



**OPEN SESSION**

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1. Convene Meeting  
*David L. Boliek Jr., Chair*
2. National Anthem  
*Ayman Bejjani, 22' Graduate*  
*Henry Nachman, Undergraduate Student*  
*Brent Wissick, Professor of Music*
3. Oath of Office
4. Roll Call  
*Malcolm Turner, Secretary*
5. Statement of Ethics  
*David L. Boliek Jr., Chair*
6. Consent Agenda
  - Approval of March 24, 2022 Minutes (Regular Meeting) Attachment A
  - Ratification of Written Ballot dated May 5, 2022 Attachment B
  - Ratification of Written Ballot dated May 5, 2022 Attachment C
  - Ratification of Written Ballot dated May 12, 2022 Attachment D
7. Board of Trustees Chair's Remarks  
*David L. Boliek Jr., Chair*
8. Student Body President's Remarks  
*Taliajah Vann, Student Body President*
9. Chancellor's Remarks  
*Dr. Kevin Guskiewicz, Chancellor*
10. Office for Undergraduate Research Presentation  
*Troy Blackburn, Associate Dean for Undergraduate Research*  
*Gabriella Hesse, Undergraduate Student*  
*Sabrina Robertson, Teaching Associate Professor, Dept. Psychology & Neuroscience*  
*Lauren McShea, Undergraduate Student*  
*Michael Fisher, Assistant Professor, Dept. of Environmental Sciences & Health*
11. \*Report of the Audit, Compliance, and Risk Management Committee  
*Marty Kotis, Committee Chair*
12. \*Report of the Budget, Finance, and Infrastructure Committee  
*John Preyer, Committee Chair*

13. \*Report of the External Relations Committee  
*Allie Ray McCullen, Committee Chair*
14. \*Report of the Strategic Initiatives Committee  
*Perrin Jones, Committee Chair*

**CLOSED SESSION**

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15. \*Report of the External Relations Committee  
*Allie Ray McCullen, Committee Chair*
16. \*Report of the University Affairs Committee  
*Rob Bryan, Committee Chair*

**OPEN SESSION**

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17. \*Report of the University Affairs Committee  
*Rob Bryan, Committee Chair*
18. Adjournment  
*David L. Boliek Jr., Chair*

CLOSED SESSION MOTION  
FOR FULL BOARD MEETING  
THURSDAY 05/19/2022

Mr. Chairman, I move that the Board convene in closed session pursuant to North Carolina General Statutes Section 143-318.11 (a) (1) (to prevent the disclosure of privileged information under Section 126-22) and also pursuant to Section 143-318.11 (a)(2) (to prevent the premature disclosure of an honorary degree, scholarship, prize, or similar award), (a)(3) (to consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body), (a)(6) (to consider the qualifications, competence, performance, or condition of appointment of a public officer or employee or prospective public officer or employee), (a)(7) (to plan, conduct, or hear reports concerning investigations of alleged criminal misconduct).



# CHAPEL HILL INNOVATION DISTRICT

**America's only innovation district adjacent  
to a top-five public research university**

## **Downtown together. Innovation infused.**

The Chapel Hill innovation district is part of the Carolina Economic Development Strategy – a collaboration between UNC-Chapel Hill, the Town of Chapel Hill and the Downtown Partnership. Through this collaboration, a "Downtown Together" team of local leaders works to create new opportunities to bring more innovation-oriented organizations to Chapel Hill where they can collaborate with the community's deep pool of research and innovation talent.

This joint strategy:

- Accelerates downtown's economic vibrancy.
- Broadens the University's business, research and government partnerships.
- Provides greater career opportunities for students.

## **Why innovation and industry will thrive in Chapel Hill**

- No. 6 most innovative university in the world (Reuters)
- 13th largest research university in the U.S.
- No. 1 coolest small city in America (The Guardian)
- No. 1 school district in North Carolina
- No. 3 best city for entrepreneurs (Entrepreneur Magazine)
- No. 4 most educated town in America (WalletHub)
- Top-five national health care brand and provider, UNC Health
- Frequent arts experiences, festivals and events
- One of America's best "foodie" towns
- Extensive parks, greenways and open spaces





6

Hotel and  
Conference  
Center



5

Apartments  
101 E. Rosemary

Downtown  
Parking Center  
125 E. Rosemary

4



Rosemary Street

Columbia Street

1

Urban Park

136 E. Rosemary  
Innovation  
Hub

137 E. Rosemary

3

Life Sciences  
Center  
150 E. Rosemary

Town Green



HISTORIC DOWNTOWN

Franklin Street

Henderson Street

UNC CAMPUS

2

University  
Gateway  
134-144 E Franklin



## District Phase I

### 100 Block of East Rosemary and Franklin Streets

- 1 **Innovation Hub.** Home to UNC-Chapel Hill's Innovate Carolina team. Services and programs for faculty and student innovators, startups, local entrepreneurs and industry partners. Office space for life science, tech and other companies. 118,000 sq. ft., 7 stories. UNC Innovation space: 20,000 sq. ft. (2023)
- 2 **University Gateway.** The entry point for University and downtown visitors. Home of the UNC visitor center, admissions office and a student collaboration area – plus ample retail space for restaurants, shops and other businesses. 125,000 sq. ft. (2024)
- 3 **Life Sciences Center.** A wet lab equipped with workspaces and equipment for researchers and biotechs. 240,000 sq ft, 7 stories. 60,000 sq. ft. lab space over 2 stories. (2025)
- 4 **Downtown Parking Center.** Convenient parking in a new structure built by the Town of Chapel Hill. Featuring a retail porch for events and food trucks. 1,100 spaces (2023)
- 5 **Professional Apartments.** New community from Grubb Properties' Link Apartments brand. Well-designed, efficient apartments and amenities tailored to those who desire luxurious, affordable urban living. 7 stories, 150 units (2024)
- 6 **Hotel and Conference Center.** For weekend visits or weeklong work trips, a destination that greets personal and professional travelers alike. Connecting guests with one another – and the modern-eclectic ambiance of downtown. 6 stories (2024)

More information

UNC-Chapel Hill

Sheryl Waddell  
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Town of Chapel Hill

Dwight Bassett  
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Downtown Partnership

Matt Gladdek  
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THE UNIVERSITY  
*of* NORTH CAROLINA  
*at* CHAPEL HILL

# Chancellor's Economic Development Council Meeting

April 29, 2022



UNC

INNOVATE  
CAROLINA

# Agenda



Breakfast/Networking



Chancellor's Welcome



Progress to Date



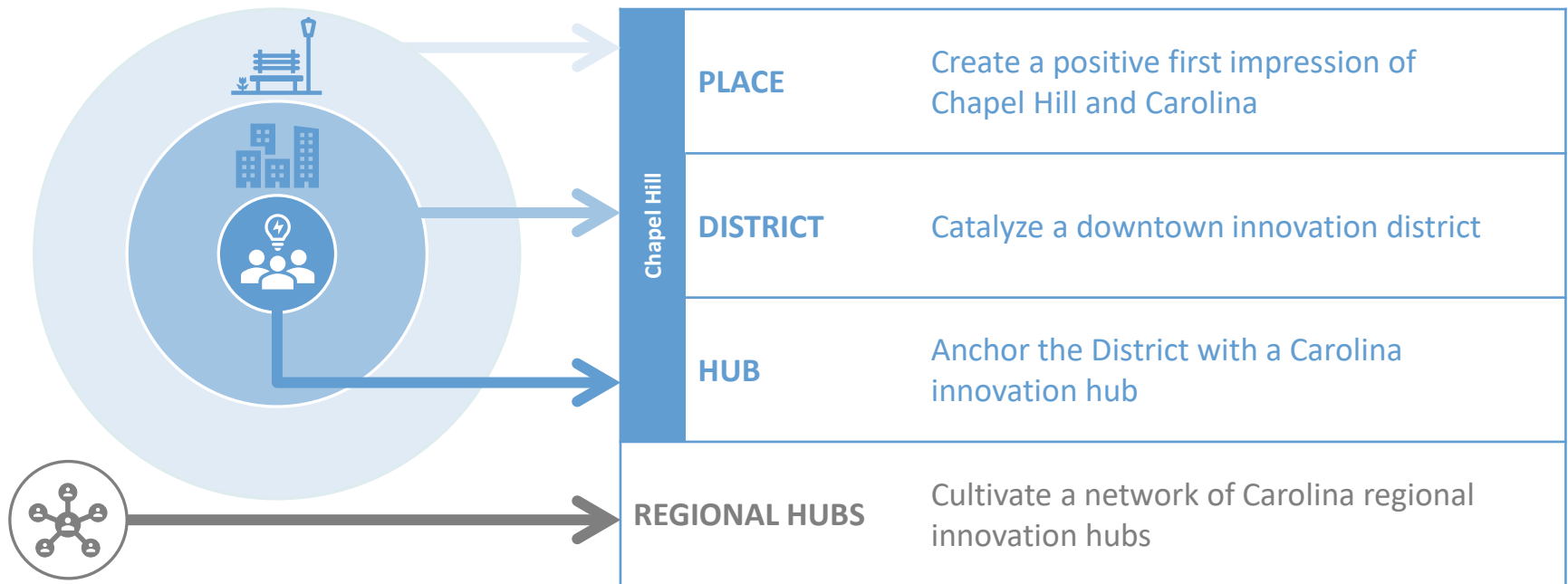
Design Thinking Workshop



Next Steps and Close

# Carolina Economic Development Strategy

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# Place










## ADOPT A BLOCK

### PHASE 1 PROJECT STATUS

APRIL 1, 2022

#### Changes since last update:

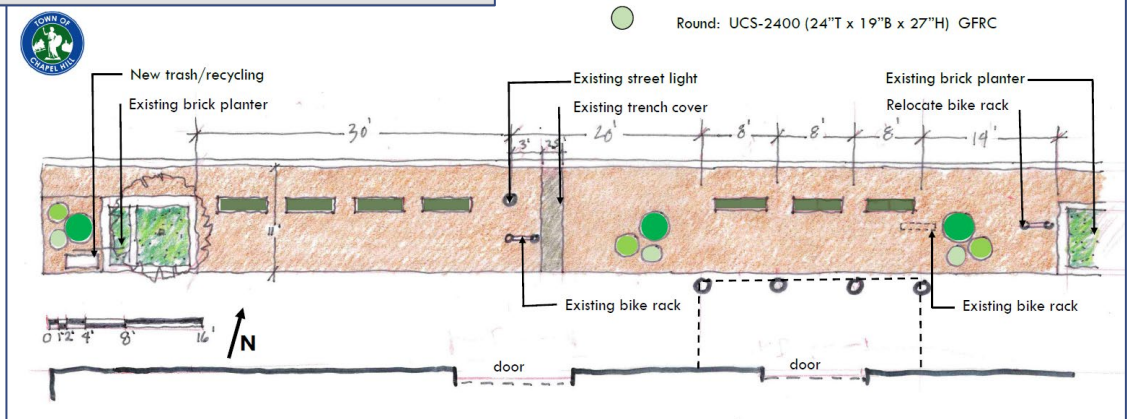
- Art banners installation complete
- Concrete planters at Columbia & Franklin and 100 block mid-block crossing designed and on order
- Designs for art on utility boxes pending NCDOT approval

	FUNDING	PLANNING	EXECUTION	OWNER
Art on utility boxes	<div></div>	<div></div>	<div></div>	
UNC building signage	<div></div>	<div></div>	<div></div>	
Peace & Justice Plaza art banners*	<div></div>	<div></div>	<div></div>	
S. Columbia driveway removal	<div></div>	<div></div>	<div></div>	
Grass, trees & mulch on S. Columbia	<div></div>	<div></div>	<div></div>	
Frat Court bus stop replacement	<div></div>	<div></div>	<div></div>	
Brick expansion @ Franklin/Columbia	<div></div>	<div></div>	<div></div>	
Concrete planters @ Franklin/Columbia	<div></div>	<div></div>	<div></div>	
Brick planter enhancement*	<div></div>	<div></div>	<div></div>	

\*Requires ongoing funding

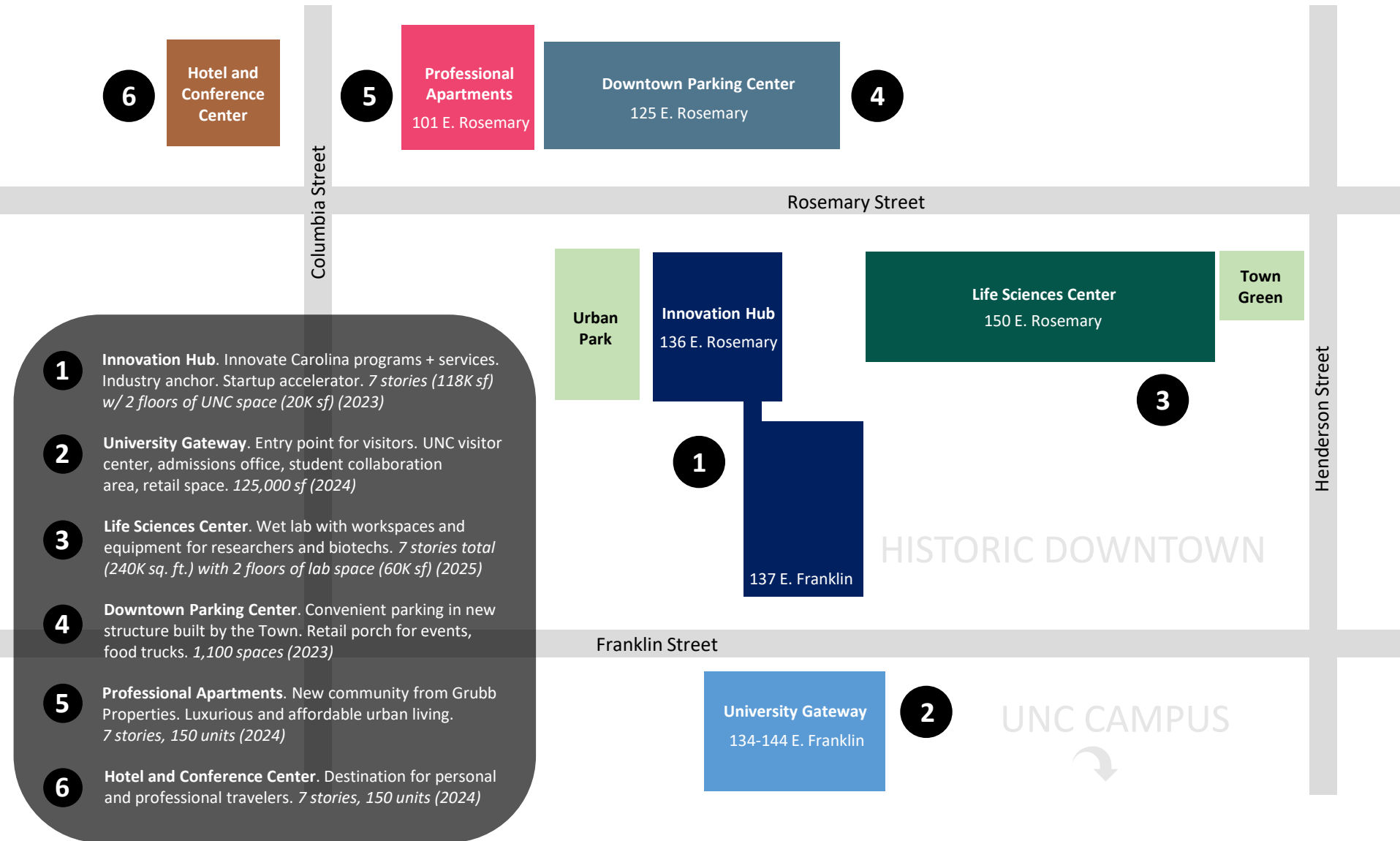


- Rectangular: UCR-601824 (60"L x 18"W x 24"H) GFRG
- Round: UCS-4200 (42"T x 37.5"B x 36"H) GFRG
- Round: UCS-3000 (30"T x 25.5"B x 32"H) GFRG
- Round: UCS-2400 (24"T x 19"B x 27"H) GFRG





# Innovation District: Phase 1

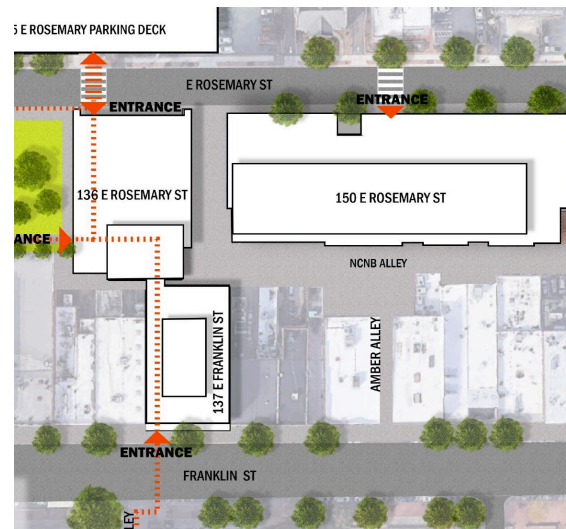


# Chapel Hill Innovation Hub

20,000 square-foot home to:

- UNC innovation programs
- Anchor for industry relationships
- Flexibility for startups

Opening 2<sup>nd</sup> Q 2023



# 1<sup>st</sup> Floor Draft Layout



Membership model offering:

- Flexible workstations
- 2-3 desk offices
- 4-5 desk offices
- Conference rooms
- Collaboration space
- Event space

## 2<sup>nd</sup> Floor Draft Layout



General Amenities include:

- Phone booths
- Slack channel
- Mailbox
- Onsite staff/reception
- Unlimited black-and-white printing
- Access to innovation services offered by Innovate Carolina
- Workshops and community networking events
- Course discounts
- Coffee and tea



# First Regional Innovation Hub: Chatham Park

UNC providing innovation programming in support of Chatham County.

Key partnerships with:

- Central Carolina Community College
- SBTDC
- Innovate Chatham

Opening 1<sup>st</sup> Q2023







THE UNIVERSITY  
*of* NORTH CAROLINA  
*at* CHAPEL HILL

Thank you

**BOARD OF TRUSTEES MEETING**  
**The University of North Carolina at Chapel Hill**  
**March 24, 2022**

The Board of Trustees met in regular session on Thursday, March 24, 2022 in the Chancellor's Ballroom at the Carolina Inn. Chair Boliek convened the meeting at 9:06 a.m.

**ROLL CALL**

Secretary Malcolm Turner called the roll and the following members were present:

Teresa Artis Neal	Allie Ray McCullen
David L. Boliek, Jr., Chair	Ralph W. Meekins, Sr.
Rob Bryan	Vinay Patel
R. Gene Davis, Jr.	John P. Preyer, Vice Chair
Dr. Perrin Jones	Malcolm K. Turner, Secretary
Marty Kotis	Ramsey White

Secretary Turner indicated that there was a quorum. Trustee White joined via Zoom Teleconference.

**NATIONAL ANTHEM**

Chair Boliek welcomed Taylor Loyd, an undergraduate Psychology and Music major with a Classical Voice concentration, to sing the National Anthem for the Board and guests.

**STATE GOVERNMENT ETHICS ACT**

Chair Boliek read the following statement:

As Chair of the Board of Trustees, it is my responsibility to remind all members of the Board of their duty under the State Government Ethics Act to avoid conflicts of interest and appearances of conflicts of interest as required by this Act. Each member has received the agenda and related information for this Board of Trustees' meeting. If any Board member knows of any conflict of interest or appearance of conflict with respect to any matter coming before the Board of Trustees at this meeting, the conflict or appearance of conflict should be identified at this time.

**CONSENT AGENDA**

The following items were presented for approval on the consent agenda:

- Approval of January 27, 2022 (Regular Meeting)
- Approval of Revised 2022 BOT Meeting Dates
- Ratification of Written Ballot dated March 3, 2022
- Ratification of Written Ballot dated March 3, 2022
- All-Funds Budget Model
- Budget, Finance, & Infrastructure Action Items 2, 3, 4, 5, 6

(ATTACHMENTS A-D)

Chair Boliek made a motion to approve the consent agenda. Trustee Davis seconded. A roll call vote was held and the consent agenda passed with a vote of 13-0.

**BOARD OF TRUSTEE CHAIR'S REMARKS**

- Chair Boliek began his remarks by thanking the Trustees for their participation and attendance at the William Richardson Davie Dinner on March 23, 2022. Chair Boliek congratulated the 2020 and 2021 awardees:
  - The Honorable Roy Asberry Cooper III (2021)
  - The Honorable Timothy Keith Moore (2021)
  - Mrs. Jean Roberts Kitchin (2021)
  - Ms. Robyn Shernita Hadley (2021)
  - Mr. Roy Allen Williams and Mrs. Wanda Jones Williams (2021)
  - Dr. Phillip L. Clay (2020)
  - Dr. Joan C. Huntley (2020)
  - Mr. David E. Pardue Jr. (2020)
  - Mr. Steve and Mrs. Debbie Vetter (2020)
- Chair Boliek shared that the first All-Funds budget was added to the Consent Agenda to be approved by the Board of Trustees. Chair Boliek thanked Nate Knuffman, Vice Chancellor for Finance and Operations and Chief Financial Officer, and Becci Menghini, Vice Chancellor for Human Resources and Equal Opportunity and Compliance, for their hard work and contributions to creating a financial roadmap that will allow the university to achieve its strategic initiatives.
- Chair Boliek recognized and thanked Student Body President Lamar Richards for his service to the university and representing the student body on the board.
- Chair Boliek concluded his remarks by calling upon Trustee Richards for his remarks.

[A copy of these remarks is in the Office of the Assistant Secretary and at [bot.unc.edu](http://bot.unc.edu)]

### **STUDENT BODY PRESIDENT'S REMARKS**

- Trustee Richards reflected on his administration's progress this past year and thanked the board for their support.
- Trustee Richards congratulated incoming Student Body President Taliajah Brown.

[A copy of these remarks is in the Office of the Assistant Secretary and at [bot.unc.edu](http://bot.unc.edu)]

### **RESOLUTION OF APPRECIATION LAMAR RICHARDS THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL BOARD OF TRUSTEES**

**WHEREAS**, Lamar G. Richards has served as a valuable and appreciated member of the University of North Carolina at Chapel Hill Board of Trustees in his capacity as the UNC-Chapel Hill student body president during the 2021-22 academic year; and

**WHEREAS**, Mr. Richards diligently illustrated his deep commitment to representing the student body by sharing candid student-centered feedback and needs in his work with the Board; and

**WHEREAS**, Mr. Richards' unfailing and passionate commitment to enact institutional change to better meet the needs of marginalized students helped make the Carolina campus more welcoming for everybody; and

**WHEREAS**, Mr. Richards was a valued voice in Board discussions as a member of the External Relations Committee and the University Affairs Committee; and

**WHEREAS**, Mr. Richards provided additional support for the University as a member of the Council of Student Body Presidents for the UNC System; and

**WHEREAS**, Mr. Richards has demonstrated leadership and dedication to the University through his work on the Carolina Union Board of Directors, the General Alumni Association Board, the National Association for the Advancement of Colored People Board of Higher Education Strategy, the Campus and Community Advisory Committee, among others; and

**WHEREAS**, Mr. Richards during his term as Student Body President started the Distinguished Lectureship on Racial Equity and Belonging; and

**WHEREAS**, Mr. Richards provided invaluable guidance, insight and leadership in working with students, faculty, staff, administrators, and his fellow Trustees on a number of timely issues, including supporting the continuing campus response to COVID-19, successfully championing internet stipends for students studying remotely through his work with the Commission on Campus Equality and Student Equity, displaying leadership and compassion in support of the mental health needs of our community, and working to make Carolina a more welcoming campus.

**NOW, THEREFORE, LET IT BE RESOLVED** that the Board of Trustees of The University of North Carolina at Chapel Hill thanks and congratulates Lamar Richards for his dedication to the University, his hard work and outstanding service in student government and as a Trustee, and wishes him every success in his future pursuits as a proud Carolina alumnus.

Chair Boliek made a motion to adopt the resolution. Trustee Davis seconded, and it passed unanimously.

#### **CHANCELLOR'S REMARKS**

- Chancellor Guskiewicz began his remarks by thanking everyone for their attendance and congratulated the honorees of the William Richardson Davie award.
- The Chancellor shared that it was honor to be a part of the Davie Award reception and thanked everyone for their help in honoring the 11 awardees who have lived lives of service to the university.
- The Chancellor highlighted three events and initiatives that had launched since the last meeting in January:
  - The university welcomed President Ron Daniels from John Hopkins University to give a lecture sponsored by the Graduate School and Program for Public Discourse. The Chancellor provided the board with a copy of his latest book, What Universities Owe Democracy.
  - The Chancellor commended UNC's progress on the UNC System 5-year goals and benchmarks which were announced in late February.
  - Carolina Across 100 launched their first program "Our State, Our Work," at Durham Tech to focus on linking young people with employment and educational opportunities.
    - The Chancellor showed a brief video highlighting Carolina Across 100.
- Chancellor Guskiewicz introduced Penny Gordon-Larsen, Carla Smith Chamblee Distinguished Professor of Global Public Health at the University of North Carolina at

Chapel Hill, and a Faculty Fellow at the Carolina Population Center as the Interim Vice Chancellor of Research.

- The Chancellor thanked everyone for their attendance and continued service to the university.

[A copy of these remarks is in the Office of the Assistant Secretary and at [bot.unc.edu](http://bot.unc.edu)]

### **WINSTON CENTER**

Chancellor Guskiewicz introduced Dr. Mitch Prinstein, Seters Distinguished Professor of Psychology and Neuroscience and Chief Scientific Officer at the American Psychological Association; Co-Director of the Winston Center, Eva Telzer, Associate Professor of Psychology and Neuroscience; Co-Director of the Winston Center, Nathan Field, PhD student, Department of Psychology and Neuroscience, Kara Fox, PhD student, Department of Psychology and Neuroscience, and Maria Maze, PhD student, Department of Psychology and Neuroscience.

To conclude their presentation, they entertained questions from the board. This presentation can be found on [bot.unc.edu](http://bot.unc.edu) and on file in the Office of the Assistant Secretary.

### **N.C. POLICY COLLABORATORY**

Chancellor Guskiewicz introduced Jeff Warren, Adjunct Professor of the Practice and Executive Director, N.C. Policy Collaboratory.

To conclude their presentation, they entertained questions from the board. This presentation can be found on [bot.unc.edu](http://bot.unc.edu) and on file in the Office of the Assistant Secretary.

### **REPORT OF THE AUDIT, COMPLIANCE, AND RISK MANAGEMENT COMMITTEE**

Trustee Kotis presented a review of the Audit, Compliance, and Risk Management Committee meeting. The following items were presented to the committee for action:

- Audit, Compliance, and Risk Management Charter and Amendments to the Office of Internal Audit Charter

Trustee Kotis made a motion to approve, and motion was seconded by Trustee Davis. The motion passed.

Trustee Kotis continued and shared the items presented for information:

- Office of Internal Audit Information Technology Audit Initiatives
- Cyber Security Update

A full review of the committee meeting is in the committee minutes in the Office of the Chancellor.

### **REPORT OF THE FINANCE, INFRASTRUCTURE, & AUDIT COMMITTEE**

Trustee Preyer presented the report from the Finance, Infrastructure, and Audit Committee. The following items were presented to the committee for action on the Full Board Consent Agenda.

### **All-Funds Budget Model**



(ATTACHMENT E)

**Advance Spending Authority – Fire Alarm Replacement in Dental Science Complex**

The Dental Sciences Complex (Brauer, First Dental, Tarrson, and Koury Oral Sciences Buildings) each have obsolete fire alarm systems. None of the system components are currently available and the systems are approaching end of life. The state budget passed in November 2021 appropriated funds for the replacement of the Brauer fire alarm system. The replacement of the Brauer system will trigger upgrades to other Dental Sciences buildings due to their interconnection.

This request is to provide advance planning for the phased replacement of the entire fire alarm system in each of the four buildings. This will be a very challenging project that will require careful planning and coordination with building occupants to minimize downtimes related to the system replacement.

(ATTACHMENT F)

**Advance Spending Authority – Baity Lab Renovation**

The Baity Lab renovation will create a space in which to carry out the PFAS ionic fluorogel research that was specifically funded in the most recent state budget, a groundbreaking project that seeks to remove PFAS compounds (e.g. GenX) from potable water sources at the scale of municipal or regional treatment. The renovation will abate hazardous materials and upgrade mechanical, electrical, plumbing and fire protection systems to meet the requirements of this type of research.

(ATTACHMENT G)

**Designer Selection – Phillips Hall HVAC Renovation**

This project scope of work includes the design for the replacement of central mechanical systems within portions of the 148,064 GSF Phillips Hall on Central Campus. The heavily utilized building contains classroom, laboratory and office space for the departments of Physics and Astronomy, Mathematics, and Biomedical Engineering within the College of Arts and Sciences. Associated work may include new finishes as well as ceiling and lighting systems replacement in affected areas. Careful attention to project phasing and implementation will be required to limit disruptions to building occupants.

(ATTACHMENT H)

**Designer Selection – Wilson Library Infrastructure Upgrades**

This project scope of work includes the design of infrastructure upgrades to the Louis Round Wilson Special Collections Library (Wilson Library). Wilson Library is a 317,529 GSF building originally constructed in 1929, with subsequent additions in 1953 and 1977. The 2021-23 state budget appropriated funding for the creation of a code compliant means of egress upgrade and the replacement of air handling units 1, 2, and 3. The total appropriation for these scope items is \$20,300,000. It is the intent of the University to also replace and install additional air handling unit 7 as well as install new fire suppression and alarm systems as part of the project. This additional scope is pending UNC Board of Governors approval and will add approximately \$9.5 million to the project budget.

(ATTACHMENT I)

**Site Approval – Finley Golf Renovation Phase II**

This scope of this project includes the reconfiguration of Finley Golf Course Drive to improve the circulation pattern around the entrance to the clubhouse, and a new varsity team building. The building includes locker rooms for both the men's and women's teams, training room, equipment room, players' lounge, study areas, coaches' offices, and player meeting rooms.

The total project budget for the team building is being developed and will be funded from gifts raised by the Educational Foundation.

(ATTACHMENT J)

**Site Approval – Cone-Kenfield Tennis Center Renovation Phase II**

The project at Cone-Kenfield Tennis Center will create a new team building adjacent to the current indoor facility and renovate the existing building. The program includes new locker rooms for both the men's and women's teams and coaching staff offices to replace the equivalent spaces in the indoor tennis facility and add new training spaces and hospitality areas.

The total project budget for the team building is being developed and will be funded from gifts raised by the Educational Foundation.

(ATTACHMENT K)

**Property Acquisition – Nutrition Research Institute**

On January 31, 2019, the Board of Trustees granted approval for the purchase of 102 Cedar Avenue, Kannapolis, NC for the purpose of providing temporary housing for graduate students and post-doctoral trainees at the Nutrition Research Institute (NRI). Due to changes in ownership of the property and the COVID-19 pandemic the close of the sale has been delayed. In the interim, the value of the property has increased beyond the previously BOT approved limit of \$125,000. The new owner is now willing to sell for \$186,000 and the new value includes necessary improvements to meet state requirements for occupancy.

(ATTACHMENT L)

**Property Acquisition by Lease – UNC Innovation Hub**

This request is to acquire approximately 24,500 square feet of rentable office space from Grubb Properties d/b/a Franklin Office Chapel Hill, LLC at 136 East Rosemary Street, Chapel Hill. This space will be occupied by the Innovation Hub to be operated by the University's Office of Innovate Carolina. This newly developed co-working space will co-locate the University's innovation and entrepreneurship programming and services with co-working space that startups and established companies can lease to work closely with Carolina's students, faculty and researchers and to provide opportunities for the commercialization of University intellectual property. The space is located within walking distance to campus and is ADA accessible.

(ATTACHMENT M)

There were no items included for information only.

A full review of the committee meeting is in the committee minutes in the Office of the Chancellor.

#### **REPORT OF THE EXTERNAL RELATIONS COMMITTEE**

Trustee McCullen presented a review of the External Relations Committee meeting. There were no action items for this committee in open session. Trustee McCullen shared the items presented for information:

- Development Update given by David Routh
- WUNC Update given by Beth Keith
- Legislative Update given by Chris McClure and Kelly Dockham

A full review of the committee meeting is in the committee minutes in the Office of the Chancellor.

#### **REPORT OF STRATEGIC INITIATIVES COMMITTEE**

Trustee Jones presented a review of the Strategic Initiatives Committee meeting. There were no action items for this committee in open session. Trustee Kotis shared the items presented for information:

- University Career Services and General Alumni Association Presentation given by Tierney Bates, Marcie Leemore, and Dana Simpson

A full review of the committee meeting is in the committee minutes in the Office of the Chancellor.

#### **MOTION TO CONVENE IN CLOSED SESSION**

On motion of Secretary Turner, and seconded by Trustee Patel, the Board voted to convene in closed session pursuant to North Carolina General Statutes Section 143-318.11 (a) (1) (to prevent the disclosure of privileged information under Section 126-22 and the following); and also pursuant to Section 143-318.11 (a) (2), (3), (6), and (7).

#### **RECONVENE MEETING IN OPEN SESSION**

Secretary Turner made a motion to return to open session. The motion was seconded, and it passed.

#### **OPEN SESSION**

#### **REPORT OF UNIVERSITY AFFAIRS COMMITTEE**

Trustee Bryan referred members to the March Human Resources and personnel items submitted for action. Trustee Bryan made a motion to approve the items. The motion was seconded, and it passed.

Trustee Bryan presented a review of the University Affairs Committee meeting. The following items were presented to the committee for action:

- March 2022 HR and Personnel Actions
- Amendments to the UNC-Chapel Hill Board of Trustees Bylaws
- Resolution Regarding In-State Tuition for Athletic Scholarship Recipients
- Request for Extension of the Extension for COVID Tenure Clock Relief

Trustee Bryan shared the items presented for information:

- Revisions to Department of Dramatic Art's Policies on Faculty Personnel Actions
- Faculty Update by Mimi Chapman
- Report on Resignations/Retirements
- Presentation on Student Body Government

A full review of the committee meeting is in the committee minutes in the Office of the Chancellor.

### **ADJOURNMENT**

There being no further business to come before the Board, Chair Boliek called for a motion to adjourn. Trustee Patel made the motion; Trustee Kotis seconded, and it passed. Chair Boliek adjourned the meeting.



**Mail Ballot**  
**Board of Trustees**  
**May 5, 2022**

Chancellor Kevin Guskiewicz submits for your review and approval the terms of appointment and compensation for Dr. Janet M. Guthmiller as Dean of the Adams School of Dentistry. This mail ballot will be approved as part of the consent agenda at the Full Board meeting on Thursday, May 19, 2022.

The undersigned votes as follows with recommendation to these proposed actions as presented by the Chancellor.

	Approve	Disapprove
Appointment and compensation for Dr. Janet M. Guthmiller as Dean of the Adams School of Dentistry	<input type="checkbox"/>	<input type="checkbox"/>

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Date \_\_\_\_\_

Please fax to Chris McClure at (919) 962-1647 or email at **chris\_mcclure@unc.edu**





**Mail Ballot**  
**Board of Trustees**  
**May 5, 2022**

Chancellor Kevin Guskiewicz submits for your review and approval the terms of appointment and compensation for Dr. Valerie M. Howard as Dean of the Nursing School. This mail ballot will be approved as part of the consent agenda at the Full Board meeting on Thursday, May 19, 2022.

The undersigned votes as follows with recommendation to these proposed actions as presented by the Chancellor.

Appointment and compensation  
for Dr. Valerie M. Howard as  
Dean of the Nursing School

☐

Approve

☐

Disapprove

Confer tenure for Dr. Valerie  
M. Howard

☐

Approve

☐

Disapprove

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Date \_\_\_\_\_

Please fax to Chris McClure at (919) 962-1647 or email at **chris\_mcclure@unc.edu**



**Mail Ballot**  
**Board of Trustees**  
**May 12, 2022**

Chancellor Kevin Guskiewicz submits for your review and approval the terms of appointment and compensation for Dr. James W. C. White as Dean of the College of Arts and Sciences. This mail ballot will be approved as part of the consent agenda at the Full Board meeting on Thursday, May 19, 2022.

The undersigned votes as follows with recommendation to these proposed actions as presented by the Chancellor.

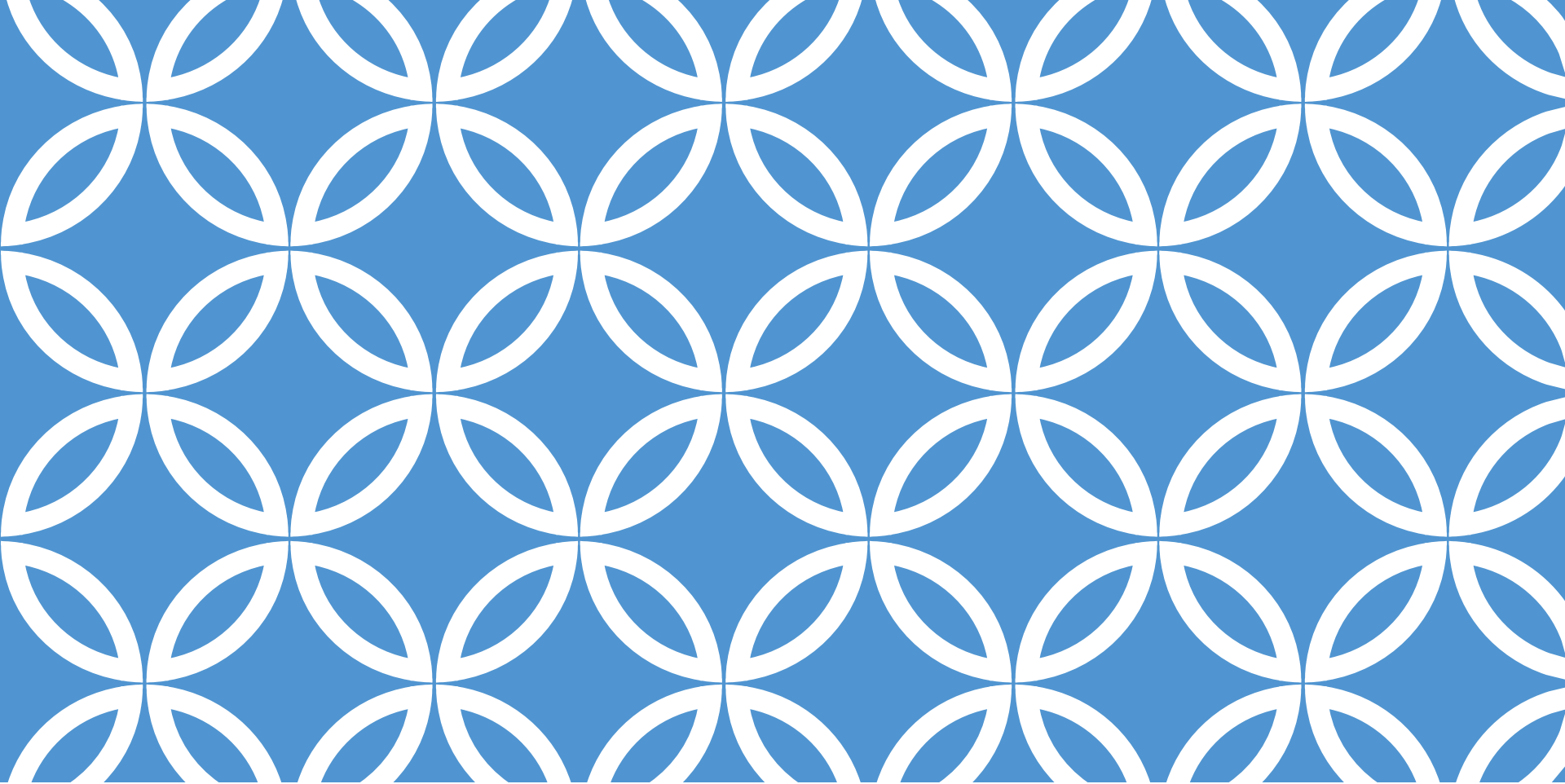
	Approve	Disapprove
Appointment and compensation for Dr. James W. C. White as Dean of the College of Arts and Sciences.	<input type="checkbox"/>	<input type="checkbox"/>

Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Date \_\_\_\_\_

Please fax to Chris McClure at (919) 962-1647 or email at [chris\\_mcclure@unc.edu](mailto:chris_mcclure@unc.edu)



**OFFICE FOR UNDERGRADUATE RESEARCH**

**UNC BOARD OF TRUSTEES MEETING**

May, 19, 2022

# Why Research?

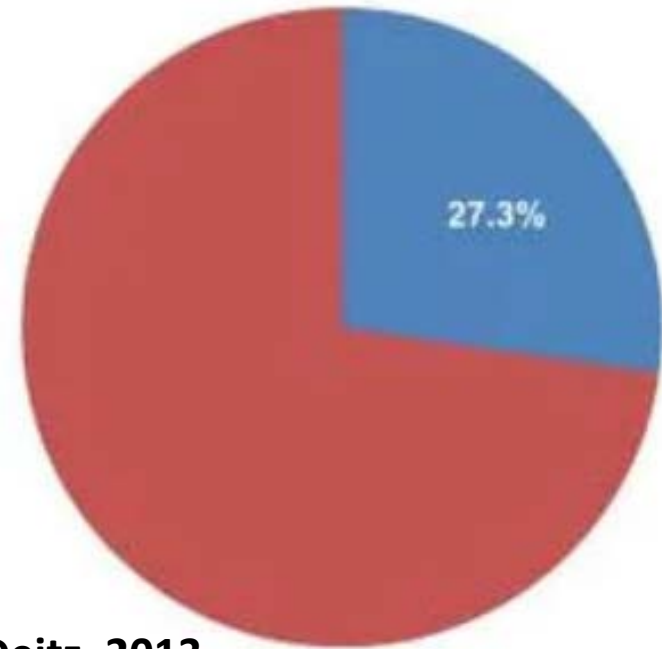
- Seeks to solve society's greatest challenges, drive innovation, and provide the foundation for classroom instruction
- Integration of classroom knowledge to real-world applications
  - “Learning by doing”



# Why Research?

- Problem-solving skills are a critical feature of a liberal arts education
- Research is one of the most impactful undergraduate experiences
  - Associated with better academic performance
  - Larger gains in:
    - Communication and leadership skills
    - Tolerance for obstacles
    - Working independently
    - Self-confidence
    - Problem solving skills

**% US bachelor degree recipients with jobs directly linked to their majors**



**Abel & Deitz, 2013**

**Source: US Bureau of the Census**

**2010 American Community Survey**



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# Who Can Do Research?





# IDEAS in Action Curriculum (Fall 2022)

- **Research & Discovery Requirement**
  - ~19,000 undergraduates required to engage in original research
    - Approaches
      - Approved Research Courses
        - Research must constitute at least 1/3 of the final course grade or activities
    - Mentored research experiences
      - Honors theses, for-credit research experiences, volunteer research experiences
      - Faculty, Study Abroad, Biotech, Governmental Agencies, etc.

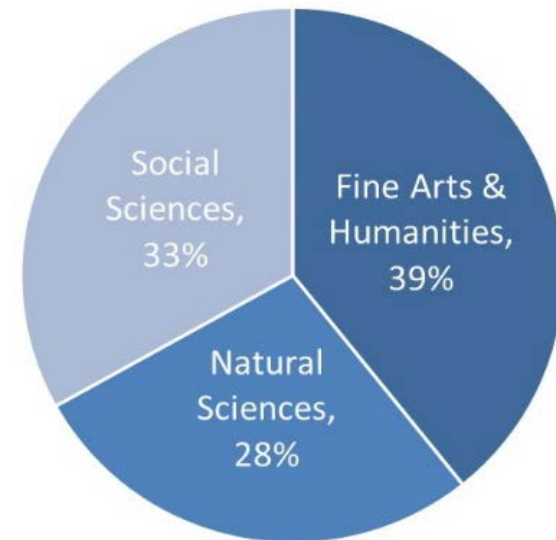
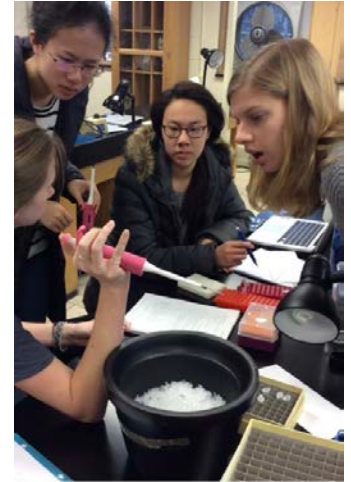


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# Graduate Research Consultant Program

- Supports graduate students who help faculty integrate research in undergraduate classes
- Provides equitable access and impacts 3,250+ students annually
- ~75% of GRC instructors indicated their meet the R&D criteria





# Course-Based Undergraduate Research Experiences (CUREs)

- Traditional lab classes assess known outcomes
- CUREs (and all R&D courses) address the unknown
  - Successfully implemented in all divisions of the College of Arts & Sciences and in the Professional Schools



# Mentored Research

- **AY 2018-19 Research Participation**

**279 Honors Theses**

**783 mentored volunteer experiences**

**+1,106 for-credit mentored experiences**

**2,168 mentored research experiences**



- **AY 2019-20 Research Participation**

**267 Honors Theses**

**711 mentored volunteer experiences**

**+957 for-credit mentored experiences**

**1,935 mentored research experiences**



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# Mentored Research

- **Summer Undergraduate Research Fellowship (SURF) Program**
  - Competitive grant program that supports mentored research experiences during summer
  - ~65 students annually
- **Summer Award for Research Courses (SARC)**
  - In-state tuition support for individual for-credit mentored research experiences during summer
  - ~20 students annually



# Celebration of Undergraduate Research

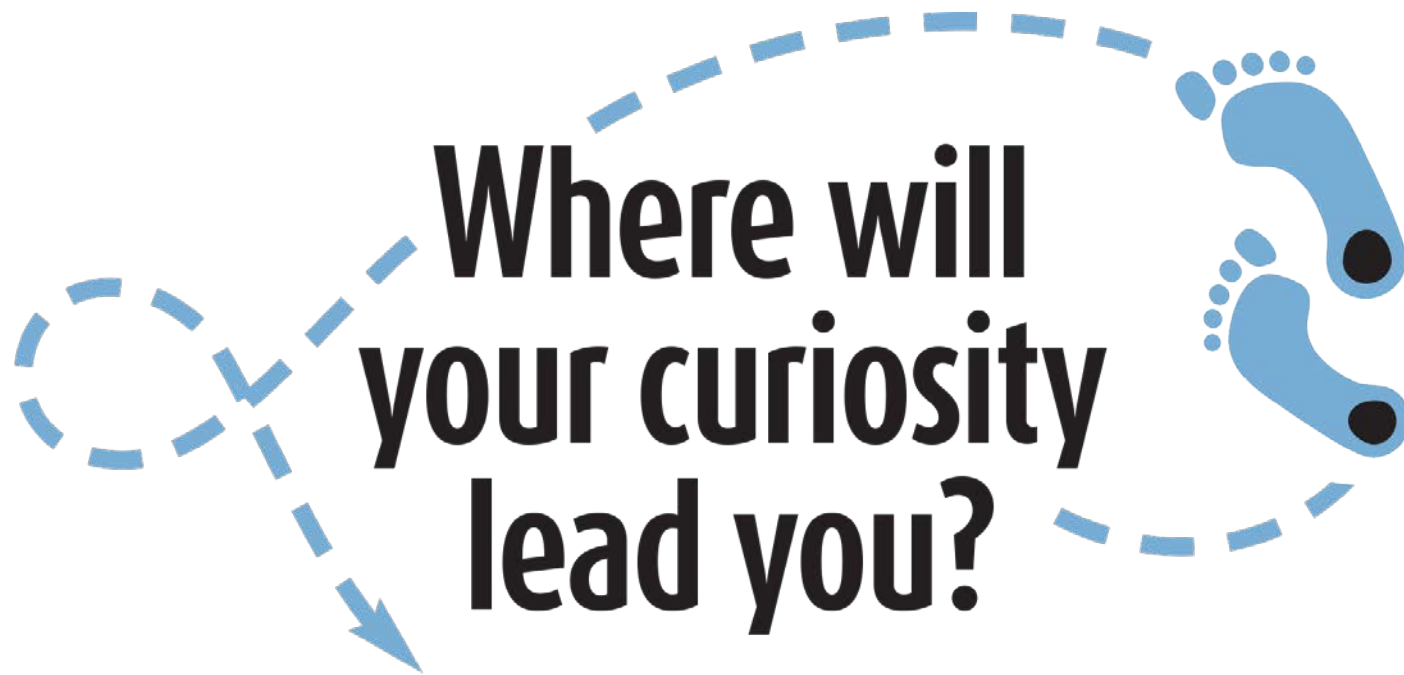
- **Annual event at which 250+ students present their research**
  - Affords students opportunity to disseminate their research and articulate the findings to diverse groups
  - Substantial growth anticipated with R&D requirement
- **2022 (23<sup>rd</sup> Annual) Celebration**
  - 230+ poster presentation with 400+ student authors
  - ~700 total attendees



# And now...the undergraduate research experts

- **Gabriella Hesse (Dr. Sabrina Robertson – Psychology & Neuroscience, College of Arts & Sciences)**
  - CURE course (NSCI 278 – Molecular Imaging of the Brain)
- **Lauren McShea (Dr. Michael Fisher - Environmental Sciences and Engineering, Gillings School of Global Public Health)**
  - Environmentally-Engaged Communities and Undergraduate Students Investigating for Public Health Protection (ECUIPP Lab – Directed by Dr. Amanda Northcross)
  - <https://ecuipp-labs-superb-site.webflow.io/>





**Where will  
your curiosity  
lead you?**

**Office for Undergraduate Research**

**our.unc.edu**

**OUR Mission**

***To facilitate and enrich undergraduate research opportunities at Carolina***

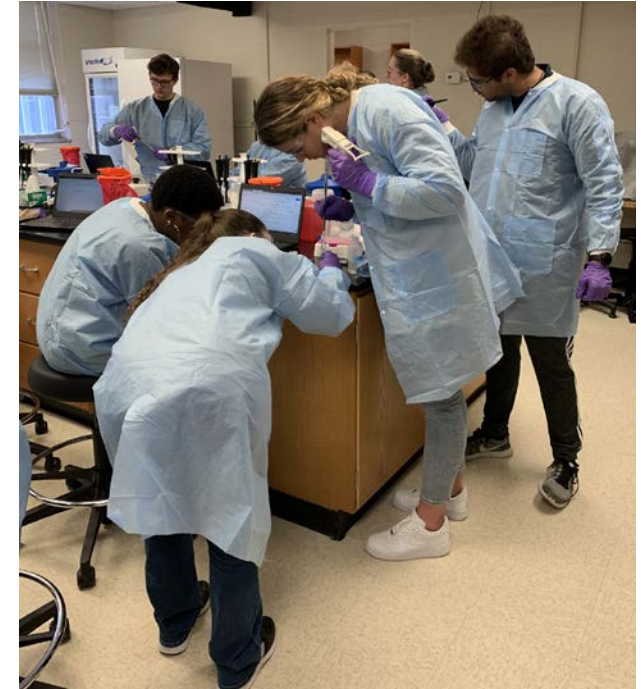
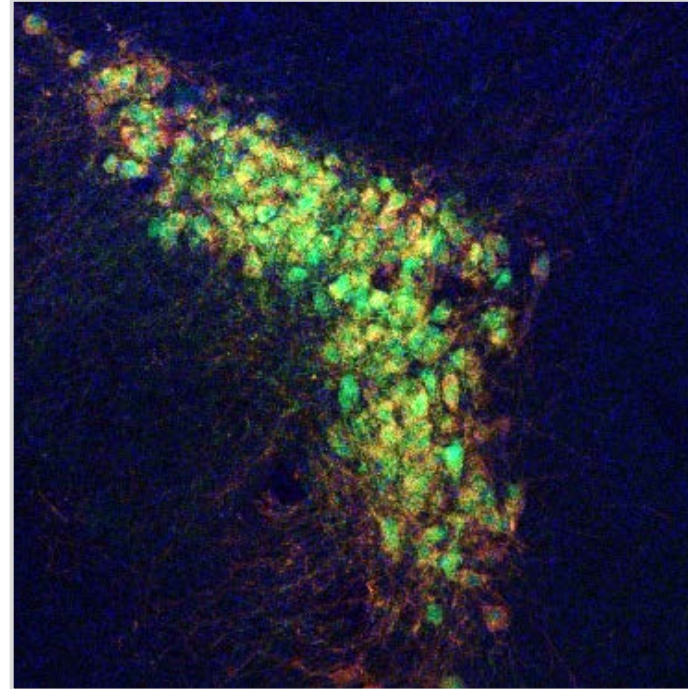
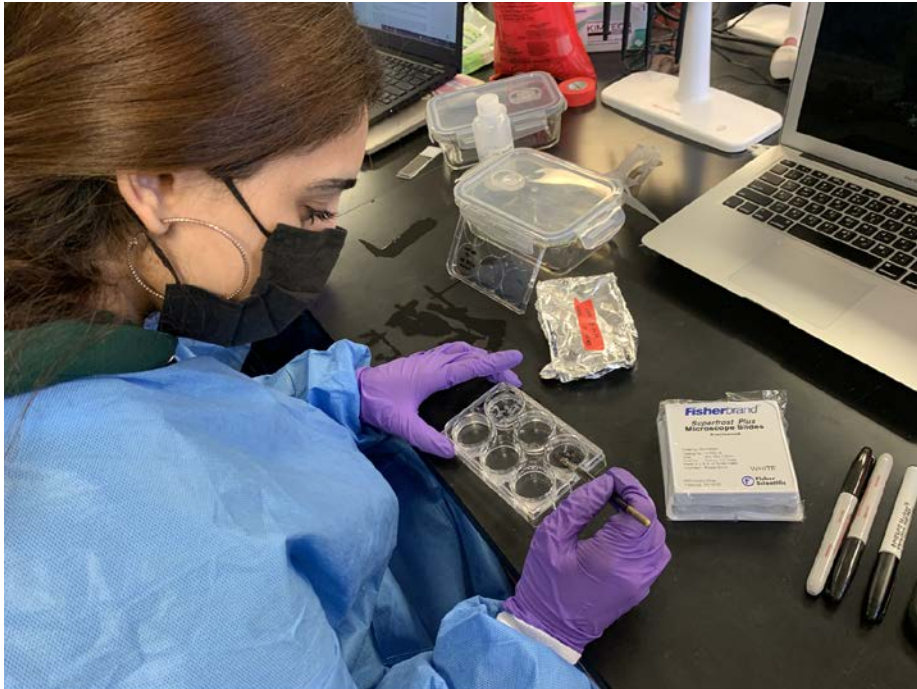
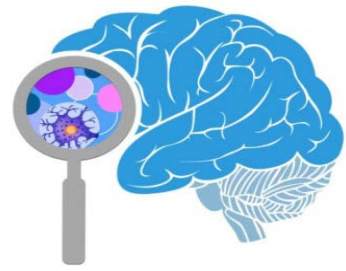


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# Engaging Neuroscience Students in Course Based Undergraduate Research Experiences (CUREs)



NSCI 278 Molecular Brain Imaging  
NSCI 276 Cellular Electrophysiology  
NSCI 274 Neurophysiology Data Science  
NSCI 279 Microglia Lab



# Poll: Is Parkinson's Disease more prevalent in...

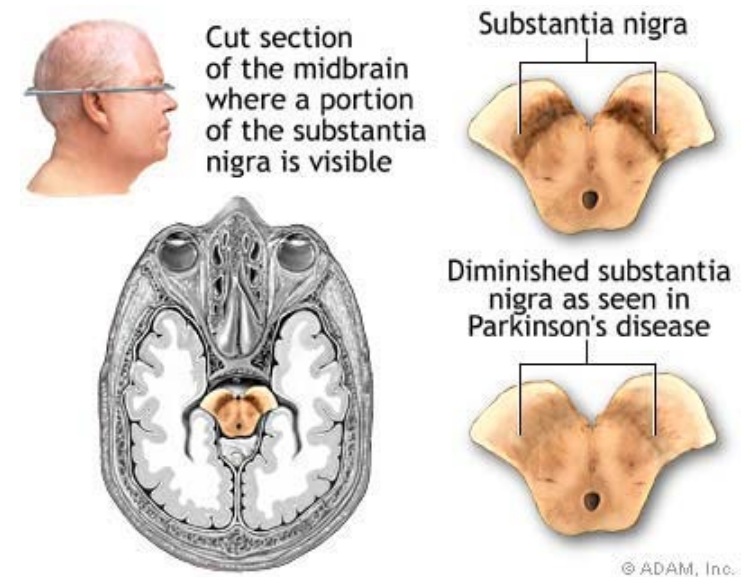
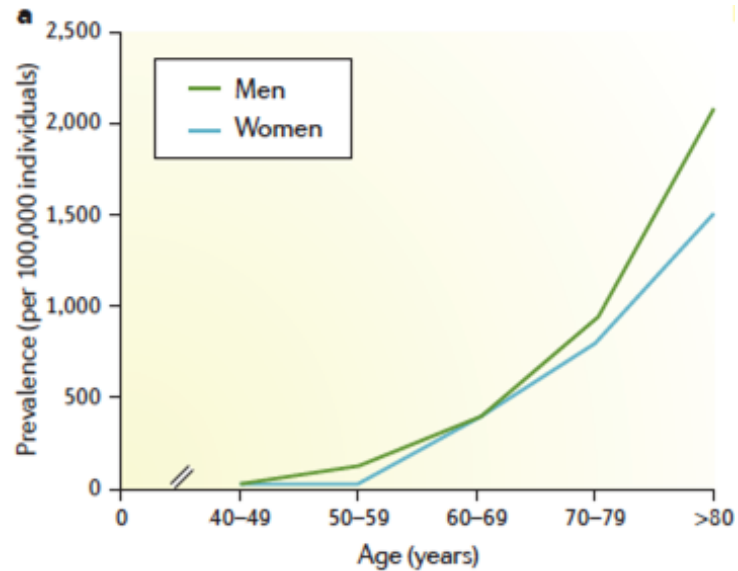
Men?

Women?

Neither (equally prevalent)?

# What is Parkinson's disease?

- **Prevalence increases with age**
  - 41 in 100,000 (40 to 49 years)
  - 1,087 in 100,000 (70 to 79 years)
- **Cardinal features**
  - Resting Tremor
  - Muscle rigidity
  - Bradykinesia or akinesia
  - Postural instability
- **Non-motor manifestations**
  - Olfactory loss
  - Depression
  - Dementia
  - Sleep disturbances
  - Cognitive Impairment
  - Fatigue and pain

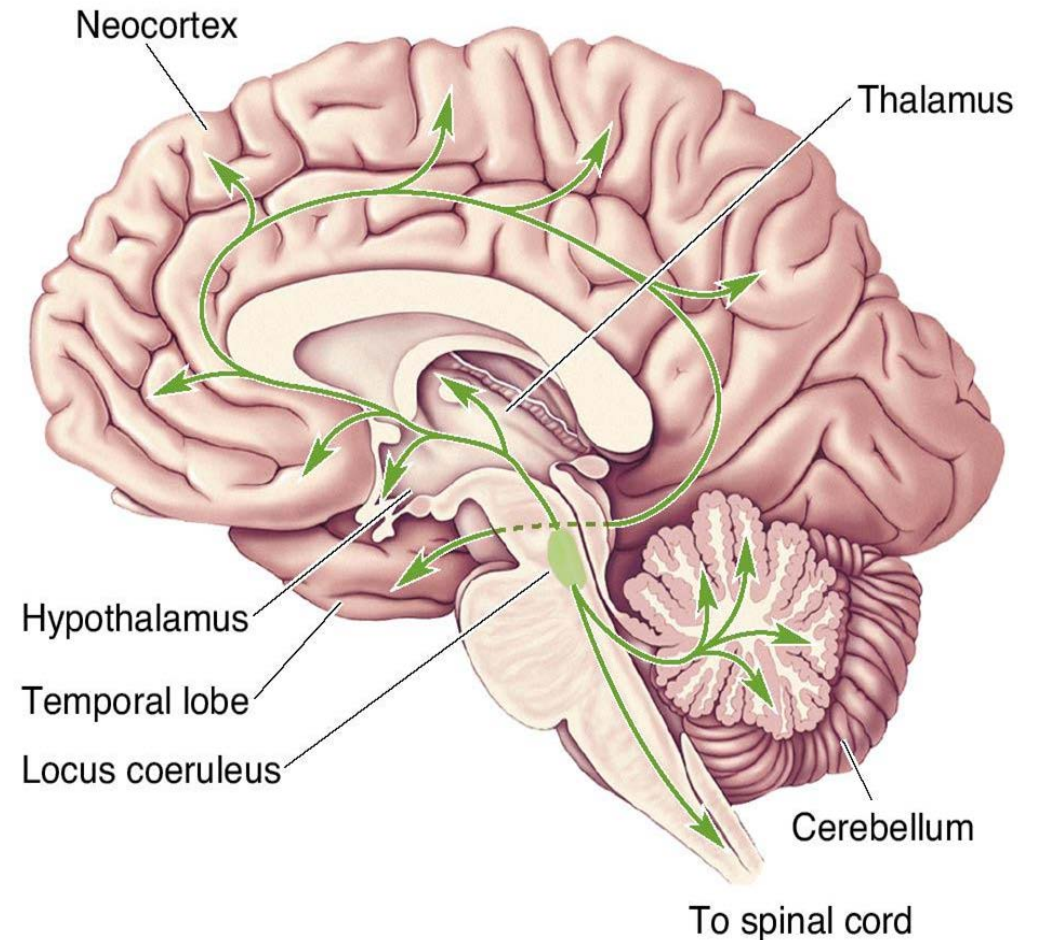
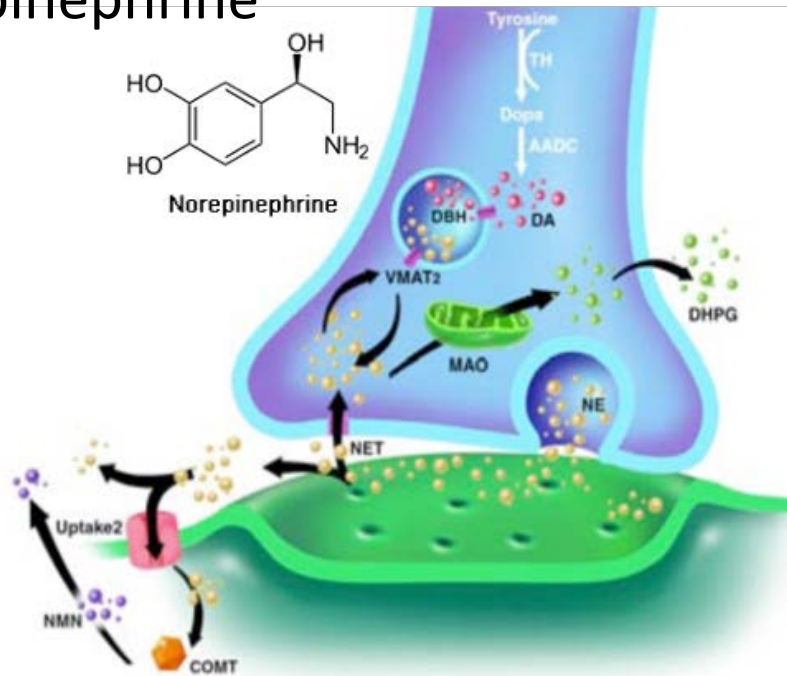


- **Pathological hallmarks**
  - Loss of dopamine neurons in the substantia nigra (SN)
  - Lewy bodies (largely made up of  $\alpha$ -synuclein)
- **Causes unknown** (genetic & environmental)

# Norepinephrine in Parkinson's disease

It is not just dopamine we care about in Parkinson's disease, in fact...

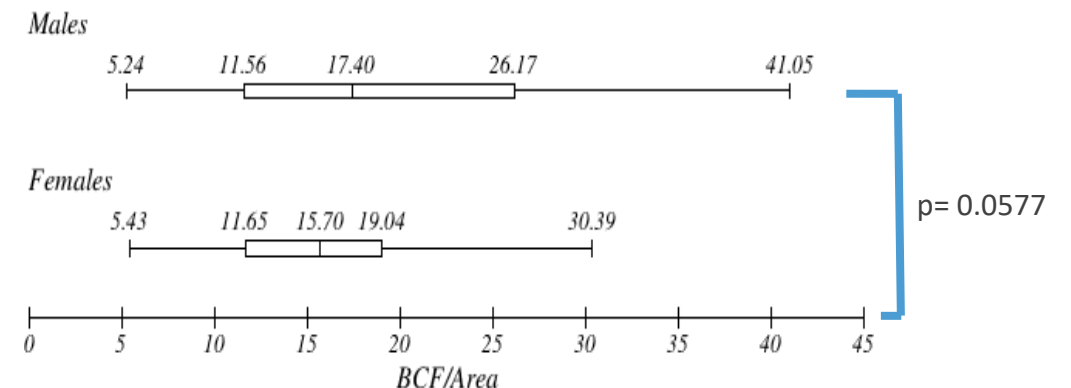
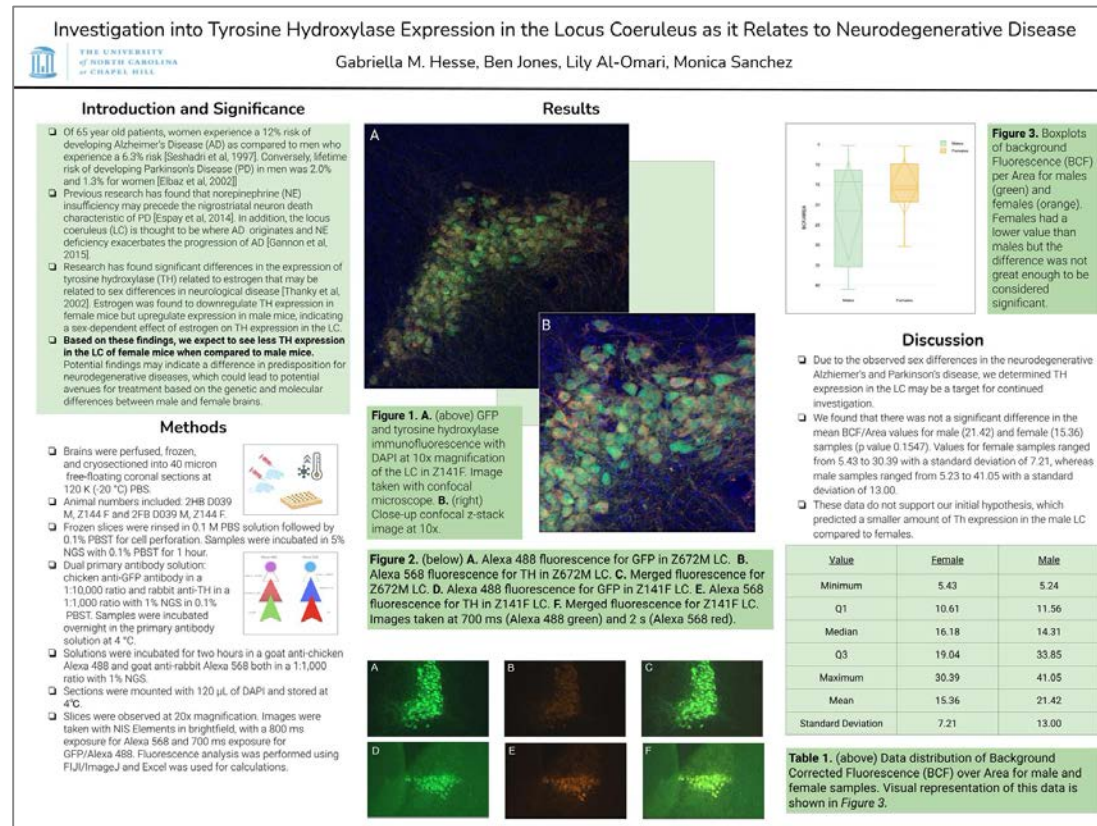
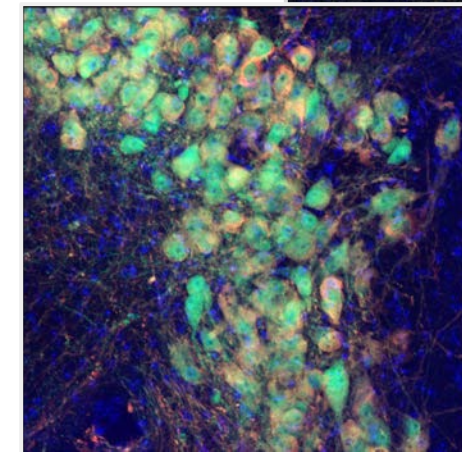
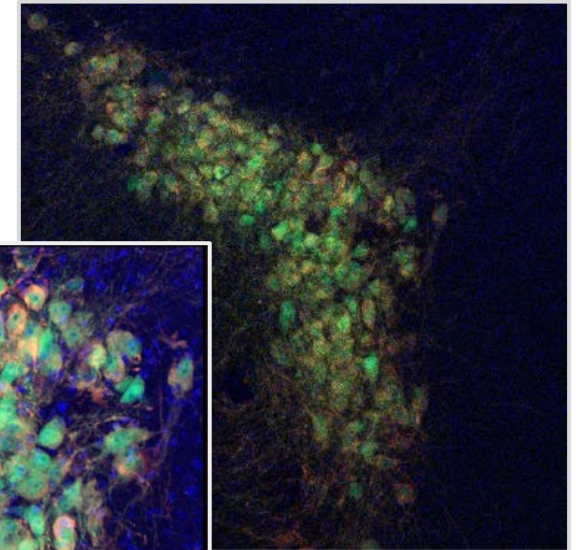
- Norepinephrine neuron loss is required for some Parkinson's disease symptoms
- Norepinephrine protects against Parkinson's disease
- Tyrosine hydroxylase is critical for making norepinephrine





# Goal of Our Research: investigate sex differences in TH expression in the LC

- Collaborated with the NIH
  - Used mice with neurons that glowed green!
  - Looked to see neurons' expression of TH



# Personal Impact

## Undergraduate Research

- Clinically-minded and would not have sought out research on my own
- Changed my view of what research can and should be
- Continue pursuing research in medical school this fall?
  - Likely with UNC Neurosurgery



UNC SCHOOL OF MEDICINE

December 16, 2021

Dear Gabriela,

My colleagues on the Admissions Committee and I are delighted to offer you a place in the class entering the University of North Carolina School of Medicine in August 2022. We hope this school will become a special place to you as it has for many of us.

I encourage you to become familiar with our curriculum and special programs by visiting our web site at <https://www.med.unc.edu/uncmed/curriculum>. In the preclinical years, faculty, and administrators at the UNC School of Medicine work in conjunction with our students to provide an integrated basic science curriculum in a variety of learning formats, as well as an introduction to clinical skills with a consistent emphasis on professionalism. Likewise, in the clinical curriculum, it is our goal to provide students with the best possible clinical education. Throughout medical school, we strive to offer students independence and flexibility to pursue research interests, community and international service initiatives, and joint degree programs such as those offered through the UNC Gillings School of Global Public Health and UNC Kenan-Flagler Business School.

Acceptance into the UNC School of Medicine is contingent upon demonstrating successful completion of all required UNC School of Medicine prerequisites, and programs indicated on your AMCAS application, or any courses taken after submission of your AMCAS application. In addition, you are required to submit all final official transcripts from each U.S. or Canadian institution attended, showing successful completion of required coursework, or degree granting programs, if applicable, by July 1st of the matriculating year.

Please complete the non-binding Acceptance Form as soon as possible, as it is a requirement for the acceptance process. In addition, you are responsible for completing the following pre-matriculation requirements: immunizations for the State of North Carolina and the UNC School of Medicine, as well as a criminal background check (CBC). More information regarding the CBC process will be sent later via email.

Please keep in touch and let us know if you have any questions, and you may contact us at [admissions@med.unc.edu](mailto:admissions@med.unc.edu). We will send additional information as the year progresses. Our faculty, and your future classmates, look forward to seeing you at Orientation on July 27, 2022.

Sincerely,

Lisa Rahangdale, MD, MPH  
Associate Dean for Admissions  
Associate Professor of Obstetrics & Gynecology



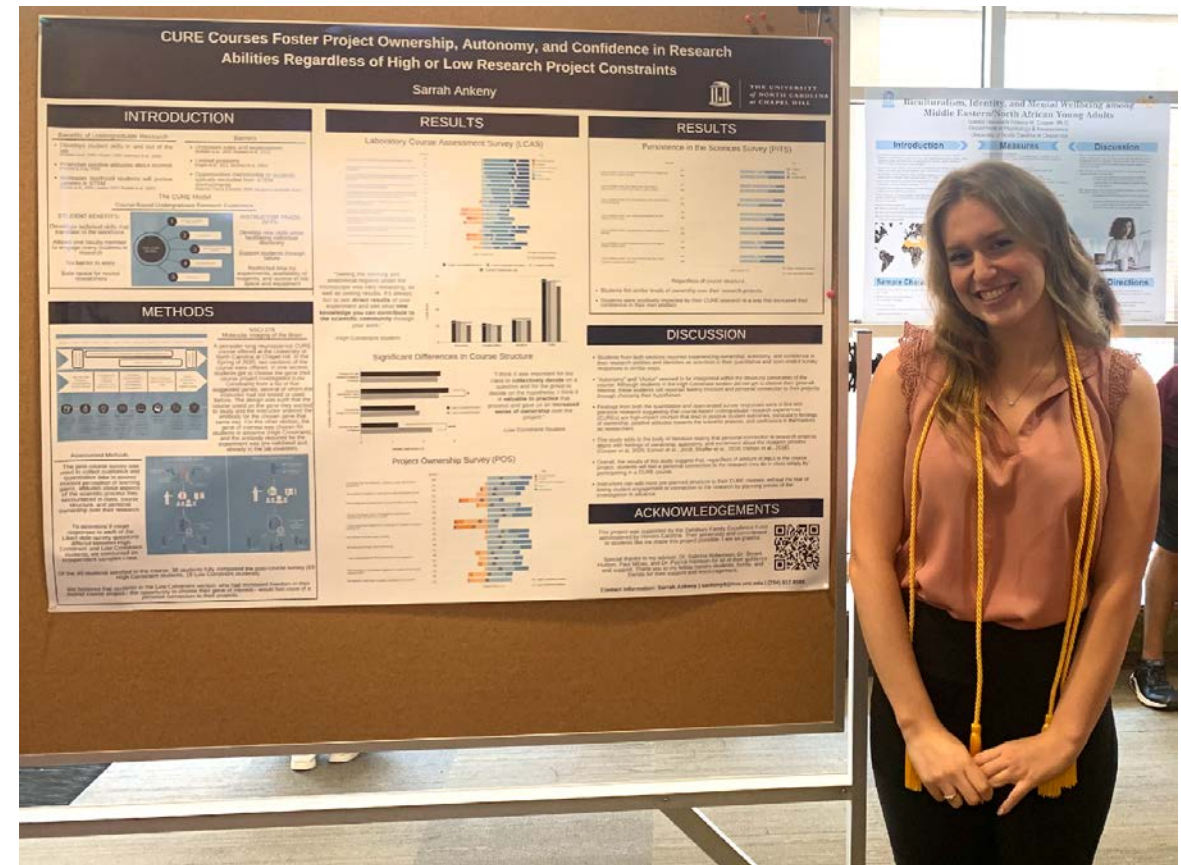
Pictured (left to right): Monica Sanchez, Lily Al-Omari, Ben Jones, Gabriella Hesse



# Research Experience Benefits Students

- Develops student skills in and out of the lab (Buffalari et al., 2020; Chopin, 2002; Seymour et al., 2004)
- Promotes positive attitudes about science (Petrella & Jung, 2008)
- Increases likelihood students will pursue careers in STEM (Carter et al., 2004; Lopatto, 2017; Russell et al., 2007)

“CURE courses foster research project ownership, autonomy, and confidence in research abilities regardless of high or low research project constraints”.

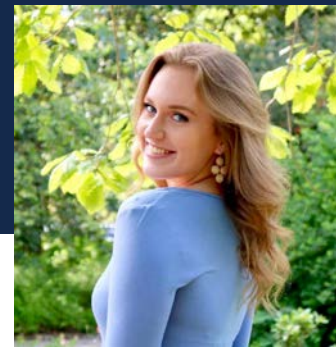


Sarrah Ankeny 2022 Senior Neuroscience Honors Thesis

Data collected from ~40 NSCI 278 Students



# NSCI 278 promotes student confidence and science identity



## Persistence in the Sciences Survey

(Hanauer, Graham, & Hatfull, 2016)

Key

- Disagree
- Agree
- Strongly Agree

I am confident that I can develop theories by integrating results from multiple studies



I am confident that I can figure out what data or observations to collect and how to collect them



I am confident that I can use research tools, instruments, and techniques



I am confident that I can create explanations for the results of the study



I am confident that I can generate a research question to answer



I am confident in communicating my work through a poster and/or paper



I am confident that I can use scientific literature and reports to guide my research



Likert Score (1-5)

*"The moment that we saw neurons was just absolutely incredible, and I showed the pictures to literally everyone that would look at my phone. I loved going to the confocal core for a similar reason— this was literal proof that we were being scientists and that something we had done actually worked!"*

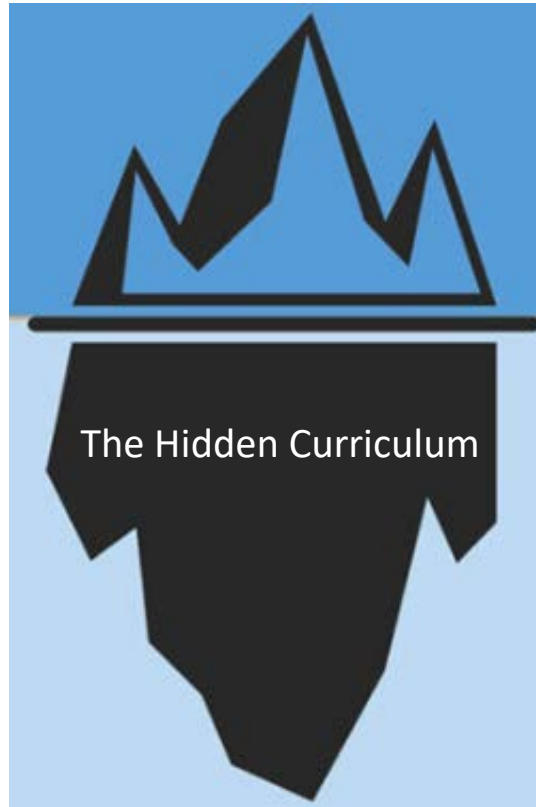
*"[The most rewarding part] was definitely our first day with microscopy, when we got to visualize the GFP neurons. It was such a cool visual representation of the work we'd been doing. Plus, you see these images in research journals all the time--it was crazy to me that I had created this stain."*



# CUREs promote inclusivity by granting research access to any student

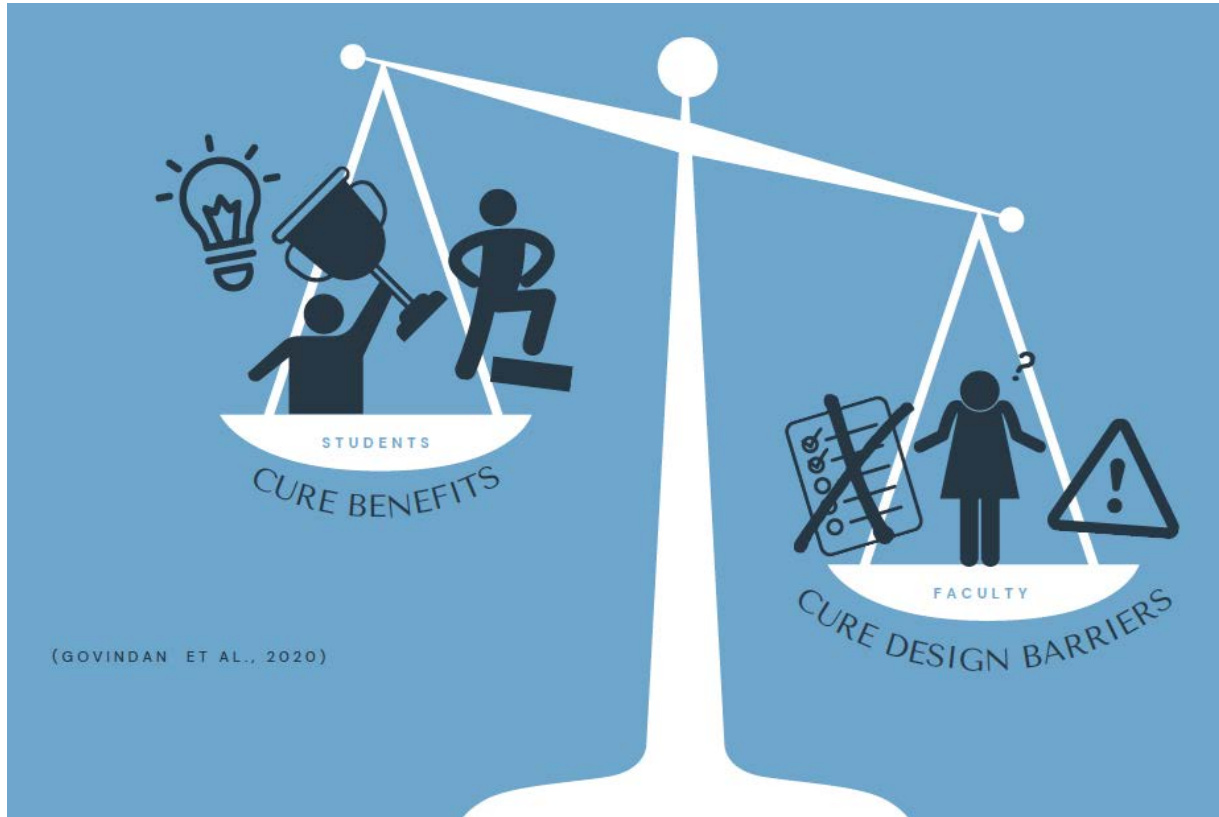


- **Limited positions** (Eagan et al., 2011; Seymour et al., 2004)
- **Unspoken rules & expectations** (Buffalari et al., 2020; Rowland et al., 2012)
- **Opportunities inaccessible to students historically excluded from STEM** (Adamuti-Trache & Andres, 2008; Bangera & Brownell, 2014)



- **No barrier to entry** (Bangera & Brownell, 2014; Brownell et al. 2015; Ott et al., 2020)
- **Safe space for novice researchers** (Irby et al., 2020; Flaherty et al. 2017; Hayward et al. 2017)
- **One faculty member engages many students in research**
- **Develop workforce translatable skills**

# Barriers to Faculty Implementation of CURES



*“Faculty can choose lower risk, easier to implement CURE course designs and students still reap the benefits”*

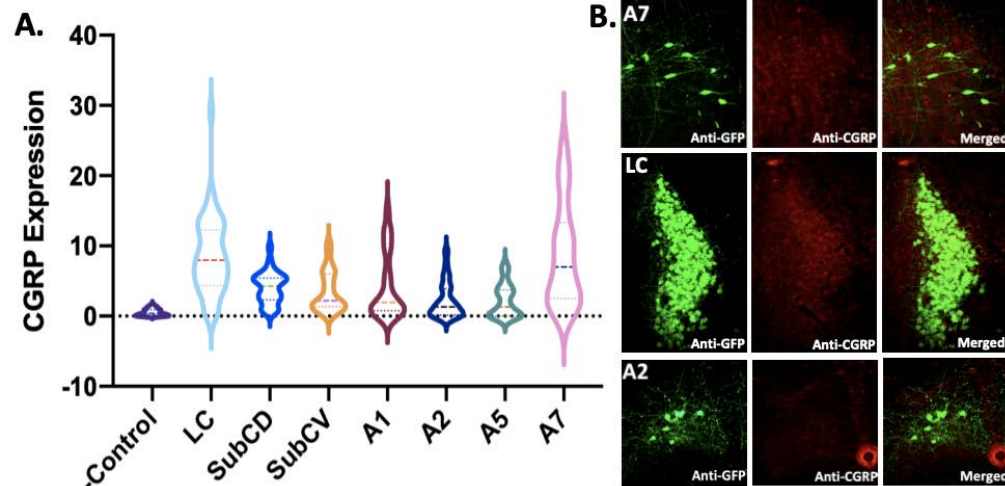
– [Sarrah Ankeny Senior Honors Thesis Poster](#)

- CUREs are time intensive and expensive to design (Eagan et al., 2010; Govindan et al., 2020)
- Support students through failure (Goodwin et al. 2021; Gin et al., 2018)
- Develop new skills while facilitating discovery
- Restricted time for experiments
- Limited availability of funding, reagents, equipment, access to lab space, etc.

# Benefits to Faculty Implementation of CURES



**Silvija Milanovic** · 2nd  
Recent Graduate | University of North Carolina at Chapel Hill  
Greater Tampa Bay Area · [Contact info](#)



- Open new research areas
- Increase experimental power
- Produce publishable work
- Standardize training for large cohorts of students
- Meet demand for research opportunities
- ***Reward*** – promotes student success & it's fun!



# Thank you!

# Questions?

Carolina Neuroscience & NSCI 278 Students



Department of  
Psychology &  
Neuroscience

QEP Funding & CURE  
Faculty Learning  
Community



Office of Undergraduate Research College of Arts & Sciences



NSCI 278 Lab Teaching Team





## ECUIPP LAB

**Environmentally-Engaged Communities and  
Undergraduate Students Investigating for Public  
Health Protection**



# Overview of ECUIPP - Dr. Northcross video

# Water Quality resources for schools and community groups / Water Institute/ EJ- Dr. Fisher

ECUIPP Lab Teams Developing and Evaluating Low-cost solutions for water testing in partnership with NC K-12 Teachers and Citizen Science groups

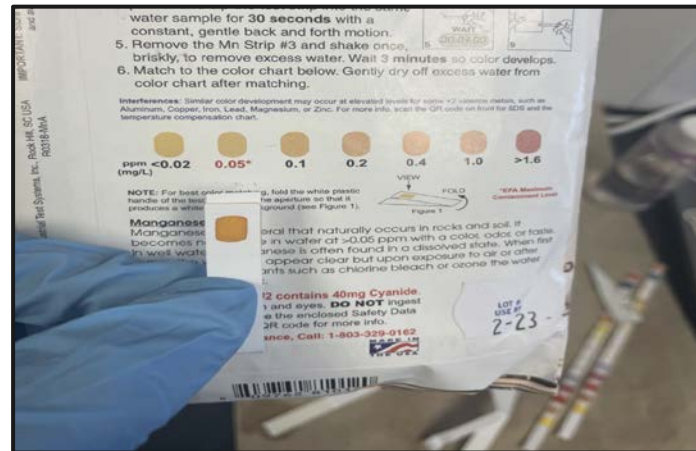
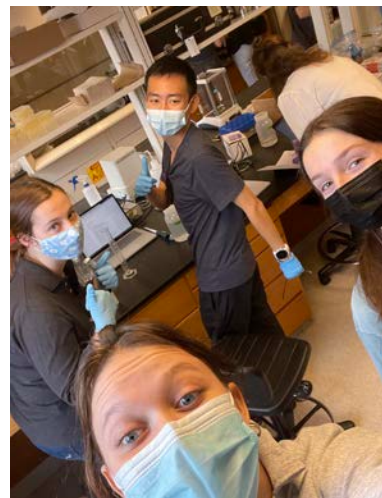
Focus on educating and empowering students and citizens in underserved communities

Multiple successful and promising innovations as part of an open-source toolkit for water safety in the state

Efforts to link citizen science data (opt-in sharing) with dashboards for use by communities and agencies in the future



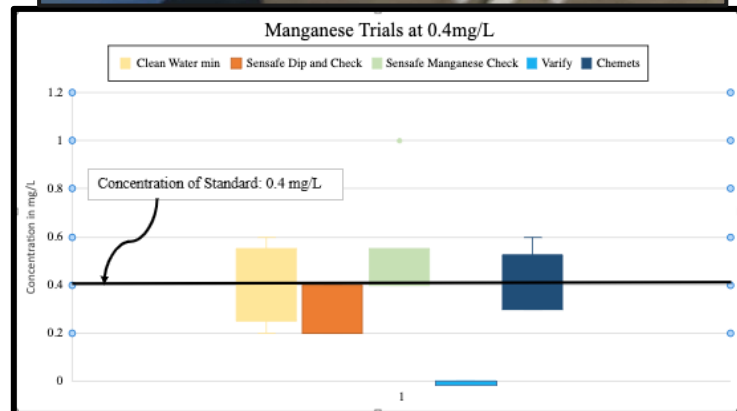
# Evaluating Low-cost Test Strips for Monitoring Well Water



## Nitrate and Manganese Test Strips



Aquagenex.com



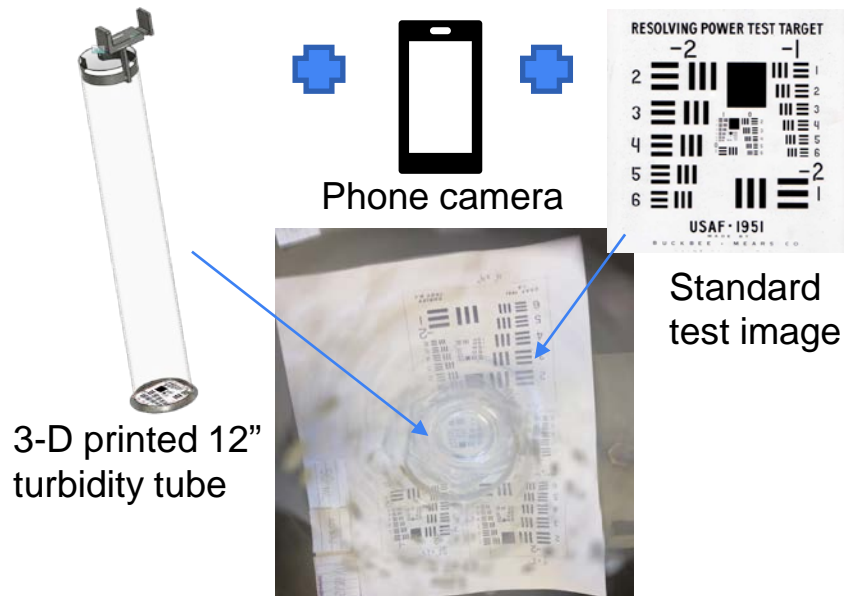
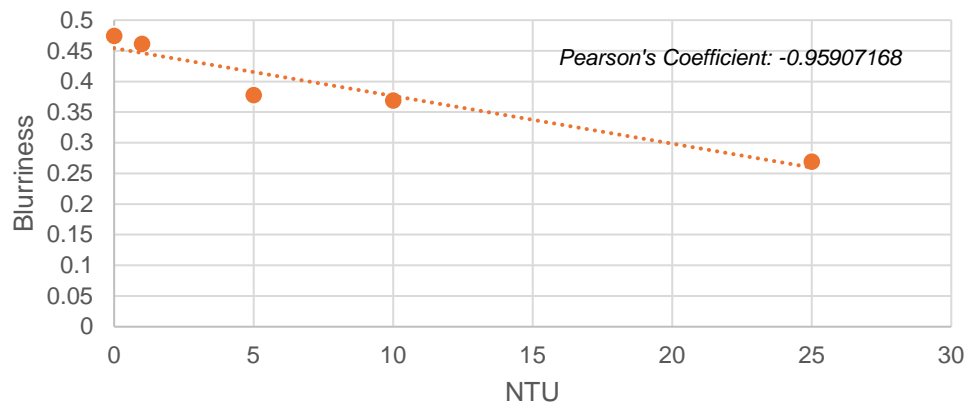


# Ultra- Low-cost 3-D Printable Turbidity Meter

Team: Hamza Ishaque, Tyler Xia, Hailey, Joanna, Drake

- Monitoring turbidity (cloudiness) helps rapidly detect contamination in water
- Digital turbidimeters more sensitive than human eye; cost \$1,000 and up
- ECUIPP lab team developing a ~\$10 prototype using your smartphone camera

Mobile Phone Image **Blurriness** Correlates with Measured Turbidity of Field Samples

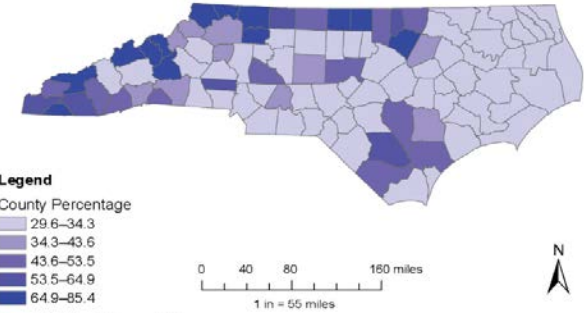




# Well-water reliance and *E. coli* testing in North Carolina

- 1/3 of NC population on well water - not monitored
- *E. coli* can indicate microbial contamination in surface and drinking water that can cause water-borne illness.
- Testing commonly requires lab incubator (\$400 and up)
- We are exploring alternative methods for *E. coli* incubation

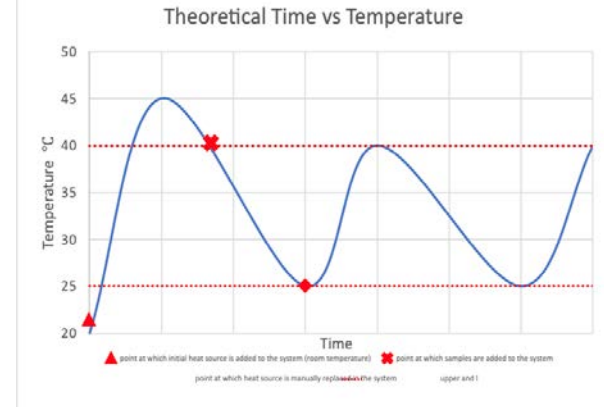
Estimated Proportion of North Carolina Residents Who Rely on Private Wells per County, 2010



Source: U.S. Geological Survey, 2019.

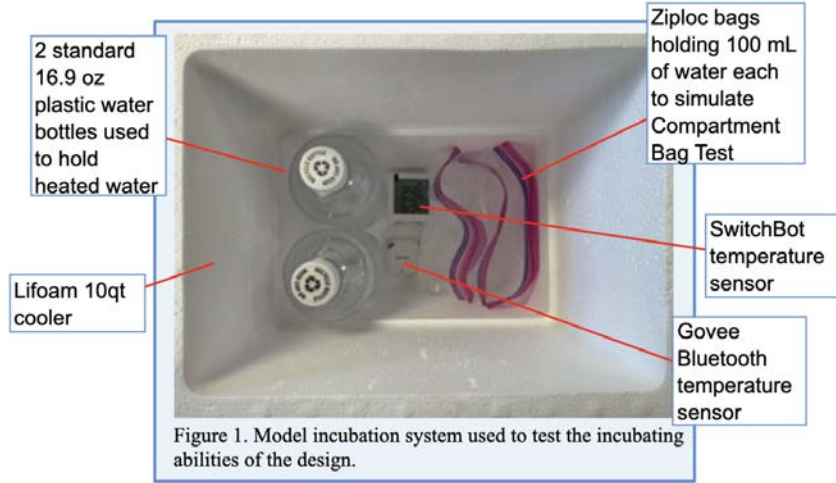
**Rationale:** a low-cost incubation system designed for at-home use would increase public access to *E. coli* testing, improving the overall awareness of water quality monitoring in North Carolina

**Research Question:** How can *E. coli* be accurately cultured in ambient temperatures under 25 °C without the use of a lab incubator?



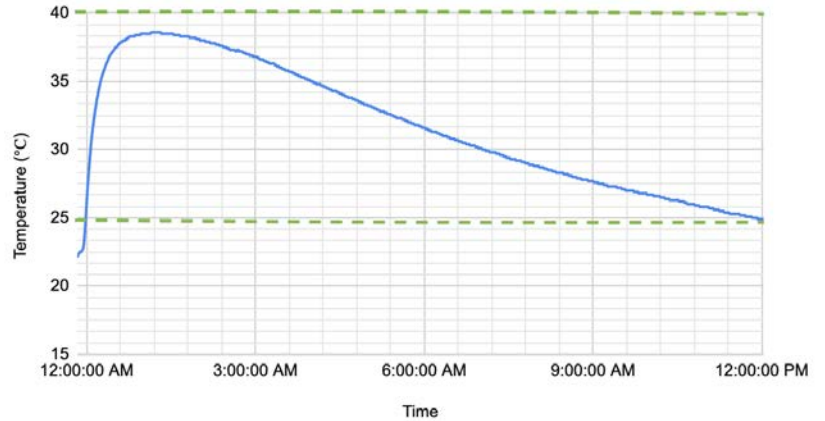


# Methods and Results



Aluminum foil insulation and heat source at 75°C- held temperature range for 11 hours and 55 minutes:

Interior Temperature vs. Time



Aluminum foil was added to increase amount of time within the temperature range for *E. coli* growth:

With heat source at 75°C the incubator stayed with in range for nearly 12 hours

**Next steps:** determine the ability of the incubation system to accurately culture *E. coli* for a presence/absence test experimentally through comparison with lab incubated samples

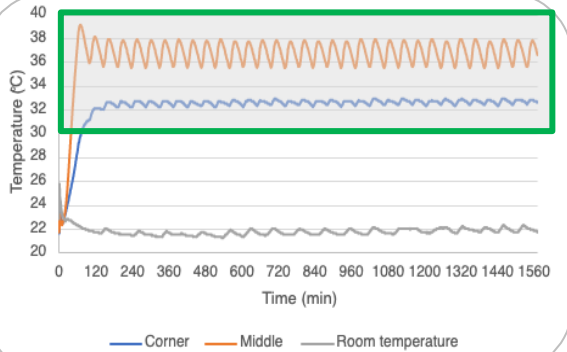
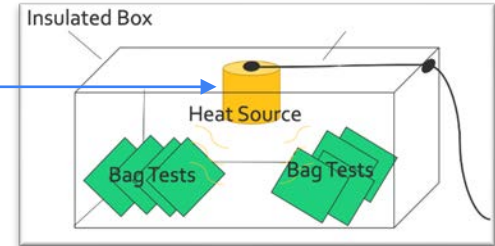


# \$20 Plug-in Incubator for *E. coli* Bag Test

## Controlling Heating/Cooling Cycles



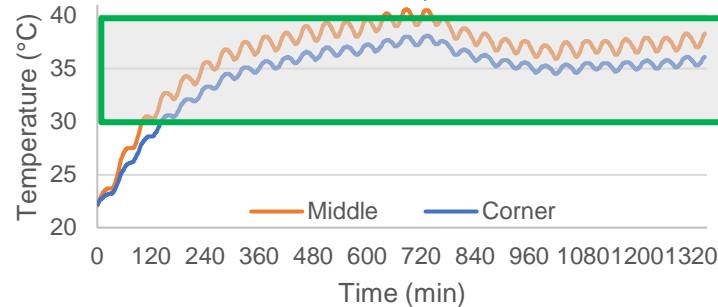
\$1 light bulb



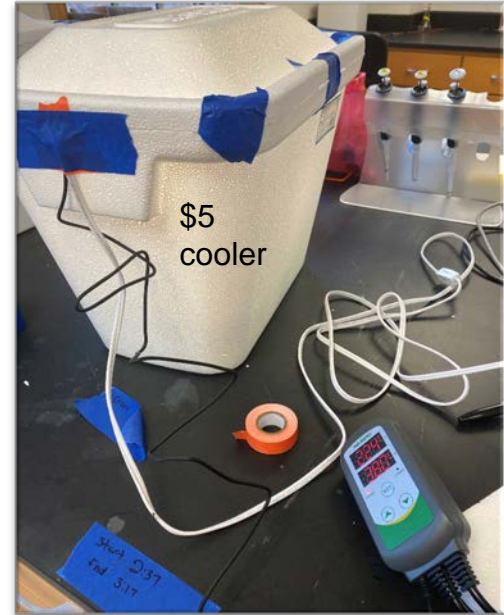
Digital thermostat maintains temperature in target range for incubating *E. coli* tests (30-40°C)



An \$8 outlet timer achieved comparable performance



Incubated tests



# Next Steps and Wrap-Up



# Thank You!

- Acknowledgements

- Lumbee Tribe of North Carolina
- Robeson County, Main Stream Academy Elementary School
- Warren County Community Members
- Profs. Radhika Dhingra (Environmental Sciences and Engineering)
- Prof. Jada Brooks (UNC School of Nursing)
- Dr. Anne Weaver (US EPA)
- UNC Institute for the Environment
- Don and Jennifer Holzworth
- ECUIPP Lab Teams from 2021-2022
- Timothy Purvis

- References