BOARD OF VISITORS INFORMATION SESSION MINUTES August 28, 2023

An information session (open session) for the Board of Visitors was held on Monday, August 28, 2023, at 1:45 p.m. in Room G102 A/B at the Fralin Biomedical Research Institute (FBRI) at VTC, 4 Riverside Circle, Roanoke, VA 24016. There was no public comment period.

Board Members Present

Edward Baine (Rector) Carrie H. Chenery Sandy C. Davis Brad Hobbs Donald Horsley Anna L. James Letitia A. Long L. Chris Petersen John Rocovich Jeff Veatch Absent David Calhoun Greta Harris William Holtzman

Constituent Representatives Present:

William Storey, Undergraduate Representative Emily Tirrell, Graduate/Professional Representative LaTawnya Burleson, Staff Representative Janice Austin, Administrative/Professional Faculty Representative Joseph Merola, Faculty Representative

Also present at the meeting were: President Timothy Sands, Kim O'Rourke (Secretary to the Board), Janice Austin, Mac Babb, Callan Bartel, Lynsay Belshe, Leanna Blevins, Eric Brooks, Bob Broyden, Lori Buchanan, LaTawnya Burleson, Brock Burroughs, Lynn Byrd, Cyril Clarke, Al Cooper, Corey Earles, Jeff Earley, Alisha Ebert, Ron Fricker, Mike Friedlander, Rachel Gabriele, Clifton Gaines, Luisa Havens Gerardo, Alan Grant, Ellington Graves, Suzanne Griffin, Rebekah Gunn, Chelsea Haines, Dee Harris, Kay Heidbreder, Tim Hodge, Rachel Holloway, Frances Keene, Leigh Anne Kelley, Chris Kiwus, Sharon Kurek, Lee Learman, Lu Liu, Elizabeth McClanahan, Ken McCrery, Nancy Meacham, Ken Miller, Laurel Miner, Joseph Merola, Justin Noble, Mark Owczarski, John Pastor, Charlie Phlegar, Ellen Plummer, David Raymond, Paul Richter, Julie Ross, Lisa Royal, Saonee Sarker, Amy Sebring, Brittany Shelton, Brennan Shepard, Dee Dee Somervell, Dan Sui, John Tarter, Don Taylor, Jon Clark Teglas, Rob Viers, Tracy Vosburgh, Melinda West, Chris Yianilos, and other guests.

The meeting was livestreamed for the public via YouTube; there were 33 concurrent viewers on YouTube and a total of 58 views.

* * * * * * * * * *

Rector Baine convened the meeting and welcomed everyone to the Information Session. He introduced the new board members and representatives to the board. The agenda included Virginia Tech's Commitment to Health and Biomedical Sciences.

Fralin Biomedical Research Institute at VTC (FBRI) - Dr. Michael Friedlander, Vice President for Health Sciences & Technology, explained that the essential parts of that commitment include colleges on the Blacksburg campus, the Fralin Biomedical Research Institute and the Virginia Tech Carilion School of Medicine in Roanoke, the Innovation Campus and Sanghani Center for AI and data analytics in Northern Virginia, and partners Carilion Clinic and Children's National Research and Innovation Campus. He went on to explain how the organizational structure of FBRI and VTCSOM differs from the organizational structure of schools such as the University of Virginia and Virginia Commonwealth University, which have their own health systems. Unlike UVA and VCU, Virginia Tech and FBRI are fortunate to have the Virginia Tech Animal Care and Research Center co-located with FBRI, which has a focus on FBRI faculty have primary appointments at FBRI, tenure-track appointments in one of Virginia Tech's colleges, and secondary appointments at VTCSOM. He explained that FBRI and VTCSOM are well integrated with respect to medical and graduate medical education. Many of our students go to Carilion Clinic, Virginia Tech's Animal Cancer Research Institute, Children's National Hospital, Wake Forest Baptist Medical Center, and Barrow Neurological Institute for clinical research opportunities. FBRI contributes to the goal of Virginia Tech becoming a top 100 global research university with main research focus areas including cardiovascular disease, cancer, brain disorders, obesity, and children's health. Graduates in Translational Biology, Medicine and Health are winning national awards and going on to postdoc positions at prestigious universities as well as the private sector. FBRI faculty have received numerous recognitions and have been listed among the world's highly cited researchers. FBRI's extramural grant funding continues to grow. Dr. Friedlander presented a graph showing how FBRI fares among peers in terms of National Institutes of Health funding. He explained plans for growth and increasing partnerships. (Copy filed with the permanent minutes.)

Virginia Tech Carilion School of Medicine (VTCSOM) - Dr. Lee Learman, Dean, of VTCSOM, explained that the VTCSOM was created without any allocation of general fund support and operated for the first eight years as a private college; in 2019, it became the ninth college of Virginia Tech. He spoke about the college's primary collaborators. He explained that the VTCSOM curriculum includes the standard two value domains (which result in a competent physician) of basic science and clinic science, and supplements those with two additional domains-research and health systems science and interprofessional practice-to create scientist physicians/ system citizens. The college redefined its vision and mission in 2020. The vision is to be a destination for innovators who aspire to establish the nation's premier model of 21st century medical education. Most importantly, the mission is to prepare physician thought leaders through innovations in medical education and cutting-edge discovery to improve the health of our communities and transform health care. He highlighted a prestigious award just received for the project focusing on developing health systems citizens. The project received \$150,000 over two years to apply a modern measurement paradigm to develop instruments that more precisely measure and evaluate students' clinical abilities as health system citizens. He explained that implementation

science relates to how evidence-based practices, interventions, and policies are translated to and used in real-world settings like hospitals, schools, and communities. A Health Systems Implementation Science department has been created, and there will be transdisciplinary research teams bridging VT, VTCSOM, and Carilion. There are plans to create a center for the science of healthcare delivery and then growing the portfolio of federal funding. Dr. Learman spoke of efforts to avert the anticipated physician workforce shortage expected in Virginia. The VTCSOM receives more applications per position compared with the other schools of medicine in Virginia. Some alumni return for specialty training and some have moved back here to practice. Statistics show that nearly two-thirds of MD graduates can be retained in the area if they complete both medical school and a residency in the area. There are wide disparities in funding among Virginia's public medical schools, but the propensity to stay in state will increase if financial pressures on students are relieved. In terms of plans for enrollment growth, he explained that the school was opened with a class size of 42. When the class grew to 49, it became apparent quickly that the facilities had been planned to accommodate a class size of only 42. Plans have begun to grow the class size further in AY 2028-29, but it will be necessary to do a deep dive into capacity limits over the next few months in order to plan appropriately. In the next year, the process will begin to request approval for growth from the accrediting body and a planning grant for facilities will be requested. (Copy filed with the permanent minutes.)

<u>Constituent Reports</u> – Each of the five representatives to the board – William Storey, Emily Tirrell, LaTawnya Burleson, Janice Austin, and Joseph Merola presented a report of their constituency. (Copy filed with the permanent minutes of the full board meeting held August 29, 2023.)

* * * * * * * * * *

The meeting was adjourned at 3:10 p.m.

(Copies of the presentations are filed with the permanent minutes and attached.)

Virginia Tech Board of Visitors Meeting

Information Session

Monday, August 28, 2023 1:45 p.m.

Room G102 A/B Fralin Biomedical Institute at VTC, Roanoke, VA

Virginia Tech's Commitment to Health and Biomedical Sciences

- Dr. Michael Friedlander, Vice President for Health Sciences & Technology
- Dr. Lee Learman, Dean, Virginia Tech Carilion School of Medicine

Constituent Reports

- Mr. William Storey, Undergraduate Student Representative to the Board
- Ms. Emily Tirrell, Graduate Student Representative to the Board
- Ms. LaTawnya Burleson, Staff Representative to the Board
- Dr. Janice Austin, Administrative and Professional Faculty Representative to the Board
- Dr. Joseph Merola, Faculty Representative to the Board



VT main campus CALS, CLAHS, CNRE, COE, COS, CVM, FLSI



Children's National Research and Innovation Campus Washington DC

Virginia Tech's Commitment to Health and Biomedical Sciences



FBRI and VTCSOM Roanoke

Michael J. Friedlander, Ph.D. VT Vice President for Health Sciences and Technology Executive Director, Fralin Biomedical Research Institute at VTC Senior Dean for Research, VTC School of Medicine

> Professor, Biological Sciences, COS Biomedical Engineering (core faculty), COE Psychiatry and Behavioral Medicine, SOM



VT Innovation campus Sanghani Center for AI and data analytics



Carilion Clinic Roanoke

The Roanoke Health Sciences Enterprise:

a public-private partnership



- Nationally ranked integrated private not-for-profit healthcare system
- Over \$2.0 billion in annual revenue
- 13,000 employees, 1,000 employed providers
- 7 hospitals (48,000+ discharges)
- Level 1 Trauma Center
- 226 practices (1.5 million+ encounters)
- Next generation ACO Model
- 25 residency & fellowship programs;





- Global leader in brain research
- 38 research teams; 500+ employees and students •
- \$173 million active research grant portfolio
- National award for innovative graduate education
- Most highly cited researchers in the world
- Major foci on brain, heart, cancer research
- National center for pediatric neurorehabilitation





- Patient-Centered Curriculum
- Research-intensive curriculum
- Offers MD + PhD option
- Educates physician thought leaders through inquiry, research and discovery
- Nearly 100% match rate in residency programs
- Screens over 7,000 applicants for 49 positions
- Many students have extensive research e experience/degrees



ATTACHMENT E

ATTACHMENT E





UVA Health

<u>Chief Executive Officer, UVA Health</u> <u>Executive Vice President for Health Affairs</u>

> Dean, UVA School of Medicine Chief Health Affairs Officer

VCU Health

President, VCU and VCU Health System

Senior Vice President, VCU Health Sciences Interim CEO, VCU Health System

President, VCU Medical Center



Clinical Research Opportunities for VT Faculty and Students



Carilion Clinic - Roanoke



Children's National Hospital - Washington DC



Wake Forest Baptist Medical Center Winston-Salem



Virginia Tech Animal Cancer Care & Research Center Roanoke



Barrow Neurological Institute - Phoenix



FBRI research focus areas: making and translating discoveries for patients

Cardiovascular Disease

Over 800,000 Annual Deaths, Cost = \$200 Billion Annually Arrhythmias, Sudden Cardiac Death, Heart Failure, Ischemic Heart Disease, Viral Myocarditis





Children's health 15 million (of 74 million) children have ongoing major health issues



Cancer

600,000 deaths annually 2 million new cases per year Over \$200 Billion annually Brain, lung, liver, pancreas



Obesity

40% of adults; 20% of children; 300,000 deaths per year, ; Cost = \$160 Billion Annually

Brain Disorders

Affects 75 Million People, Cost = \$2.0 Trillion Annually

Addiction, Traumatic Brain Injury, PTSD, Depression, Intellectual Disabilities, Parkinson's, Alzheimer's







Most FBRI Faculty have:

- primary appointment at FBRI (financial, space, administrative and technical support)
- tenure track homes in 8 departments in 5 colleges:

-College of Agriculture and Life Sciences; Human Nutrition, Foods and Exercise
-College of Engineering: Biomedical Engineering and Mechanics
-College of Liberal Arts and Human Studies: Human Development and Family Sciences
-College of Science: Biology, Neuroscience, Physics, Psychology
-College of Veterinary Medicine: Biomedical Sciences and Pathobiology

• Secondary appointments in VTC School of Medicine







FBRI personnel - FY23 (n=470)



38 primary faculty research team leaders
135 full time salaried research faculty and staff
43 central administrative/technical support
22 postdoctoral fellows
78 graduate students**
67 medical students
65 undergraduate students
22 high school students





** Graduate students from 9 VT programs:

 Translational Biology, Medicine and Health (TBMH)
 Biology (COS)
 Biomedical Engineering (COE) Biomedical Sciences/
 Pathobiology (CVM) Human Development (CLAHS)
 Human Nutrition, Foods & Exercise (CALS)
 Neuroscience (COS)
 Psychology (COS)
 Statistics (COS)



ATTACHMENT E

Translational Biology, Medicine and Health

• First class admitted in 2014

<u>G</u>

• 76 graduates to date (68 PhD; 6 MS; 1 MD/PhD; 1 MD/MS)

• Recognized by AAMC for Innovation in Graduate Biomedical Education

raduates in postdoctoral positions at:	Graduates in i
Baylor College of Medicine	Aastra
Boston Children's Hospital	Alinera
Brigham and Women's Hospital	Gausma
Dartmouth	Carilion
Duke	Inova N
Emory	CDC
Harvard	Decibce
Johns Hopkins	Icagen
Mayo Clinic	New An
MIT	The Asp
Penn State	Walter
Stanford	
U. Michigan	-
UC San Francisco – Gladstone Institute	() () () () () () () () () ()
UNC	
UVA	
Vanderbilt	
VT	
Yale	

Aastra Zeneca Aastra Zeneca Alinera Sciences Gausman and Moore Carilion Clinic Inova Novartis CDC Decibcel Therapeutics Icagen New Amsterdam Genomics The Aspen Institute Walter Reed Army Medical Center

- Time to graduation: 5.01 years
- (National Average = 5.40 years)
- PhD completion rate: 86.6%; national average = 49.4%
- Yield rate from recruitment, incoming 2023 class = 68%
- Average GPA: 3.61

Three Translational Biology, Medicine, and Health (TBMH) students awarded American Heart Association fellowships May, 2023



Megan Sedovy, Kari Stanley, and Kenneth Young

Some recent graduate student national awards

Gabriela Carrillo NIH F99/K00 pre/postdoctoral fellowship Postdoc – Harvard



Paras Patel NIH F31 Predoctoral fellowship Postdoc - Yale



Hassan Farah NIH F31 predoctoral fellowship



Rachel Padget NIH F31 predoctoral fellowship _____Postdoc - UCSF



Rachana Somaiya NIH OSNAP Award Postdoc – UC Berkeley



Ubadah Sabbagh NIH F99/K00 pre/postdoctoral fellowship Postdoc - Harvard



ATTACHMENT E

Fralin Biomedical Research Institute at VTC





Contributing to global 100

5 year FBRI research scholarship 728 peer reviewed publications 99 in high impact (impact factor = 10-40) journals (top 2%) Average impact factor per publication increased from 4.5 to 7.8 Citations = 110,420





Top 0.1% of world's most highly cited researchers in all fields FBRI's Warren Bickel for cross-field interdisciplinary research



Rarolinska Institutet News archive Calendar Press Office

0

Nobel Mini-symposium: Dopamine as a neural substrate of reward prediction and psychopathology

08-09-2022 8:30 am to 09-09-2022 12:00 pm Add to iCal **Campus Solna** Nobel Forum, Nobelsväg 1



The symposium brings together researchers that first proposed that dopamine neurons signal reward prediction errors with some influential researchers that have developed this idea further. The research has both important preclinical and clinical implications.



FBRI at VTC's Read Montague

ATTACHMENT E

novo nordisk foundation

"Our vision is to improve people's health and the sustainability of society and the planet"

\$94 billion USD in assets



The Jacobæus Prize is the oldest prize of the Novo Nordisk Foundation.

2022 winner of the Novo-Nordisk Foundation Jacobaeus prize -FBRI's Zhen Yan Home > Business > VTC Professor Elected Fellow of American Institute for Medical and Biological Engineering

Business

VTC Professor Elected Fellow of American Institute for Medical and Biological Engineering

March 29, 2022



Fralin Biomedical Research Institute at VTC researcher becomes Virginia Tech's first NIH Outstanding Investigator Award recipient

March 7, 2022 in Biology

 \mathcal{O}^{0}

FBRI's Robert Gourdie named senior member of the National Academy of Inventors February, 2023



ATTACHMENT E







Jennifer Munson, Biomedical Engineer at the Fralin Biomedical Research Institute at VTC receives the national: Ben & Catherine Ivy Foundation Emerging Leader award

to further her study of patient-specific therapies for deadly brain tumors

Research Expenditures by Sponsor

NATIONAL SPONSORED RESEARCH, 2021



VIRGINIA TECH SPONSORED RESEARCH, 2021



FBRI Extramural Grant Funding



Annual Awards



Total Project Awards

NIH Funding Comparisons – FY23

university	annual NIH funding	school/ <mark>research</mark>	# NIH funded projects at the university	average annual NIH funding per project
UAB	\$333M*	1,689	1411	\$189K
VCU	\$84M	1,403	233	\$361K
UVA	\$165M	1,315	401	\$411K
U Maryland	\$163M	1,364	423	\$466K
UNC	\$359M	2,001	453	\$792K
VT	\$47M	873	137	\$343K
FBRI at VTC*	\$27M	38	66	\$409K**, ***

* 80% from SOM

* Does <u>not</u> include NIH sub-contracts

**** \$711K per faculty member**

******* \$964K per FBRI NIH funded faculty member

Top NIH funded institutions

- #1 UCSF \$751M
- #2 Stanford \$584M
- #3 Wash U. \$567M
- #4 Johns Hopkins \$563M
- #5 UPenn \$551M

Fralin Biomedical Research Institute faculty start up companies



FirstString Research Inc.



Tiny Cargo Company Protecting and delivering heart therapies on target



Rob Gourdie Spencer Marsh





BEAM Diagnostics, Inc. Behavioral Economics as Advanced Methodological Diagnostics

Shining light on the future of precision medicine



ACOMHAL RESEARCH FIGHTING CANCER AT ITS SOURCE



Bio Tairapeutics precision peptidic medicine





Cairina Predicting brain tumor growth & optimal treatment



Kernyll **Software analytics** for human health





Sarah Snider Warren Bickel*

Samy Lamouille



Zhi Sheng

28 invention disclosures by 35 FBRI faculty, students and staff over last 5 years

Read Montague

Jennifer Munson

Children's Health Research at FBRI

FBRI Neuromotor Research Clinic National NIH Pediatric Rehabilitation Resource Center, headquartered at Fralin Biomedical



Sharon Ramey, Ph.D.



Stephanie DeLuca, Ph.D.

- FBRI collaboration with PT and OT researchers
- Opportunities for VT-Radford enhanced collaboration in allied health sciences



FRALIN BIOMEDICAL RESEARCH INSTITUTE AT VTC VIRGINIA TECH video





Physical growth of the HS&T campus in Roanoke

- New VTCSOM building to accommodate expanded class size
- Back-renovation of original VTCSOM to accommodate FBRI growth
- VTC partnership recruitment of physician scientists
- Build on global reputation in brain and cardiovascular research
- Major growth of cancer research









UPDATE ON THE

VIRGINIA TECH CARILION SCHOOL OF MEDICINE

LEE A. LEARMAN, M.D., PH.D.

Virginia Tech Board of Visitors Information Session August 28, 2023





Among the first of 32 MD-granting schools initially accredited from 2007-2022 (with 6 more on the way)





Groundbreaking 2008 Dean Cynda Johnson Carilion CEO Ed Murphy Governor Tim Kaine VT President Charles Steger

VTC Virginia Tech Carilion School of Medicine

Our Academic Health Center's Primary Institutional Collaborations

Healthcare delivery

- Hospitals and Clinics
- Physicians, Physician Assistants (PAs)
- Nurses, Nurse Practitioners (NPs)
- Other health professions and staff

Health professions education

- Medical students, residents, fellows
- Nursing, NP and PA students
- Respiratory, physical and occupational therapists, others
- Biomedical research trainees
- Undergraduates considering health professions

Biomedical research and innovation

- Basic and preclinical studies
- Clinical trials
- Dissemination and implementation science
- Community-based and public health research



VTCSOM Curriculum: 4 Value Domains

Standard MD Curriculum (competent physician)

VTCSOM Differentiators (scientist physician, system citizen)





VTC Virginia Tech Carilion School of Medicine

VTCSOM's First MD/PhD Students

Katelyn

Stebbins

Class of 2019/2023



Oscar Alcoreza, MD, PhD

Original Class of 2023



Kenneth Young

Original Class of 2024



Andrew Strohman



Noah Oakland



Redefined Vision and Mission 2020

VISION

We will be a destination for innovators who aspire to establish the nation's premier model of 21st century medical education.

MISSION

Prepare physician thought leaders through innovations in medical education and cutting-edge discovery to improve the health of our communities and transform health care.



RESEARCH

Virginia Tech Carilion School of Medicine receives prestigious award to support innovation

The Stemmler Fund will help the school develop health system citizens by advancing student assessment.





You cannot change the human condition, but you can change the conditions in which humans work.

-James Reason, PhD

People generally come to work to do the right thing. If they don't or can't, its our job to figure out why.

-Robert Wears, MD, PhD

Every system is designed to achieve exactly the results it gets.

- Don Berwick, MD; many others


What is implementation science?

 how evidence-based practices, interventions, and policies are effectively translated to and used in real-world settings like hospitals, schools, and communities



ATTACHMENT E

"...the promise of a cure requires an additional step: Patients must receive the treatments promptly and properly...

we spend far more money on inventing new treatments than on research into how to deliver them..."

"All breakthrough, no follow through" S.H. Woolf (2006) Washington Post "Unhealthy medicine"



Implementation Science Puts Knowledge to Work

What is the T0 to T4 Translational Research Continuum?

		OWLEDGE	EXCHANG	CC E • PARTNERSHI	P MMUNITIES		
ACADEMICIANS T1TR T2TR							
Basic	Pre-Clinical	Clinical	Clinical	Dissemination Implementation Impact			
Research	Studies	Efficacy	Effectiveness				
TO	T1	T2		T3	T4		
Basic	Translation	Translation		Translational	Translation		
Research	to Humans	to Patients		to Practice	to Communities		

- Discovery of best implementation practices
- Design and testing of implementation
- Operational implementation of best practices
- Sustainability of best practices

Virginia Tech Carilion

Health Systems Implementation Science (HSIS)

- Academic department formed and chair recruited (Parker)
- University tenure at VTCSOM approved by BOV
- Research faculty and space for HSIS
 - 2 junior faculty hired + 2 tenure/tenure-track lines in recruitment
 - Physician-scientist cost-sharing model under review
 - VT IRB eligibility for Carilion-employed researchers
 - Carilion-adjacent space for program expansion (financial analysis)
- Transdisciplinary research teams bridging VT-VTCSOM-Carilion
 - Center for Future Work Places and Practices at VT Institute for Creativity, Arts and Technology
 - Destination Area 2.0 Human-Systems Integration proposal



ATTACHMENT

Vision for the VTCSOM Implementation Science Program



• Human Centered Design • Implementation Science Methods

Cross-cutting HSS topics

•High-value, High-quality Healthcare • Social Dimensions of Health • Innovative Community Health Models • Informatics and Technology • Health Policy and Economics

T3/T4 research center goals

- Discovery of best implementation practices
- Design and testing of implementation
- Operational implementation of best practices
- Sustainability of best practices

This research center goals

- Intersect research and application
- Address general and health system specific needs of relevance to this community
- Provide foundational expertise to be used and deployed
- Create unique T3-T4 partnerships to improve the health of the community

Goal One: Strengthen Innovative and Collaborative Research to Positively Impact the Health of our Communities and Beyond



Small yet mighty

VTC is state's most competitive medical school

PUBLISHED MAY 30, 2023 BY SYDNEY LAKE

Return to Roanoke

Roanoke may not always be the first place VTC graduates practice medicine, but it's often a final destination. Both Tate and his wife, VTC alum Dr. Megan Whitham, pursued residencies elsewhere before returning to Roanoke to work at Carilion Clinic.

Whitham works in maternal fetal medicine, while Tate practices family medicine. Originally from Carroll County, Tate was "psyched" to get to study medicine near home and Southwest Virginia's Appalachian Mountains, a region negatively affected by a shortage of doctors.



"We both loved being here during school and made many important connections," says Dr. Adam Tate, who practices at Carilion with his wife and fellow VTSCOM graduate Dr. Megan Witham. Photos by Don Petersen

"The transformation of an industrial brownfield into a rapidly growing health science and technology campus over the past decade is a remarkable success story for the Roanoke-**Blacksburg region and the** commonwealth as a whole," says Virginia Tech President Tim Sands. "We are excited about the next phase of growth for VTCSOM."

> Virginia Tech Carilion School of Medicine



Averting Virginia's Future Physician Workforce Shortage

School	Annual admissions	Applications per position	
VTC	49 (50)	138	
East Virginia	151	51	
VCU	186	40	
UVA	150	39	

Annual admissions	# Schools
50 or less	4
51-100	29
101-150	53
151-200	46
201 or more	23

Of 630 Virginians admitted to US medical schools in 2022-23, only 263 are attending Virginia medical schools



Retaining Physicians Trained in Virginia

Virginia State Physician Workforce Profile

	VA	VA Rank
Pct. Physicians Retained in State from UME, 2016	32.5%	32
Pct. Physicians Retained in State from GME, 2016	39.1%	41
Pct. Physicians Retained in State from UME + GME, 2016	64.3%	29

Virginia Healthcare Workforce Advisory Council Final Report and Recommendations. Virginia Hospital and Healthcare Association, 2020.

Recent data show wide disparities in funding among Virginia's public medical schools

	VT	VCU	UVA		
FY 22 AAMC Annual Financial Questionnaire, \$ in millions					
State Appropriations	\$ 0.0	\$ 49.9	\$ 12.8		
Gross Tuition and Fee Revenues ¹	\$ 10.0	\$ 41.8	\$ 40.6		
University (Parent) Support ²	\$ 5.7	\$ 27.6	\$ 46.2		
Hospital Support ³	\$ 3.4	\$181.0	\$238.7		
Philanthropic Support	\$ 0.5	\$ 30.7	\$ 78.7		

¹ Gross tuition and fee revenues does not reflect impact of tuition waivers, scholarships or other discounting. VTCSOM's discount rate is approximately 20% or \$2M annually.

² University (parent) support for VTCSOM includes the \$3.4M in annual contributions as part of the 50-50 split between the university and Carilion Clinic plus central university funding for incremental salary and fringe benefit adjustments.

³ Hospital support **excludes funding for Graduate Medical Education** (GME). For VTCSOM, this reflects the annual \$3.4M contribution from Carilion Clinic.

THE FUTURE: Enrollment Growth and In-State Support

	AY 23-24	AY 24-25	AY 25-26	AY 26-27	AY 27-28	AY 28-29	
Enrollment Capacity Analysis	Capacity determined						
Capital Planning		Planning grant, building permit		Building construction			
Accreditation Approval		Proposal prepared, submitted		Growth approved			
In-State Tuition Support	Request		Request		Request		
Total Enrollment	196	196	196	196	196	First larger class	



ATTACHMENT E

Thank You

VTC

Virginia Tech Carilion School of Medicine

Board of Visitors Constituency Report William Storey, Undergraduate Representative August 28th-29th, 2023

Good afternoon Rector Baine, members of the board, President Sands, administration, guests, and friends. I am grateful for this opportunity to be sitting here with you all today and for the board entrusting me with this position. I look forward to collaborating with the board in its mission to exemplify *Ut Prosim* for the betterment of all current and future hokies here at Virginia Tech.

My time here as a student has been unique when comparing my experiences with those of students before and after me. My freshman year was all online due to the pandemic and whilst some of my peers may resent their time learning over zoom, I do not, because it is during this time that I got to see what truly makes Virginia Tech great, the people. While living in West AJ, I became good friends with the custodian on my floor, Ivan, and with dining hall staff like Kareem, both of whom I still talk with today. Drawing from these interactions, I decided that I wanted to play a role, like Kareem and Ivan, in making this university exceptional. Thereafter, I quickly became involved in student leadership with organizations such as the Student Life Council, the class of 2024 Leadership Team, and SVCC Cultural Transformation subcommittee where I garnered rich experiences and relationships that have allowed me to become the student leader I am today. Of course, none of this would have been possible had I not had down to earth people like Ivan and Kareem to show me what it truly means to exemplify Ut Prosim.

As the 2023-2024 Undergraduate Representative, I will address a wide array of issues relating to student life. Including but not limited to: food insecurity, accessibility, affordability, sexual violence, mental health, and diversity. In addition, I will work towards improving the quality of student life by working collaboratively with deans, directors, and fellow student leaders. Currently, one of my top priorities is to work with the SSD center. As the student population has steadily increased over the past few years, the

ATTACHMENT E

center has outgrown its current space in Lavery hall. It has gotten to the point where many of my professors would rather have me take my exam in an adjacent classroom, lab, or office, than deal with the headache of finding a time that fits with the SSD's schedules. Because of this, I want to work towards expanding the opportunities and resources available to the SSD office so that they will continue to aid students' academic success. Similarly, I want to help make this campus as accessible as possible. As someone with a younger brother who has cerebral palsy, I have seen first hand how important it is to have an ADA accessible campus. Furthermore, having grown up working in local food banks, I have become open-minded to just how relevant food insecurity is in many people's lives, especially younger and vulnerable college students. I want to make sure that every student is able to obtain a healthy meal on campus, no matter their dietary restriction or socioeconomic class.

The issue of housing costs is not a spasmodic topic here at Virginia Tech. In the post pandemic era we are seeing off campus housing prices reach unprecedented levels. The average cost of rent for a student living off campus is now upwards of \$800. When combined with other costs of living such as utilities, food, and gas, the cost per month easily exceeds upwards of \$1000 per month. I and many of my peers, have found it difficult to find affordable housing here in the Blacksburg area, as anything affordable that is not an old trailer full of mold priced at anything less than \$700 a month gets quickly gobbled up. Much of this has been accelerated by the Town of Blacksburg's decision in last year's comprehensive plan to limit where student housing can be built in the future, a significant portion of this area being where student housing is already pre-existing. Unsurprisingly, cheaper student housing is now being bought up by mega leasing companies and being replaced with "luxury" apartments, with the average price per bed at \$1100. As Virginia Tech grows and expands towards its university master plan, I want to implore the university to seek out more cooperative options and initiatives with the town of Blacksburg for student housing, as the rift between the two only seems to widen each year rather than come together. I bring this issue up not because I hate economic development, or hate the town of Blacksburg, but because I love this town

and university and want it to be better. Furthermore, this issue is not something that only a few students are facing, but a significant portion of the student body, even the students on the board with you today.

Similar causes for anxiety and uncertainty amongst many students, especially those of underrepresented and underserved minority groups have arisen in the wake of the Supreme Court decision to overrule Affirmative Action for the college admissions process. I believe it to be axiomatic that we continue to strive for greater diversity and richness amongst the student body despite the potential setbacks from Affirmative Action being overruled. I know that the university is already doing incredible work with programs like InclusiveVT, but I emphasize that we need not let this decision by the Supreme Court keep us from making a campus that is welcoming and accepting of all students.

To conclude, I once again want to express my sincere gratitude for this incredible opportunity to work with you all on making this university better not only for current students, but all future Hokies. It is because of this board that Virginia Tech is more than just a research institution, it is a place where people from all nationalities, religions, and socioeconomic classes can truly feel at home. On behalf of all undergraduate students here at Virginia Tech, thank you!

Graduate and Professional Student Constituency Report Virginia Tech Board of Visitors August 27 - 29, 2023 Presented by Emily Tirrell, Graduate and Professional Student Representative

Rector Baine, members of the Board of Visitors, President Sands, Provost Clarke, administrators, and guests. Thank you for this opportunity to speak with you all about the graduate and professional students today.

Thank you for the incredible opportunity to serve in this role. I am eager to get started and to collaborate closely with you throughout my term. My name is Emily Tirrell, and I am the Graduate and Professional Student Representative for the 2023-2024 year! I am a second year Ph.D. student in the Translational Biology, Medicine, and Health program and conduct research in the Robotics and Sensorimotor Control Lab in the Biomedical Engineering and Mechanics Department. I have been fortunate to be a student at Virginia Tech twice, and completed my undergraduate degrees in Biological Science and in Clinical Neuroscience. During my first few months as the Graduate and Professional Student Representative, I have connected with student leaders throughout the Virginia Tech community and connected with the deans of the graduate school, the medical and veterinary schools, and the different state - wide campus associate deans and representatives.

During my term I will give a voice to the graduate and professional student perspective, and impact how the board and university might improve our experiences here at Virginia Tech. First, I would like to share the complexities behind what a graduate and professional student really is. Our location for this board meeting provides an excellent opportunity for me to stress the importance of our graduate and professional students, the direct impact that we have, and the value we bring to our community and to the Virginia Tech brand. The Virginia Tech Carilion School of Medicine (VTCSOM) and Fralin Biomedical Research Institute (FBRI) combine in one of three thematic institutes associated with Virginia Tech, the others are the Virginia Tech Transportation Institute (VTTI) and the Virginia Tech National Security Institute (VTNSI). The Fralin Biomedical Research Institute (FBRI) and Virginia Tech Carilion School of Medicine (VTCSOM) alone house approximately 2% of graduate and professional students (approximately 145 students) and in FY22, brought in approximately 48% of Virginia Tech's research enterprise grants and contracts (approximately 173 million dollars according to the FY22 Financial Report). These research institutes not only provide space for faculty and students to develop formative research questions and answers, but space for Virginia Tech to grow into the surrounding commonwealth environment. I want to emphasize the importance of the institutes for Virginia Tech's strategic plan to achieve excellence as a comprehensive global land - grant university, and to specifically draw attention to the important role that graduate and professional students have in achieving that commitment.

So what is a graduate and professional student? We are first and foremost individuals and students of the university. We are also an extraordinary tool, resource, and contributor that the university has to promote its strategic plans and grow its research enterprise success. Our thematic institutes, departments, and research labs would not function or be productive without the work of graduate and professional students. In terms of rankings, when compared to our peer Land Grant Institutions, Virginia Tech ranked 16/112 overall in Fall of 2022, and recently gained recognition with a CASE 50 membership, acknowledging our value, quality, and fundraising excellence. These are both prodigious achievements, however, in Fall of 2022, Virginia Tech placed in the 251-300 range for the global ranking based on research excellence on a global scale. I segway into this comparison for one main reason: With the commitment to achieving excellence as a comprehensive global land grant university, it is imperative that we attract and retain highly skilled graduate and professional students to increase our research enterprise success. Graduate and professional students will push Virginia Tech into achieving these goals and continue to raise our ranking. Two main topics impact graduate and professional student attraction and retention and I would like to focus on these throughout my term: student financial wellness and overall student engagement and wellbeing.

I am pleased to report that there have been great strides at the various campuses to improve student financial wellness. The DC Area Campus is installing a new metro pass initiative, partnering with the Washington Metropolitan Area Transit Authority, to introduce the U-Pass to our graduate students. This pass allows full-time students unlimited Metrobus and Metrorail access to travel for about \$1 per student per day. This helps alleviate pressures to live close to campus, and encourages students to live in more affordable areas while still having direct access to campus. The Roanoke Area Campus has initiated a new "StarCard" reward program for students to get discounts at local restaurants and local establishments to offset some of the cost of living expenses. The Town of Blacksburg has provided free public transportation with the Blacksburg Transit Bus System. However, students are still struggling financially. To combat this and provide some financial relief, I am working with the Dean of the Graduate School and the Dean of Students to find additional sources of funding, using the student emergency fund, to help provide additional support to our students. I ask that the board continue to discuss the financial wellbeing of graduate and professional students, and support these initiatives.

There have also been great strides at the various campuses to improve engagement with campus resources and overall student wellbeing. "TimelyCare", a virtual health and well-being platform available to all Virginia Tech students, has been utilized at all of our campuses. "TimelyCare" offers flexibility for students to be seen at off-hours and reduces barriers to accessing mental health care. With 4.69% of our graduate and professional students (approximately 333 students) utilizing this resource, "TimelyCare" has been an incredible success. However, students still report a great disconnect between campus resource availability and need, and previous campus polling shows that upwards of 21% of graduate and professional students (approximately 1,491 students) need additional access to campus resources. I am working with the Vice President of Student Affairs, Cook Counseling, and Hokie Wellness to promote campus resources to all students and to increase resource availability to combate accessibility difficulties that our students are facing. I ask that the board continue to discuss the engagement and overall wellbeing of graduate and professional students, and support these initiatives.

Overall, I am working with student leaders, the graduate school, the medical and veterinary schools, and campus partners to provide support to our graduate and professional students, to increase retention and to attract talent to the university. I ask that the board consider student financial wellness and student wellbeing and engagement when discussing future university initiatives, and to consider the impact that graduate and professional students have on the Virginia Tech enterprise as a whole.

On behalf of the graduate and professional students, thank you for listening today. I appreciate your attention and I thank you again for this opportunity to share. I look forward to sharing my ongoing progress in this role and collaborating with you all to make this an amazing year serving Virginia Tech! Go Hokies!

Staff Senate Constituency Report

Virginia Tech Board of Visitors

August 27 – 29, 2023 Presented by LaTawnya Burleson, Staff Senate President

Rector Baine, members of the Board of Visitors, President Sands, administrators and guests. Thank you for the opportunity to speak to you today about staff at Virginia Tech.

It is one of the best times of the year for Hokies everywhere with the start of the fall semester and the season opener of Virginia Tech football just a week away. It is a time of excitement, hope and new beginnings; for Staff Senate it comes with a renewed commitment to be strong advocates for all staff at Virginia Tech.

The senate met with President Sands this past June in a hybrid format for the first time since 2019. We had a very productive meeting which shed light on many issues we face and brought forth a suggestion from Dr. Sands that he meets more than once a year with the Staff Senate and we, in turn, send a quarterly report to him on our activities. Staff Senate appreciates Dr. Sands continued interest in and support of staff activities.

One goal for this year's Senate is to increase the participation of staff in governance and professional development opportunities. Many staff have shared they do not have the support of their immediate supervisor to attend governance meetings and participate in professional development opportunities. The Staff Senate Executive Team is planning a road show to visit colleges and departments either in person, virtually or hybrid as a way of increasing communication with all staff and ensuring awareness of the many opportunities offered. The President's Office and the Department Human Resources are partnering with us in this effort by sharing messaging with Administration. This messaging will also be highlighted on the staff senate website to increase visibility and to reach all staff members.

A second goal is to thoroughly study leave discrepancies and compensation issues that staff face, with increasing the \$500 per year supplement and increasing the threshold a priority. This will be done by working closely with our Human Resources colleagues, who have been receptive and collaborative with us as we dig in on this work.

Thirdly, we will focus on education; it is the reason we are all here. The Staff Senate will welcome members from strategic affairs who reached out to us to discuss the Beyond Boundaries Vision and we appreciate that they are including us in this important work. Dr. Sands spoke to staff about the Virginia Tech Advantage Initiative which should have such an important impact on the commonwealth. Staff Senate would also like to see investment and thought given to increasing the faculty/staff dependent scholarship fund so that it might be more impactful to the dependents of Virginia Tech employees.

In closing on behalf of the Staff Senate Executive Committee, Staff Senate and all staff at Virginia Tech, I thank you again for this opportunity to not only speak to you today, but for our inclusion in Governance at Virginia Tech. I look forward to collaborating with you, sharing successes and providing ongoing support to this wonderful university.

Respectfully submitted,

LaTawnya L. Burleson

President, Staff Senate

Administrative and Professional Faculty Constituent Report

August 27-29, 2023

Presented by Janice Austin, A/P Faculty Senate President

Good afternoon, Rector Baine, board members, President Sands, Provost Clarke, administrators, and guests. I am honored to represent the over 2,400 administrative and professional faculty at Virginia Tech and look forward to serving with each of you this year.

Since your last Board meeting in June, the A/P Faculty Senate has transitioned leadership and the new officers and senators are looking forward to the upcoming year. I am grateful to serve as the A/P Faculty Senate President and thank our immediate past president, Holli Gardner Drewry, for her service to our alma mater and being the first A/P Faculty Senate President. Her leadership through the creation and standing up of the Senate has been outstanding and we are immensely thankful for her service.

Holli spearheaded our Beyond Boundaries Scholarship philanthropic project. I am pleased to report that we met our minimum goal of \$3,000 to have a named scholarship. We look forward to a current VT undergraduate student receiving this scholarship. The AP Faculty Senate is currently discussing what our 2023-24 philanthropic project will be and I look forward to sharing more on that endeavor at our next board meeting.

Our A/P Faculty Senate meetings continue to have strong attendance and participation. We have installed our new officers and senators as well as continued to receive monthly updates from HR on the Job Architecture Project. We are looking forward to hearing from the Virginia Tech Beyond Boundaries Vision Co-chairs in our next meeting and will extend an invitation to Rector Baine and President Sands to attend a meeting this year as your calendars allow.

This year the A/P Faculty senate will continue working on two initiatives which began last academic year. Our Professional Development Leave working group is working on refining recommendations and creating a narrative proposal for feedback. Our Elections and Nominations standing committee is working on constituent group representation and formation and will recommend any revisions to our structure as they complete this work.

Thank you and I look forward to sharing additional updates on the work of the A/P Faculty Senate at our next meeting.

Good afternoon, Rector Baine, President Sands, all the members of the VT BOV, VT administrators and all guests. It is a distinct honor to be able to represent the Virginia Tech Faculty on this board and to speak in this open session. I was honored to have been in this same position 10 years ago and, I can say that the Virginia Tech landscape is very different today than it was then and it is all for the better. The physical landscape is strikingly different – the addition of many new buildings but the academic landscape is just as altered new programs and new directions.

Based on our conversations yesterday at the Board Retreat, I decided to spend my time giving a chemistry lesson to the group, especially Mr. Chris Petersen who shared a poor experience with chemistry as an undergraduate and I just couldn't let that stand.

From the faculty perspective, shared governance in the university is stronger than ever and the role of faculty senate has moved to a more central position in university governance and has a key role in initiating, developing and approving key university policies. The entirety of the ensures governance system is a robust interaction between administrators, faculty, staff, and students, both graduate and undergraduate. By having input from all of those constituents, the university that its structure, the academic curricula and a myriad of policies are, to borrow from a recruiting ad, "all that they can be."

Shared governance is critical to the health of the university and, to a large degree, is responsible for VT being in a better place than many universities around the country including several peer institutions.

There are some 2600 faculty at Virginia Tech and, on any given issue, there could be as many as 2600 opinions. Here are some of the issues that FS will grapple with this year:

- Improving communication between Faculty Senate and administration. We had some glitches in that regard concerning the rollout of various IT policies that confused and caused concern among faculty. Earlier consultation with faculty senate and other bodies would have allayed much of the concern by allowing for more education of what the policies meant or did not mean. AND to tweak those policies for the benefit of those universities I am pleased to say that many administrators, including Amy Sebring, have reached out to me with their willingness to have regular meetings accomplish just that.
- 2. How can Faculty senate best represent and serve VT faculty? As VT expands, how should those new faculty be brought into the fold of the faculty senate? VT Carilion Med school, Innovation campus, etc.

3. Artificial intelligence – our discussions about this subject at the retreat yesterday were both fun and stimulating. The importance of the liberal arts in what we often refer to as a digital or technical future clearly came across the the importance of a university educating the full human was a very strong message, one that I believe that faculty embrace. On a narrower front, faculty need to understand the AI tools and how students can use them and how then can use them as teaching tools.

Someone yesterday asked how many admissions essays are written by AI. As an exercise, I went to ChatGPT, one of those AI tools. I posed the following task: "Subject: Faculty Representative Constituent Report". I will share that report for the record, but let me now give you a few snippets to show you the power of the tool. (ChatGPT generated document is added to the end. I mentioned the bullet points in that report and showed how they coincided with the actual concerns of faculty.)

I again want to thank the board for the wonderful discussions we had at the retreat yesterday and your continued willingness to listen to the various constituent groups. I am the tip of the Faculty Senate iceberg. Other officers, administrative and staff support all of the senators. All of the concerns brought up by other constituents are also faculty concerns – a university is a holistic organism and faculty cannot do their best if the students, staff and AP staff are not healthy.

Thank you again for paying attention to the input from the faculty and I look forward to updating the board on the activities of the faculty.

Addendum 1: Constituent report generated by ChatGPT

Subject: Faculty Representative Constituent Report to Virginia Tech Board of Visitors

Dear Members of the Virginia Tech Board of Visitors,

I hope this message finds you well. As the faculty representative, I am honored to provide you with a comprehensive report on behalf of the faculty constituents at Virginia Tech. This report aims to highlight key concerns, achievements, and suggestions that have been voiced by our faculty members.

Faculty Concerns:

- 1. **Workload and Burnout:** A recurring concern among faculty members is the increasing workload, which has led to burnout in some cases. Many faculty members are managing a delicate balance between teaching, research, and administrative responsibilities. There's a call for more support mechanisms, such as hiring additional teaching assistants, streamlining administrative processes, and exploring flexible work arrangements.
- 2. **Diversity, Equity, and Inclusion:** Faculty members are committed to enhancing diversity, equity, and inclusion on campus. However, there's a consensus that more can be done to foster an environment where all voices are heard and valued. Efforts such as providing implicit bias training, diversifying curriculum, and creating safe spaces for open dialogue have been suggested.
- 3. **Faculty Development:** Continuous professional development is crucial for maintaining the excellence of our institution. Faculty members are interested in more opportunities for workshops, training sessions, and networking events that facilitate interdisciplinary collaboration and pedagogical innovation.

Faculty Achievements:

- 1. **Research Excellence:** Virginia Tech's faculty members continue to make significant contributions to their respective fields. This year, several research projects have gained national and international recognition. The dedication of our faculty to advancing knowledge and addressing real-world challenges is commendable.
- 2. **Student Mentorship:** Faculty members take pride in their role as mentors. Many have gone above and beyond to provide guidance and support to students, both academically and personally. The positive impact of these relationships on student success cannot be understated.

Suggestions for Consideration:

- 1. **Transparent Communication:** Improved communication between the administration and faculty can enhance collaboration and understanding. Regular town hall meetings, where faculty can engage directly with the leadership, could be instituted to address concerns and share updates.
- 2. **Resources for Well-being:** Considering the challenges posed by the recent global events, allocating resources for faculty well-being, including mental health support and wellness programs, is highly recommended.
- 3. **Recognition of Service:** Recognizing faculty members' service to the university, beyond research and teaching, can boost morale and motivation. Acknowledging contributions to committees, outreach programs, and community engagement can foster a sense of appreciation.

In conclusion, I would like to express my gratitude for the opportunity to serve as the faculty representative and convey the thoughts and aspirations of my colleagues. I am confident that by working together, we can continue to elevate Virginia Tech's reputation as a premier institution of higher learning.

Thank you for your attention, and I remain at your disposal for any further discussions or clarifications.

Sincerely,

[Your Name] Faculty Representative Virginia Tech

Addendum 2: Rector Baine asked if I used ChatGPT to generate the board response. Here is what it produced:

[Virginia Tech Logo]

Office of the President Virginia Tech Blacksburg, VA 24061

[Date: Insert Date]

Dear [Faculty Representative's Name],

On behalf of the Virginia Tech Board of Visitors, we want to express our sincere gratitude for your comprehensive and thoughtful constituency report

presented during our recent meeting. Your insights and perspectives have provided invaluable information that aids us in better understanding the needs and concerns of our esteemed faculty members.

Your dedication to representing the faculty's interests and fostering open dialogue within our university community is commendable. Your report touched on various aspects that are crucial to maintaining and enhancing Virginia Tech's reputation as a center of academic excellence and innovation.

We appreciate the time and effort you invested in gathering and presenting data, addressing a range of topics including faculty development, research opportunities, curriculum improvements, and campus facilities. Your report has already sparked productive discussions among the Board members, highlighting areas where collaborative efforts can be undertaken to drive positive change.

Rest assured that your report will be carefully reviewed and considered as we move forward. We believe that an inclusive approach, involving faculty representatives like yourself, is essential in shaping the strategic direction of our institution.

We would like to extend an invitation to you to attend our next Board meeting to engage in further discussions based on your report. Your presence and active participation will provide additional context and insights that will be beneficial as we deliberate on various decisions and initiatives.

Once again, thank you for your dedicated service and your commitment to advancing Virginia Tech's mission. We are eager to work together with you to create a brighter future for our university and its community.

Sincerely,

[President's Signature]

[President's Name] President, Virginia Tech Board of Visitors

Cc: [University President's Name] [Other Relevant Board Members' Names] [Faculty Senate Chair's Name]