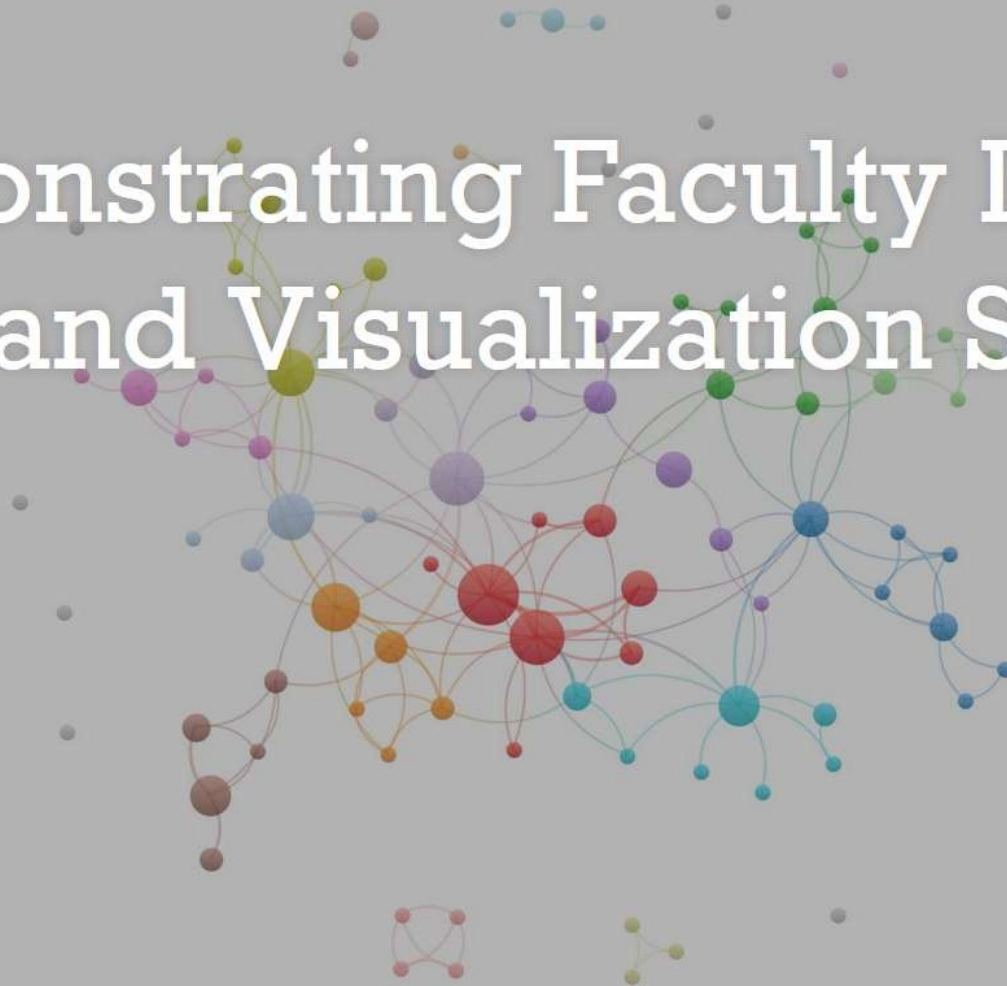


Demonstrating Faculty Impact: New Data and Visualization Services

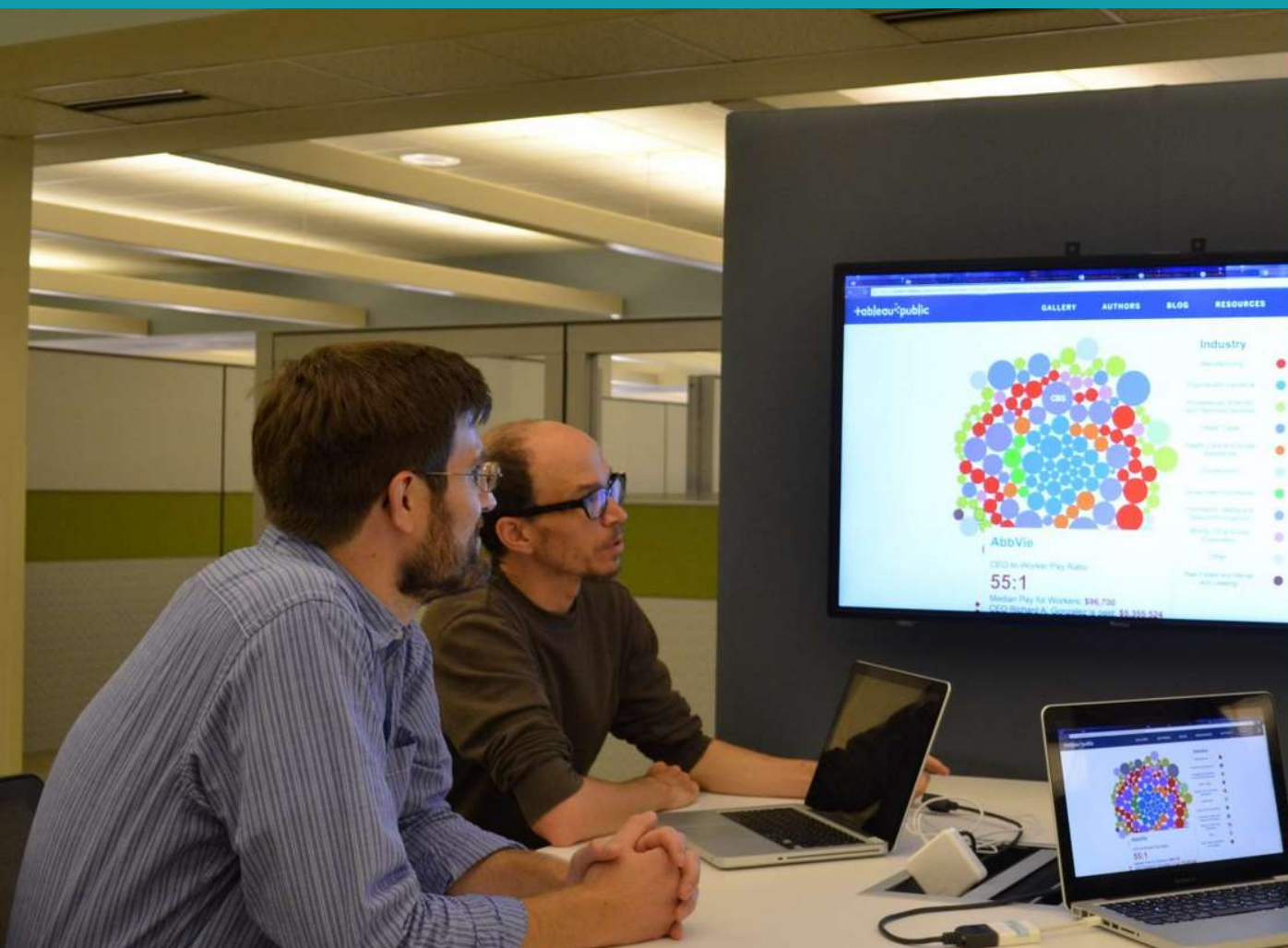




 **UNC** | UNIVERSITY
LIBRARIES

library.unc.edu

The University Libraries offers three Research Hub locations offering, spaces, technology, and expertise to support the entire research lifecycle.



Impact, Efficiency, and Data-driven Decision-making in Higher Education

- Provost's initiatives for data-driven decision-making and global engagement
- Increased request from campus units:
- Communicate impact/influence/reach
- Identify areas of strength
- Collaboration patterns and growth
- Inform efforts to reduce cost and maintain quality

Envisioning New Services

Five-Year Strategic Plan (2013-2018)

Foster researcher success by providing active support throughout the research lifecycle

A photograph of a male researcher with glasses and a purple shirt, wearing white gloves, working at a computer in a laboratory. The background shows a desk with a monitor, keyboard, and various lab equipment. A yellow diagonal graphic element is in the top left corner of the image area.

THEME
1

THE
RESEARCH
LIFECYCLE

Foster researchers' success by providing active support throughout the research lifecycle, from identification of the problem through dissemination of results.

The three Hub sites offer services tailored to primary users of each location, but also serve the public and users campus-wide.

RESEARCH HUB SERVICES ARE CAMPUS-WIDE



Adapting Services



Organizational Changes

- 2014 Digital Research Services Department created (Davis Library)
- 2017 Cross-Departmental Impact Measurement and Visualization Team created (Health Sciences Library)



Building Expertise

- New positions and updated roles
- Training
- Projects



Building for Sustainability

Tiered Engagement Model:

- Training
- Walk-in Assistance (Davis Hub Service Desk)
- Consultation
- Project partnerships (charters)
- Outline project goals, scope, responsibilities, sun-setting, and recognition
- Unit support/funding for dedicated staff expertise



Project Examples

Prevalence of Pediatric Food Allergies
Jordan [Name]

Allergic Reactions
Allergic reactions are the way in which our body responds, called Anaphylaxis, to a foreign substance that we do not recognize. This can appear as a skin rash, swelling, or gastrointestinal distress and to diagnose an allergy doctors will perform a skin prick test or an oral food challenge.¹

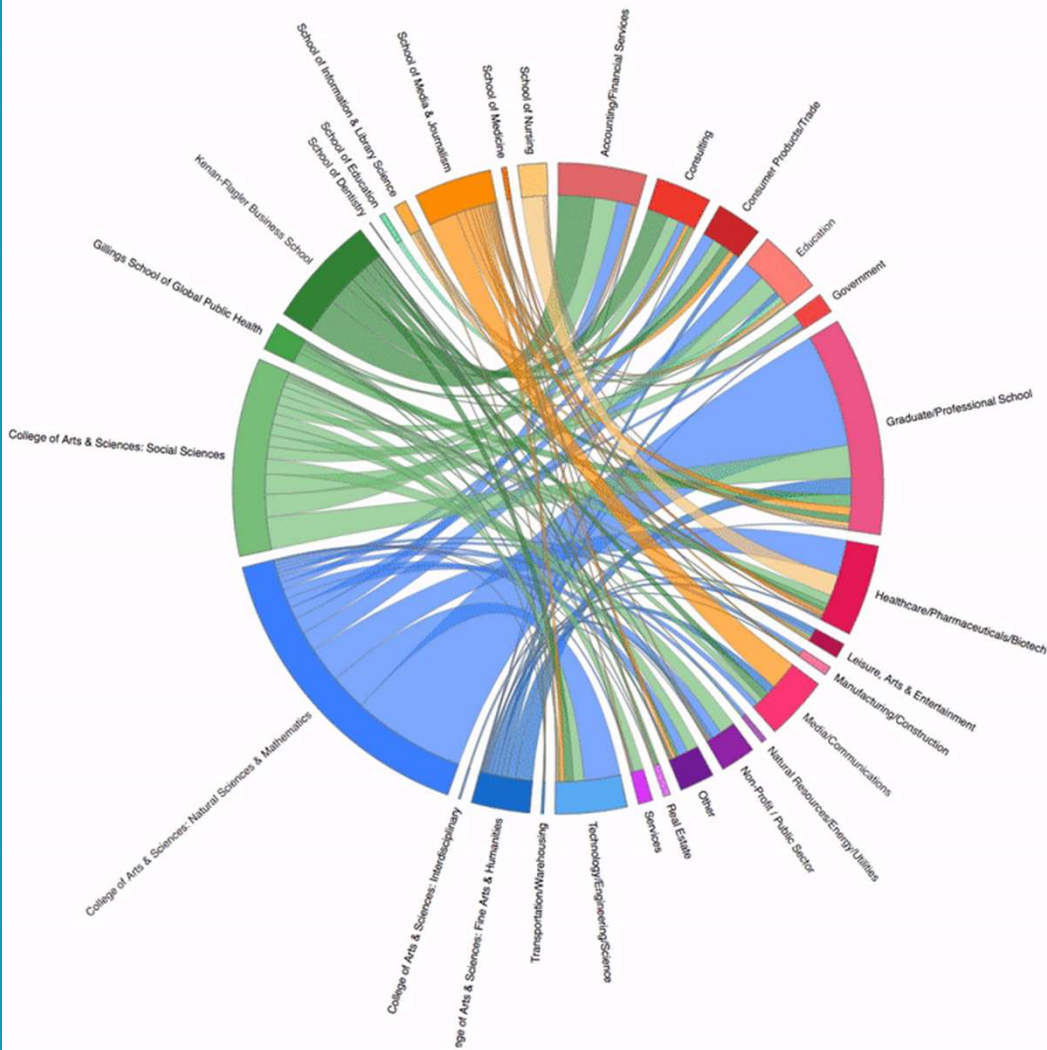
Prevalence
An experiment that follows children living in urban and rural settings from birth until age 18 with various food allergies. This will help researchers pin point the differing environmental factors that contribute to causing a child to be more at risk for developing a food allergy.

Possible Solutions
Several studies have been able to pin point specific gene sequences that correlate with peanut allergies. It is caused by a gene mutation and causes the person to be more at risk for developing a food allergy. These genetic mutations tend to run in families and having a biological sibling with a food allergy will cause the other sibling to more likely be allergic too as well.²

Bar Chart Data:

Year	Prevalence (%)
2000	~1.0
2005	~1.5
2010	~2.5
2015	~4.0





—
Career Services
 Investigation of Careers for
 students from different
 schools through
 visualization

Demonstrating Global Reach

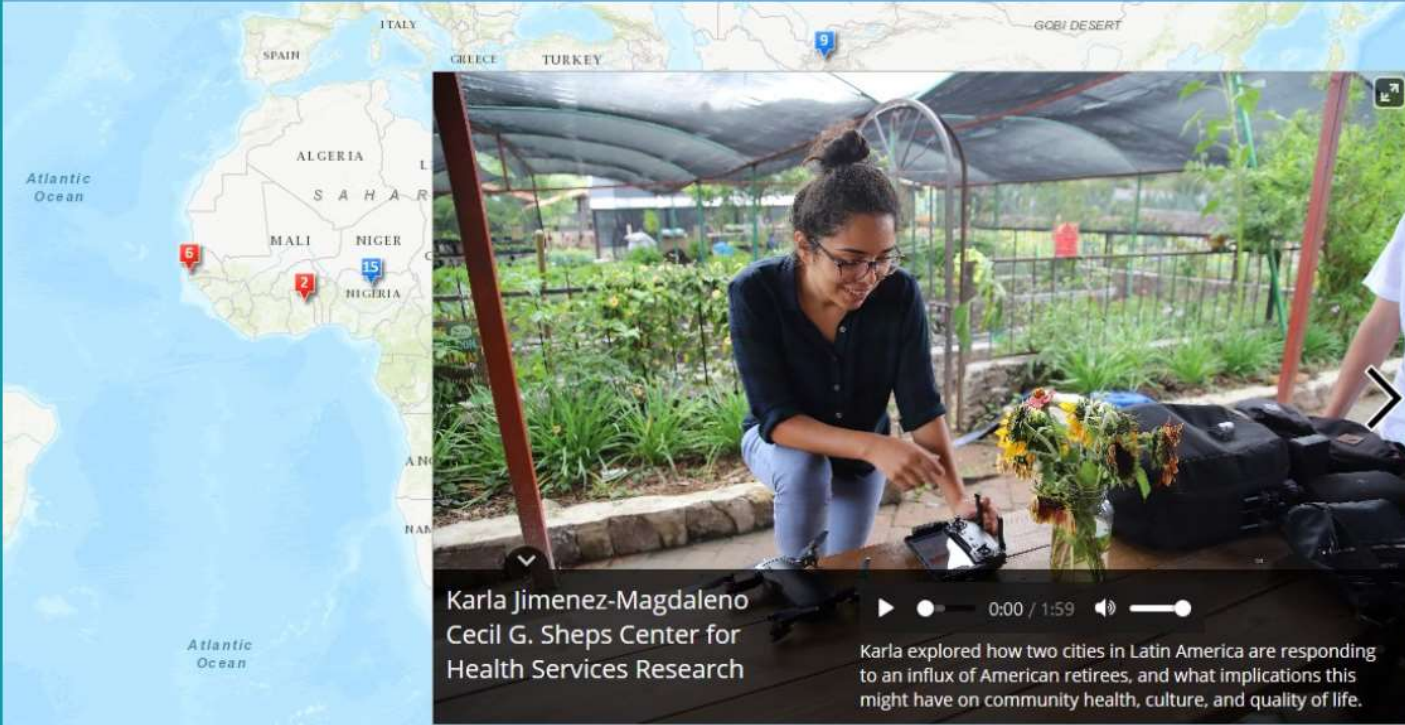
"Public health is the most powerful when we work across boundaries. In this case, we are grateful that you and your colleagues in Davis Library are our partners, and **you'll see that your reach extends around the globe.**"

Carolina Asia Center demonstrates their broad engagement in Asia with [this map](#)

Research, Innovation and Global Solutions office at UNC Gillings

UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

their global practica experiences.



Atlantic Ocean

ITALY GREECE TURKEY

ALGERIA SAHARA MALI NIGER NIGERIA

GOBI DESERT

Karla Jimenez-Magdaleno
Cecil G. Sheps Center for Health Services Research

0:00 / 1:59

Karla explored how two cities in Latin America are responding to an influx of American retirees, and what implications this might have on community health, culture, and quality of life.

4

5 Nastacia Pereira
Institute for Latin American

6 Fanny Njie
United Nations Population

7 Sara L. Shifra

8 Hayley Welgus
Save the Children

9 Ellison Henry
IntraHealth International

10 Breanne Lesnau
Honduran Health Alliance

Carolina Asia Map

This interactive map lays out every UNC-Chapel Hill connection with Asian schools, universities, governments and research groups.



Demonstrating Global Reach

“Public health is the most powerful when we work across boundaries. In this case, we are grateful that you and your colleagues in Davis Library are our partners, and **you'll see that your reach extends around the globe.**”

Carolina Asia Center demonstrates their broad engagement in Asia with [this map](#)

SYLLABUS

```
from collections import Counter

def count_words(text):
    skips = [".", " ", ":", ";", "'", '"']
    for ch in skips:
        text = text.replace(ch, "")
    word_counts = {}
    for word in text.split(" "):
        if word in word_counts:
            word_counts[word] += 1
        else:
            word_counts[word] = 1
    return word_counts

# >>> count_words(text) You can check t

def count_words_fast(text):
    text = text.lower()
    skips = [".", " ", ":", ";", "'", '"']
    for ch in skips:
        text = text.replace(ch, "")
```

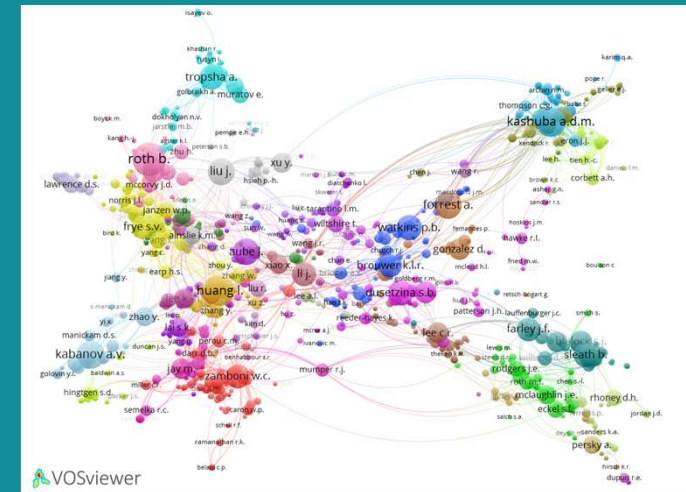
School of Pharmacy Syllabus Project

Used text analysis to **identify overlap across graduate courses**. Syllabi were tagged with a **controlled vocabulary of topics and skills**. Research Hub Data Analyst **transformed topics into overlap reports**.

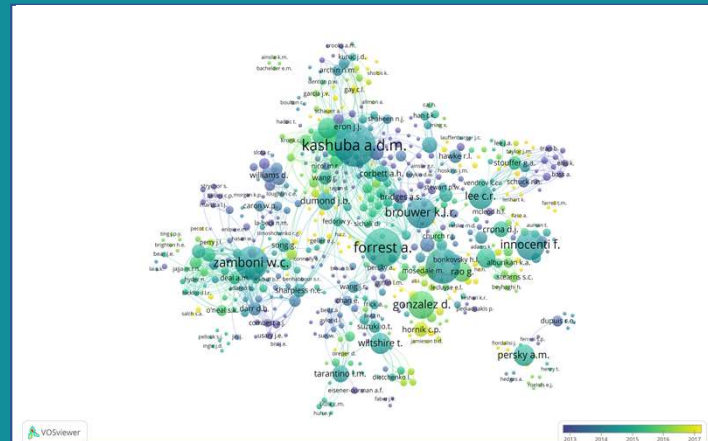
Citation Analysis: Faculty Collaborations

School of Pharmacy (ESOP) Curriculum Design Project

- With whom are ESOP faculty collaborating?



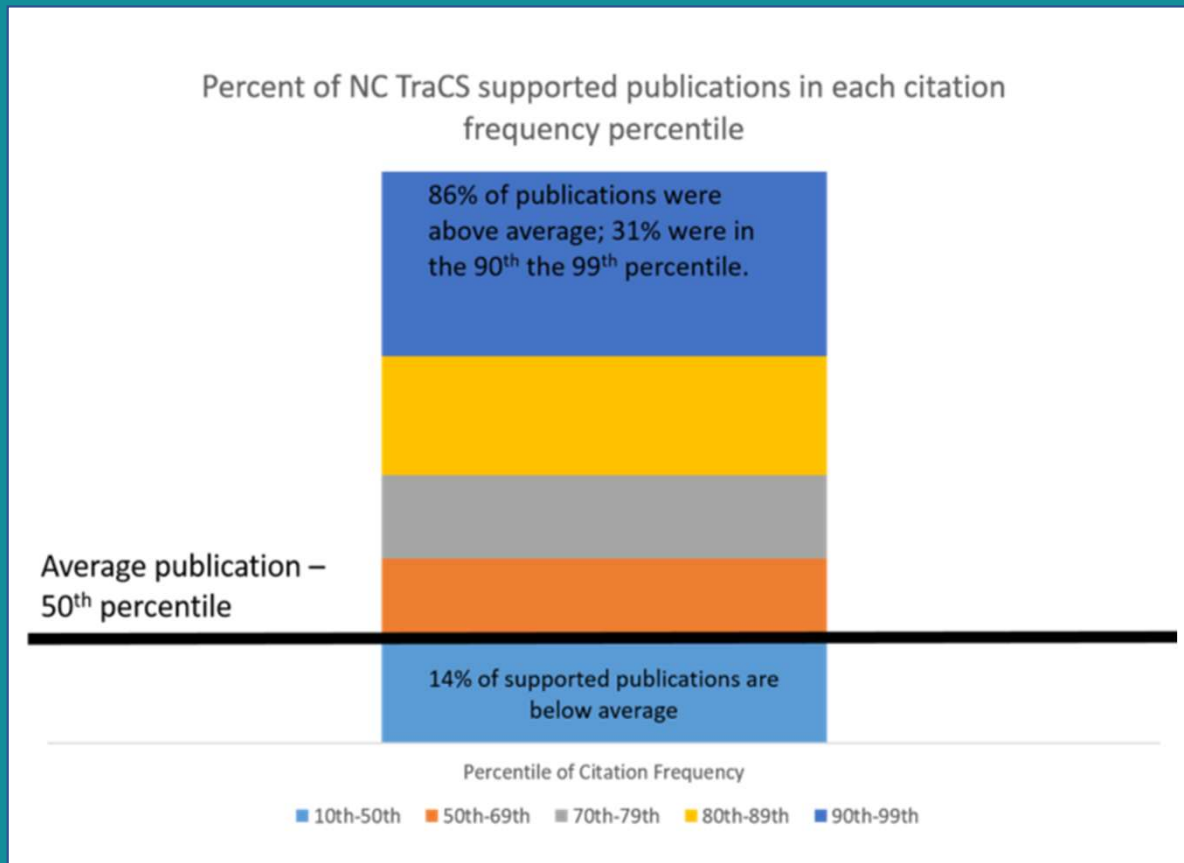
ESOP Faculty Collaboration Network
(includes 1150 Other UNC Collaborators)



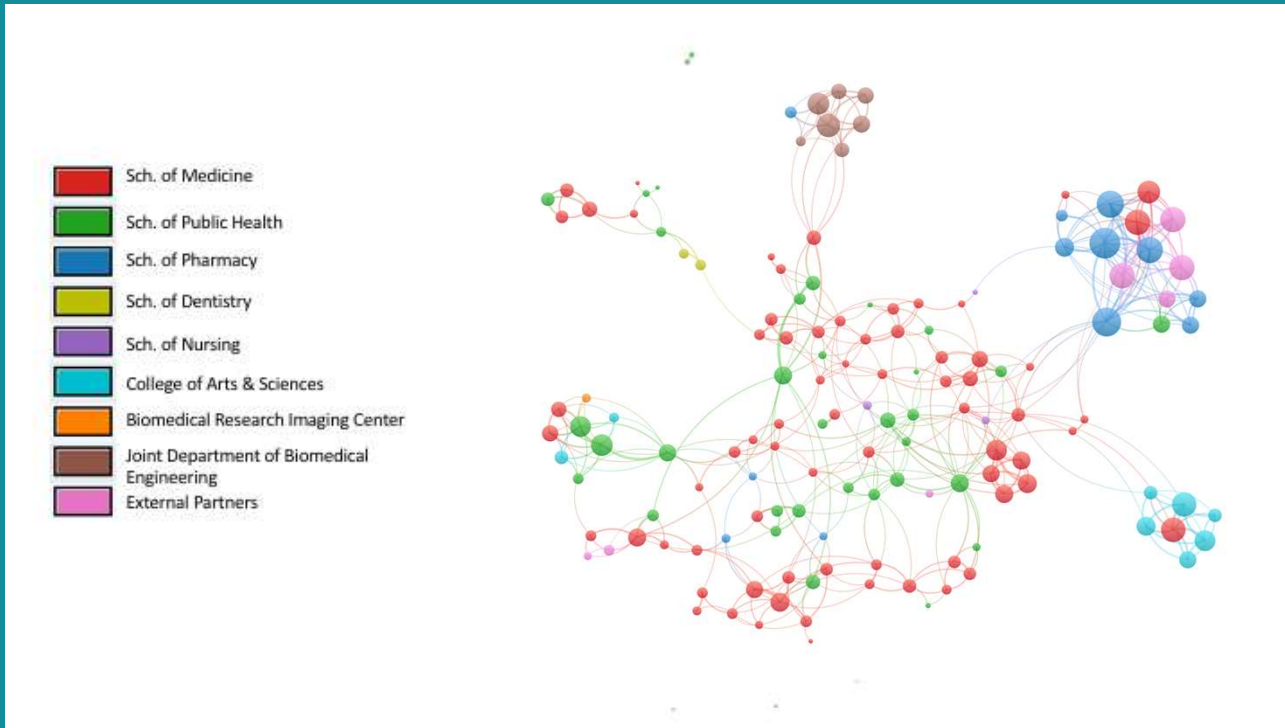
DPET Division Collaboration Network
(includes 577 Int. and Ext. Collaborators)

Research Influence of NC TraCS-Supported Publications

—
NC Translational and
Clinical Sciences
Institute



NC TraCS-Supported Research Collaboration Author

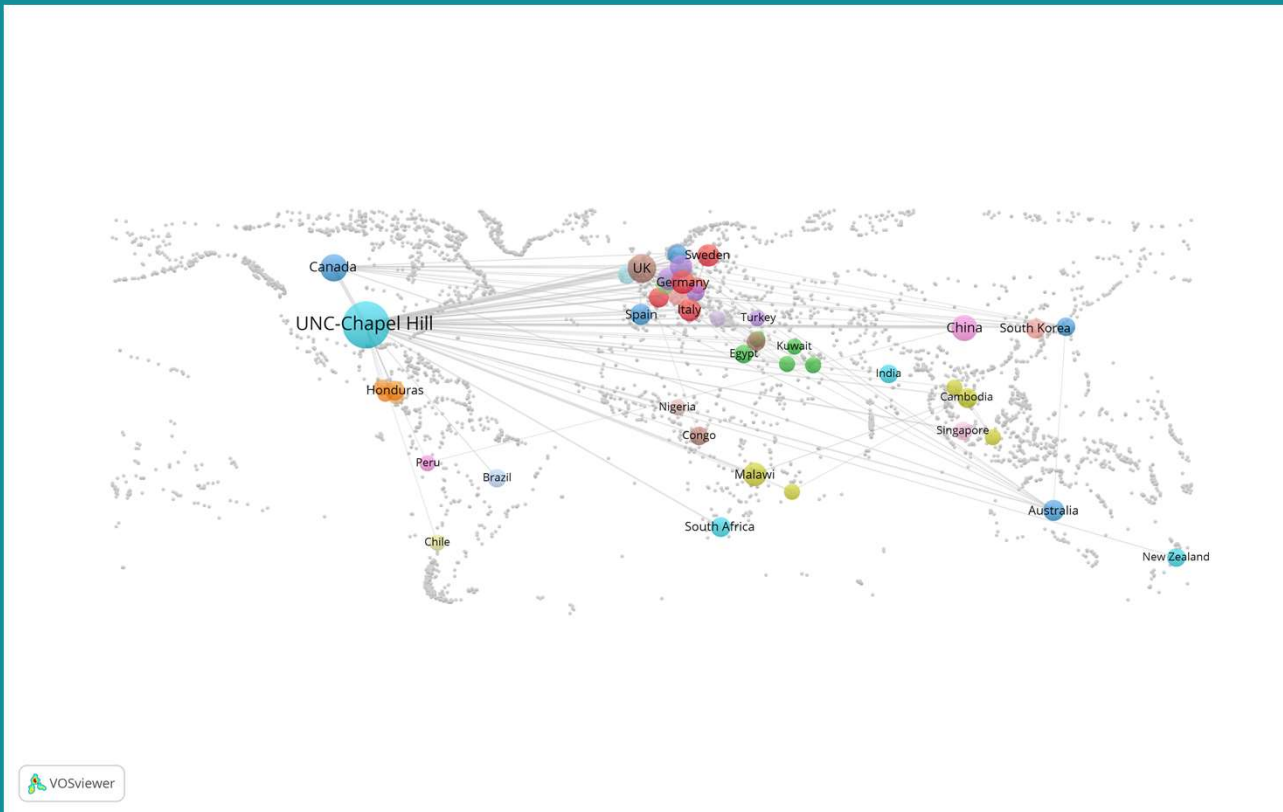


NC Translational and
Clinical Sciences
Institute

NC TraCS-supported intra-institutional researcher collaborations

NC TraCS-Supported Research Collaboration Country

—
NC Translational and
Clinical Sciences
Institute



NC TraCS-supported international research collaborations

Future Plans





Incorporate new methods and tools

- Multiple data types
- Automate record deduplication & screening
- Text mining full-text articles

Broader staff training

- Promoting Hub workshops to all staff
- Library Carpentry
- Community of practice

Thank you!

Questions?

Contacts

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