OPEN SESSION

FOR INFORMATION ONLY
(No formal action is requested at this time)

1. Innovate Carolina – Overview of Innovation and Economic Development Programs
   Michelle Bolas, UNC Chief Innovation Officer, Executive Director, Innovate Carolina

2. A Resolution in Support of Career Services
   Perrin Jones, Committee Chair

COMMITTEE MEMBERS
   Perrin Jones, Chair
   Ramsey White, Vice Chair
   Dave Boliek, ex-officio
   Rob Bryan           Ralph Meekins
   Gene Davis          Marty Kotis
Situation: The Committee has for its consideration a presentation on Innovate Carolina.

Background: Innovate Carolina encompasses UNC’s innovation programs, initiatives, and economic development activities. In addition to executing the Chancellor’s innovation and economic development priorities, Innovate Carolina supports UNC researchers and scholars through innovation programs and services, including the services provided through the Office of Technology Commercialization (OTC). These activities help UNC transmit and apply research and knowledge for the benefit of North Carolina and its citizens, as reflected in data that Innovate Carolina collects and reports as part of its mission. Innovate Carolina is headed by Michelle Bolas, UNC’s Chief Innovation Officer.

Assessment: The presentation to the Committee will orient members to Innovate Carolina’s background and development and serve as a foundation for future discussions with the Committee about UNC’s innovation and economic activities.

Action: This item is for information only.
Innovate Carolina

Moving Discovery and Knowledge to Impact

Michelle Bolas
Chief Innovation Officer
Executive Director, Innovate Carolina

May 2022
INNOVATE CAROLINA

Our Mandate

Do well. For good.

Strategic and well-connected innovation practices leverage public investment in knowledge and discovery to create economic, social and human impact.

• University innovation linked to the prosperity of the state.

• “...passionately public – the most public of publics.”

• National leader in translating knowledge assets into public good.
INNOVATE CAROLINA

Who We Are

Chief Innovation Officer
Executes the University-wide strategy for innovation, entrepreneurship and economic development as set by the Chancellor.

Innovation Practitioners
Skilled experts who put innovation into practice through their combined experience in scientific research development, commercialization, venture creation and business strategy.

Chief Innovation Officer Charge

Innovation Strategy
How do we create a unified strategy and governance for and visibility into the use of innovation resources?

Alignment of Investment + Mission
How do we align the University’s investments in innovation with its mission?

External Engagement
How do we engage external industry, research and community partners with a singular focus?

Return on Investment
How do we know what works and measure the impact made by UNC innovation?
WHO WE ARE

Emerging Opportunities: State of Innovation

1. NSF technology directorate.
   Spur innovation, technology development and commercialization.

2. Proposed creation of national technology “hubs.”
   Create through commerce and center in regions of high research output.

3. ARPA-Health administration (modeled on DARPA).
   Speed innovation in cures and areas where UNC has considerable strength (cancer, Alzheimer's).

4. Creation of an “Innovation State” organization by top NC business and civic leaders.
   Disseminate state investment in innovation over the next decade. Proposal to raise $250M/year over 10 years to spur innovation and strengthen industry sectors.

5. Additional state funding for mitigation of COVID-19.
   Make an impact and prepare for future pandemics.
Bridging the Innovation Gap

Internal Assets

Knowledge and Discovery

Innovation Strategy + Innovation Practice

Methods | Tools | Programs | Funding
Experts | Data | Accelerators

External Impact and Growth Targets

Products
Services
Companies

Today

Tomorrow

Beyond
Technology Commercialization

USING INTELLECTUAL PROPERTY TO MAXIMIZE THE IMPACT OF UNC RESEARCH
TECHNOLOGY COMMERCIALIZATION

Goals: Technology Commercialization

1. Recruit and Retain World-Class Faculty
2. Grow Industry Partnerships and Sponsored Research
3. Translate Research Into Products and Services
4. Bolster Economic Development
5. Reinvest Revenue Into Research and Translation at UNC
6. Support and Engage in University-Wide Initiatives
The Power of Alignment: Industry and Strategic Partnerships
INDUSTRY & STRATEGIC PARTNERSHIPS

Why Do We Engage With Industry Partners?

• Build relationships with industry partners to understand areas of interest and evolving markets
• Use industry resources and expertise to meet the needs of UNC faculty and technologies
• Connect UNC startups to investors, tech partners and advisors
• Transfer UNC technologies via licenses into companies that can conduct development activities outside of the scope of university research and take products and services to market
• Get industry feedback on UNC technologies
  • Is the technology market ready? Is it what the market wants?
  • What can be done to validate or optimize the technology?
  • Might there be future industry interest?
NSF Higher Ed Research Development Survey


2019 Total Spend

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<th>Source</th>
<th>Spend</th>
<th>% Total</th>
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<tbody>
<tr>
<td>Fed Gov</td>
<td>44.53</td>
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<td>Business</td>
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<td><strong>Total</strong></td>
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Source: NSF Higher Education Research and Development Survey (HERD), FY 2019
Translational Paths: Strategy and Practice

01 Out-License

02 Startup Company

03 Industry Collaboration
446 UNC startups in 29 NC counties

UNC Startups: Strength in Numbers
As of July 2021

- **UNC STARTUPS**
  - 446 HQ in NC
  - 538 Active
  - 814 Total

- **JOBS**
  - 12,767 Jobs in NC
  - 89,589 Jobs Worldwide

- **$17.8B** Startup revenue raised (since 1958)
- **$15.2B** Annual startup revenue (2020-21 snapshot)

- **83%** Active UNC startups located in NC
- **95%** UNC startup revenue in NC
- **79%** UNC IP-based startups work in life sciences

Technology Commercialization

- **3,605** Inventions Disclosed
- **1,003** U.S. Patents Issued
- **1,547** Technologies Licensed
- **$111.5M** Licensing Revenue
- **147** IP-Based Startups

- **5 Year Trends: FY2017-21 vs. FY2012-16**
  - U.S. PATENTS ISSUED: 57% INCREASE
  - INVENTION DISCLOSURES: 7% INCREASE
  - TECHNOLOGIES LICENSED: 38% INCREASE
  - LICENSING REVENUE: 162% INCREASE

Inventions Disclosed: 3,605
U.S. Patents Issued: 1,003
Technologies Licensed: 1,547
Licensing Revenue: $111.5M
IP-Based Startups: 147

Cumulative
INDUSTRY & STRATEGIC PARTNERSHIPS

Partner Touchpoints

Faculty
Consult with industry on research projects

Innovate Carolina
Team with partners to move research to market + expand economic development

Office of Sponsored Research
Administer research with external/industry partners

Development: Corporate and Foundation Relations
Connect external partners and funders to faculty/staff to advance University goals

How can we coordinate across partner touchpoints?
INDUSTRY & STRATEGIC PARTNERSHIPS

Spotlights: Strategic Partnerships
TALENT PIPELINE: NC INNOVATION WORKFORCE

North Carolina Life Science Alliance

• UNC-Chapel Hill’s research and innovation enterprise helps to power a significant state initiative

• Areas of action:
  • Infrastructure
  • Talent
  • Investment
  • Market Development and Attraction

N.C. life sciences jobs, source NCBIotech Life Science Intelligence