CALL TO ORDER
Dr. Carol Shapiro, Chair of Academic and Health Affairs Committee, called the meeting to order at 9:25 a.m.

APPROVAL OF MINUTES
On motion made and seconded, the Academic and Health Affairs Committee approved the Minutes of the meeting held March 22, 2019. A copy of the minutes can be found on the VCU website at the following webpage http://www.president.vcu.edu/board/committeeminutes.html.

ACTION ITEMS:
Academic Program Proposals:
On motion made and seconded, the Academic and Health Affairs Committee approved a motion
to recommend to the Board of Visitor approval of the following academic proposals: 1). Department of Oral Health and Community Outreach to Department of Dental Public Health and Policy (rename); and 2) Bachelor of Science in Health Services (create a new).

REPORTS
Dr. Gail Hackett provided updates on several reports that the committee had requested regarding approved academic programs and metrics for career planning strategies and online enrollment. She added that a new executive director for Global Education will soon be named and that a search for a new dean of the College of Humanities and Sciences will be launched.

Dr. Marsha Rappley provided an update on the Health Equity Initiative, which involves working with community partners to screen and refer people with complex medical issues to VCU Health System medical units. This is an important opportunity for our students to have a real-world experience in their fields. In addition, The VCU Health Hub @25th has opened and a new dean has been appointed in the College of Health Professions – Susan Parrish will begin on July 1.

Dr. Srirama Rao provided a clear overview of the current landscape of the research and innovation enterprise at VCU. He also provided a preview of some aspirational goals that he and the president are considering. These goals center around five key themes – Human Health, Social Justice and Equity, Human Life, Sustainable Ecosystem and Societal Transformation. A copy of his presentation is attached hereto as Attachment A and is made a part hereof. It was noted that a VCU Research presentation by Dr. Srirama Rao is being planned for the full board this fall.

The student representatives, Jacob Parcell and Dhruv Sethi, provided their last report to the committee and introduced their successors for next year, Samantha Lee and Michael Berger.

Holly Alford finished her four years of service as the faculty representative to the board as well. She reported that the Faculty Senate is sponsoring a symposium for faculty this fall that will help faculty effectively handling, integrating diversity and inclusion in all curriculums and classrooms, as well as faculty mentoring as a strategy for faculty success across the career continuum. Scott Street will be the faculty representative next year and Nancy Jallo will be the alternate.

Nick Fetzer reported that the Staff Senate is in the process of transitioning into an elected body. In addition, the Staff Senate is planning its fourth annual employee appreciation Week next spring. Next year’s staff representatives to the board will be named this summer.

OTHER INFORMATION
The committee requested future reports on the steps needed to ensure that the Massey Cancer Center achieves NCI Comprehensive status and on the current and future relationship of VCU and the BioTech Center.

ADJOURNMENT
There being no further business, Dr. Carol Shapiro, Chair, adjourned the meeting at 11:00.
Board of Visitors
Academic and Health Affairs Committee
May 10, 2019

Research and innovation update
Srirama Rao, Ph.D., vice president for research and innovation
Perspectives of the new vice president for research and innovation ...

... seeking input and feedback
Premier urban, public research university and academic health center committed to:

- Inclusion, access and excellence
- Innovative and transformative learning
- **Impactful research***
- Exceptional patient care
- Beneficial community impact

*QUEST 2025 Goal: National prominence
Promote human health through transformational biomedical and innovative clinical research

Enhance social justice and equity through creative arts, business, humanities, policy and community-engaged research

Advance quality of life and well-being through pharmaceutical engineering, sustainable energy, material and data science

Create a sustainable ecosystem through cutting-edge environmental research

Achieve societal transformation through transdisciplinary research

Nexus of arts, humanities, engineering and medicine
VCU research metrics and highlights
FY2018 VCU Sponsored Program Awards by source and units

Funding by Unit:
- Medicine: $138,612,106
- Wilder School: $337,959
- Other: $513,809,940
- Engineering: $16,158,957
- Pharmacy: $6,826,616
- Dentistry: $6,313,187
- Health Professions: $2,667,406
- Nursing: $3,007,637
- Social Work: $335,076
- Business: $30,250
- Humanities and Sciences: $161,287,154
- Arts (including VCUQ): $39,998,751

Funding by Purpose:
- Research: 47.9%
- Training: 11.4%
- Clinical Trial: 11.0%
- Clinical Research: 4.9%
- Other: 23.5%
- Equipment: 0.1%
- Fellowship: 0.7%
- Outreach: 0.4%

FY 2018: $271,022,724
National rankings (selected)

- NSF Ranking, total R&D expenditures - 67*
- NSF Ranking Federal R&D expenditures, 2017 - 54 *
- Blue Ridge Ranking (NIH Funding), Schools of: Pharmacy -24, Dentistry -26 and Medicine - 60**
- Neuroscience NIH awards received -33, and addiction -15

*NSF ranking out of 400 public universities
**Blue Ridge Ranking, 2018: Pharmacy, out of 92; Dentistry, out of 50; Medicine, out of 147
Of universities nationwide, VCU is:

• One of only 43 with NCI-designated cancer center and the Clinical and Translational Science Award

• One of only 54 designated as “Community Engaged” with “Very High Research Activity” (Carnegie Foundation)

• Top 50 ranked in multiple graduate programs
Technology and Commercialization: licensing, patents, royalties, and startups

**FY 2018:**
- 134 Invention disclosures
- 155 Patents filed
- 30 Patents issued
- $2.7M In licensing revenue

**In the past 10 years:**
- $22M Licensing/royalty revenue
- 2 Selected as best university start-ups
- $64M In equity funding
- 27 Products to market

**Start-ups:**
- 30 Start-ups in 10 years
- 4 Start-ups in 2016-17
- 4 Start-ups in 2017-18
- 12 Start-ups in 2018-19

**Innovation Gateway:** Conduit for proof-of-concept, product development and out licensing

**VCU Ventures:** New focus on start-ups in collaboration with HIC
Advance groundbreaking and transformative research to be “locally relevant, nationally prominent and globally recognized.”
Quest 2025 VCU Research and National Prominence: Current and Future Priorities

Nexus of arts, humanities, engineering and medicine

- Neuroscience (pain and addiction)
- Cancer/cardiovascular and GI
- Drug discovery, development and delivery
- Microbiome, OMICS and data analytics
- New therapies and vaccines
- Children's and women's health

Understanding the basis of life disease and promoting well-being of people
- Pharmaceutical, material, nanomedicine and biomedical engineering
- Cyber-science research
- Artificial intelligence and supercomputing
- Big data and informatics
- Nuclear engineering and physics
- Renewable energy

Enhancing human life through innovation in engineering, arts and social sciences

Enriching the ecosystem via environment and data science
- Clean air and water
- Conservation biology
  - Nanoscience
    - Ecology and evolution
    - Renewable energy
    - Environmental habitat (aquatic and terrestrial)
    - Data science

Addressing social disparities, justice and equity through humanities and the arts
- Equity, social justice and disparity
- Sustainability
- Policy and education
- Community engagement
- Early childhood and nutrition
- Virtual reality, arts, communication and design
Priority: Strategic implementation plan across VCU

Monroe Park Campus Research Initiative
• Community-engaged research, social, environmental and societal well-being
• Art and medicine, virtual reality and AI
• Pharmaceutical and biomedical engineering, renewable energy and cyber initiative

MCV Academic Health Sciences Research
• Massey cancer center – achieving comprehensive status
• Transdisciplinary, neuroscience initiative and building
• Basic and applied research that integrates the academic health center units
• Drug discovery, vaccines, diagnostics and therapeutic

One VCU
• Integrate VCU and VCU Health System to increase and advance clinical research and trials

Health Innovation Consortium
• $7 million funding opportunity (VCU-HS)
Prioritize resources and infrastructure that support:

- **Culture shift**: Focus on interdisciplinary collaboration and cross-functional teamwork

- **Financial resources**: Secure sufficient investments to fund strategic goals/aspirations (institutes, centers and cores)

- **Faculty and student development**: Retain and recruit faculty and trainees who will pursue groundbreaking and transformational research through team science

- **Large, multi-disciplinary, multiple PI grants**: Increase submission of large grants and invest in programmatic staff to assist colleges/schools
• **Innovation:** Accelerate VCU discoveries to the market place

• **Integration:** Brand ONE VCU and promote clinical partnership across all schools and colleges

• **National prominence and outreach:** Communicate research outcomes and impact to stakeholders, RVA, the Commonwealth and beyond...
VCU research – national prominence aspirational goals

**Top 10**
*urban-serving public research university (federal funding)

**Top 50**
**public research university (federal funding)**

$300M
Total R&D funding

5-10% annual increase in FACR (overhead funds)

10-20% increase in licensing and royalty revenue

Top 50
Increase in ranked research programs

5-10% annual increase of student engagement in R&D

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VCU strategic research priorities/goals and implementation plan (2019 -)

* APLU public urban research univs (from total 40); ** NSF Herd ranking (from total of 400)
Questions, comments and feedback
VCU-technology based products in market (selected)
Start-ups and licensing partners (selected)