ACTION ITEMS:

- Minutes of March 21 meeting
- Proposal to move the Post-Baccalaureate Certificate in Care Coordination from the Office of the Senior Vice President for Health Sciences to the School of Nursing Dean’s Office
- Proposal to create a Bachelor of Fine Arts in Emerging Media and Technology – School of the Arts, Qatar Campus
- Proposal to create a Bachelor of Science in Pharmaceutical Sciences – School of Pharmacy

FOR INFORMATION/COMMITTEE REVIEW:

1) Items that may be action items at upcoming committee meeting:
   - none

2) Items that the board needs to be aware of, but will not require action:
   - none

EXECUTIVE REPORTS:

Report from the Provost and Senior Vice President for Academic Affairs

- Provost Fotis Sotiropoulos will report on current faculty retention trends and the initiatives in place for ensuring an infrastructure for continued faculty development.

Report from the Vice President for Strategy, Enrollment Management and Student Success

- Dr. Tomikia LeGrande will provide an update on fall enrollment to date.

Report from the Senior Vice President for Health Sciences

- Dr. Art Kellermann will provide an update on faculty performance and accountability in the health sciences and its alignment with the research strategic plan and with the university’s mission to the Commonwealth.

Report from the Vice President for Research and Innovation

- Dr. Sriram Rao will provide a briefing on VCU’s Research Enterprise that covers an update on technology commercialization including benchmarking (state and nationally) and current/future impact and its applications.
AGENDA

1. CALL TO ORDER
   Coleen Santa Ana and Dr. Gopinath Jadhav, co-chairs

2. ACTION ITEMS:
   Coleen Santa Ana and Dr. Gopinath Jadhav, co-chairs
   Minutes of the March 21, 2022 meeting
   Administrative Change Proposal
   1. Proposal to move the Post-Baccalaureate Certificate in Care Coordination from the Office of the Senior Vice President for Health Sciences to the School of Nursing Dean’s Office
   New Certificate Program Proposals
   2. Proposal to create a Bachelor of Fine Arts in Emerging Media and Technology – School of the Arts, Qatar Campus
   3. Proposal to create a Bachelor of Science in Pharmaceutical Sciences – School of Pharmacy

4. REPORT FROM THE PROVOST
   Dr. Fotis Sotiropoulos, Provost and Senior Vice President for Academic Affairs
   10:50 a.m. – 11:10 a.m.

5. REPORT FROM THE VICE PRESIDENT FOR STRATEGY, ENROLLMENT MANAGEMENT AND STUDENT SUCCESS
   Dr. Tomikia LeGrande, Vice President for Strategy, Enrollment Management and Student Success
   11:10 a.m. – 11:20 a.m.

6. REPORT FROM THE SENIOR VICE PRESIDENT FOR HEALTH SCIENCES/CEO VCU HEALTH
   Dr. Arthur Kellermann, Senior Vice President for Health Sciences/CEO VCU Health
   11:20 a.m. – 11:40 a.m.

6. REPORT FROM THE VICE PRESIDENT FOR RESEARCH AND INNOVATION
   Dr. Srirama Rao, Vice President for Research and Innovation
   11:40 a.m. – Noon
7. OTHER BUSINESS

Coleen Santa Ana and Dr. Gopinath Jadhav, co-chairs

8. ADJOURNMENT

Coleen Santa Ana and Dr. Gopinath Jadhav, co-chairs

**The start time for the Board of Visitors meeting is approximate only. The meeting may begin either before or after the listed approximate start time as Board members are ready to proceed.

The members of the Academic and Health Affairs Committee are: Coleen Santa Ana, co-chair, Gopinath Jadhav, M.D., co-chair, Tonya Parris-Wilkins, D.D.S, vice chair, Andrew C. Florance, Edward L. McCoy, Reverend Tyrone E. Nelson, Stuart C. Siegel and Shantaram Talegaonkar, M.D.
CALL TO ORDER
Dr. Gopinath Jadhav, Co-Chair of the Academic and Health Affairs Committee, called the meeting to order at 9:30 p.m.
OPEN SESSION ITEMS
Ms. Jadhav began by asking the committee to consider items for approval.

On a motion duly made and seconded the following items: 1) Minutes of Dec. 10 meeting; 2) Proposal to create a Graduate Certificate in Business Analytics; 3) Proposal to create a Graduate Certificate in Data Science for Management; 4) Proposal to create a Graduate Certificate in Decision Analytics; 5) Proposal to create a Graduate Certificate in Information Risk, Security, and Assurance; 6) Proposal to create a Graduate Certificate in Supply Chain Management; 7) Proposal to create a Graduate Certificate in Health Care Financial Management; 8) Proposal to change the name of the Department of Rehabilitation Counseling to the Department of Rehabilitation and Mental Health Counseling; and 9) Proposal to change the name of the School of Public Health to the School of Population Health were approved by a roll call vote:

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<thead>
<tr>
<th>Vote</th>
<th>Ayes</th>
<th>Nays</th>
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<tbody>
<tr>
<td>Ms. Coleen Santa Ana, Co-Chair</td>
<td>X</td>
<td></td>
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<tr>
<td>Dr. Gopinath R. Jadhav, Co-Chair</td>
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<td>Dr. Tonya Parris-Wilkins, Vice Chair</td>
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<td>Mr. Edward L. McCoy</td>
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<td>Rev. Tyrone Nelson (not available)</td>
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<td>Mr. Stuart C. Siegel</td>
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<td>Dr. Shantaram Talegaonkar (not available)</td>
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The minutes and proposal briefs for each of these items are attached hereto as Attachment A and is made a part hereof.

REPORTS
Provost and Senior Vice President for Academic Affairs Fotis Sotiropoulos reported on how VCU is preparing students for the future of work through transformative experiences. A copy of Dr. Sotiropoulos’ presentation is attached hereto as Attachment B and is made a part hereof.

Dr. Art Kellermann, senior vice president for health sciences and CEO VCU Health, provided an update on MCV Campus academic leadership and transformative experiences in health programs. A copy of Dr. Kellerman’s update presentation is attached hereto as Attachment C and is made a part hereof.

Dr. Sriram Rao, vice president for research and innovation, provided a briefing on the One VCU Research Enterprise, covering numbers of interest and importance including: sponsored funding YTD trends, NSF ranking and comparisons to peer institutions; progress of the One VCU Research Strategic Priorities Plan and its current funding approaches; and technology commercialization benchmarking and current/future global outreach and applications. A copy of Dr. Rao’s presentation is attached hereto as Attachment D and is made a part hereof.
On motion made and seconded, the Board of Visitors of Virginia Commonwealth University convened a closed session under Section 2.2-3711(A)(2) for the discussion or consideration of admission or disciplinary matters or any other matters that would involve the disclosure of information contained in a scholastic record concerning any student of any Virginia public institution of higher education or any state school system, specifically regarding the selection of the Board of Visitor Student Scholarship recipient which requires disclosure of scholastic records. The motion was approved by roll call vote:

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<td>Ms. Coleen Santa Ana, Co-Chair</td>
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<td>Dr. Gopinath R. Jadhav, Co-Chair</td>
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<td>Dr. Shantaram Talegaonkar</td>
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**Resolution of Certification**

BE IT RESOLVED, that the Committee certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements under this chapter were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion by which the closed session was convened were heard, discussed or considered by the Board.

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<td>Dr. Shantaram Talegaonkar</td>
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</table>

All members present for voting responding affirmatively, the resolution of certification was adopted.

**ADJOURNMENT**
There being no further business, Dr. Jadhav adjourned the meeting at 10:38 a.m.
Virginia Commonwealth University
Proposed Organizational Change

Proposal
The Virginia Commonwealth University seeks approval to move the Post-Baccalaureate (Graduate) Certificate in Care Coordination from the Office of the Senior Vice President for Health Sciences to the School of Nursing Dean’s Office.

Overview
The Post-Baccalaureate (Graduate) Certificate in Care Coordination was approved by the State Council of Higher Education for Virginia in February 2017. The purpose of the certificate program is to educate healthcare professionals in concepts and best practices of care coordination. Upon successful completion of the program, graduates are equipped to help patients and their families who are at risk for excess use of health care to navigate the complex interface among providers, insurers, governmental programs, and community based organizations.

While the certificate is an innovative academic program that provides important training for the future of healthcare. Enrollment has been low despite multiple efforts to attract and retain more students. Moving the certificate to the School of Nursing will allow that academic unit to align recruitment efforts with other ongoing recruitment efforts and provide more support services to the students. In addition, there may be opportunities to align other nursing offerings with certificate offerings, for example a track in care coordination for masters level students.

This proposed change was presented at the November 4, 2021 IPE Advisory Committee meeting which included leaders from College of Health Professions, Dentistry, Medicine, Nursing, Pharmacy, and Social Work. No concerns were indicated.

The Center for Interprofessional Education and Collaborative Care notified the Office of the Senior Vice President for Health Sciences, including Arthur Kellermann on October 21, 2021, and noted no concerns.

Method of Delivery
All courses required for the Post-Baccalaureate (Graduate) Certificate in Care Coordination are delivered in an online delivery format. This organizational change will have no impact on the method of delivery.

Target Implementation Date
July 1, 2022

Demand and Workforce Development
In large part due to the changing healthcare climate from the Affordable Care Act’s (ACA) goal to reduce 30-day preventable hospital readmissions, care coordination has been recognized as a clear societal need in which healthcare professionals need to be better trained in best practices. The Agency for Healthcare Research and Quality (AHRQ) responded by proposing a set of care coordination measures to guide best recommended practices. To say care coordination is a challenging job is an understatement as care coordinators must solve a multitude of intensely complex barriers to patient care every day. Further proving the national support of the care coordination role, the Centers for Medicare and Medicaid Services (CMS) have recognized that care coordination is a critical component of primary care that will contribute to better health of patients and reduced spending. In a policy brief by the American Academy of Nursing’s Care Coordination Task Force, the need for workforce development is clearly delineated as a specific recommendation to help improve sustainability of care coordination. This certificate program is structured to meet not only the recommendations of the AHRQ’s Mechanisms for Achieving Care Coordination in the Care Coordination Measures Atlas, but also to provide the
successful graduate with practical exposure to how to facilitate safe and effective care transitions. Typically healthcare professionals are prepared for their role in care coordination by direct immersion with very little to no formal training, so this curriculum will allow students to have a measurable level of knowledge necessary to utilize effective care coordination strategies. Therefore, participants and employers will find certification appealing because it helps to identify them as experts in their field.

**Impact on Existing Programs**
No impact on existing programs. To date, all the certificate students have not been enrolled in other VCU degree programs. Since offering Post-Baccalaureate (Graduate) Certificate in Care Coordination courses independent of the program, a small but growing group of Master of Social Work students have enrolled.

This organizational change will have no impact on these courses nor the participating programs. The Center for Interprofessional Education and Collaborative Care offers non-certificate IPEC courses in which the following programs participate: BSN, PharmD, MD, DDS, DH, MHA, PT, OT, MPH.

The Council on Education for Public Health (CEPH) competency 21 requires an interprofessional course for all Master of Public Health (MPH) students. Currently, IPEC 501: Foundations in Interprofessional Practice is the required course. Due to its more advanced healthcare focus, IPEC 510 is used as an option for physicians enrolled in the MPH program to satisfy accreditation standards. Since 2018, 1-2 Doctor of Medicine (MD) students in the MPH program have enrolled into IPEC 510. Transferring this program to the School of Nursing has no impact on course content.

Master of Science (MS) degree program in Gerontology with a concentration in geriatric care management requires IPEC 516. Again, transferring this program to the School of Nursing has no impact on course content.

**Impact on Faculty**
The move will have no impact on faculty currently teaching in the program. The program director is full-time faculty in the School of Nursing and 0.2 FTE is currently paid by The Center for Interprofessional Education and Collaborative Care to oversee the certificate and teach two courses. The remainder of the faculty are adjuncts who were identified by the course director and hired and also paid by The Center for Interprofessional Education and Collaborative Care.

- Kimberly Davis (program director): IPEC 510 and 515: Interprofessional Communication and the Care Coordinator I and II
- Ross Airington: IPEC 511: US Healthcare and Care Coordination
- Bonita Hogue: IPEC 512: Healthcare Payment Models and Care Coordination
- Mark Robinson: IPEC 513: Ethical and Legal Consideration in Care Coordination
- Patricia Baker: IPEC 514: Hospital Based Care Coordination
- Angel Daniels: IPEC 516: Community-Based Care Coordination

**Funding**
The School of Nursing has the resources needed to sustain the certificate program. FY22 funding for five adjunct faculty and 0.2 FTE of the program director was $49,351, inclusive of respective FY22 fringe rates. The Center for Interprofessional Education and Collaborative Care established competitive adjunct faculty rates that meet current compensation requirements for adjunct faculty engaged in credit instruction (credit hour minimum for J00001 instructors). The Center for Interprofessional Education and Collaborative Care receives no tuition revenue from any of its offerings. Going forward, the tuition revenue for the certificate will be folded into the model for the School of Nursing and other Schools and Colleges. The School of Nursing has the resources to support faculty, administration, and recruitment/marketing.
**Benefit to University**
The Care Coordination Certificate meets the mission and goals set forth in VCU’s *Quest 2025: Together We Transform*, such as support for real-world learning (e.g. Capstone Projects), interdisciplinary collaborations, and workforce development that seeks to solve complex needs in healthcare.

State Council of Higher Education for Virginia (SCHEV) approval is not required

**Next Steps**
- March 1: Program and Courses Deadline
- March 22: Programs and Courses Meeting
- April 5: University Graduate Council Meeting
- April 28: University Council Subcommittee on Academic Affairs and University Policies Meeting
- *May 5: University Council Meeting*
- *May 2: President’s Cabinet Meeting*
- May 13: Board of Visitors

*Proposals may be presented at the President’s Cabinet meeting prior to the University Council to facilitate Board of Visitors review and approval.*
Virginia Commonwealth University
Proposed Program Brief

Proposal to create a Bachelor of Fine Arts in Emerging Media and Technology

Overview
Virginia Commonwealth University seeks approval to establish a Bachelor of Fine Arts (BFA) degree program in Emerging Media and Technology at the School of the Arts campus in Doha, Qatar (VCUArts Qatar). The program will be administered by the Dean’s Office in the School of the Arts in Qatar. The purpose of the program is to prepare students to work as designers and artists within a spectrum of correlated emerging media and technology fields. The program will provide students with a foundation in the theory and history of digital media art and design, enabling graduates to engage in critical dialogue and contribute meaningfully to the evolving discourse of their field.

Delivery Format
The program will be offered in a face-to-face delivery format.

Target Implementation Date
Fall 2023

Target Population
The intended target audience for the program is individuals interested in enter into a broad range of professions such as game designer, application designer, creative video editing and directing, 2D and 3D modelers and animators, motion graphics artists, sound designers and performers, interactive media designers, and immersive media consultants, particularly in the Middle East and North Africa Region.

Impact on Existing Programs
The BFA in Emerging Media and Technology is not similar or related to an existing degree program at Virginia Commonwealth University. The BFA in Emerging Media and Technology will not compromise any existing degree programs. No programs will close as a result of the initiation and operation of the program.

Impact on Faculty
Ten full-time faculty will teach in the program. The faculty members teaching program have a combined 70 years of teaching experience in art and design, computerized digital imaging, new media, graphic design, digital animation, and other related disciplines. Each faculty member holds a terminal degree in their respective field.

Funding
Virginia Commonwealth University and the VCU School of the Arts in Doha, Qatar have all of the faculty, classified support, equipment, space, library, and other resources necessary to launch the program. All new hires will be supported by tuition and fees generated through student enrollment. The program will be supported by resources already in place to sustain existing academic programs, including student support services (enrollment services, library support, and career services) and faculty support services (advising, ALTLab, and CTLE).

Next Steps
April 28 - University Council subcommittee on Academic Affairs and University Policies (UC-AAUP)
May 5 - University Council Meeting
Electronic vote - President’s Cabinet Meeting
May 13 - Board of Visitor's Meeting
Proposal to create a Bachelor of Science in Pharmaceutical Studies

Overview
Virginia Commonwealth University (VCU) seeks approval to create a Bachelor of Science degree program in Pharmaceutical Sciences (BSPS). The purpose of the degree program is to train students to work in entry-level positions, and to serve as a pipeline into advanced programs of study (e.g., M.S. or Ph.D. in Pharmaceutical or Biomedical Sciences; Pharm.D.). Students will develop the appropriate knowledge, skills and abilities to address problems in pharmaceutical sciences.

Delivery Format
The degree program will be offered in a face-to-face delivery format.

Target Implementation Date
Fall 2023

Target Population
The intended target audience for the degree program is individuals interested in working in a variety of settings, including but not limited to, pharmaceutical and biotechnology companies, research facilities, regulatory agencies, and laboratories such as the National Institutes of Health, as well as those interested in pursuing advanced programs of study (e.g., M.S. or Ph.D.; Pharm.D.).

Impact on Existing Programs
Virginia Commonwealth University would be the first public institution in Virginia to offer a standalone BS degree program in Pharmaceutical Sciences. No public institution in the state offers a similar or related degree program. No degree programs will close because of the initiation and operation of the degree program. The degree program will be distinctly different from existing bachelor’s degrees in chemistry and biology because of the emphasis on pharmaceutical science courses.

Impact on Faculty
The School of Pharmacy Dean’s Office will hire one faculty member to serve as program director and advisor and one academic advisor to support the program in its initiation year. Faculty from existing programs will teach courses to support the BSPS degree. These faculty will come from the School of Pharmacy with additional faculty resources from the College of Humanities and Sciences. Adjunct faculty will not be required to initiate or sustain the program. Two graduate assistants are required to initiate or sustain the core courses of the degree program beginning fall 2025. Additional faculty and academic advisors will be hired based on enrollment.

Funding
The program will be supported by resources already in place to sustain existing academic programs, including student support services (enrollment services, library support, and career services) and faculty support services (advising, ALTLab, and CTLE). All funding will come from school resources and tuition and fees generated through student enrollment.

Next Steps
April 28 - University Council subcommittee on Academic Affairs and University Policies (UC-AAUP)
May 5 - University Council Meeting
Electronic vote - President’s Cabinet Meeting
May 13 - Board of Visitor's Meeting
Faculty are critical to VCU’s mission and the vibrancy of the student and patient experience.

The Future of Faculty: Building a culture of care and commitment to excellence

VCU Board of Visitors | May 12, 2022
Fotis Sotiropoulos, Ph.D.
Provost and Senior Vice President for Academic Affairs
Faculty Groups

Tenured
Tenure Track
Term
Adjunct

Full-Time Faculty: includes tenured, tenure track and term faculty

See appendix for definitions and faculty composition
Current State: Percentage of Female and Minoritized Full-Time Faculty

Successes:
- Significant five-year % growth among Black/African American, Hispanic, and Asian faculty.
- VCU’s percentage of minoritized full-time instructional staff is the highest among all VA public institutions.
- VCU’s percentage of minoritized tenured/tenure track faculty is above the average of all VA R1s.

Challenges:
- While we are increasing diversity, our faculty is not representative of our student population.
Successes:

- Retention rates are consistent across demographics.
- One- and two-year retention is improving.
- Two-year retention rates for tenured/tenure track faculty are higher than the overall rate.

Challenges

- At year three, we are losing nearly 25% of new faculty, which carries implications for costs, faculty collaborations, and student success.
Current State: Percentage of Full-Time Faculty Turnover

Successes:
- Turnover rates for minoritized and tenure track faculty are lower than the overall rate.

Challenges:
- Turnover rate is steady rather than declining.
- National data indicate that faculty cite quality of colleagues, salary, and leadership style as important factors influencing retention.

Source: VCU Census 2
Diversity: Reduce the imbalance in faculty diversity compared to student diversity.

Retention: Increase retention of full-time faculty overall with a particular focus on year two and three.

Enhanced Faculty Experience: Implement year long onboarding and multi-pronged approaches to mentoring.

Collaboration: Increase engagement opportunities for transdisciplinary teams to advance innovative teaching & research.

Integration of Faculty Data: Institute a culture of using data to inform strategies to support and retain faculty.

“...We (partner and faculty) felt valued with our salaries, and we also felt invested in by the University so that our talents and passions could be utilized. We were also brought into conversations about what we could be a part of and how our careers could grow and how we could make an impact. We were given the runway to build and create initiatives, programs, and/or centers to further help develop the VCU culture and make VCU and the Richmond community a more compassionate and better place to work, live, and thrive.

- Recently Retained School of Business, Associate Professor
This is a scholarly analytic tool that incorporates nationwide information for discipline specific benchmarks to recognize excellence and generate discussions for opportunities.

In this example of one VCU department, there are many early-mid career faculty with research/scholarly activity above the mean of all national institutions.

This information can guide retention, coaching strategies and inform development plans.
Jay Albanese, Ph.D. is a professor in the L. Douglas Wilder School of Government & Public Affairs and 2022 recipient of a State Council of Higher Education for Virginia Outstanding Faculty Award.

"He is the epitome of excellence both inside and outside of the classroom. It is the rare professor who glides seamlessly across international and national professional and academic audiences, while being dedicated to changing the lives of his students." Susan Gooden, Dean, L. Douglas Wilder School of Government and Public Affairs
The Full Circle Faculty Learning Community provides the opportunity for faculty to explore, question, and prepare for promotion to Professor. Sharing this (virtual) space with others helped me prioritize time to reflect on my professional trajectory, contribution and impact -- and focus on what a path to promotion might look like for me.

- Participant in Spring 2022 Faculty Learning Community to discuss and develop a plan for promotion to full professor
Appendix
Appendix: Definitions of Faculty Positions

**Tenured**: full-time faculty with tenure who have teaching, research and service responsibilities. The faculty are mainly composed of associate and full professors.

**Tenure Track**: tenure-eligible full-time faculty who have teaching, research and service responsibilities. The faculty are mainly composed of assistant professors.

**Term**: full-time non-tenure eligible teaching or research and service responsibilities. The faculty are mainly composed of instructors, assistant, associate and full professors.

**Adjunct**: part-time non-tenure eligible teaching appointments.

**Full-Time Faculty**: includes all full-time faculty engaged in teaching, research and service responsibilities (tenured, tenure eligible, term). This group is often referred to as teaching and research (T&R) faculty. Excludes adjunct faculty.

**Tenured/Tenure Track (T/TT)**: includes both tenured and tenure eligible faculty engaged in teaching, research and service responsibilities.
Overview of Faculty Positions

Source: VCU Census 2

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Appendix: Examples of Building a Culture of Care - A Holistic Approach to Faculty Success

Reimagining the faculty experience
- Shift to year-long onboarding experience
- Diverse team-based mentoring
- Create faculty learning communities/career pathways programs (i.e., promotion from associate to full professor, leadership development, the role of the department chair)

Connect, discover and engage
- Provide an environment for advancing knowledge and access to shared resources (i.e., electronic platform that is a “one-stop” for faculty career development opportunities, policies, funding)
- Strengthen collaborations across VCU to build individual faculty relationships and strengthen unit level partnerships (i.e., theme based “pop-up” discussions, faculty learning communities centered on research or teaching themes)

Support excellence
- Promote innovative teaching and learning to strengthen student engagement, knowledge and retention
- Advance collaborative scholarly and creative expression to impact research funding, honorific awards and knowledge creation
- Ensure equitable policies and practices
- Proactively celebrate and reward excellence
Two Organizations: One VCU

VCU Health System Authority
- Hospitals
  - VCU Medical Center
  - VCU Health Community Memorial Hospital
  - VCU Health Tappahannock Hospital
- Physician Groups
  - VCU Health CMH Physicians
  - VCU Health MCV Physicians
- Other
  - VCU Health Ambulatory Surgery Center
  - VCU Health Children’s Services at Brook Road
  - VCU Health Continuing Education

VCU Health Sciences
- College of Health Professions
- School of Dentistry
- School of Medicine
- School of Nursing
- School of Pharmacy
- Research Centers and Institutes
  - VCU Johnson Center for Critical Care and Pulmonary Research
  - VCU Massey Cancer Center
  - VCU Health Harold F. Young Neurosurgical Center
  - VCU Health Hume-Lee Transplant Center
  - VCU Health Pauley Heart Center
  - VCU Medical Center Evans-Haynes Burn Center
  - VCU Medical Center Trauma Program

VCU Colleges and Schools
- College of Engineering
- College of Humanities and Sciences
- Graduate School
- L. Douglas Wilder School of Government and Public Affairs
- School of the Arts
- School of Business
- School of Education
- Richard T. Robertson School of Media and Culture
- School of Social Work
- School of World Studies
The Power of Partnerships
By the Numbers (FY21)

1,079
Licensed Beds

13,000+
Team Members

800+
Physicians

500+
Advanced Practice Professionals

200+
Clinical Specialties

19
Clinical Departments

548
Patients enrolled in clinical trials

2,591
Patients in research studies

394
Studies open to enrollment

244
Clinical trials open to enrollment

$362.9M
Total Amount of Research Awards

4,119
Total Students

782
Total Residents*

2021 Enrollment by College or School

11%
Pharmacy

12.3%
Dentistry

22.1%
Nursing

26.2%
Health Professions

28.4%
Medicine

*as of Fall 2021
Our formula for success

- Recruit, build, and retain stars
- Nurture a culture of teamwork, transparency & accountability
- Recognize, celebrate and reward faculty achievement – individually and as teams
- Remediate underperformers who want to improve. Repurpose those who are better suited to different roles
- Remove obstacles and impediments to faculty, staff and student success
- Relentlessly market that VCU an ideal place to make a difference
Recent Additions to Our Leadership Team

- **Mike Roussos**, President, VCU Medical Center
- **Silvia Munoz-Price, M.D., Ph.D.**, Chief Quality and Safety Officer, VCU Health
- **David Chelmow, M.D.**, Professor of Ob/Gyn; Interim Dean, VCU School of Medicine
- **Brett McMillan**, VP Revenue Cycle, VCU Health
- **Michael Elliott, Pharm.D., MSHA, FACHE**, Chief Operating Officer, VCU Health (effective May 15!)
- **Brian Jenkins**, Chief Real Estate Officer, VCU Health
- **KC Ogbonna, Pharm.D., MSHA**, interim Dean designee, VCU School of Pharmacy
- **Shari Barkin, M.D., MSHS**, Chair designee, Dept of Pediatrics & Physician-In-Chief, CHoR
- **Lyndon Cooper, DDS, PhD.**, Dean, VCU School of Dentistry
VCU Health System Strategic Plan Pillars: FY2023-FY2028
Goals, Objectives and Enablers

**Workforce Wellness**
- We commit to strengthening our work culture to be supportive, inclusive, equitable and innovative.

**Patient Centered Care**
- We provide patients with prompt access to safe care; a great experience, and optimal clinical outcomes across the VCU Health Continuum.

**Advance Health Equity**
- We provide equitable care to all patients and communities while acknowledging their unique needs.

**Innovative Research & Education**
- To improve health through exceptional and innovative discovery, training and patient care.

---

**Strategic Enablers**
- Operations and Facilities
- Safety and Quality
- Clinical Leadership
- Marketing & Communications
- Strategic Growth Governance
- Financial
- DEI and HR teams
- Technology
- Analytics & Data Management, EPMO

---

**Goals & Objectives**

---

VCU Health
For us, this isn’t a business. It’s our mission.
Background Material on Faculty Impact

Dr. Art Kellermann
Senior VP Health Sciences & CEO VCU Health System
May 2022
Faculty Impact: College of Health Professions

Since 2018:

- Enrollment: up 21%
- Research awards: up 78%
- Graduate student diversity: up 10%
- Board exam pass rates: >95%
- Student retention: >90%
- On-time graduation: >90%
- Employment in field: >95%

- Four campuses: RVA, Roanoke, Abingdon & Alexandria
- Diversifying CHP’s Leadership & Faculty: Since FY19, ~54% of new faculty hires are from under-represented minority groups
- Fall 2021 enrollment: 1,079
- US News & World Report Rankings
  #1 Nurse Anesthesia
  #4 Rehab Counseling
  #5 Health Administration
  #15 Occupational Therapy
  #20 Physical Therapy

May 2022
Faculty Impact: School of Dentistry

• Fall 2021 enrollment: 505
  • B.S. in Dental Hygiene: 31
  • Doctorate of Dental Surgery: 407 (Includes 30 International Dentist Program students)
  • Advanced Education Programs: 55
  • Graduate Research Programs: 12
  • >90% board exam pass rate; ~95% acceptance to advanced education programs

• Ranked #17 among all U.S. dental schools in NIH research funding, rising 25 spots in the past 10 years*

• Provided oral health care to 32,000+ community members in 2021

• Commitment to Equity & Community
  • Home to the VCU iCubed Transdisciplinary Oral Health Core
  • DEI Director, Dr. Carlos Smith, is leading national diversity and inclusion collaborations at U.S. dental schools and universities
  • Our service-learning program partners with dental safety-net clinics to provide oral health care to communities in need
  • Resumed “Missions of Mercy” (MoM) collaborations with the Virginia Dental Association Foundation

*Source: Blue Ridge Institute for Medical Research
Faculty Impact: School of Medicine

- Fall 2021 enrollment: 1,171
- 989 full-time faculty:
  - M.D. Clinical - 660
  - Teaching/Research – 274
  - Non-M.D. Clinical – 55
- Clinical work vital to VCU Health’s reputation and success
- >$182M in extramural research funding in 2021:
  - 37.2% increase from 2017
  - Ranked #64 nationally in FY 2021*
- >$85M in philanthropy in 2021 + a $104M gift in first qtr. of 2022!!
- Overall student satisfaction with medical education: 91.5% (versus 88.6% for all schools nationally)
  - MD-PhD program is now an NIH-funded Medical Scientist Training Program
  - 75% of our Ph.D. students graduate in six years - National average is less than 50%)
  - National media success for faculty research and clinical news stories resulting in 8.3 billion in reach from 1,978 hits - Aug 2020 - Aug 2021

*Source: Blue Ridge Institute for Medical Research
Faculty Impact: School of Nursing

- Fall 2021 enrollment: 912
  - 538 undergraduates + 374 graduate students
- 105 faculty = 55 full and part-time + 50 adjunct
- Our BS, MS, DNP, and post-professional certificate programs are CCNE-accredited through 2031
- Our undergrad nursing program is ranked #27 (in top 4% of all undergrad nursing programs nationwide)
- >$8 million in research awards: #1 among Virginia nursing schools*
  
  Examples:
  - LEGACI Study - part of a $470 million NIH national project
  - Mindful Moms Project – $2.4M NIH and NINR funded study
  - Alzheimer’s Health Disparities – Part of a $1.2M HHS grant
- Richmond Health and Wellness Program
  - Nationally recognized community-based initiative that improves the health and wellbeing of low-income older adults and those with disabilities
  - Supports inter-professional education, practice and research

*Source: Blue Ridge Institute for Medical Research
Faculty Impact: School of Pharmacy

• Fall 2021 enrollment: 453
• $7.9M in NIH funding (23% increase from the prior year and the highest level in school history)
• Ranked in US News’ top 20
• #25 in the nation among Pharmacy Schools for NIH funding
• Faculty conduct collaborative research with the Massey Cancer Center, the SOM, College of Health Sciences and College of Engineering; SoP colleagues have submitted a research center proposal for VCU Drug Discovery
• SoP faculty members direct Massey core labs in genomics, proteomics and structural biology
• Highest rated VCU academic unit in 2021 for VCU Models of Inclusive Excellence; 97% of School Faculty and Staff members noted that the School is “Welcoming to individuals with diverse backgrounds”
One VCU Sponsored Research - YTD Trends

Variance (YTD) from FY2021: $30.7M (12%▲)

Cumulative Award Dollars by Fiscal Month
FY18 - FY22

Year-over-Year Growth in Sponsor Dollars
Current FY results are through April 13, 2022.

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>$276,789,748</td>
<td>$362,906,366</td>
</tr>
<tr>
<td>2021</td>
<td>$335,125,866</td>
<td>$310,216,377</td>
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<tr>
<td>2020</td>
<td>$271,022,724</td>
<td>$275,420,834</td>
</tr>
<tr>
<td>2019</td>
<td>$271,199,199</td>
<td>$271,199,199</td>
</tr>
<tr>
<td>2018</td>
<td>$271,022,724</td>
<td>$275,420,834</td>
</tr>
<tr>
<td>2017</td>
<td>$275,420,834</td>
<td>$271,199,199</td>
</tr>
<tr>
<td>2016</td>
<td>$271,199,199</td>
<td>$271,199,199</td>
</tr>
</tbody>
</table>

Annual Growth Rate Over Previous Year
Only completed fiscal years. 2016 rate not shown because 2015 data not included.

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>8%</td>
</tr>
<tr>
<td>2020</td>
<td>8%</td>
</tr>
<tr>
<td>2019</td>
<td>14%</td>
</tr>
<tr>
<td>2018</td>
<td>-2%</td>
</tr>
<tr>
<td>2017</td>
<td>2%</td>
</tr>
</tbody>
</table>

YTD: April, 13, 2022
Technology Commercialization

10 years of impact

- New products to market: 49
- Licensing revenue: >$28M
- Invention disclosures: 1,213
- Patents filed: >1,540
- Licenses/Options: 172
- Patents issued: 192
- Start-ups: 55+
- In start up funding: $70M

FY2021

$3.76M
160
164
24
27
7
FY2020 Technology Commercialization
Virginia R1 Universities Peer Analysis*

**Start-ups**
- VCU: 7
- UVA: 6
- VT: 6
- GMU: 4

**Licensing Income**
- UVA: $3.3M
- VCU: $2.5M
- VT: $1.4M
- GMU: $0.17M

*Source: FY2020 AUTM data
AUTM is the Association of University Technology Masters*
## FY2020 Technology Commercialization Virginia Peer Analysis

<table>
<thead>
<tr>
<th></th>
<th>Research Expenditures</th>
<th>Invention Disclosures</th>
<th>Patent Applications</th>
<th>Licenses + Options</th>
<th>*Licensing Income</th>
<th>Patents Issued</th>
<th>Start-ups</th>
<th>Licensing FTEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCU</td>
<td>$283M</td>
<td>133</td>
<td>128</td>
<td>22</td>
<td>$2.9M</td>
<td>17</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>UVA</td>
<td>$654M</td>
<td>241</td>
<td>185</td>
<td>83</td>
<td>$3.4M</td>
<td>56</td>
<td>6</td>
<td>6.6</td>
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<tr>
<td>VT</td>
<td>$556M</td>
<td>127</td>
<td>90</td>
<td>27</td>
<td>$1.4M</td>
<td>21</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>GMU</td>
<td>$200,000</td>
<td>40</td>
<td>n/a</td>
<td>6</td>
<td>$0.17M</td>
<td>n/a</td>
<td>4</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Source: FY2020 AUTM data

*Royalties, out-licensing, equity
## Technology Commercialization

### FY2020 Peer Analysis of 19 Public Universities

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>TOTAL RES. EXPENDITURES</th>
<th>INVENTION DISCLOSURES</th>
<th>PATENT APPLICATIONS</th>
<th>LICENSES &amp; OPTIONS</th>
<th>LICENSING INCOME</th>
<th>ISSUED PATENTS</th>
<th>START-UPS</th>
<th>LICENSING FTEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Louisiana State University</td>
<td>$356,036,000</td>
<td>197</td>
<td>134</td>
<td>56</td>
<td>$8,553,734</td>
<td>44</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>University of South Florida</td>
<td>$353,737,000</td>
<td>189</td>
<td>n/a</td>
<td>102</td>
<td>$1,776,745</td>
<td>n/a</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>University of Kentucky</td>
<td>$350,012,433</td>
<td>117</td>
<td>165</td>
<td>17</td>
<td>$2,943,622</td>
<td>38</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Medical College of Wisconsin</td>
<td>$307,519,000</td>
<td>50</td>
<td>67</td>
<td>14</td>
<td>$294,000</td>
<td>10</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Utah State University</td>
<td>$304,255,724</td>
<td>51</td>
<td>26</td>
<td>22</td>
<td>$1,698,829</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>Temple University</td>
<td>$299,707,000</td>
<td>92</td>
<td>91</td>
<td>20</td>
<td>$1,191,573</td>
<td>22</td>
<td>3</td>
<td>5</td>
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<tr>
<td>University of Hawaii</td>
<td>$296,887,000</td>
<td>65</td>
<td>42</td>
<td>13</td>
<td>$220,647</td>
<td>10</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Virginia Commonwealth University</td>
<td>$283M</td>
<td>133</td>
<td>128</td>
<td>22</td>
<td>$2,480,057</td>
<td>17</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>University of Oklahoma</td>
<td>$287,151,848</td>
<td>51</td>
<td>51</td>
<td>5</td>
<td>$3,832,716</td>
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<td>4</td>
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<tr>
<td>University of Connecticut</td>
<td>$280,131,000</td>
<td>102</td>
<td>126</td>
<td>14</td>
<td>$838,713</td>
<td>24</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>University of Kansas</td>
<td>$275,401,741</td>
<td>62</td>
<td>103</td>
<td>35</td>
<td>$8,087,081</td>
<td>27</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Medical University of South Carolina</td>
<td>$271,300,000</td>
<td>156</td>
<td>56</td>
<td>19</td>
<td>$1,010,541</td>
<td>20</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Oregon State University</td>
<td>$268,385,000</td>
<td>100</td>
<td>79</td>
<td>51</td>
<td>$3,800,619</td>
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<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Mississippi State University</td>
<td>$264,526,000</td>
<td>23</td>
<td>20</td>
<td>10</td>
<td>$164,000</td>
<td>1</td>
<td>3</td>
<td>3.75</td>
</tr>
<tr>
<td>Clemson University</td>
<td>$263,403,000</td>
<td>69</td>
<td>39</td>
<td>13</td>
<td>$315,578</td>
<td>12</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>University of Cincinnati</td>
<td>$262,444,482</td>
<td>148</td>
<td>117</td>
<td>23</td>
<td>$791,235</td>
<td>36</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Auburn University</td>
<td>$255,281,000</td>
<td>60</td>
<td>113</td>
<td>22</td>
<td>$4,609,824</td>
<td>17</td>
<td>1</td>
<td>2.6</td>
</tr>
<tr>
<td>University of New Mexico</td>
<td>$243,375,266</td>
<td>127</td>
<td>258</td>
<td>47</td>
<td>$52,341,706</td>
<td>46</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Wayne State University</td>
<td>$243,259,000</td>
<td>47</td>
<td>67</td>
<td>7</td>
<td>$817,203</td>
<td>23</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>VCU Peer Rank (out of 19)</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td>11</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>VCU National Rank (out of 183)</td>
<td>81</td>
<td>66</td>
<td>63</td>
<td>89</td>
<td>89</td>
<td>106</td>
<td>35</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: FY2020 AUTM data
Percent of VCU licenses going to start-ups

- 55+ Start-ups
- 8 products
- $76 Million in funding

Source: FY2020 AUTM data
VCU Research drives innovation to the marketplace

VCU Start-ups over the past 10 years

55+ Startups | $76M Funding | 8 Products

[Logos of various startups]
Impactful Innovators and Entrepreneurs

- Wound Healing Patch
- Clotting Bandage
- Sickle Cell Drug
- Lyme Disease Vaccine
- Venting and Feeding Device for Infants
- Biofilm for Infection Prevention
- Automated Detection of Sexual Assault DNA
- Early Detection of Parkinson’s Disease
- V-Coach – App for Mindfulness
- VR for Improving End of Life Quality
Therapies for sickle cell, cancer, inflammation

Anti-sickling compounds

Anti-cancer

Cardiovascular and anti-inflammatory
Two revolutionary VCU products Innovation Gateway guided on their journey to the market:

Vanguard® crLyme A Chimeric Recombinant Vaccine for Dogs: the best-selling Lyme disease vaccine for dogs in the U.S.
- $5.2M in total royalties in 6 years
- Sponsored Research Funding > $8 million
- Pipeline of new products:
  - Diagnostics products (Lyme, Leptospirosis, Anaplasmosis)
  - Human Lyme vaccine
  - Vaccines for other tick-borne diseases (Leptospirosis, Anaplasmosis)

Vanguard® crLyme A Chimeric Recombinant Vaccine for Dogs: the best-selling Lyme disease vaccine for dogs in the U.S.
- $5.5M in total royalties
- ImmunoCAP Tryptase: the only WHO-recommended and FDA approved Assay for Systemic Mastocytosis
VCU Start-up Pipeline

Coaching Need

Maturity Level

Challenge: Funding, equity, royalty

higher potential

Life science
### VCU Innovation Gateway:

**Average start-up terms by select universities** *(for devices and therapeutics)*

<table>
<thead>
<tr>
<th>University</th>
<th>Equity</th>
<th>Royalty</th>
<th>Third Party Payments</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCU</td>
<td>5-10%</td>
<td>3-7%</td>
<td>35-15%</td>
<td>Anti-dilution to $1-2MM; 15% equity before 2010 and start-ups raised VC$; One going to IPO - 15% equity and 3% royalty for therapeutics</td>
</tr>
<tr>
<td>Georgia Tech</td>
<td>2-5%</td>
<td>3-5%</td>
<td>35-10%</td>
<td>Do not share equity with inventors/founders. Nothing special for engineering inventions</td>
</tr>
<tr>
<td>UVA</td>
<td>5-7%</td>
<td>2-4%</td>
<td>35-15%</td>
<td>Sublicensing is 20-25% on average. Anti-dilution through Series A.</td>
</tr>
<tr>
<td>NYU</td>
<td>5-10%</td>
<td>4-7%</td>
<td>25-10%</td>
<td>Do not share equity with inventors/founders</td>
</tr>
<tr>
<td>Columbia</td>
<td>5%</td>
<td>3-5%</td>
<td>market</td>
<td>Anti-dilution through Series A</td>
</tr>
<tr>
<td>Univ Michigan/ Michigan State</td>
<td>3-10%</td>
<td>5-10%</td>
<td>40-25%</td>
<td>Anti-dilution through $1.5-2 MM</td>
</tr>
<tr>
<td>AUTM averages</td>
<td>4%</td>
<td>2-6%</td>
<td>25%</td>
<td>$ are made from royalties not from cashing equity; usually from 1 patent</td>
</tr>
</tbody>
</table>
VCU Commercialization Vision for Growth:

Goals for the next 6 years

**Present State (2022)**

- **$3.7M** Licensing revenues/year
- **Inconsistent growth**
  Issued patents
- **10-20% yearly growth**
  Cash revenues
- **6-7 start-ups**
  Slow growing, faculty-run

**Future State (2028)**

- **$8-10M** Licensing revenues/year
- **40+**
  Issued patents/year
- **1-2**
  VC rounds or Exits/year
- **10-15 start-ups**
  Per year
- **Fast growing start-ups**
  Fast-funded; CEO-run
How do we achieve this vision?

Communications and Connections

- **Communicate** the program to VCU colleges, schools and faculty inventors
- **Engage** senior VCU leadership and VCU alumni office – mentors, access to advisory boards, corporate connections, smoothing VCU policy and process

Ecosystem Support
Talent, capital, infrastructure

Team

Highly experienced
New Ventures Director

Entrepreneurs-in-Residence and experienced CEO candidates

Support from Innovation Gateway team – vetting, triage, IP protection

VCU student engagement – bring talented students into spinouts, perhaps support selected student startups

Capital

VCU PoC; VIPC
VCU

SEED CAPITAL
Build access to RVA and VA Angels

VENTURE CAPITAL

Venture Fund? (Future)
Leap of Faith: Former VCU cancer researcher becomes CEO of a company studying therapy he invented

VCU researcher developing methods to mass-produce eco-friendlier aerogels

Meet The Nuzzi, a VCU-born breastfeeding aid
Questions and Comments