

**CONFIDENTIAL SUMMARY
ACADEMIC AND HEALTH AFFAIRS COMMITTEE
OF THE BOARD OF VISITORS
September 15, 2022
OPEN SESSION**

ACTION ITEMS:

- Minutes of May 12, 2022 meeting
- Academic and Health Affairs Committee Charter and Planner (annual review)

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:
 - Report from the Vice President for Research and Innovation
 - Dr. Srirama Rao will provide a short, written update on the One VCU Research Strategic Priorities Plan.
 - Report from the Vice President for Strategy, Enrollment Management and Student Success
 - Dr. Tomikia LeGrande will provide an enrollment report to the full board on Sept. 16, 2022.

EXECUTIVE REPORTS:

Report from the Provost and Senior Vice President for Academic Affairs

- Provost Fotis Sotiropoulos will join a panel of VCU undergraduate students in providing a report on transformative experiences for students, generally, and problem-based learning, specifically. Transformative experiences bridge the gap between the classroom and the real world, and empower students to develop skills that are reinforced by mentorship and critical reflection. Problem-based learning focuses on real-world problems and provides a deeper, more active and engaging learning experience for students. Examples include: capstone, research, lab experience, independent study, interprofessional collaboration, entrepreneurship and innovation.

Report from the Senior Vice President for Health Sciences

- Dr. Art Kellermann will provide a report on how faculty, staff and students on the MCV campus engage with students throughout the university.



**VIRGINIA COMMONWEALTH UNIVERSITY
BOARD OF VISITORS
ACADEMIC AND HEALTH AFFAIRS COMMITTEE
2:45 PM¹
SEPTEMBER 15, 2022
JAMES BRANCH CABELL LIBRARY ROOM 303
RICHMOND, VIRGINIA
AGENDA**

- | | |
|--|--|
| 1. CALL TO ORDER
2 minutes (2:45 - 2:47 p.m.) | Dr. Tonya Parris-Wilkins, Chair |
| 2. ACTION ITEMS:
5 minutes (2:47 - 2:52 p.m.)

a. May 12, 2022 meeting minutes
b. Committee Charter and Planner | Dr. Tonya Parris-Wilkins, Chair |
| 3. REPORT FROM THE PROVOST
40 minutes (2:55 - 3:35 p.m.) | Dr. Fotis Sotiropoulos, Provost and Senior Vice President for Academic Affairs |
| 4. REPORT FROM THE SENIOR VICE PRESIDENT FOR HEALTH SCIENCES
20 minutes (3:35 - 3:55 p.m.) | Dr. Arthur Kellermann, Senior Vice President for Health Sciences and CEO VCU Health |
| 5. OTHER BUSINESS | Dr. Tonya Parris-Wilkins, Chair |
| 6. ADJOURNMENT | Dr. Tonya Parris-Wilkins, Chair |

In accordance with the Board's operating procedures and in compliance with the Virginia Freedom of Information Act, there will be no opportunity for public comment at this meeting.

¹ 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.



**VIRGINIA COMMONWEALTH
BOARD OF VISITORS
ACADEMIC AND HEALTH AFFAIRS COMMITTEE
May 12, 2022
James Branch Cabell Library
901 Park Avenue – Room 303
RICHMOND, VIRGINIA
& VIRTUAL**

MINUTES

DRAFT

COMMITTEE MEMBERS PRESENT

Dr. Gopinath Jadhav, *Co-Chair*
Ms. Coleen Santa Ana, *Co-chair*
Mr. Edward L. McCoy
Rev. Tyrone E. Nelson
Mr. Stuart C. Siegel

COMMITTEE MEMBERS PRESENT VIRTUALLY

Dr. Shantaram Talegaonkar

MEMBERS NOT PRESENT

Dr. Tonya Parris-Wilkins, *Vice Chair*
Mr. Andrew Florance

OTHERS PRESENT

President Michael Rao
Mr. Ben Dendy, *Rector*
Ms. Carolina Espinal, *Vice Rector*
Dr. Fotis Sotiropoulos, *Provost and Senior Vice President for Academic Affairs*
Dr. Art Kellermann, *Senior Vice President for Health Sciences and CEO of the VCUHS*
Dr. Charles Klink, *Senior Vice Provost for Student Affairs*
Dr. Tomikia LeGrande, *Vice President for Strategic Enrollment Management and Student Success*
Dr. Aashir Nasim, *Vice President for Inclusive Excellence*
Dr. Srirama Rao, *Vice President for Research and Innovation*
Ms. Jamie Stillman, *Director of Strategic Communications, Office of the Provost*
Members of the VCU Board of Visitors
Presidential Cabinet of VCU
VCU students, faculty and staff
Member of the Media

CALL TO ORDER

Ms. Coleen Santa Ana, Co-Chair of the Academic and Health Affairs Committee, called the meeting to order at 10:45 a.m.

OPEN SESSION ITEMS

Ms. Santa Ana began by asking the committee to consider items for approval.

On a motion duly made and seconded the following items: 1) Minutes of March 21, 2022 meeting; 2) 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; 3) Proposal to create a Bachelor of Fine Arts in Emerging Media and Technology in the School of the Arts, Qatar Campus; and 4) Proposal to create a Bachelor of Science in Pharmaceutical Sciences in the School of Pharmacy were approved by a roll call vote:

<u>Vote</u>	<u>Ayes</u>	<u>Nays</u>
Ms. Coleen Santa Ana, Co-Chair	X	
Dr. Gopinath R. Jadhav, Co-Chair	X	
Mr. Edward L. McCoy	X	
Rev. Tyrone Nelson (not available)	--	
Mr. Stuart C. Siegel	X	
Dr. Shantaram Talegaonkar	X	

A copy of the proposals are attached hereto as ***Attachment A*** and is made a part hereof.

REPORTS

Provost and Senior Vice President for Academic Affairs Fotis Sotiropoulos provided a report on current faculty retention trends and the initiatives in place for ensuring an infrastructure for continued faculty development. A copy of Dr. Sotiropoulos' presentation is attached hereto as ***Attachment B*** and is made a part hereof.

Dr. Tomikia LeGrande, vice president for strategy, enrollment management and student success, provided an update on fall enrollment to date.

Dr. Art Kellermann, senior vice president for health sciences and CEO VCU Health, provided 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. A copy of Dr. Kellerman's update presentation is attached hereto as ***Attachment C*** and is made a part hereof.

Dr. Sriram Rao provided a report on VCU's Research Enterprise that covers an update on technology commercialization including benchmarking (state and nationally) and current/future impact and its applications. A copy of Dr. Rao's presentation is attached hereto as ***Attachment D*** and is made a part hereof.

Virginia Commonwealth University
Board of Visitors
Draft Academic and Health Affairs Committee
May 12, 2022

ADJOURNMENT

There being no further business, Ms. Santa Ana adjourned the meeting at 12:15 p.m.

ATTACHMENT A

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.

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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

Virginia Commonwealth University Proposed Program Brief

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



ATTACHMENT B

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

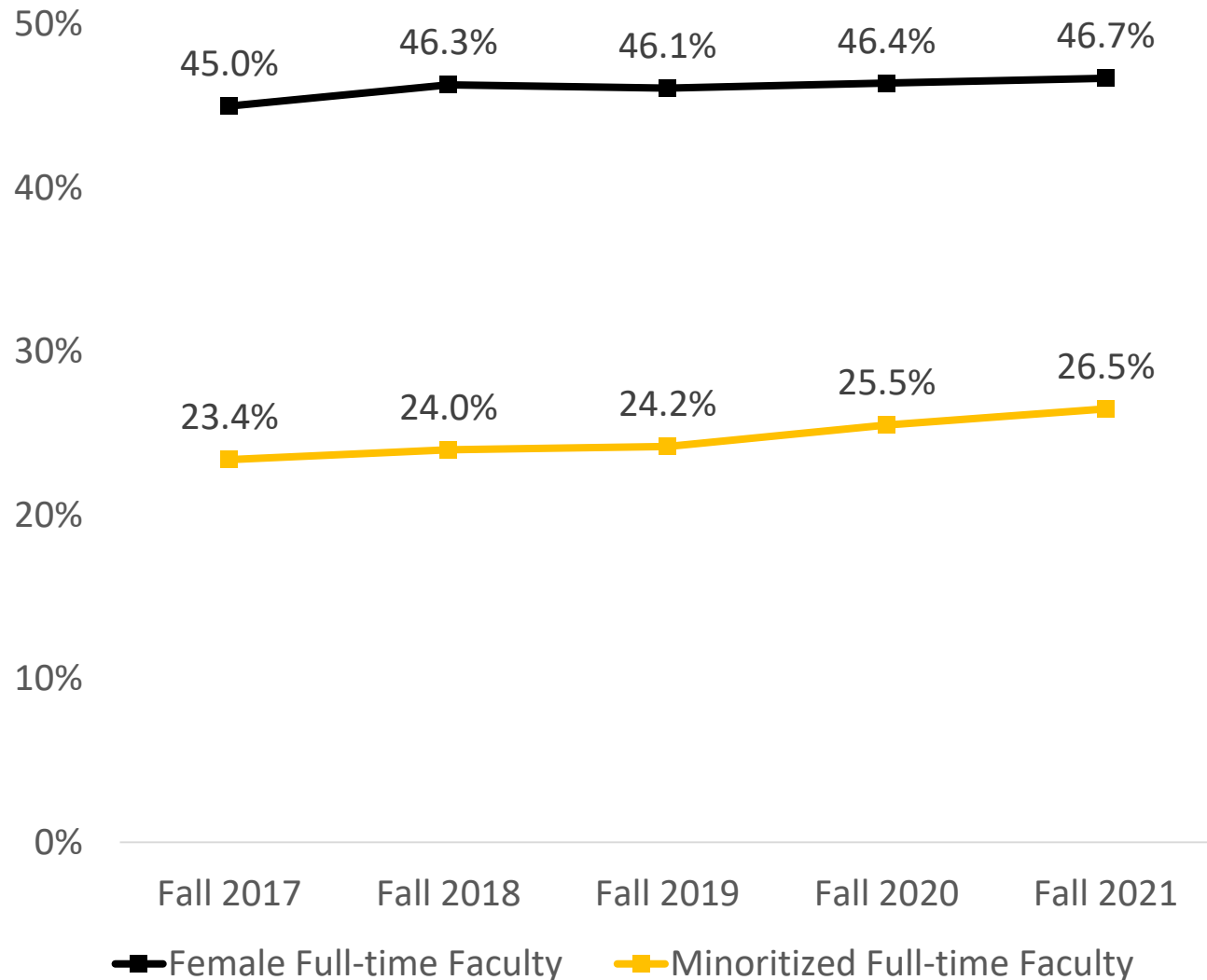
Full-Time Faculty: includes tenured, tenure track and term faculty

See appendix for definitions and faculty composition



VCU's 37th Annual Faculty Convocation: Welcoming new members and honoring distinguished faculty award recipients.

Current State: Percentage of Female and Minoritized Full-Time Faculty



Source: VCU Census 2

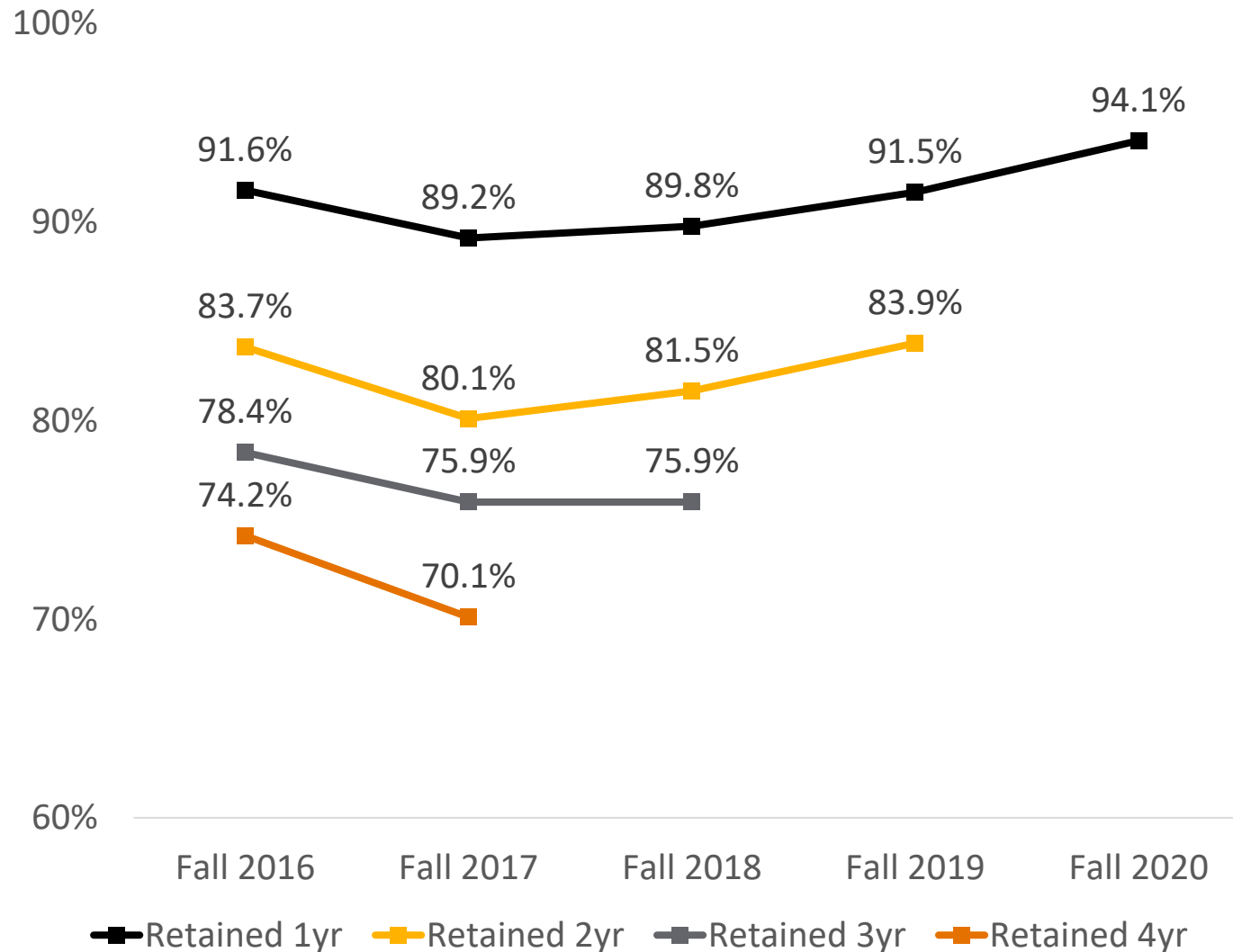
Successes:

- 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.

Current State: Percentage of New Full-Time Faculty Retained from Fall 2016 to Fall 2020



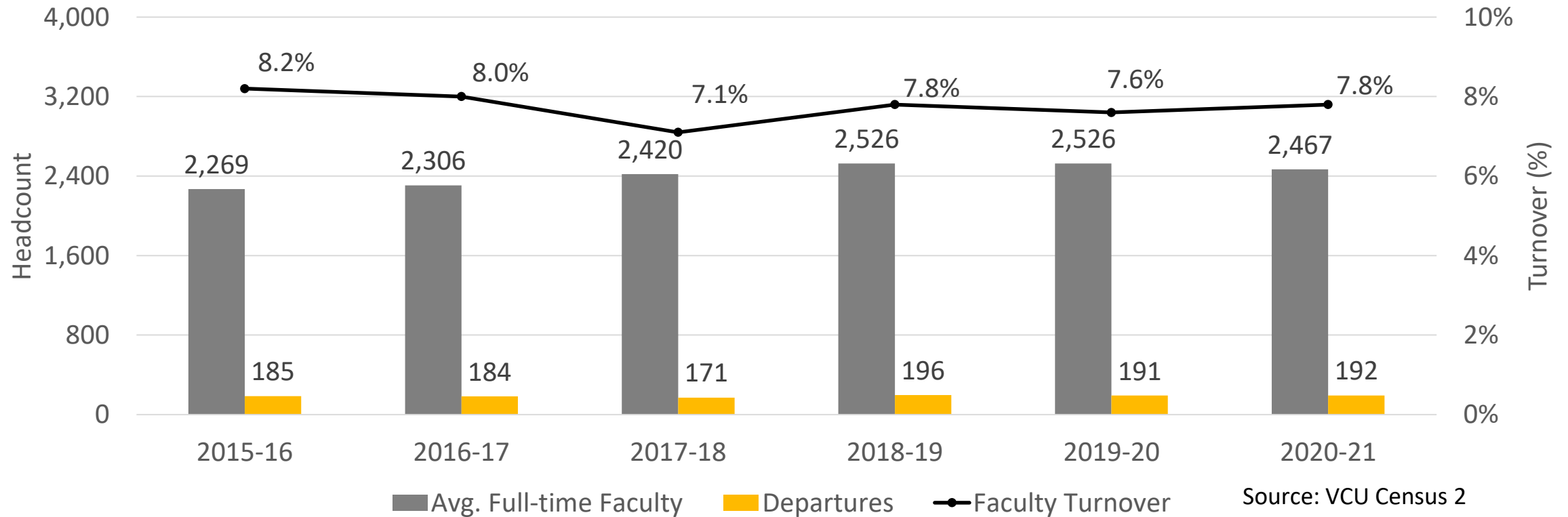
Successes:

- 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.



Goals by 2028

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.

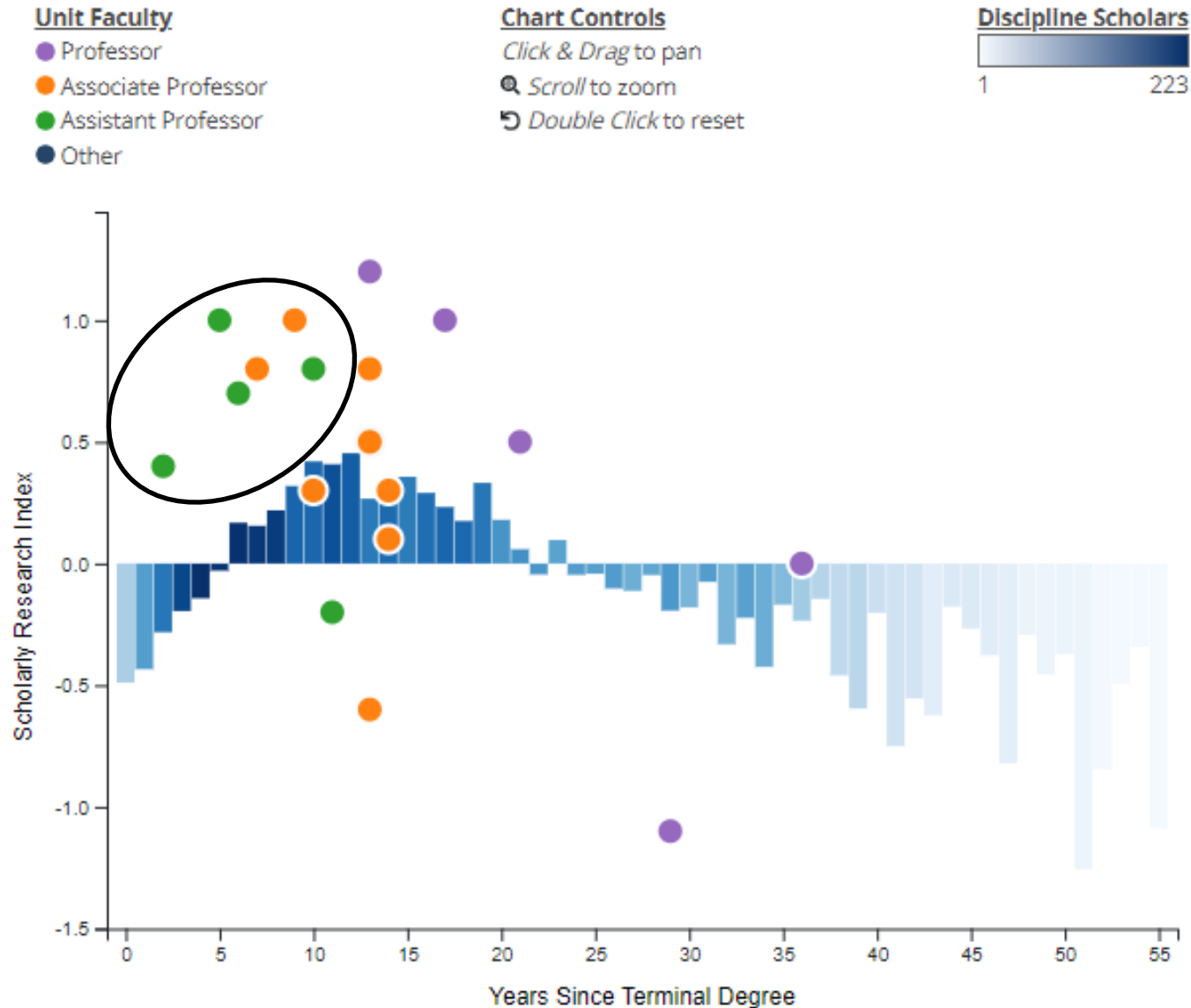
“

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

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Strategy: Integrating Data as a Tool for Faculty Success



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.

Strategy: Recognizing the totality of faculty contributions

Teaching, Research, Service & Clinical Care

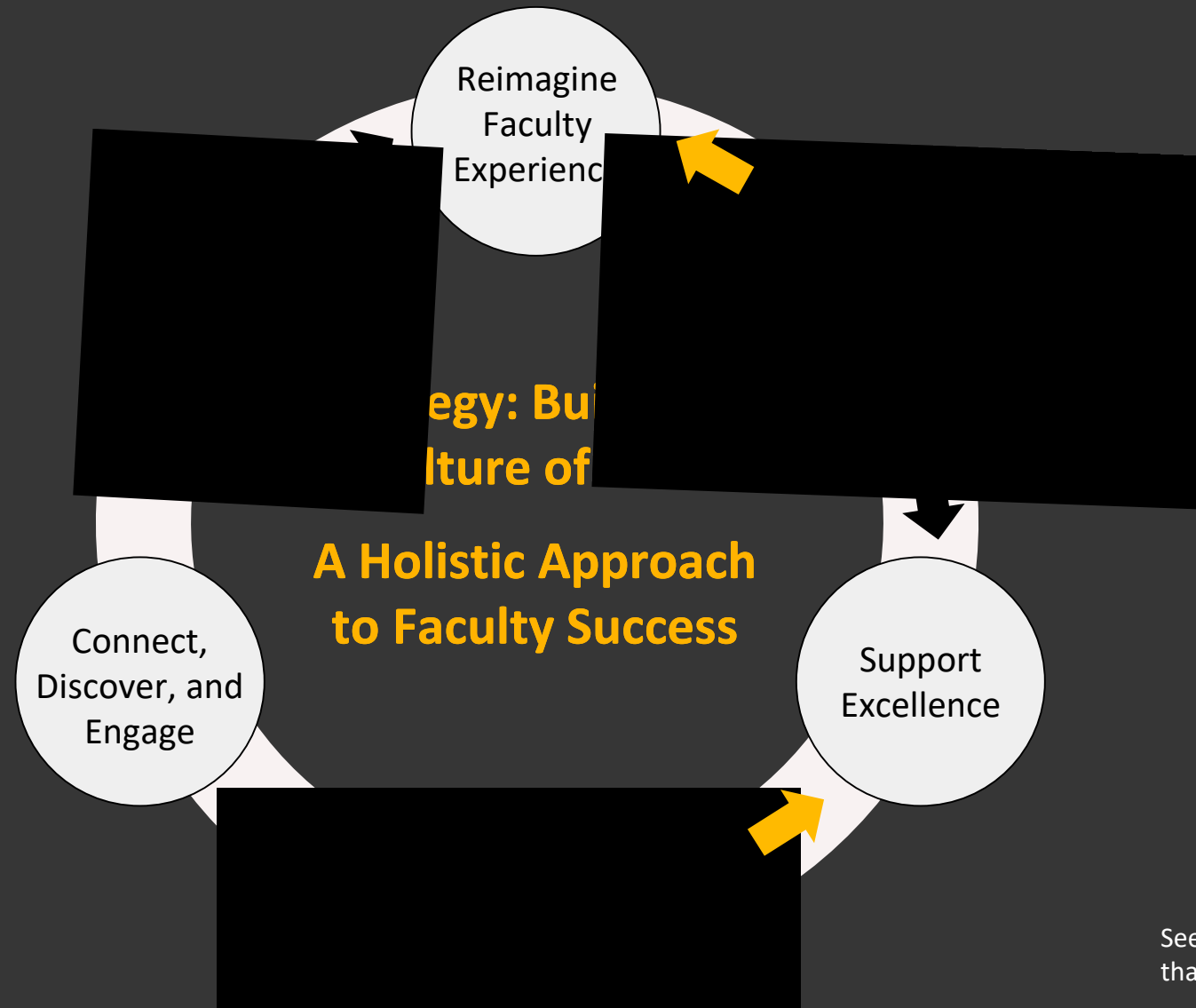


Jay Albanese, Ph.D. is a professor in the L. Douglas Wilder School of Government & Public Affairs and 2022 recipient of a State Council of Higher Education for Virginia Outstanding Faculty Award.

“

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 students. Susan Gooden, Dean, L. Douglas Wilder School of Government and Public Affairs

”



See appendix for examples of tactics that support faculty success strategies.

“

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

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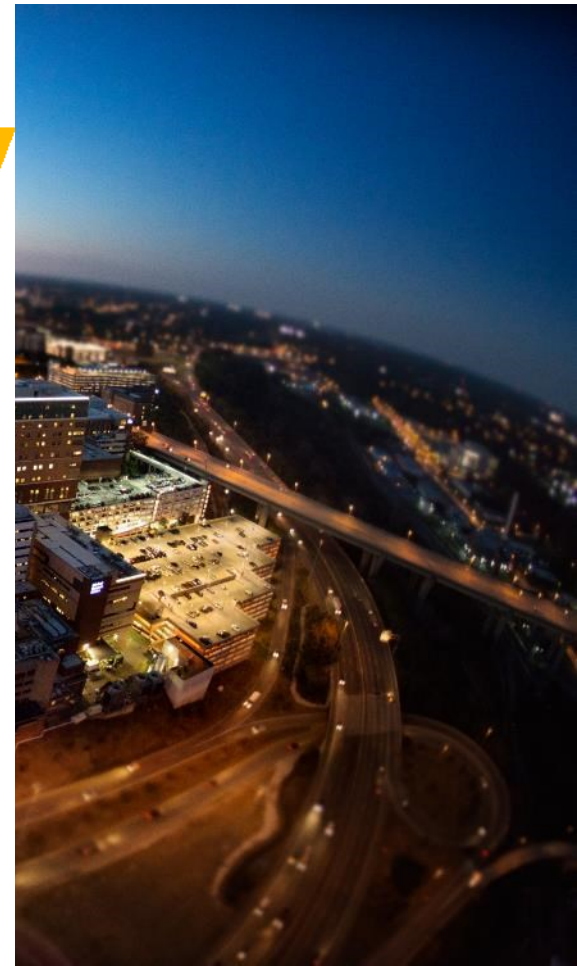
ATTACHMENT C

VCU Health Sciences

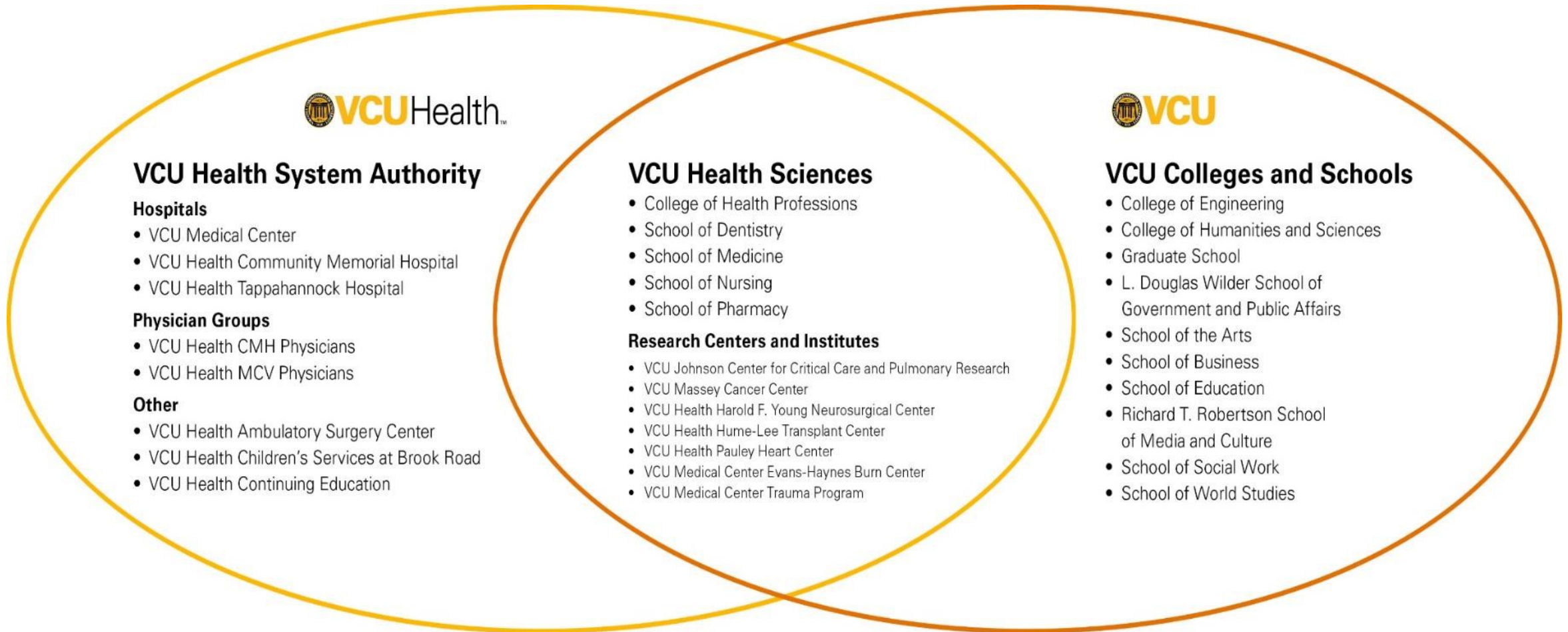
Dr. Art Kellermann

Senior VP Health Sciences & CEO VCU Health System

May 2022



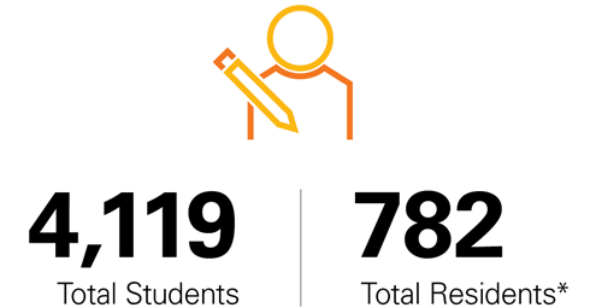
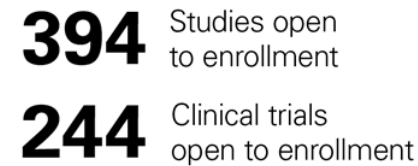
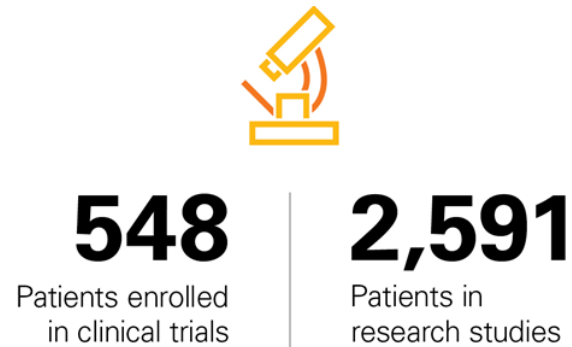
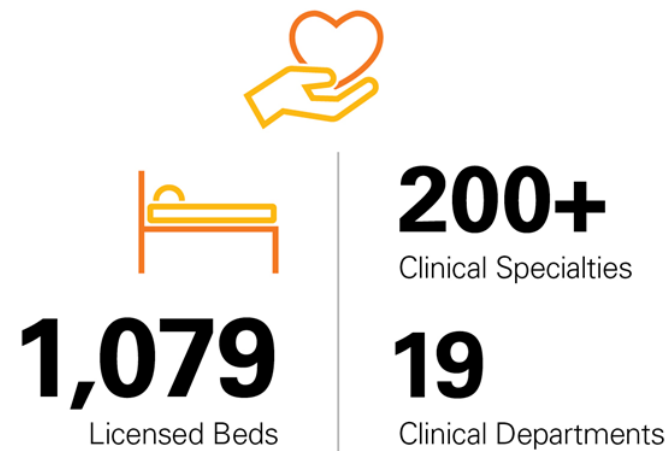
Two Organizations: *One VCU*



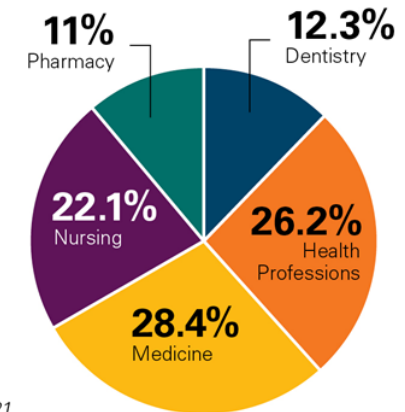
The Power of Partnerships



By the Numbers (FY21)



2021 Enrollment by College or School



*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

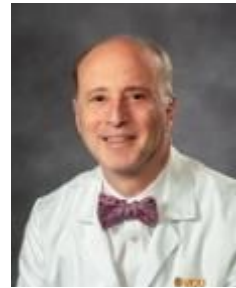
Recent Additions to Our Leadership Team



Roussos



Munoz-Price



Chelmow



McMillan



Elliott



Jenkins



Ogbonna



Barkin

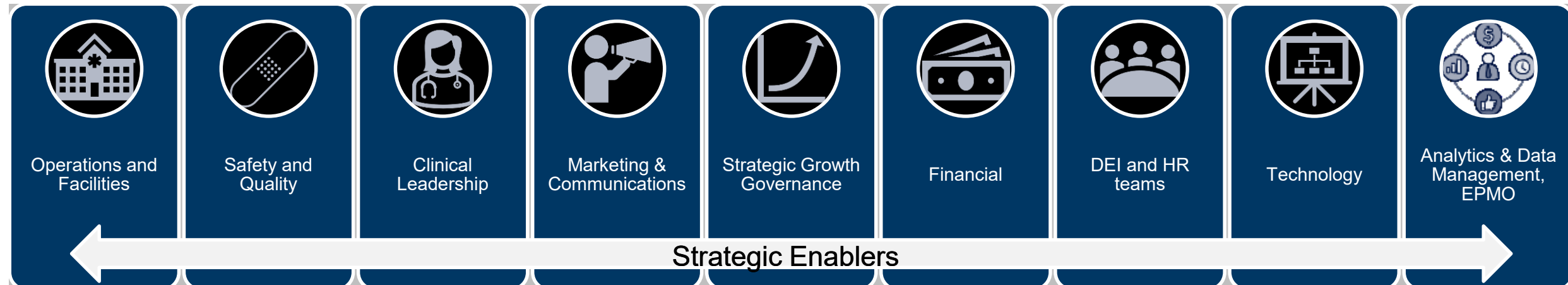


Cooper

- **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



For us, this isn't a business. It's our *mission*



ATTACHMENT D

oneVCU

Research Enterprise Briefing

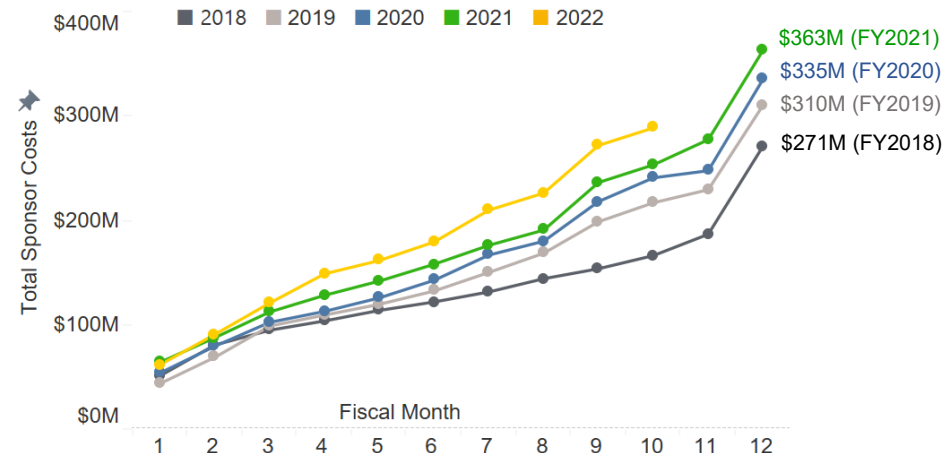
P. Srirama Rao, Ph.D.

Vice President for Research and Innovation | May 12, 2022

One VCU Sponsored Research - YTD Trends

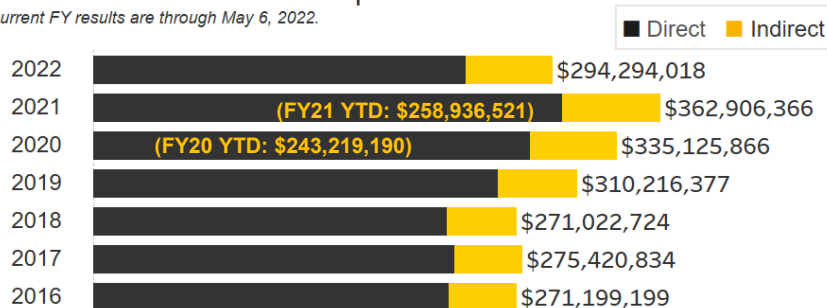
Variance (YTD) from FY2021: \$35.3M (14% ▲)

FY18 - FY22 *Only completed months.*



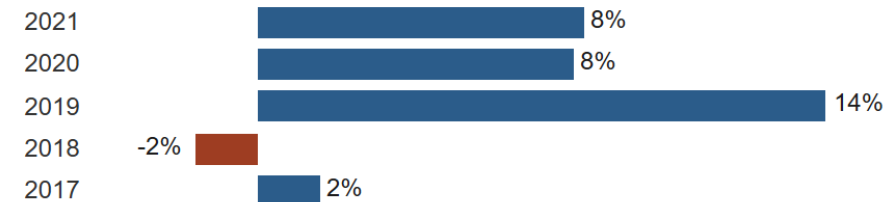
Year-over-Year Growth in Sponsor Dollars

Current FY results are through May 6, 2022.



Annual Growth Rate Over Previous Year

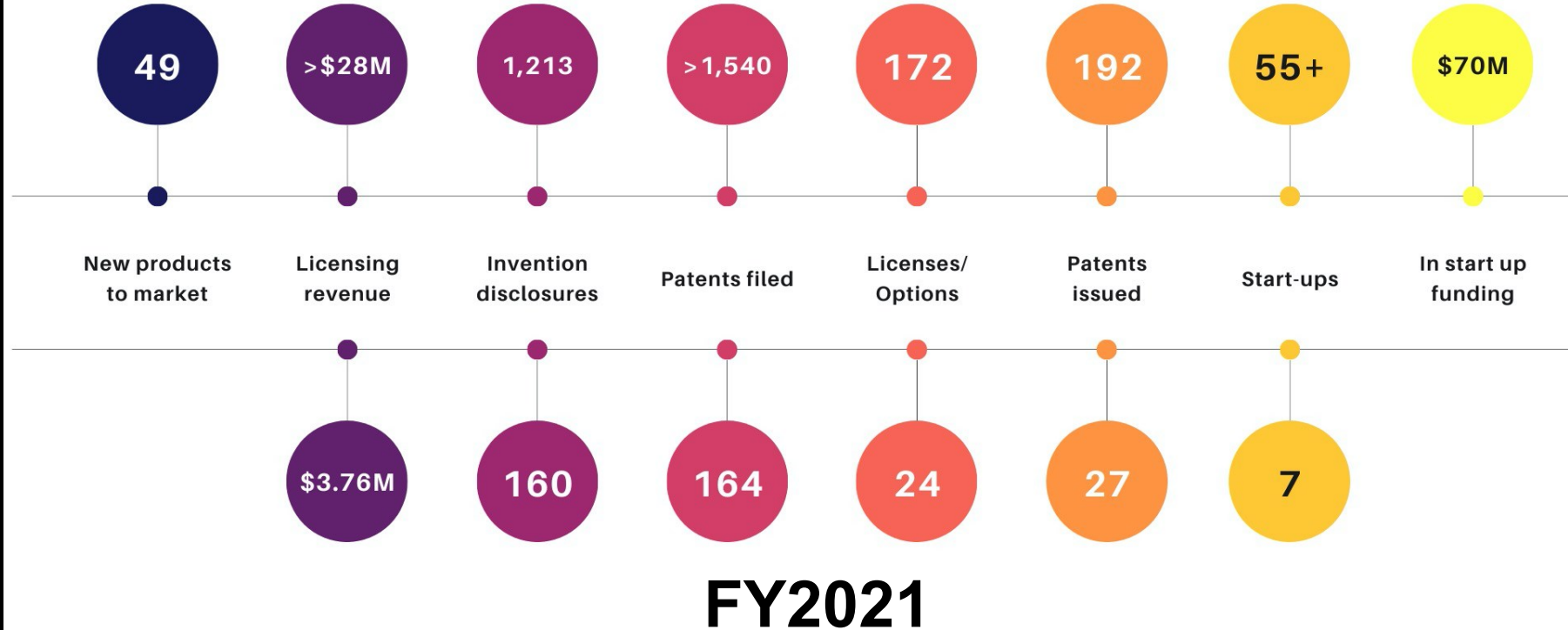
Only completed fiscal years. 2016 rate not shown because 2015 data not included.



YTD: May 6, 2022

Technology Commercialization

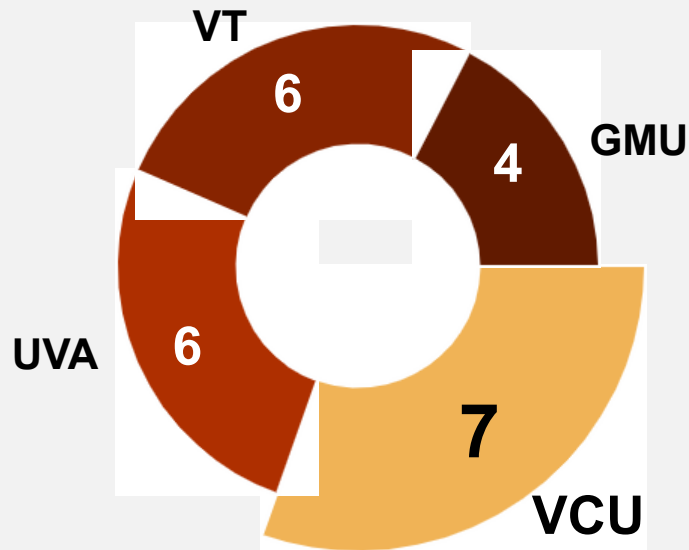
10 years of impact



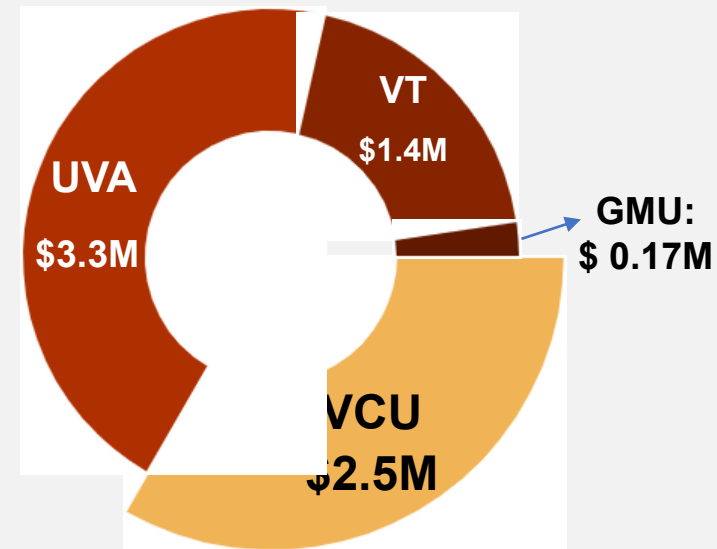
FY2020 Technology Commercialization

Virginia R1 Universities Peer Analysis*

Start-ups



Licensing Income



FY2020 Technology Commercialization Virginia Peer Analysis

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

Technology Commercialization

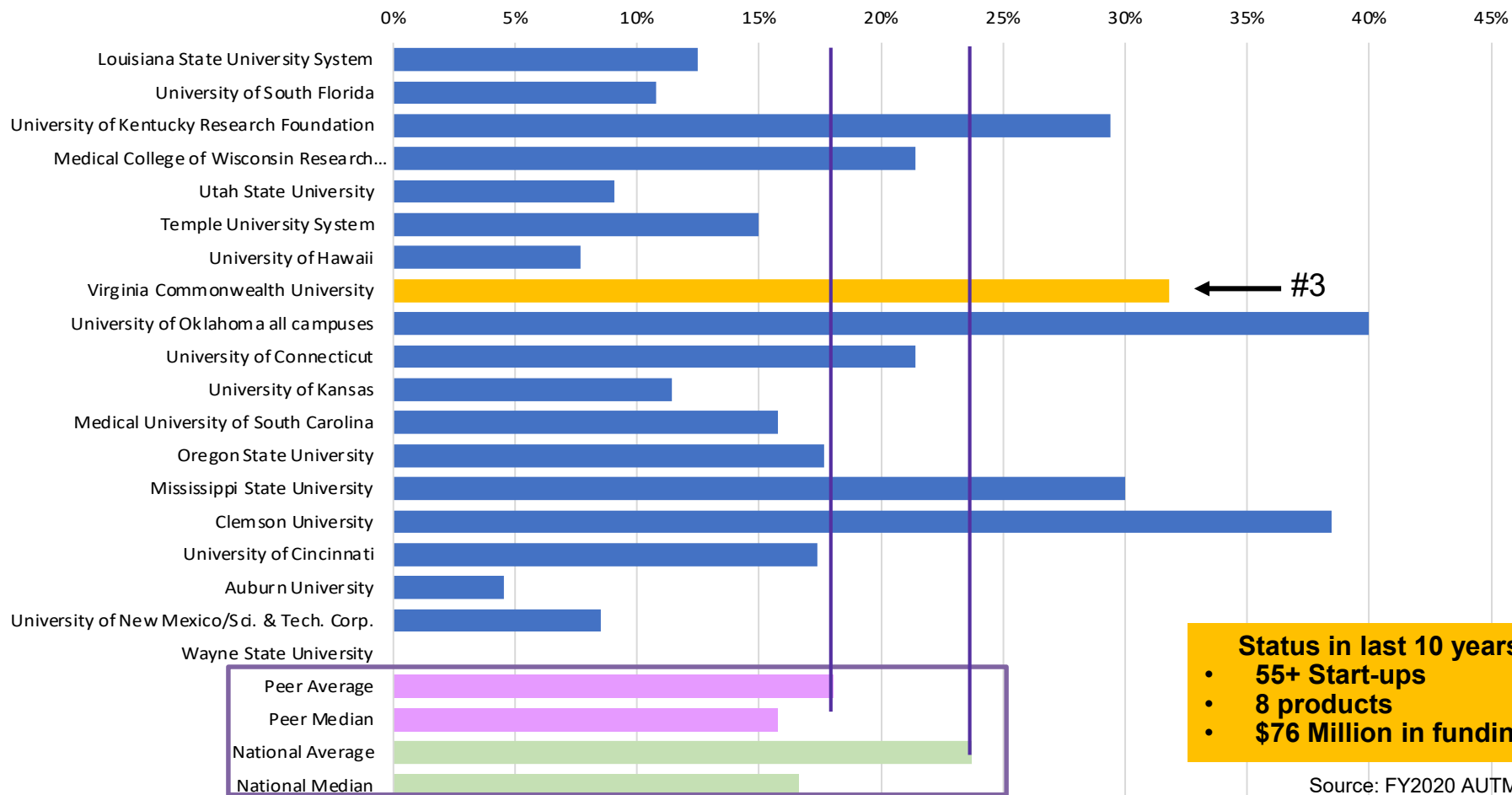
FY2020 Peer Analysis of 19 Public Universities



#3 start-ups, #4 patent applications, #5 invention disclosures, #8 licensing income

INSTITUTION	TOTAL RES. EXPENDITURES	INVENTION DISCLOSURES	PATENT APPLICATIONS	LICENSES & OPTIONS	LICENSING INCOME	ISSUED PATENTS	START-UPS	LICENSING FTEs
Louisiana State University	\$356,036,000	197	134	56	\$8,553,734	44	7	9
University of South Florida	\$353,737,000	189	n/a	102	\$1,776,745	n/a	11	7
University of Kentucky	\$350,012,433	117	165	17	\$2,943,622	38	5	10
Medical College of Wisconsin	\$307,519,000	50	67	14	\$294,000	10	3	2
Utah State University	\$304,255,724	51	26	22	\$1,698,829	11	2	2
Temple University	\$299,707,000	92	91	20	\$1,191,573	22	3	5
University of Hawaii	\$296,887,000	65	42	13	\$220,647	10	1	4
Virginia Commonwealth University	\$283M	133	128	22	\$2,480,057	17	7	4
University of Oklahoma	\$287,151,848	51	51	5	\$3,832,716	15	2	4
University of Connecticut	\$280,131,000	102	126	14	\$838,713	24	3	3.5
University of Kansas	\$275,401,741	62	103	35	\$8,087,081	27	4	5
Medical University of South Carolina	\$271,300,000	156	56	19	\$1,010,541	20	3	4
Oregon State University	\$268,385,000	100	79	51	\$3,800,619	26	9	4
Mississippi State University	\$264,526,000	23	20	10	\$164,000	1	3	3.75
Clemson University	\$263,403,000	69	39	13	\$315,578	12	5	3
University of Cincinnati	\$262,444,482	148	117	23	\$791,235	36	4	4.3
Auburn University	\$255,281,000	60	113	22	\$4,609,824	17	1	2.6
University of New Mexico	\$243,375,266	127	258	47	\$52,341,706	46	4	5
Wayne State University	\$243,259,000	47	67	7	\$817,203	23	0	2
VCU Peer Rank (out of 19)	8	5	4	7	8	11	3	8
VCU National Rank (out of 183)	81	66	63	89	89	106	35	90

Percent of VCU licenses going to start-ups



VCU Research drives innovation to the marketplace

VCU Start-ups over the past 10 years

~60+ Startups | ~\$80M Funding | 8 Products

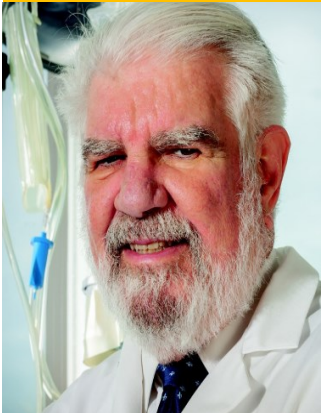


LightSwitchBio

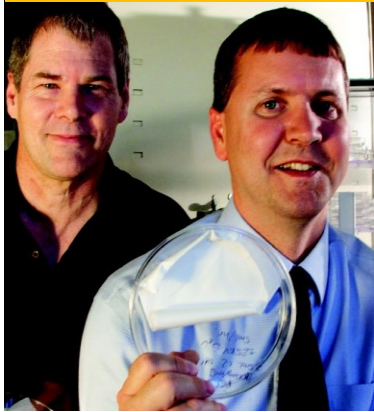


Impactful Innovators and Entrepreneurs

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



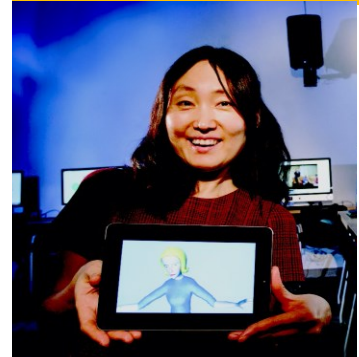
Early Detection of Parkinson's Disease



V-Coach – App for Mindfulness

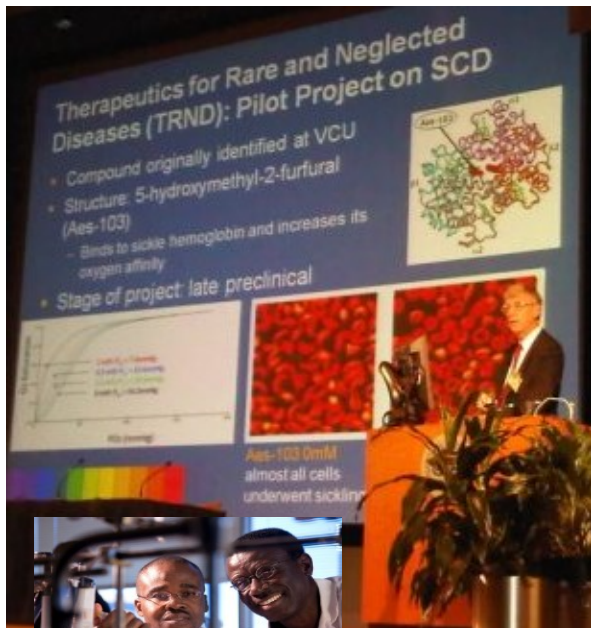


VR for Improving End of Life Quality



Therapies for sickle cell, cancer, inflammation

Anti-sickling compounds



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Anti-cancer



Cardiovascular and anti-inflammatory



Two revolutionary VCU products Innovation Gateway guided on their journey to the market:



Dr. Richard Marconi, Microbiology and Immunology



*Not for sale - see product for full details



ThermoFisher
SCIENTIFIC



Dr. Lawrence Schwartz, Internal Medicine

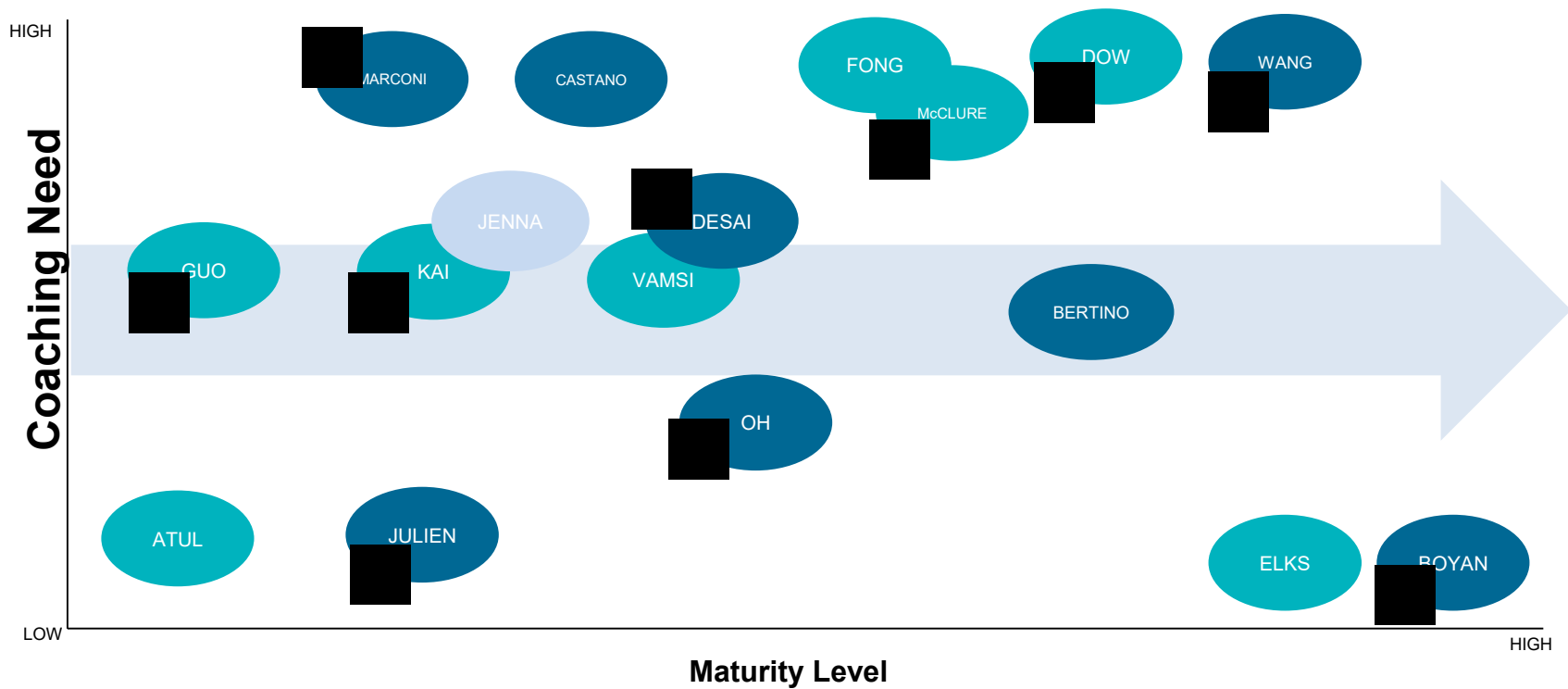
Vanguard® crLyme A Chimeric Recombinant Vaccine for Dogs: the best-selling Lyme disease vaccine for dogs in the U.S.

- **\$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)

ImmunoCAP Tryptase: the only WHO-recommended and FDA approved Assay for Systemic Mastocytosis

- **\$5.5M in total royalties**
- ImmunoCAP Tryptase: the only WHO-recommended and FDA approved Assay for Systemic Mastocytosis

VCU Start-up Pipeline



Challenge: Funding, equity, royalty

VCU Innovation Gateway:


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

University	Equity	Royalty	Third Party Payments	Notes
VCU	5-10%	3-7%	35-15%	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
Georgia Tech	2-5%	3-5%	35-10%	Do not share equity with inventors/founders. Nothing special for engineering inventions
UVA	5-7%	2-4%	35-15%	Sublicensing is 20-25% on average. Anti-dilution through Series A.
NYU	5-10%	4-7%	25-10%	Do not share equity with inventors/founders
Columbia	5%	3-5%	market	Anti-dilution through Series A
Univ Michigan/ Michigan State	3-10%	5-10%	40-25%	Anti-dilution through \$1.5-2 MM
AUTM averages	4%	2-6%	25%	\$ are made from royalties not from cashing equity; usually from 1 patent

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



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Team

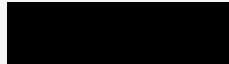
Highly experienced
New Ventures Director



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
CCF, The Catalyst



SEED CAPITAL

Build access to RVA and VA Angels

VENTURE CAPITAL



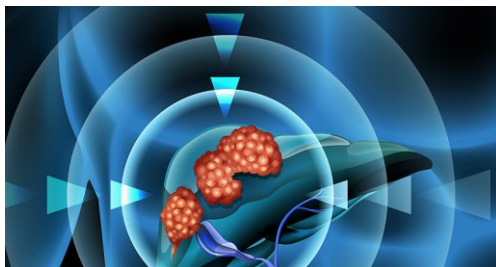
NorthernVirginia



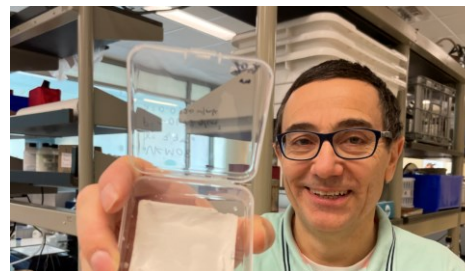
Venture Fund?
(Future)



Spreading the word on VCU startups and technologies



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



VIRGINIA COMMONWEALTH UNIVERSITY BOARD OF VISITORS

ACADEMIC AND HEALTH AFFAIRS COMMITTEE CHARTER

I. PURPOSE

The primary purpose of the Academic and Health Affairs Committee is to provide oversight and make recommendations to the Board on all policies and plans regarding strategic enrollment management; academic quality; student matters; faculty matters; athletics; inclusive excellence and research consistent with the stated goals and objectives of the University and with its academic health center, including its affiliation with the Virginia Commonwealth University Health System Authority. Areas of responsibility include:

- Strategic enrollment management
 - Admissions
 - Retention
- Academic quality
 - Quality
 - Degrees, programs and structure
 - Trends
 - Strategic priorities
 - Academic program review
 - Online education
 - SACS/accreditation
- Student matters
 - Academic Success
 - Rights and Responsibilities
 - Concerns
 - Safety, satisfaction and engagement
- Faculty matters
 - Employment, rights and responsibilities, and professional development
 - Salaries
 - Recruitment and retention
 - Benchmarks and best practices
- Athletics
 - Academic success of student athletes and compliance with NCAA guidelines
- Research
- Inclusive Excellence
- Coordination of academic activities of health sciences schools and affiliation with the VCU Health System Authority

In addition, the Academic and Health Affairs Committee provides oversight and counsel toward the achievement of the mission, vision and goals of the Virginia Commonwealth University strategic plan.

The function of the Academic and Health Affairs Committee is primarily oversight. University management, under the auspices of the President, the Provost and Senior Vice President for Academic Affairs, and the Senior Vice President for Health Sciences and CEO of the VCU Health System, is responsible for the development, implementation, and measurement of success regarding these areas of responsibility, as well as the policies and procedures for maintaining these programs and activities.

II. COMPOSITION AND INDEPENDENCE

The Academic and Health Affairs Committee will be comprised of three or more Visitors. Each member must be free from any financial, family or other material personal relationship that, in the opinion of the Board or Academic and Health Affairs Committee members, would impair their independence from management and the University.

III. MEETINGS

The Academic and Health Affairs Committee will meet at least four times annually. Additional meetings may occur more frequently as circumstances warrant. The Committee chair should communicate with the Provost and Senior Vice President for Academic Affairs and the Senior Vice President for Health Sciences and CEO of the VCU Health System prior to each Committee meeting to finalize the meeting agenda and review the matters to be discussed.

IV. RESPONSIBILITIES

In performing its oversight responsibilities, the Academic and Health Affairs Committee shall:

A. General

1. Adopt a formal written charter that specifies the Committee's scope of responsibility. The charter should be reviewed annually and updated as necessary.
2. Maintain minutes of open session portions of meetings.
3. Report Committee actions to the Board of Visitors with such recommendations as the Committee may deem appropriate.
4. Consistent with state law, the Committee may communicate in closed session (with or without members of senior management present) with general counsel and/or the executive director of assurance services present to discuss matters that the Committee or any of these groups believe should be discussed privately.

B. Academic degrees, programs and structure

1. Review and approve all proposed new domestic and international undergraduate, graduate, and professional educational programs, research programs and proposed new degrees, and monitor existing programs.
2. Review and approve proposals for the organization of the University's academic health center, including the affiliation between VCU and the Virginia Commonwealth University Health System Authority.
3. Review proposals for the organization of the academic structure of the University.

C. Coordination of academic activities of health sciences schools and affiliation with the VCU Health System Authority

1. Receive reports on the relationship and affiliation between the University and the Virginia Commonwealth University Health System Authority and other institutions, organizations, laboratories, and clinics involved in the University's academic health center, including reviewing program coordination between the Virginia Commonwealth University Health System Authority and academic and research programs.

D. Academic research activities

1. Review and approve research policies deemed to require Board of Visitor action.

2. Receive reports on research advances of faculty, interdisciplinary groups, and VCU institutes and centers.
 3. Receive reports on the relationship of research activities to local, regional, national, and international economic development.
 4. Report annually on the state of the VCU research enterprise including the total research awards, expenditures, trends, and outlook.
- E. Faculty and staff employment, rights and responsibilities, and professional development
1. Review and approve policies governing the compensation, tenure, promotion, recruitment, retention, rights and responsibilities, and development of the faculty.
 2. Review and approve policies and programs on equal employment opportunity and affirmative action.
 3. Afford an opportunity for direct communication between Board members and members of the faculty and staff.
- F. Admissions and retention
1. Review and approve policies governing the admission and retention of undergraduate, graduate and professional students to all divisions of the University.
- G. Accreditation
1. Review and approve policies and reports related to departmental, school, and institutional accreditation.
- H. Academic Success of Students
1. Review nominations and make the final selection of the recipient(s) of the Board of Visitors Award at a regularly scheduled meeting in the spring of each year.
 2. Review topical areas of interest related to the student experience.
 3. Review major fall and spring activities.
 4. Review and monitor student academic success.
- I. Academic Success of Student Athletes
1. Review and oversee matters relating to the intercollegiate athletic program.
- J. Student Rights and Responsibilities
1. Review matters (including approving policies) relating to student rights, responsibilities, conduct, concerns and discipline, including matters relating to the VCU Honor System, and Student Code of Conduct.
 2. Review and oversee matters relating to student government, and appropriate student participation in University governance.
 3. Review and oversee matters relating to student organizations and extracurricular activities.
- K. Student Services
1. Review and oversee matters relating to financial aid, housing services, counseling, student health, safety and other student services.
 2. Review and approve policies relating to student records.
 3. Review report on campus safety that provides awareness of federal reporting requirement, general overview of VCU safety-related statistics, and ongoing efforts to improve safety.
- L. Student Communications
1. Afford an opportunity for direct communication between Board members and students.

M. International Partnerships and Collaborations

1. Review and approve international partnerships

Virginia Commonwealth University Board of Visitors

Academic and Health Affairs Committee Meeting Planner

A=Annually; Q=Quarterly; AN=As Necessary	Frequency			Planned Timing			
Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)	A	Q	AN	Q1	Q2	Q3	Q4
				Sep	Dec	Feb	May
A. General							
1. Review, update, and approve Academic and Health Affairs Committee charter	X			X			
2a. Approve minutes of previous meeting		X		X	X	X	X
2b. Maintain minutes of meetings		X		X	X	X	X
3. Authorize investigations into any matters within the Committee's scope of responsibilities			X				
4. Report Committee actions to the Board of Visitors with recommendations deemed appropriate		X		X	X	X	X
5. Communicate in executive session, with general counsel		X		X	X	X	X
6. Review and approve Academic and Health Affairs Committee meeting planner for the upcoming year	X			X			
7. Monitor student academic success.		X		X	X	X	X
B. Academic degrees, programs and structure							
1. Review and approve all proposed new domestic and international undergraduate, graduate, and professional educational programs, research programs and proposed new degrees, and monitor existing programs.			X				
2. Review and approve proposals for the organization of the University's academic health center, including the affiliation between VCU and the Virginia Commonwealth University Health System Authority.			X				
3. Review and approve proposals for the organization of the academic structure of the University.			X				
C. Coordination of academic activities of health sciences schools and affiliation with the VCU Health System Authority							
1. Receive reports on the relationship and affiliation between the University and the Virginia Commonwealth University Health System Authority and other institutions, organizations, laboratories, and clinics involved in the University's academic health center, including reviewing program coordination between the Virginia Commonwealth University Health System Authority and academic and research programs.			X				
D. Academic research activities							

A=Annually; Q=Quarterly; AN=As Necessary	Frequency			Planned Timing			
				Q1	Q2	Q3	Q4
	A	Q	AN	Sep	Dec	Feb	May
Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)							
1. Review and approve research policies deemed to require Board of Visitor action.			X				
2. Receive reports on research advances of faculty, interdisciplinary groups, and VCU institutes and centers.			X				
3. Receive reports on the relationship of research activities to local, regional, national and international economic development.			X				
4. Report annually on the state of the VCU research enterprise including the total research awards, expenditures, trends, and outlook.	X				-		X
E. Faculty and staff employment, rights and responsibilities, and professional development							
1. Review and approve policies governing the compensation, tenure, promotion, recruitment, retention, rights and responsibilities, and development of the faculty.			X				
2. Review and approve policies and programs on equal employment opportunity and affirmative action.			X				
3. Afford an opportunity for direct communication between Board members and members of the faculty.			X				
4. Afford an opportunity for direct communication between Board members and members of the staff.			X				
F. Admissions and retention							
1. Review and approve policies governing the admission and retention of undergraduate, graduate and professional students to all divisions of the University.			X				
G. Accreditation							
1. Review and approve policies and reports related to departmental, school, and institutional accreditation.			X				
H. Academic Success of Students							
1. Review nominations and make the final selection of the recipient(s) of the Board of Visitors Award at a regularly scheduled meeting in the spring of each year.	X					X	
2. Review topical areas of interest related to the student experience and overall student engagement.		X		X	X	X	X
3. Review major fall and spring activities.	X				X		X
4. Review and monitor student academic success.			X				
I. Academic Success of Student Athletes							
1. Review and oversee matters relating to the intercollegiate athletic program.	X		X				

A=Annually; Q=Quarterly; AN=As Necessary	Frequency			Planned Timing			
Q1, Q2, Q3, Q4 based on Fiscal Year (July – June)	A	Q	AN	Q1	Q2	Q3	Q4
				Sep	Dec	Feb	May
J. Student Rights and Responsibilities							
1. Review matters (including approving policies) relating to student rights, responsibilities, conduct, concerns and discipline, including matters relating to the VCU Honor System.			X				
2. Review and oversee matters relating to student government, and appropriate student participation in University governance.			X				
3. Review and oversee matters relating to student organizations and extracurricular activities.			X				
K. Student Services							
1. Review and oversee matters relating to financial aid, housing services, counseling, student health, and other student services			X				
2. Review and approve policies relating to student records.			X				
3. Review report on campus safety that provides awareness of federal reporting requirement, general overview of VCU safety-related statistics, and ongoing efforts to improve safety.	X					X	
L. Student Communications							
1. Afford an opportunity for direct communication between Board members and students.			X				
M. International Partnerships and Collaboration							
1. Review and approve international partnerships			X				

Revised: 8/5/2013 12:53 PM
Approved by BOV: Sept. 19. 2013
Revised: 03/11/2019
Approved by BOV: 03/22/2019
Approved by BOV: 09/18/2020
Approved by BOV: 09/16/2021

Transformative and problem-based learning experiences student panel

**Board of Visitors
Academic and Health Affairs Committee
*September 15, 2022***

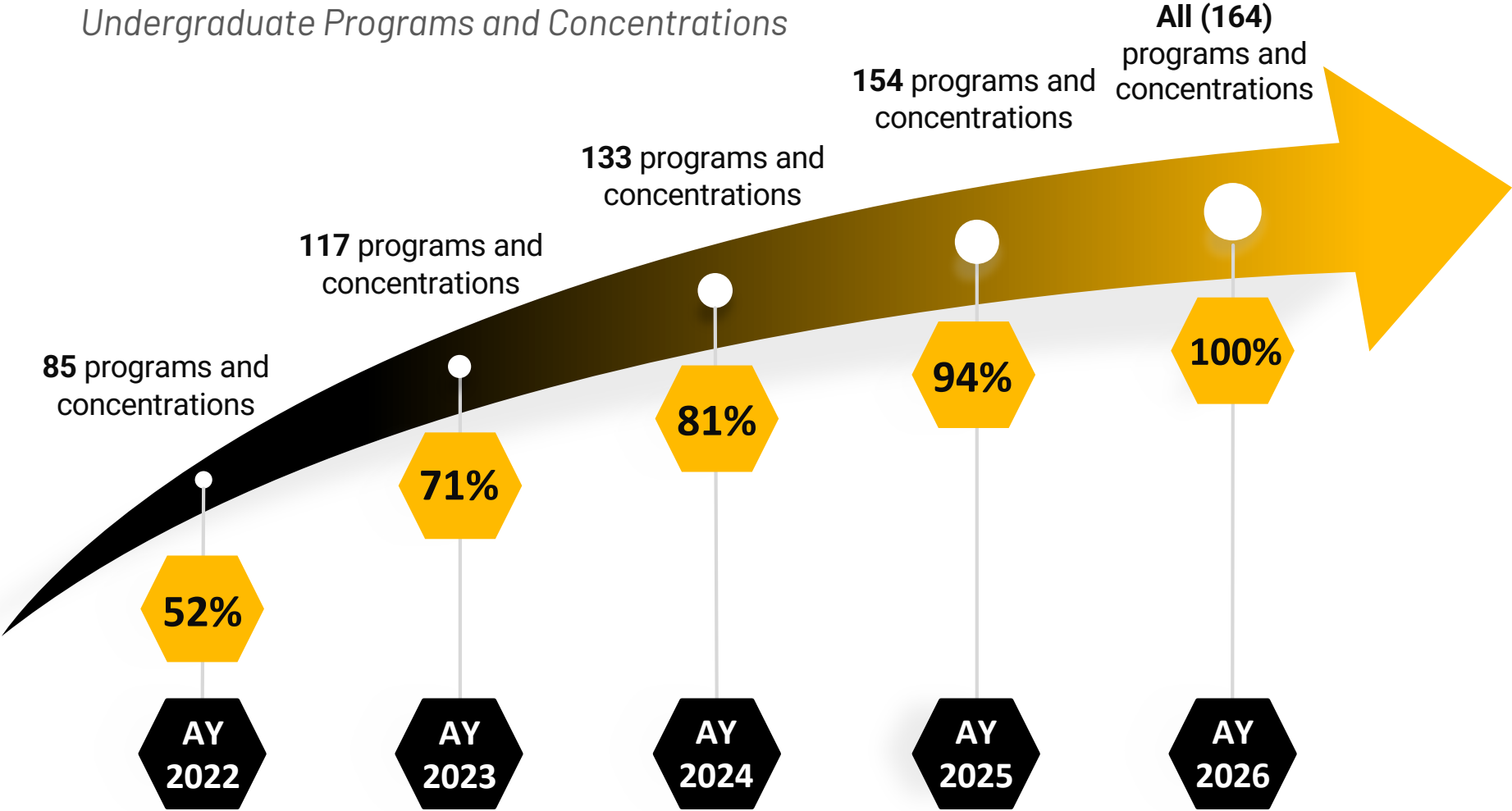


VCU

Office of the Provost

Path to Transformative Learning Experiences for VCU

Undergraduate Programs and Concentrations



Transformative experiences



Transformative experiences **bridge the gap** between the classroom and the real world, and empower students to develop skills that are reinforced by mentorship and critical reflection.

The broad types of transformative experiences include:

Work-based learning

Internship | Field experience | Practicum/Clinical
Cooperative Education

Problem-based learning

Capstone | Research | Lab experience | Project-based learning
Independent study | Interprofessional collaboration
Entrepreneurship/ Innovation

Other

Includes global learning experiences, service learning,
leadership education, etc.



Our focus for today

Problem-based learning



- Often focuses on a real-world problem, allowing students to connect and apply their learning to the larger world
- Provides a deeper, more active and engaging learning experience for students
- Take place in a wide variety of settings, formats, and academic disciplines
 - Ensures increased student access
 - Allows students to engage in multiple problem-based learning activities while at VCU, amplifying its benefits
- Develops soft skills (e.g., teamwork, problem-solving, time management) valued by potential employers



The result:

Students who participate in problem-based learning experiences are **better prepared for their careers.**

Strategic employer and community partnerships




Purpose: Strengthen student transformative learning opportunities and experiences

Working with major employers in greater Richmond area to:

- Identify education and up-skilling needs of their workforce for VCU develop credentials
- Provide problem-based learning experiences:
 - Company/organization identifies problems that need to be addressed
 - Team of VCU students, across various majors, led by a faculty member to propose solution to problem

+ Benefits

- Companies have limitations on the maximum number of paid internships they can afford or offer but every organization has problems to be solved.
- Equalizer of work-based learning for larger numbers students
- Value add to companies



Introduction of student panel

VCU Health Sciences

Dr. Art Kellermann

Senior VP Health Sciences & CEO VCU Health System

September 2022



MPC Student Engagement: *One VCU*

PATHS
Programs

Research &
work
opportunities

Mentorship

Instruction



Advising &
Counselling

Student
Clubs and
Orgs

Shadowing

Social
Events

MPC Partners

Unbounded Opportunities

University partners

- Military Student Services
- Student Success
- Career Services
- TRIO
- Graduate School
- College of Engineering
- College of Humanities and Sciences
- School of the Arts
- Honors College
- *And more*

Student Organizations

- Pre-health and Related Interest Mentoring Experiences (P.R.I.M.E.)
- Medical Students for a Sustainable Future
- Med Mentors
- STEM Care
- Sisters to Stethoscopes
- Black Men in Medicine
- Emerging Health Leaders
- Minority Association of Pre-health Students
- *And more...*

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OSVPHS Division of Student Engagement and Impact

onevcu

Acceleration – a living-learning community to promote community and provide resources for students interested in health sciences.

STEM Transitions Transfer Success – a collaboration with VCU Careers Services and VCU REAL to provide support and resources to new students.

Triage - a partnership with the Office of Military Student Services connecting students who are interested in healthcare professional in the United States Military

Exhale After Hours - an interprofessional program connecting students with their peers in a relaxed setting to foster community and exchange of resources.



School Highlights

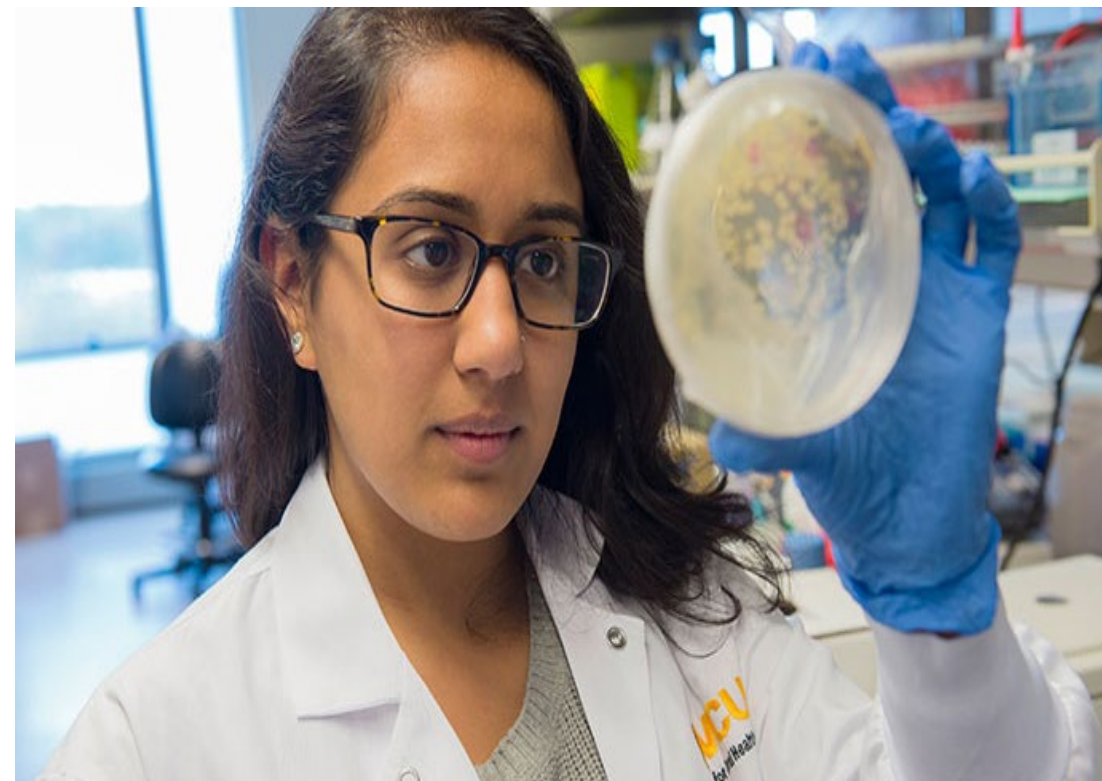
VCU College of Health Professions

- Allied Health Career Exploration Program
- Mentorship opportunities with CHP Alumni
- CHP office space for MPC students in P.R.I.M.E.
- Student employment and general ed opportunities
- New & rapidly growing BSHS degree program

VCU School of Dentistry

- Research opportunities in Oral Health
- DENS 101 – Intro to Dentistry for MPC students
- Advising and counseling for pre-dental students
- Growing BS degree program in dental hygiene

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School Highlights (cont'd)



VCU School of Medicine

- Extensive research opportunities, including oncology and traumatic brain injury
- Instructional support for multiple MPC courses
- Faculty serve on advisory committees for grad students
- Shadowing opportunities in Family Medicine
- Collaborate with School of the Arts students for medical simulation training sessions

VCU School of Nursing

- Welcome back social events
- Specialized information sessions
- Participation in Student Success Special Topics course
- Large and growing BSN program



School Highlights (cont'd)



VCU School of Pharmacy

- Summer research program in pharmaceutical engineering
- Multiple courses taught on MPC
- Shadowing opportunities with faculty & staff
- Undergrad student employment opportunities
- BS in Pharmaceutical Science submitted to SCHEV

Coming Soon: a VCU School of Population Health

- Under consideration by SCHEV
- Based on our long-accredited public health *program*
- 4 departments; several research centers
- Will enable creation of a “4+1” BS-MPH track
- Expected to boost recruitment and retention of VCU pre-health students to serve the Commonwealth in a wide range of roles



Key Performance Indicators

1. **Develop thriving undergraduate degree programs** in the VCU CHP and VCU Schools of Nursing, Pharmacy and Dentistry.
 - Measure the impact of each on undergraduate enrollment, retention, graduation rates, job placements and tuition revenue
2. **Establish a 4:1 BS-MPH dual degree program** in VCU's new SPH
 - Monitor its impact on various VCU schools' pre-health enrollment, retention & graduation rates, as well as subsequent MPH matriculation, job placement and revenue
3. **Connect VCU URM, First Gen, and/or rural students** to on-campus and in-town experiential opportunities
4. **Expand both the number and array of service-learning and part time employment opportunities** offered to VCU undergrad students
 - Monitor the number of openings offered and filled each year
 - Measure the quality of student experiences
 - Determine the impact of these programs on student career choice and success

#OneVCU

One VCU Research Strategic Priorities Plan: Year One Update

Prepared for Academic Health Affairs Committee of the VCU Board of Visitors | September 2022



Our vision

VCU will be widely recognized for highly creative transformative innovation through collaboration across traditional boundaries, advancing the student experience, and improving lives while tackling societal grand challenges.

Our goals

VCU will clearly establish our unique strengths:

- Contributions to global change
- Diverse and inclusive research culture
- Sustainable, scalable and nimble research infrastructure

Our future

As part of Quest 2028, we will achieve:

- Top 50**
US research university ranking
- >\$400M**
per year in external awards
- ~\$500M**
per year in research expenditures
- Up 3-5%**
in federal research awards
- Up 5-10%**
in clinical research
- Up**
in patents, licensing,
partnerships, and start-ups

One VCU Research Strategic Priorities Plan: Year One Update

Largest single-year VCU direct investment in research and innovation at ~\$10M through-engagement-of faculty, staff and students in projects under the following strategic funding initiatives:

~\$1M Quest Fund; ~\$1.5M Accelerate Fund; ~\$3M Breakthroughs Fund; ~\$0.5M Commercialization Fund; \$5.5M Higher Education Equipment Trust Fund; ~\$0.1M Arts, Humanities, and Social Sciences Fund



Enriching the human experience

VCU leverages creativity and excellence in innovation to solve problems across the globe by leveraging transdisciplinary knowledge creation, applications in technology, and, transformations in creative practice. We apply creative expression, critical analysis, and, advancements in knowledge and technology to enhance individual quality of life and social infrastructure.



Optimizing health

We will harness our strengths in basic research, personalized medicine, public health and innovations in medicine to address health disparities that lead to optimized health for all. We use trans-, multi- and interdisciplinary approaches at scales from molecules to populations in search of new ways to preserve and restore human health.



Achieving a just and equitable society

We will develop a national model for transforming diversity, equality and inclusion in research and scholarship into measurable, societally relevant outcomes. We commit to identifying injustices and finding solutions to the most difficult social problems to build a better world, recognizing that change begins with us.



Supporting sustainable energy and environments

We will bring about the convergence of technological innovation and sustainability to solve society's critical energy and environmental problems. We create evidence-based solutions that contribute to a better future in a rapidly changing natural world.

FY2020-21

Faculty-led planning & implementation groups (<200 faculty, students, staff, stakeholders)

FY2022

- Launch
- Year one awards ~\$10M
- Infrastructure readiness:
 - Research institutes
 - Research cores
 - Critical expansion
 - Research Equipment

FY2024-25

- Year three and four research funding and awards: pending
- Early ROI calculations

FY2026-27

- Year five and six research funding and awards: pending
- Early ROI calculations

FY2023

Year two research funding and awards: pending

FY2028