



Dean's Advisory Committee Meeting

March 22, 2022

Welcome

Cristy Page, MD, MPH
Executive Dean

Dr. Page welcomed the committee and reviewed the agenda.

The motion to approve the meeting notes from the December meeting was approved.

Dr. Page welcomed Dr. Steve Bogdewic as our newest DAC member, joining in his new role as Senior Associate Dean for Faculty Affairs and Leadership Development.

Dr. Page announced that Dr. Paul Dayton has been named Chair of the Joint UNC-NCSU Dept. of Biomedical Engineering, after serving in an interim role since Fall 2019.

Heather Skinner was acknowledged as our new Director of Compliance and Research Integrity.

Dr. Page thanked Dr. Beat Steiner and Dr. Georgette Dent, as they plan to step down from their roles as Sr. Assoc. Dean for Medical Student Education and Assoc. Dean for Student Affairs.

A number of leadership transitions were shared. In our health care system, Tracy

Parham, our current CIO, will be stepping into a new role as Deputy Chief Business Integration Officer; Brent Lamm will be stepping in to serve as Interim CIO for UNC Health as a result. University leadership changes include Chris Clemens, appointed Executive Vice Chancellor and Provost shortly after our last DAC meeting. Raul Reis was appointed our next Dean of Journalism. Penny Gordon Larsen has been appointed Interim Vice Chancellor for Research. Dean searches are underway for Dean of Public Health, Dean of Arts and Sciences, Dean of the School of Govt, Dean of Nursing and Dean of Dentistry.

Dr. Page provided updates on the Surgery and Biochemistry/Biophysics chair searches.

Our new Charlotte campus in partnership with Novant Health launched at February; Dr. Page shared her experience visiting the new class of students, and thanked Mike Steiner, Jennifer Wu, Cam Enarson, and other education leaders who made this possible.

Match Day was celebrated virtually. Dr. Page noted a 93% match rate, with 30% of our students staying in the state.

Our One UNC Health journey, paused due to the pandemic, will restart in March with additional resources for leaders and teammates to engage with One UNC Health.

Dr. Page encourage participation in the Hooding Ceremony scheduled for May 7th at Memorial Hall to celebrate our graduates.

A new bi-monthly leadership briefing was announced; these briefings will share updates across our tripartite mission for leaders in SOM and UNC Health system.

Agenda

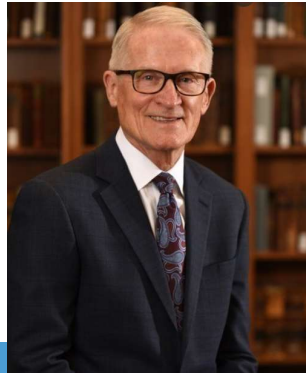
Cristy Page, MD, MPH	3:30-3:45
Welcome	
Approval of December 2021 Minutes	
Organizational Updates	
Beat Steiner, MD, MPH and Arlene Davis, JD	3:45-3:55
Education & Student Progress Committees Report Out	
Blossom Damania, PhD	3:55-4:00
Blue Ridge Rankings Update	
Bob Duronio, PhD	4:00-4:15
The Value of Basic Science	
Cristy Page, MD, MPH	4:15-4:55
Identifying our Strategic Priorities	
Cristy Page, MD, MPH	4:55-5:00
Closing Remarks	

Approval of Minutes



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Welcome New DAC Members



Steve Bogdewic, PhD, MA
Senior Associate Dean for Faculty Affairs &
Leadership Development
January 2022



Paul Dayton, PhD
Chair, Joint Department of
Biomedical Engineering



Heather Skinner
Director of Compliance and
Research Integrity, UNC SOM

Thank You



Beat Steiner, MD, MPH
Sr. Assoc Dean for Medical Student
Education



Georgette Dent, MD
Assoc Dean for Student
Affairs

UNC Health Leadership Update



Tracy Parham, RN
Deputy Chief Business Integration Officer



Brent Lamm
Interim Chief Information Officer

Campus Leadership Update



Chris Clemens, PhD
Executive Vice Chancellor & Provost



Raul Reis, PhD
Dean, School of Journalism & Media



Penny Gordon-Larsen, PhD
Interim Vice Chancellor for Research

Surgery Chair Search

Concluded semi-finalist round

Leadership working to determine finalists

Biochemistry and Biophysics Chair Search

Identified four candidates as finalists

Dean of Public Health

- Four finalist forums in March and April

Dean of Arts and Sciences

- Six finalist forums in March and April

Dean of Government

- Martin Brinkley, Dean, School of Law appointed chair of search committee

Dean of Nursing

- Four finalist forums concluded in early March

Dean of Dentistry

- Three finalist forums concluded in January

New Charlotte Campus Launch



Match Day 2022 Results

linkaptslinden

Happy Match Day! Congratulations to all of the UNC School of Medicine students on their matches! 🎉

Alia Capone @alia_capone

Ben Twery

@BenTwery and I matched at the @UMMC I am ecstatic to start this next phase of my training in Family Medicine in Baltimore with my partner by my side! Thank you to all those who have given us so much love and support along the way! #UNCsOMMatch #couplesmatch #EMRevolution <https://t.co/XxcGAqKUXW>

Grace Osagie @GraceOsagie

I MATCHED GENERAL SURGERY AT @UofL Dept of Surg Thank you to my incredible family and friends, my support in everything. To my

Emily Hollis @EmilyHollis

We successfully couples matched at our first choice programs! Tar Heel born, bred, med and matched! @UNCRadOnc @UNCOrtho #uncsommatach <https://t.co/IATVkmbyXP>

2 days ago 183 6 1

93% match rate, 30% of students staying in NC,
32 different states, 24 different specialties

ONE UNC Health Journey



Save the Date!



2022 SOM Hooding Ceremony

*May 7th at 10am
Memorial Hall*

New UNC Health and UNC SOM Leadership Briefings



- **Date:** March 24th
- **Time:** 4:30pm
- **Cadence:** Bi-monthly thereafter
- **Purpose:** Communicate updates across clinical care, research and education missions to UNC SOM and UNC Health Leadership

Education Committee Report Out

Beat Steiner, MD, MPH
Senior Associate Dean for Medical Student Education

Dr. Beat Steiner provided an update from the education committee, which oversees the medical school curriculum.

He first wanted to acknowledge the social isolation felt by our students during the pandemic, and the need to rebuild and strengthen community.

Dr. Steiner reminds that our partnerships will help us build capacity. Our partnership with Novant will help us grow in Charlotte from 9 students to 30 students over time and offer opportunities in the Wilmington campus; our health system partners will help us place students, especially Rex and Johnson Health; and will allow for expanded outpatient capacity in Physician Network (PN) Practices.

The Foundation Phase (basic science) redesign is under way and the new curriculum is expected to launch Fall 2023. These changes will help us better engage students and have them better prepared for clerkships and Step 1 exam.

Education Committee Report

Managing COVID

Building Capacity

Foundation Phase Redesign for Fall 2023



Foundation Phase Redesign

Gaps:

- Lack of engagement with current curriculum with students defaulting to memory aids like flash cards (as few as 15 student attend lectures)
- High number of students not prepared to take Step 1 (over 20% of class delayed entry into Application Phase)
- Components of basic science curriculum need revision to ensure preparation for clerkships (LCME finding “satisfaction with monitoring”)



Foundation Phase Redesign

- Standardized preparation material (Bricks Rx as modern “textbook”)
- High yield large group sessions
- Longitudinal small group, cased based, learning to strengthen learning
- Teaching and assessing all six competencies

* Implementation moved to Fall 2023 to allow broad input



Foundation Phase Redesign

Measures of Success:

- Students feel better prepared for clerkships with basic science teaching and better prepared to take Step 1 exam
- Students as more successful team players who navigate change and innovation fluently
- Students feel a greater sense of trust and belonging which improves learning





White Coat Ceremony for Class of 2024

Student Progress Committee Report Out

Arlene M Davis JD
Professor of Social Medicine
Chair, Student Progress Committee

Dr. Arlene Davis provided a report out of the Student Progress Committee.

She reviewed the structure of the committee, which includes both basic science and clinical faculty. Issues reviewed this year include academic and professionalism concerns, as well as administrative matters (such as review and approval for graduation).

Dr. Davis also shared an overview of the Committee's work over the past year with gratitude for the work of its members and for the support offered by the SOM.

SPC Function: The SOM has established a SPC to review the academic and professional performance of medical students, including compliance with the Technical Standards.

Student Progress Committee



- 9 Voting members
 - Chair
 - 3 Basic Science Faculty (1 open)
 - 4 Clinical Faculty
- 4 Alternate members
- 5 Ex-officio members
- Voting members serve renewable 3-year terms

Student Progress Committee

- Standardized the appeals process for SPC decisions
- Developed templates and procedures for communications with students, advisors, and other parties
- Introduced new annual confidentiality process
- Introduced a new member orientation/member refresher
- Scheduled regular weekly meetings with the Chair to prepare the SPC agenda and address other SPC matters
- Coordinated SPC function with new Professionalism Committee (COPE)
 - COPE is a student affairs function with a separate process and committee membership (Dr. Kristy Borawski)
- Continued virtual meetings in response to the pandemic with the benefit of better participation for members across our branch campuses



Research Rankings

Blossom Damania, PhD
Vice Dean for Research
School of Medicine

Dr. Blossom Damania reviewed the Blue Ridge ranking information – this information reflects NIH funding only.

We still rank #5 among public medical schools, but some shuffling of rankings occurred this year due to COVID-related NIH funding.

All 6 basic science departments are ranked among the top 10 in the nation; 12 clinical departments are ranked in top 30.

Dr. Damania also noted that our NIH indirect cost rate has not changed for over 6 years and could lead to fall in future rankings if we cannot increase.

2021 NIH FUNDING

Blue Ridge Institute for Medical Research (BRIMR)
-includes all grants (except contracts)

Year	Total NIH \$
2017	\$272,644,942
2018	\$293,009,911
2019	\$316,414,062
2020	\$345,729,473
2021	\$347,792,867

2021 Blue Ridge Institute for Medical Research (BRIMR) Rankings



Rank	Name	School of Medicine Award
1	NEW YORK UNIVERSITY SCHOOL OF MEDICINE	\$809,281,610
2	UNIVERSITY OF CALIFORNIA SAN FRANCISCO	\$629,550,692
3	DUKE UNIVERSITY	\$608,453,942
4	WASHINGTON UNIVERSITY ST LOUIS	\$576,556,160
5	JOHNS HOPKINS UNIVERSITY	\$566,920,824
6	UNIVERSITY OF PENNSYLVANIA	\$532,140,579
7	STANFORD UNIVERSITY	\$525,716,278
8	YALE UNIVERSITY	\$511,699,920
9	COLUMBIA UNIVERSITY HEALTH SCIENCES	\$497,327,864
10	UNIVERSITY OF CALIFORNIA LOS ANGELES	\$494,000,577
11	UNIVERSITY OF PITTSBURGH	\$478,826,408
12	VANDERBILT UNIVERSITY	\$445,537,839
13	UNIVERSITY OF CALIFORNIA SAN DIEGO	\$427,957,682
14	UNIVERSITY OF MICHIGAN	\$401,993,044
15	ICAHN SCHOOL OF MEDICINE MOUNT SINAI	\$400,217,277
16	EMORY UNIVERSITY	\$382,713,655
17	NORTHWESTERN UNIVERSITY CHICAGO	\$356,685,048
18	UNIVERSITY OF NORTH CAROLINA CHAPEL HILL	\$347,792,867
19	UNIVERSITY OF WASHINGTON	\$347,598,027
20	BAYLOR COLLEGE OF MEDICINE	\$344,822,690

UNC SOM ranked #5 among public medical schools

- In the 2020 rankings last year, NYU was ranked #19 below UNC and others
- NYU received a \$450M COVID grant in 2021 that catapulted them to #1
- As a result, everyone else dropped a rank
- However, UNC SOM is still ranked #5 among public medical schools

Total 2021 NIH Awards to Basic Science Departments



All 6 Basic Science departments in the UNC SOM ranked among the Top 10 in the nation

DEPARTMENT	RANK	TOTAL DOLLARS
Biochemistry	#5	\$19,327,048
BME	#4	\$6,980,964
Genetics	#3	\$44,120,400
Microbiology & Immunology	#6	\$21,153,880
Pharmacology	#4	\$23,326,107
Physiology	#1	\$25,655,286



http://www.brimr.org/NIH_Awards/NIH_Awards.htm

Total 2021 NIH Awards to Clinical Departments



DEPARTMENT	RANK	TOTAL DOLLARS
Emergency Medicine	#13	\$2,638,345
Dermatology	#18	\$1,800,718
ENT	#20	\$2,203,305
Family Medicine	#11	\$3,110,803
Medicine	#19	\$103,066,910
Pathology	#21	\$11,880,853
OB-GYN	#4	\$10,624,043
Pediatrics	#25	\$14,962,106
PM&R	#18	\$576,305
Psychiatry	#19	\$18,407,404
Radiology & Rad Onc	#24	\$8,432,479
Urology	#30	\$453,287



12 Clinical departments in the UNC SOM ranked among the Top 30 in the nation

Some takeaway points...

- COVID funding (\$450M grant to NYU SOM) changed the ranks of the top 20 funded institutions causing everyone except NYU SOM to drop a rank
- Our NIH indirect cost rate (55.5%) has not changed for over **6 years**. This could potentially lead to a fall in our future rankings if we cannot increase our indirect rate.

The Value of Basic Research

Bob Duronio, PhD

Director of the Integrative Program for Biological and Genome Sciences (iBGS)

Associate Dean for Research

Dr. Bob Duronio underlined that basic research is an essential component of the SOM research portfolio and illustrated how critical curiosity-driven research can translate to future medical breakthroughs. Finding new ways to fund this research, such as our application for CZBioHub, will allow us to continue this important work.

What we do at UNC is world-class. We are known for our collaborative research enterprise, and it helps us in recruiting.

Dr. Duronio also shared an overview of iBGS as an example of how its curiosity-driven research is an essential part of therapy development.

“Basic research” is an essential component of the SOM research portfolio

- Raise awareness for the value of basic research
- Highlight the SOM strengths in basic research



<https://science.sciencemag.org/content/339/6117/250.long>

<https://science.sciencemag.org/content/340/6138/1265.full>

How do you define “Basic Research”?

aka “foundational” research; “discovery” research; “pure” research

- **Merriam Webster:** “any one of the sciences (such as anatomy, physiology, bacteriology, pathology, or biochemistry) fundamental to the study of *medicine*”
- **AAMC:** “basic science research focuses on determining the causal mechanisms behind the functioning of the human body in health and illness”
- **Wikipedia:** “aim to improve scientific theories for improved *understanding* or prediction of natural or other phenomena”
- **Chegg.com:** “acquired knowledge which does not have any concern about its future application and uses”

What is your motivation for performing research?

Pragmatism

I want to solve a problem.

I want to apply knowledge.

I want to treat human disease.

versus

Curiosity

I want to answer a question.

I want to acquire knowledge.

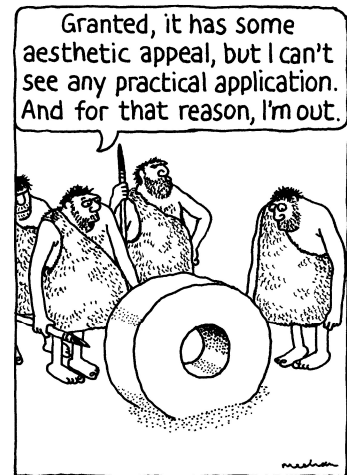
I want to understand human disease.



Examples of successful curiosity...

- **CRISPR:** *how does bacterial immunity work?*
- **Cell signaling:** *how do fruit flies develop?*
- **Apoptosis:** *how are these worm cells dying?*
- **p53:** *what does this viral protein bind to?*
- **Cdks:** *how do frog eggs mature?* (palbociclib)

Chegg.com: “acquired knowledge which does not have any concern about its future application and uses”



“Why we can’t cure cancer with a moonshot”

Dr. Bill Kaelin Jr., 2019 Nobel Prize Awardee in Physiology or Medicine Washington Post Op-Ed
February 11, 2020



“while we will greatly benefit from the kinds of collaborations and resources envisioned by “cancer moonshot” programs, they *must not come at the cost of robust support for curiosity-driven science*

“*The next breakthrough in pancreatic cancer, for example, might come from a scientist studying pancreatic cancer, but it could also come from a scientist working on another form of cancer or a non-cancer scientist studying some arcane piece of biology in a model organism.*”

“Although *basic science* is fundamental to applied science, it *is the most vulnerable part of the entire scientific enterprise* because most investors and philanthropists will not tolerate its uncertain timelines and deliverables.”

“... the timelines and deliverables in science are far less predictable than those in engineering. The only thing for certain is the greater the investment, the faster new knowledge will emerge. It is both exciting and frustrating that *the utility of this knowledge can seldom be anticipated.*”

https://www.washingtonpost.com/opinions/the-problem-with-trying-to-cure-cancer-with-a-moonshot/2020/02/11/87632bba-2d84-11ea-9b60-817cc18cf173_story.html

Basic science is under threat



Cell

Leading Edge

 CellPress



Commentary

Basic science under threat: Lessons from the Skirball Institute

Agnel Sfeir,^{1,*} Gord Fishell,^{2,3,*} Alexander F. Schier,^{4,*} Michael L. Dustin,^{5,14} Wen-Biao Gan,^{6,14} Alexandra Joyner,^{7,14} Ruth Lehmann,^{8,14} David Ron,^{9,14} David Roth,^{10,14} William S. Talbot,^{11,14} Deborah Yelon,^{12,14} and Arturo Zychlinsky^{13,14}

“Support for basic science has been eclipsed by initiatives aimed at specific medical problems. The latest example is the dismantling of the Skirball Institute at NYU School of Medicine.”

<https://doi.org/10.1016/j.cell.2022.02.008>

The CZ Biohub



HISTORY & MISSION

- OUR VISION
- CZ BIOHUB VALUES
- RESEARCH INITIATIVES
- LEADERSHIP
- LICENSING
- FELLOWSHIPS & COMPETITIONS

HISTORY & MISSION

In 2016, the Chan Zuckerberg Initiative announced a bold new mission to support the science and technology that will make it possible to cure, prevent, or manage disease by the end of the century.

“CZ Biohub was created to support that mission – by understanding the fundamental mechanisms underlying disease and developing new technologies to lead to actionable diagnostics and effective therapies.”

<https://www.czbiohub.org/about/#history-amp-mission>

The CZ Biohub



“Bio-resilience”

UNC-CH
NCCU
NC A&T
Duke
NC State

“We expect that the next CZ Biohub will receive a 10-year funding commitment in the range of \$200–250 million, with an anticipated launch in 2023.”

<https://www.czbiohub.org/about/#history-amp-mission>

The SOM basic science departments are world class



All have been ranked among the top 10 in the nation since 2015

DEPARTMENT
Biochemistry and Biophysics
Biomechanical Engineering (BME)
Genetics
Microbiology & Immunology
Pharmacology
Cell Biology and Physiology

SOM basic science is world class

Prestigious awards for SOM basic scientists



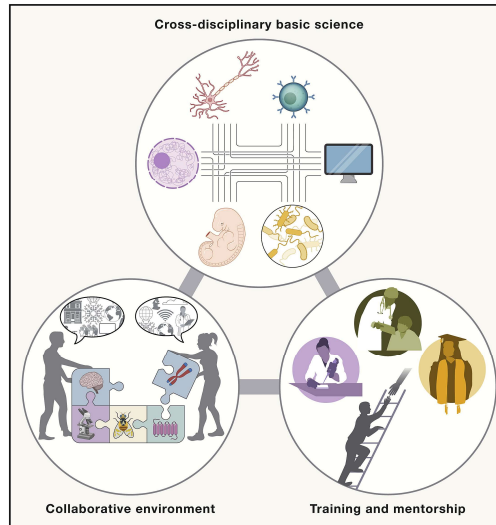
Oliver Smithies, 2007 Nobel Prize Awardee in Physiology and Medicine
Aziz Sancar, 2015 Nobel Prize Awardee in Chemistry



NATIONAL ACADEMY
OF SCIENCES

Aziz Sancar, Ralph Baric, Richard Wolfenden, Jack Griffith

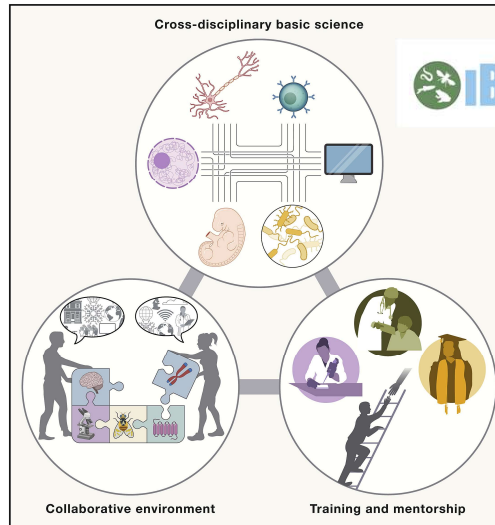
Organizing principles core to academic basic science



<https://doi.org/10.1016/j.cell.2022.02.008>

Organizing principles core to academic basic science

We are known across the country for our collaborative research enterprise



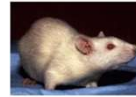
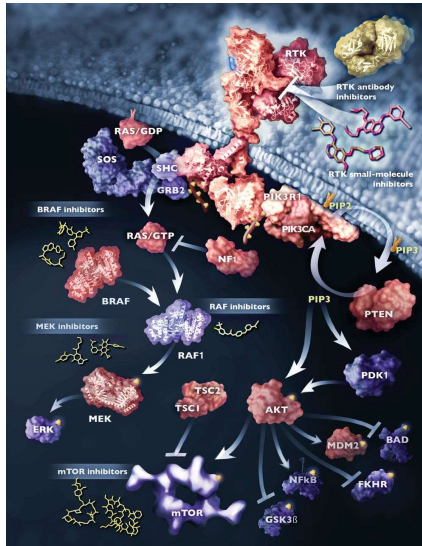
Office of Graduate Education is a national leader

BBSP PhD Recruitment
~1900 applicants with 269 offers to fill 110 slots

56 Training Grants with total funding = \$105 million

<https://doi.org/10.1016/j.cell.2022.02.008>

Research using “model organisms” is contributes to our understanding of human disease



Rat
(*Rattus norvegicus*)



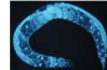
Mouse
(*Mus musculus*)



Fruitfly
(*Drosophila melanogaster*)



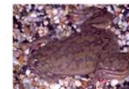
Plant
(*Arabidopsis thaliana*)



Nematode
(*Caenorhabditis elegans*)



Sea Urchin
(*Strongylocentrotus purpuratus*)



Frog
(*Xenopus laevis*)

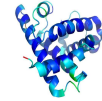
“The vast majority of our knowledge of the function of [cancer] driver genes has been derived from the study of the pathways through which their homologs work in nonhuman organisms.” B Vogelstein et al. *Science* 2013;339:1546-1558

Review > *Dis Model Mech.* 2017 Dec 19;10(12):1381-1389. doi: 10.1242/dmm.031203.

Sophisticated Lessons From Simple Organisms: Appreciating the Value of Curiosity-Driven Research

Robert J Duronio¹, Patrick H O'Farrell², Greenfield Sluder³, Tin Tin Su⁴

iBGS research and operational missions are unique



Therapy Development Pipeline

Curiosity-Driven Research

Showing that an idea for a therapy has potential

Showing that a cell or molecule is effective in an animal or test tube.

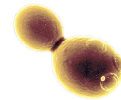
Gathering data to show that the cell or molecule is safe to test in humans

Clinical Trials (CRSO)

Proof of Concept

Development Candidate

Filing IND

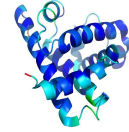


Research Mission: To understand how molecules and cells coordinate organism development and function using model systems and genomics approaches.

Operational Mission: Recruit and support faculty jointly between the School of Medicine and the College of Arts and Sciences

Topics: DNA replication and repair, chromatin and genome organization, gene expression, RNA metabolism, chemical biology, neurobiology, structural biology, vascular and heart development/disease, energy homeostasis

iBGS research and operational missions are unique



Biology (joint)

- Vicki Bautch [§] (MHI Dir.)
- Frank Conlon [§] (Genetics)
- Greg Copenhaver [§]
- Bob Duronio [§] (Genetics)
- Corbin Jones [§]
- Greg Matera [§] (Genetics)
- Dan McKay (Genetics)
- Jeff Sekelsky [§] (Genetics)
- Amy Maddox
- Steve Rogers [§]
- Toshi Hige (CBP)

School of Medicine

- Steve Crews (Biochem/Biology)
- Tal Kafri [§] (M&I/GTC)
- Nobuyo Maeda (Path)
- Bill Marzluff [§] (Biochem/Biology)
- Glenn Matsushima (M&I/NSC)
- Jill Downen [§] (Biochem/LCCC/Biology)
- Rob Downen (CBP/Biology)
- Liz Brunk [§] (Pharmacology/Chemistry)

22 Faculty Currently

Currently manage **\$7.2 million in grants annually**
(Faculty located in Fordham Hall or GSB)

Total grants of all faculty ~\$15 million annually

Chemistry (joint)

- Gary Pielak [§]
- Matt Redinbo [§] (M&I)
- Kevin Weeks [§]



***Winner* Funding Basic Science to Revolutionize Medicine, 2013 FASEB Stand Up for Science**



<https://www.youtube.com/watch?v=GmhD-RWNL6c>

Strategic Planning: Seeking Committee Input

Cristy Page, MD, MPH
Executive Dean

Dr. Cristy Page noted that with the current strategic plan, Forward Together, approaching the end of that 5 year period in 2024, we need to think big about how we can continue to lead across our triparte missions.

The committee was broken into smaller groups for further discussion. Results will be discussed in future DAC meeting.

UNC School of Medicine's 5-year strategic plan, entitled *Forward Together*, aligns with the *Carolina Next*



Research

Research that is highly innovative and aimed towards making a difference in our patients' lives



Education

Education that prepares healthcare leaders of the future – in service to our state, nation and beyond



Service

Community service and impact at the state, national and global levels



Diversity

Diverse faculty, learners, and staff, working together in a culture where all can thrive



Faculty

Faculty that can lead and make a difference in their chosen career paths

Our goal as we move Forward Together is...

To become the leading public school of medicine in the nation

Closing Remarks

Cristy Page, MD, MPH
Executive Dean

Dr. Page thanked everyone for their active participation.