Committee Minutes

ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE

August 28, 2023

Committee Members Present: Carrie Chenery (chair), Brad Hobbs, Don Horsley. Additional board members present: Ed Baine, Dave Calhoun, Sandy Davis, Nancy Dye, Bill Holtzman, Anna James, Tish Long, Chris Petersen, Jeff Veatch.

Constituent Representatives Present: Emily Tirrell (graduate and professional student representative), Janice Austin (A/P faculty representative), Will Storey (undergraduate student representative), Joe Merola (faculty representative), and LaTawnya Burleson (staff representative).

Guests: Mac Babb, Callan Bartel, Laura Belmonte, Lynsay Belshe, Leanna Blevins, Bob Broyden, Brock Burroughs, Lynn Byrd, Cyril Clarke, Al Cooper, Corey Earles, Jeff Earley, Alisha Ebert, Ron Fricker, Mike Friedlander, Rachel Gabriele, Luisa Havens Gerardo, Dan Givens, Alan Grant, Ellington Graves, Suzanne Griffin, Rebekah Gunn, Chelsea Haines, Kay Heidbreder, Tim Hodge, Rachel Holloway, Frances Keene, Chris Kiwus, Sharon Kurek, Lee Learman, Lu Liu, Nancy Meacham, Scott Midkiff, Ken Miller, Laurel Miner, Justin Noble, Kim O’Rourke, Charlie Phlegar, Ellen Plummer, Jon Porter, Julie Ross, Saonee Sarker, Brennan Shepard, Paul Skolnick, Dan Sui, Aimee Surprenant, John Tarter, G. Don Taylor, Jon Clark Teglas, Mary Trigiani, Rob Viers, Tracy Vosburgh, Melinda West, Chris Yianilos.

OPEN SESSION

1. Welcome. C. Chenery, chair of the committee, welcomed attendees to the meeting. Committee members Brad Hobbs and Don Horsley introduced themselves to the committee. The chair invited provost’s office administrators who support the committee to introduce themselves.

2. Review and Approval of Open Session Agenda.

3. Consent Agenda Items. Approval of June 5, 2023, Meeting Minutes; Report of Reappointments to Endowed Chairs, Professorships, and Fellowships; Resolution to Ratify 2023 – 2024 Faculty Handbook; Resolution for Exclusion of Certain Officers/Directors.

The committee voted unanimously to approve the Open Session Agenda as presented including approval of all Consent Agenda items.

4. Provost’s Update. C. Clarke, executive vice president and provost, provided updates to the committee. Virginia Tech is compliant with the U.S. Supreme Court’s ruling in June 2023 that excludes race from consideration in admissions decisions. Virginia Tech requires short essays in which applicants describe their activities and commitments to service, leadership, integrity, perseverance through personal challenges or adversity, and
making a positive impact on others and the community. Essays are scored by two different, blinded readers who do not see the applicant’s identifying information. Graduate and professional admissions are managed at the departmental and college levels, and the imperative of not using race or ethnicity as a factor in admissions has been communicated to academic units.

Graduate assistant compensation continues to be a top priority. In the spring of 2022, a task force made eight recommendations regarding graduate assistant compensation. The university continues to improve graduate assistant compensation by building on successive 5% increases in stipends over the last few years, actions taken by academic programs to further increase minimum stipends and ensuring that external grant applications include appropriate funding for graduate assistants. Effective this academic year, the minimum level of an assistantship was raised to $2,400 per month for the 50% work commitment. The Graduate School provided 30 students, most in the final stages of their degree, with $7,500 of full summer support and the provost's office committed approximately $200,000 in one-time funding to help bridge the gap for externally funded students in tuition and health insurance subsidies. Some of the recommendations are not feasible (e.g., waiving the comprehensive fee, which would result in undergraduate students funding services provided to graduate students). The Graduate School dean will include and prioritize compensation among the critical need requests submitted each year for consideration by the university. Other recommendations are serving as goals for future development, such as increasing extramural and summer support.

In July, the university welcomed two college deans. Lu Liu began his tenure as dean of Architecture, Arts, and Design, and Saonee Sarker began her tenure as dean of the Pamplin College of Business.

The Innovation Campus and Tech Talent Investment program continue to make progress in Northern Virginia. The Virginia Tech Research Center – Arlington (VTCR-A) has a strong representation of programs related to national security. Progress continues on transitioning the Falls Church Northern Virginia Center (NVC) to a center for smart construction in partnership with an industry partner. Faculty members are being repositioned from the NVC to the Innovation Campus Academic Building 1. J. Ross, dean of the College of Engineering, is leading the implementation of a support structure to extend the university’s administrative services to the entire Northern Virginia region.

Launched in 2017, the university's Destination Areas (DAs) are Virginia Tech’s nine areas of research and learning designed to enhance the university’s global reputation. An initiative implemented in 2022, and termed DA 2.0, invited project development proposals from across the university. Four projects were selected for multi-year funding including those focused on human systems integration in health care, invasive species, public interest technology, and pandemic prediction and prevention. Two future projects are focused on pediatric neurooncology, and quantum navigation.

The Association for General and Liberal Studies awarded Virginia Tech the 2023 Exemplary General Education Program award. This award recognizes the university’s excellence in undergraduate general education.
5. **Top-100 Global University: Virginia Tech’s Cancer Research Initiatives.** D. Sui, senior vice president for research and innovation, M. Friedlander, executive director Fralin Biomedical Research Institute and vice president for health sciences and technology, and C. Clarke, executive vice president and provost led a discussion on the university’s cancer research initiatives. Virginia Tech is poised to compete successfully to be a top-100 global university. Cancer research is one area in which Virginia Tech can capitalize on federal funding and the national focus on the treatment of cancers. Faculty members across colleges and institutes have secured funding for cancer research using a whole-health model. Markers of continued success include increased productivity in translational research, award-winning scholarship, and additional opportunities for student research and experiential learning.

6. **Agenda Items for Committee Meeting.** Committee members are encouraged to contact the chair with any possible future agenda items.

8. **Adjournment.**
# Open Session Agenda

**ACADEMIC, RESEARCH AND STUDENT AFFAIRS COMMITTEE**  
Fralin Biomedical Research Institute, 102 A/B Roanoke VA  
Monday, August 28, 2023  
3:30 – 5:00 p.m.

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<td>1. Welcome</td>
<td>C. Chenery</td>
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<td>4. Provost’s Update</td>
<td>C. Clarke</td>
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<td>5. Top-100 Global University: Virginia Tech’s Cancer Research Initiatives</td>
<td>C. Clarke, D. Sui, M. Friedlander</td>
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<td>6. Agenda Items for Future Committee Meetings</td>
<td>C. Chenery</td>
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<td>7. Adjourn</td>
<td>C. Chenery</td>
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* Requires Full Board Approval  
# Discusses Enterprise Risk Management topic(s)
**Closed Session Agenda**

**ACADEMIC, RESEARCH, AND STUDENT AFFAIRS COMMITTEE**

Tuesday, August 29, 2023

8:45 – 9:15 a.m.

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<td>1. Motion to Begin Closed Session</td>
<td>C. Chenery</td>
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<td>2. Resolutions to Approve Appointments to Emeritus/a Status (2)</td>
<td>C. Clarke</td>
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<td>* 3. Resolution to Approve Appointments Endowed Chairs, Professorships, or Fellowships (24)</td>
<td>C. Clarke</td>
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<td>* 4. Resolution to Approve Appointments with Tenure (18)</td>
<td>C. Clarke</td>
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<td>* 5. Resolution to Approve Faculty Research Leaves (3)</td>
<td>C. Clarke</td>
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<td>7. Motion to End Closed Session</td>
<td>C. Chenery</td>
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<td>8. Report of Closed Session Action items</td>
<td>C. Chenery</td>
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*Requires Full Board Approval*
REPORT

Reappointments to Endowed Chairs, Professorships, or Fellowships (2)

August 28, 2023

The president and executive vice president and provost have confirmed the reappointment of the following faculty to endowed chair, professorship, or fellowship appointments with a salary and/or operating supplement provided by the endowment.

College of Engineering (2)

Stefan Duma

Harry C. Wyatt Professorship

John Little

Charles E. Via, Jr. Professorship in Civil and Environmental Engineering
Cancer Research and Top 100 Global
Academic, Research, and Student Affairs Committee

Dan Sui
Senior Vice President,
Office of Research and Innovation

August 2023
National Cancer Institute Funding – FY23

- University of Virginia
- Virginia Commonwealth University
- Virginia Tech

$Million

25
20
15
10
5
0

University of Virginia
Virginia Commonwealth University
Virginia Tech
Cancer Moonshot Reignited

FACT SHEET: President Biden’s Budget Accelerates Progress Toward the Goal of Ending Cancer as We Know It

MARCH 09, 2023

$2.8 billion for Cancer Moonshot activities at Department of Health and Human Services, Environmental Protection Agency, Department of Veteran Affairs, Department of Agriculture, Department of Defense, and NASA

More than $10 billion at the Department of Health and Human Services for research and translational innovation
National Cancer Plan: Research is the backbone

- The second component of the National Cancer Plan is a set of strategies associated with each goal, describing essential research directions and implementation activities necessary to maximize benefits for everyone.

- The National Cancer Institute and the National Institutes of Health lead this component by supporting a comprehensive research portfolio to achieve each goal.
Publications by field of science

Research talent is nationally dominated by those in health and biomedical areas.

- 50% of postdocs nationally are in health and biosciences, compared to 25% at Virginia Tech.

- National Academy of Medicine members comprise 1/3 of the National Academies membership nationally. Virginia Tech has 0 members in the National Academy of Medicine.
Research Frontiers

**HEALTH**
Leading one health to achieve whole health

**SECURITY**
Innovating for secure and resilient communities

**ARTIFICIAL INTELLIGENCE**
Harnessing artificial intelligence for intelligence augmentation

**QUANTUM**
Advancing the quantum leap
The Animal Cancer Care and Research Center will soon celebrate three years since its opening in Roanoke beside Virginia Tech’s Fralin Biomedical Research Institute in the Riverside Center for Research and Technology.
"A whole health approach changes the paradigm from 'what is the matter with you' to 'what matters to you.'"

-- Karen Roberto, University Distinguished Professor and executive director of the Institute for Society, Culture, and Environment.

Whole Health Consortium expands traditional focus of health and well-being research and practices

May 3, 2023
AI for Pediatric Health and Rare Diseases, an inter-institutional meeting of scientists and innovators co-led by Children’s National Hospital and the Virginia Tech Sanghani Center for Artificial Intelligence and Data Analytics to discuss the potential of artificial intelligence to understand pediatric health.

Pressing Issue: Tackling diseases, particularly cancer, in children, an area that suffers from limited treatment options and inadequate research compared with diseases affecting adults.
“Inaccurate prediction may produce life-threatening consequences. These prediction errors could result in miscalculating the likelihood of a patient dying in an emergency room visit or of surviving cancer.”

-- Daphne Yao, the Elizabeth and James E. Turner Jr. ’56 Faculty and CACI Faculty fellow in the College of Engineering.
Cancer moonshot identifies critical intersections with national security, environmental quality, and community resilience.
Cancer research at Virginia Tech

Where we are
where we’re going and
how we’ll get there

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
Value proposition

- Cancer as major disease/economic health burden
- Many cancers are result of lifestyle/behavior challenges endemic to our region
- Opportunity for VT to serve the public good
- Interface of human and companion animal cancers
- Environment/climate impact on cancer
- Opportunities for multiple VT units/colleges to engage
- Large unrealized extramural funding opportunities
- Advance global reputation
- VT strengths as differentiators
- Multiple experiential learning opportunities
- Strong partners
2,000,000 new cancer cases
600,000 cancer deaths
American Cancer Society, 2023

Cancer will cost the world
$25 trillion over the next 30 years

Nature
March, 2023

Annual economic impact of cancer in US
$450 billion
1.8% of US GDP

The Cancer Atlas, 2022
VT Cancer Research Alliance Faculty Research Areas

- Nanotechnology, point of care diagnostics
- Immunotherapy
- Targeted cancer drug delivery
- Cellular therapy
- Chromosome segregation in cancer, aneuploidy
- Microfluidics, cancer therapy
- Cancer genomics
- Clinical trial design
- Tumor microenvironment
- Circadian rhythms and cancer
- Obesity and cancer
- Exercise and cancer
- Nutrition, processed foods and cancer
- Cancer stem cells
- Behavioral interventions for cancer prevention and relapse
- Radiation damage protection in radiotherapy
- Mathematical modeling and metastasis
- Computational analysis of cancer cell signaling
- Tumor targeting bacteria
- Epigenetics of cancer
- AI and cancer diagnostics
- Cancer imaging
- Non-invasive tumor ablation
Virginia Tech’s differentiators in cancer research

Milk derived exosomes to deliver therapeutics to limit radiation damage in cancer patients

Hi field MRI/PET/FUS

THE LANCET 2022

The Lancet: Almost half of global cancer deaths are due to risk factors, with smoking, alcohol use, and high BMI the greatest contributors

Human behavioral science

Veterinary medicine

Exercise and diet

Nature Medicine, October, 2022
VT’s Center for Health Behaviors Research has a cancer focus

Humans and our companion animals develop many of the same cancers

One medicine
- brain
- oral melanoma
- leukaemia
- lymphoma
- cutaneous melanoma
- breast
- bladder
- prostate
- bone

Approx. 1.66 million diagnoses each year (approx. 500 cases/100,000 population)

Approx. 4.2 million diagnoses each year (approx. 5300 dogs/100,000 population)

One pathogenesis
Major Funding Opportunities

Open Cancer Grand Challenges

• Determine the mechanisms through which obesity and physical activity influence cancer risk

• Develop therapeutics to target oncogenic drivers of solid tumors in children

Pediatric brain cancer research at CNRIC in Washington, DC
VT basic, translational and clinical cancer research network

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

VT Innovation campus
Sanghani Center for AI and data analytics

FBRI/VTCSOM/ACCRC
VT Health Sciences Campus Roanoke

Children’s National Research and Innovation Campus Washington DC

Carilion Clinic Roanoke
Experiential Learning Opportunities in Cancer Research

Associate Professor Jenny Munson and research fellow, Caleb Stine spin out new company from the Fralin Biomedical Research Institute to translate science into personalized brain cancer treatments.

Translational Biology, Medicine, and Health graduate student Hanaa Abdelazim working with mentor, Research Assistant Professor Laura Beth Payne at the FBRI.

VTCSOM medical student, Alexis Dowiak working with Dr. Roger Packer, Director of the Brain Tumor Institute at the Children’s National Hospital on first in human focused ultrasound therapies to open blood brain barrier in children to treat brain cancer.

Undergraduate students, Hezekiah Emmanuel and Baylee Reasor working on breast cancer research with manager Tatiana Boluarte, in FBRI lab of Carla Finkielstein.

Associate Professor Jenny Munson and research fellow, Caleb Stine spin out new company from the Fralin Biomedical Research Institute to translate science into personalized brain cancer treatments.
Funding support for cancer research program growth

- VT Destination Areas Program
- Extramural grants and contracts
- State appropriations
- Capital equipment fund
- Philanthropy