIENCE CENTER

A joint venture between City, State, and UM

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Zegerid Receives FDA Approval

Heartburn drug developed at MU receives FDA OK
Go-ahead given to market Zegerid as over-the-counter product, university will receive revenue from licensing

READ FULL STORY
Goals for 2010

- Expand research partnerships
- Accelerate momentum for IP commercialization
- Integrated Research Park marketing plan
- Secure funding for future facilities
- “Start up” funding initiative