

# **Commercialization Task Force Progress Report**

**Barbara Entwisle, Chair**

**Dhiren Thakker, Committee on Faculty Enhancement**

**Judith Cone, Committee on Student Experience**

**Joseph DeSimone, Committee on Commercialization Strategy and  
Process**

**Presented to:**

**BOT Committee on Innovation and Impact**

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# Charge of the Commercialization Task Force

**The Task Force will develop an integrated strategy and plan of action for the commercialization of technology at UNC.**

Former Chancellor Thorp's vision of Carolina " Carolina is both compelled and poised to accelerate and apply innovation and its accompanying entrepreneurial focus in a concerted and deliberate way to grapple with fundamental issues affecting the quality of human life and, in that context, to help solve the world's most pressing problems. "

Currently, however, UNC lags behinds its peers in the commercialization of technology.

The Task Force's goal to address three interrelated questions:

- How does the commercialization of technology relate to the university's tripartite mission of research, teaching, and service? What are we trying to achieve? Are these goals compatible?
- What stands in the way of achieving our goals?
- How can these problems be addressed? How can the resources currently available be best used? What further investments should be made?

# Draft Report

## Commercialization of Technology

### Faculty Enhancement



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# Sub-committee on Faculty Enhancement

- Fletcher Fairey
- Maryan Feldman
- Don Holzworth
- Jeff Johnson
- Cam Patterson
- Jackie Quay
- Dhiren Thakker (Chair)
- Ted Zoller

# Process

- Committee Discussion on *Faculty Perceptions regarding Pros & Cons of Commercializing Inventions*
- Survey of Faculty & Postdoctoral Fellows
- Interviews with Faculty Entrepreneurs & Administrators
- Examine the Scholarly Work on *Faculty & Commercialization of Inventions*
- Conclusions & Recommendations

# The Committee View

- **Major motivation for commercializing inventions**
  - It enables faculty to translate research into societal benefit
  - Validation of the value of research
  - Improved quality of science, grantsmanship
  - Diversification of funding portfolio
- **Major disincentives**
  - Worries about poorly managed conflict of interest
  - Promoting inappropriate secrecy
  - Limiting availability of research tools
  - Potential for conflicts among faculty, between faculty and school/university

# Survey Construction & Data Collection

- Survey Design
  - Demographic & Background Characteristics
  - The Current Carolina Entrepreneurial Experience
  - The Ideal Carolina Entrepreneurial Experience
- Data Collection
  - Online Qualtrics Survey
  - 3 email reminders from February 9 to February 22



# Survey Response

- Response Rate
  - Faculty: 732 responses~13%
  - Post-docs: 162 responses ~ 20%
- Representative with regards to
  - Rank
  - Discipline
- Preliminary Analysis of Results

# I frequently think about how my research might be put into practical use

Agree: **75%**



## *By Rank*

Assistant Professors:  
**87%**

Full Professors: **72%**

## *By Years at Carolina*

Less than 6 years:  
**82%**

7 to 22 years: **75%**

More than 23 years:  
**68%**

Following Analysis is Restricted to  
Individuals who Indicate Technology  
Commercialization is part of their Career  
Path



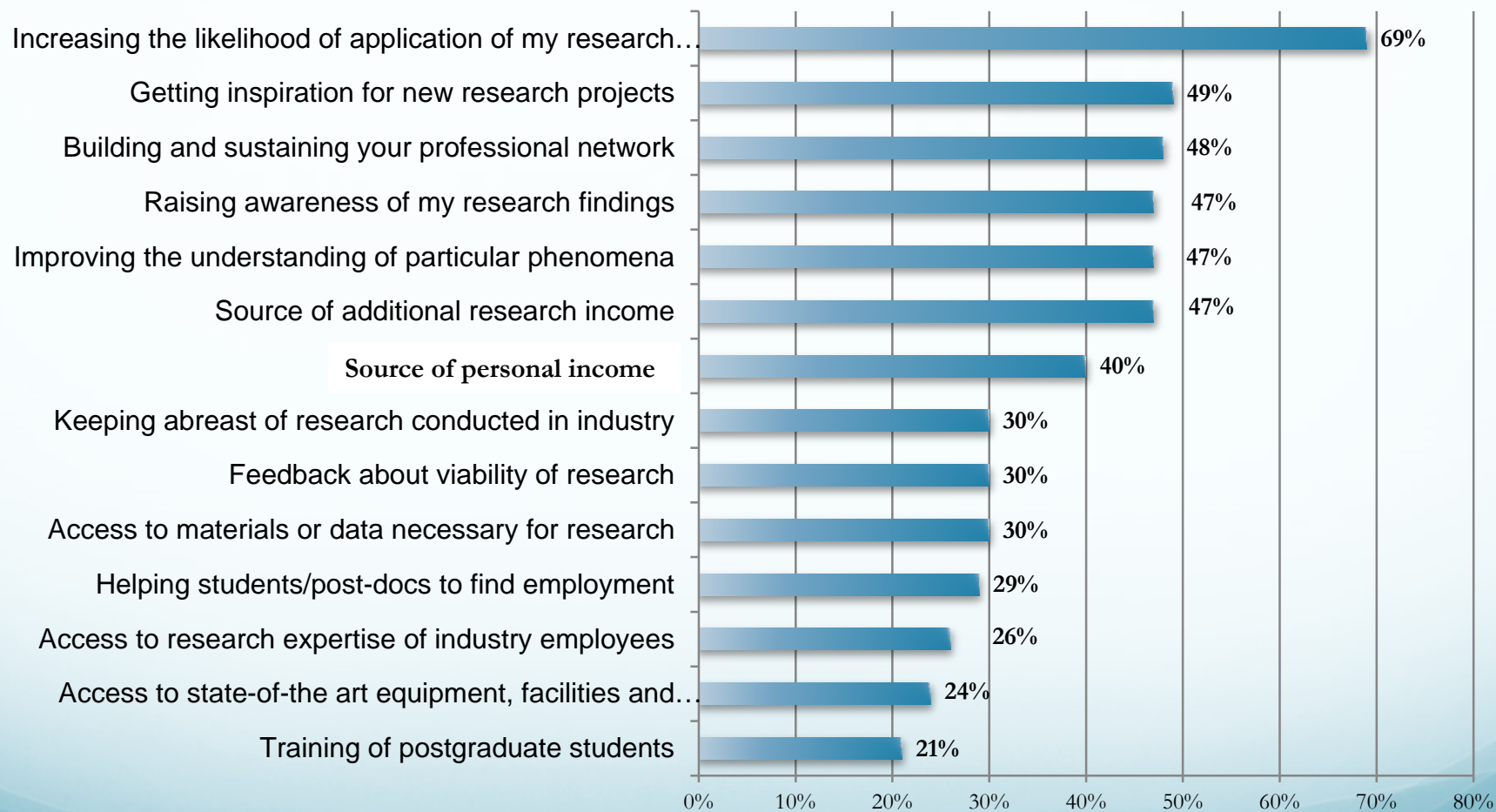
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# Knowledge/Use of University Resources to Promote Commercialization & Entrepreneurship

	I have used this resource and it was valuable	I have used this resource and it was not valuable	I have heard of this resource but have not used	I am not familiar with this resource
UNC Technology Licensing Office	26%	9%	34%	31%
Carolina KickStart	13%	4%	32%	50%
Launching the Venture	12%	0%	28%	59%
Entrepreneur in Residence	9%	4%	29%	58%
Kenan Institute of Private Enterprise	7%	3%	37%	54%
Faculty Bootcamp	4%	1%	30%	64%
Carolina Challenge	5%	1%	38%	56%
Innovate@Carolina	4%	2%	43%	51%

31%-64%  
of faculty  
are not  
familiar  
with these  
resources

# What Motivates Your Involvement in Innovation and Commercialization?



# Barriers to Entrepreneurship

Barriers	%
Lack of time due to job demands	70%
Lack of financial resources	57%
Lack of rewards from the university incentive system	44%
Lack of business skills	37%
Lack of mentors	31%
Lack of support from the university	35%
Worries over potential conflict of interest oversight	29%

# The Ideal Carolina Entrepreneurial Experience: What would be highly valued?

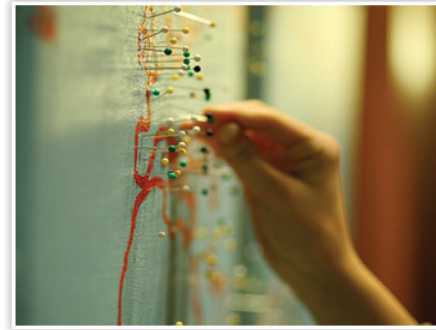
Choice	Valuable
Assistance from experienced entrepreneurs	73%
Proof of concept funding	73%
A streamlined Conflict of Interest oversight process	71%
Increased funding to assist faculty-based startups with patenting expenses	71%
Help vetting technology and commercialization opportunities	68%
Better support for collaborating with industry	68%
Increased emphasis at Technology Licensing Office on business development and marketing	62%
An on-campus incubator facility	60%
Active involvement of Deans and/or academic departments in championing projects	60%
Entrepreneurial educational programs	59%

# Conclusions

- Support and enthusiasm for entrepreneurship and commercialization of innovation, with range of opinions
- Motivations for involvement in entrepreneurial activity are more due to research goals than personal reward.
- The most significant barrier is lack of time and other resources
- There is a lack of knowledge of the resources that are available
- Anticipate increased demand from faculty regarding innovation, entrepreneurship and innovation



*Putting important ideas to use for a better world*



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# Innovation & Entrepreneurship Student Experience



UNC-Chapel Hill Board of Trustees Meeting | Judith Cone | 11.20.2013 | [innovate.unc.edu](http://innovate.unc.edu)

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# Impact – UNC Chapel Hill

## Vision

With a special focus on **urgent challenges**, **innovators** and **innovations** launched at Carolina consistently **put to use** important ideas for a **better world**.

## Mission

Ensure that UNC is a place where **innovators** thrive.

*(Innovation = unique + valuable + implemented)*





# Students and Commercialization

For Carolina students to thrive in the 21<sup>st</sup> Century, they must be prepared with an entrepreneurial mindset and skillset, and do translational work to imagine, design, build, launch and lead in whatever career they choose.



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# I- Shaped Students

- **Top:** Emotional Intelligence, Design Thinking, Cultural Competence, Global Citizen
- **Vertical Bar:** Expertise in Majors and Minors
- **Bottom:** Implementation (Entrepreneurship mindset and skillset)





# Goals for students involved in commercialization

- **Startups.** Develop an entrepreneurial mindset and skillset -- apply both through translational actions.
  - Hopefully the student startup will be successful, but company building is difficult. Students will be better prepared for the next commercialization activity due to the knowledge gained from and support offered by the campus entrepreneurship ecosystem.
- **Supporting others.** Often students are involved in a supporting role in commercialization activities.
  - Not the founder but they gain new knowledge about various technologies, entrepreneurship, and other business skills for translation of ideas into commercial success.
  - Graduate students sometimes have the opportunity to work closely with the faculty advisor not only on the science/technology but on the commercialization activities.



# Goals for the Carolina commercialization ecosystem related to students

- **Integrate** across units the programs and support being offered to students so that there is a comprehensive set of educational and support programs.
- Fill **the gaps** for programs, funding, and opportunities.
- Senior administrative leaders, deans and center directors, department chairs, and faculty recognize the **value** of commercialization and **encourage** and **support** students as they engage in these activities.



# Entrepreneurial Mindset and Skillset

- An entrepreneurial **mindset** - a way to see problems as opportunities, question assumptions, conduct analyses, take purposeful action, engage partners, try alternative solutions, learn from failures, make meaning, and persevere to reach a goal.

Entrepreneurial thinkers ask:

- What is the need? Break apart the problem to see it in fresh ways.
  - What is the opportunity?
  - What is the status quo response?
  - Does it have to be this way?
  - Is it the best way?
  - What might be better ways?
  - What can I do?
- An entrepreneurial **skillset** – combining design thinking, lean startup, business models in order to know how to move ideas into reality to create value.





# Commercialization and students

- University-owned IP – only relevant in rare student cases.
  - Students are most likely engaged with faculty members helping the faculty member create licensed IP and startups.
- Non university-owned IP – the majority of student startups fall in this category.





# UNC Campus Support



# Innovation & Entrepreneurship

[About](#)[Strategy](#)[Impact](#)[GET INVOLVED](#)

GO

## DATES TO KNOW

[VIEW ALL](#)

- Jul 24 | 1 Million Cups at Launch Chapel Hill
- Jul 25 | Tech Venture Demo Company Applications Due
- Aug 21 | Startup Workshop: Prep for Launching the Venture

**TWITTER** @innovateunc

Don't miss [@1MillionCupsTRI](#) at [@LaunchChapelHill](#) this Wednesday morning 9am [#startups](#) [#ent](#) [#innovatorsthive](#)

## SPECIAL FOCUS

### WATER IN OUR WORLD

Pan-Campus Theme 2012-2014

[MORE INFORMATION >](#)

## Matter



HAVE AN IDEA?  
SUBMIT A VIDEO



## Making it matter >

From butterfly wings to solar cells

UNC's Ed Samulski turns inspiration to collaboration to develop breakthrough technologies in alternative energy

## IN THE NEWS

[VIEW ALL](#)

[Behind The Beat: UNC'S First Beat Making Lab \[PBS Digital Studio Video\] >](#)

[Aldrich Wins Babson Entrepreneurship Lifetime Achievement Award >](#)

[The Ph.D. Fabricator >](#)

Commercialization Task Force  
Committee on Commercialization Strategy and Process

Joseph DeSimone, Chair

Ned Sharpless

Ric Boucher

Alexander Kabanov

Ming Lin

Will Lambe

Robin Cyr

Jackie Quay



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# Recommendations from the Committee

**Recommendation: UNC should declare that the increased commercialization and impact of our research is a priority for our university, for our state and for our nation.**

## Innovation, Entrepreneurship and Economic Development Initiative

Compliance	Patents	Business Development
Office of Technology Compliance	Patent Assessment & Protection Office	Business Development & Licensing Office
<ul style="list-style-type: none"> <li>• Bayh-Dole Act compliance</li> <li>• Greater awareness of invention disclosure process through web presence, etc.</li> <li>• MTA's with Academic Entities</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment                             <ul style="list-style-type: none"> <li>○ Patentability &amp; Strategy</li> <li>○ Landscape</li> <li>○ Market Assessment</li> </ul> </li> <li>• Decision Process                             <ul style="list-style-type: none"> <li>○ Review and decision by Committee of Deans and Chairs (or designates)</li> <li>○ In the case of "no", option to faculty exclusively</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• New Company Formation</li> <li>• Industrial Alliances (collaborative deals to generate new IP)</li> <li>• Out-license IP to Industrial Entities</li> <li>• Clinical Trials</li> <li>• Staff skill sets to include legal and business development</li> </ul>

We propose an allocation from the F&A each year. Rationalized to

- Research expenditures
- IP generation
- Commercialization activities
- Avoids the annual anxiety related to financial commitment

# Recommendations from the Committee

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## **Recommendation #2: Conflict of Interest (COI) – Separate but Aligned (reporting into Chancellor or Provost)**

### **Conflict of Interest Office**

- Structured to provide appropriate level of oversight and management of conflicts
- Clear and streamlined guidelines on conflict management
- Create an open culture with a focus on the customer