



**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

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

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

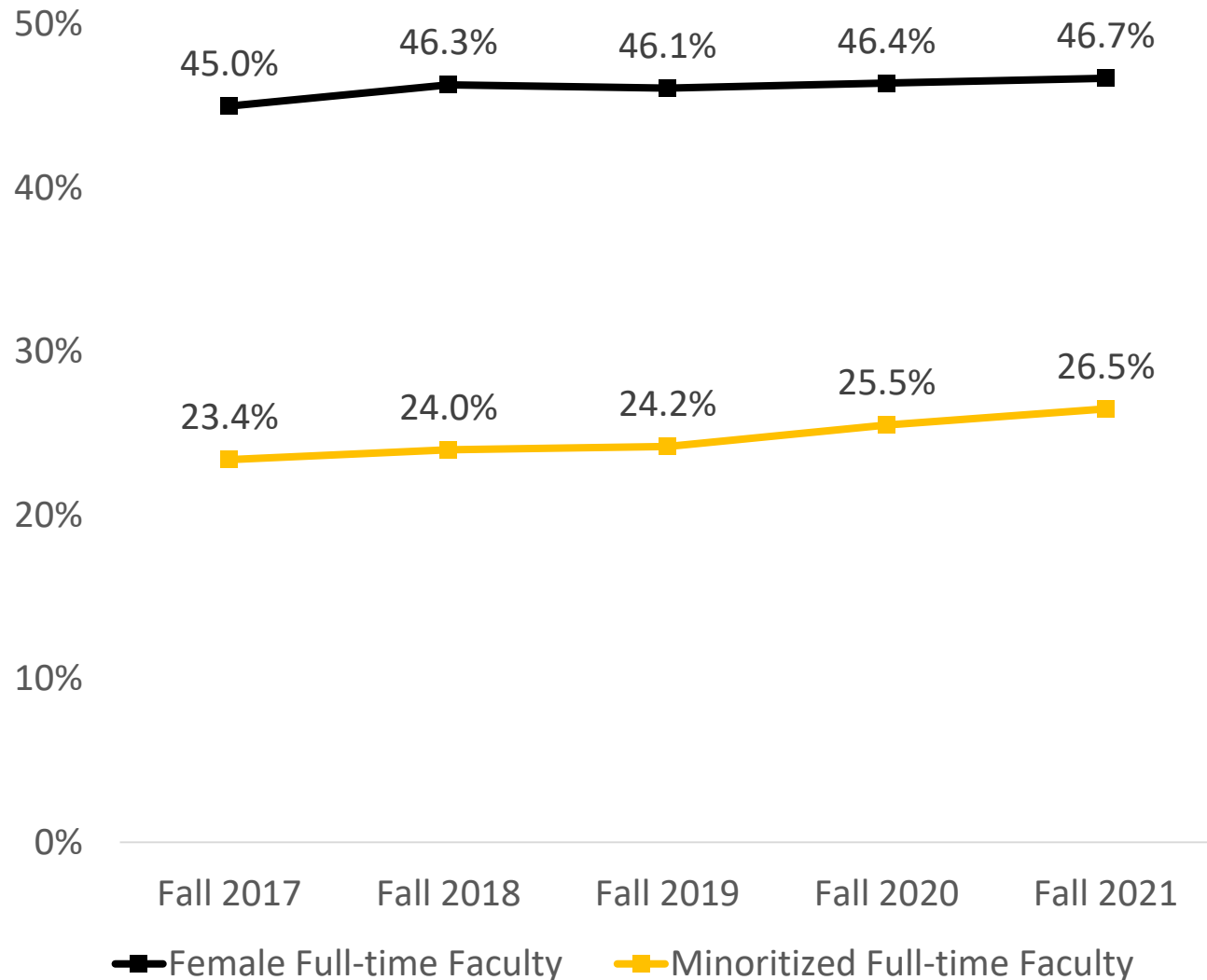
Adjunct

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

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

See appendix for definitions and faculty composition

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



Source: VCU Census 2

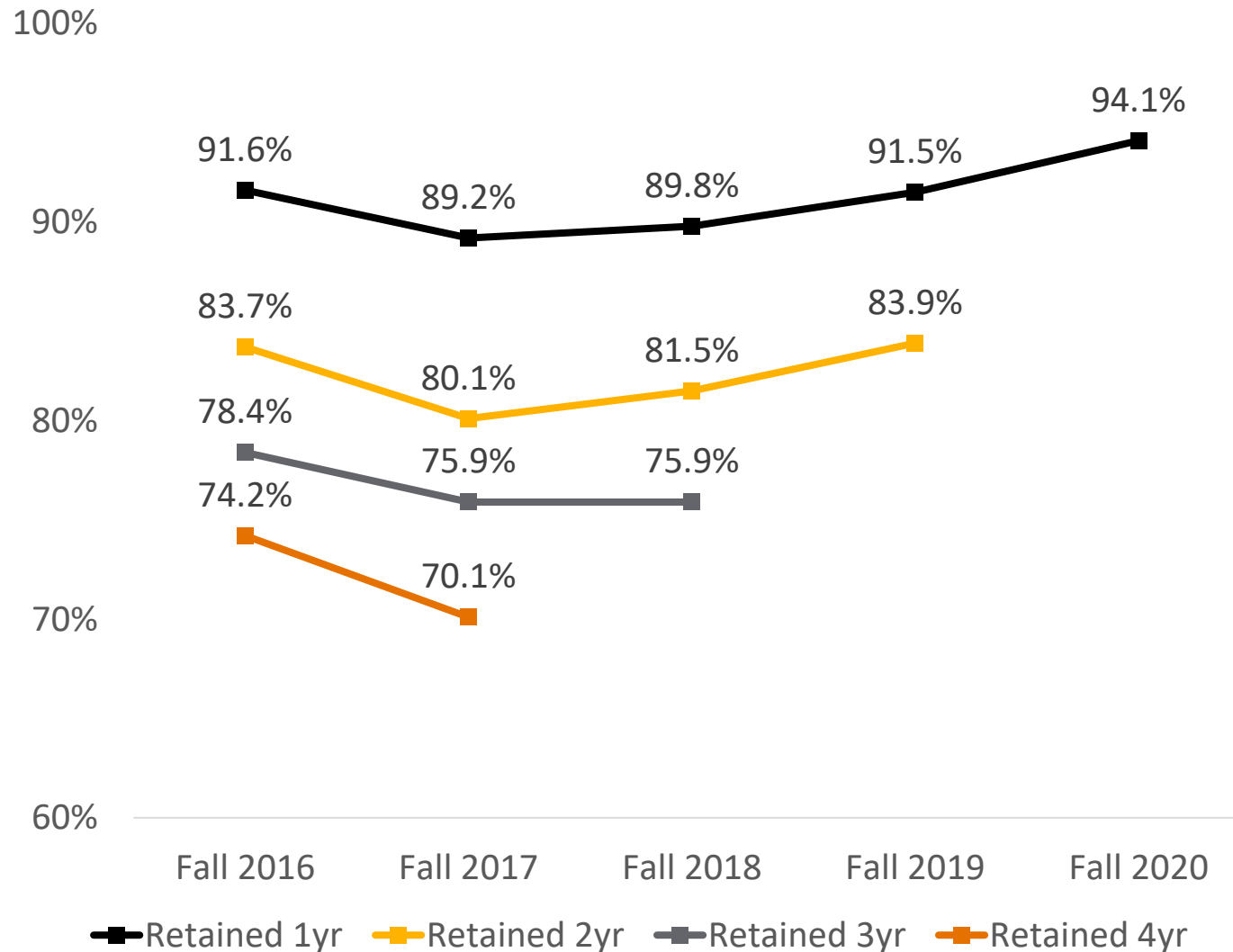
Successes:

- 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



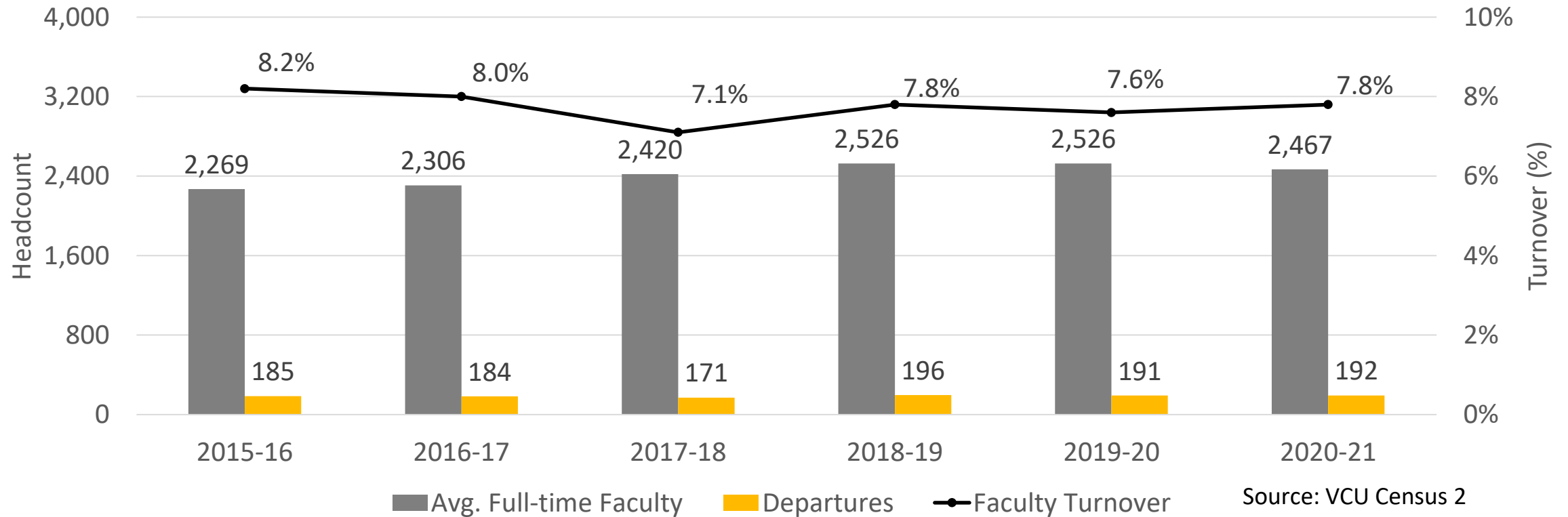
Successes:

- 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.

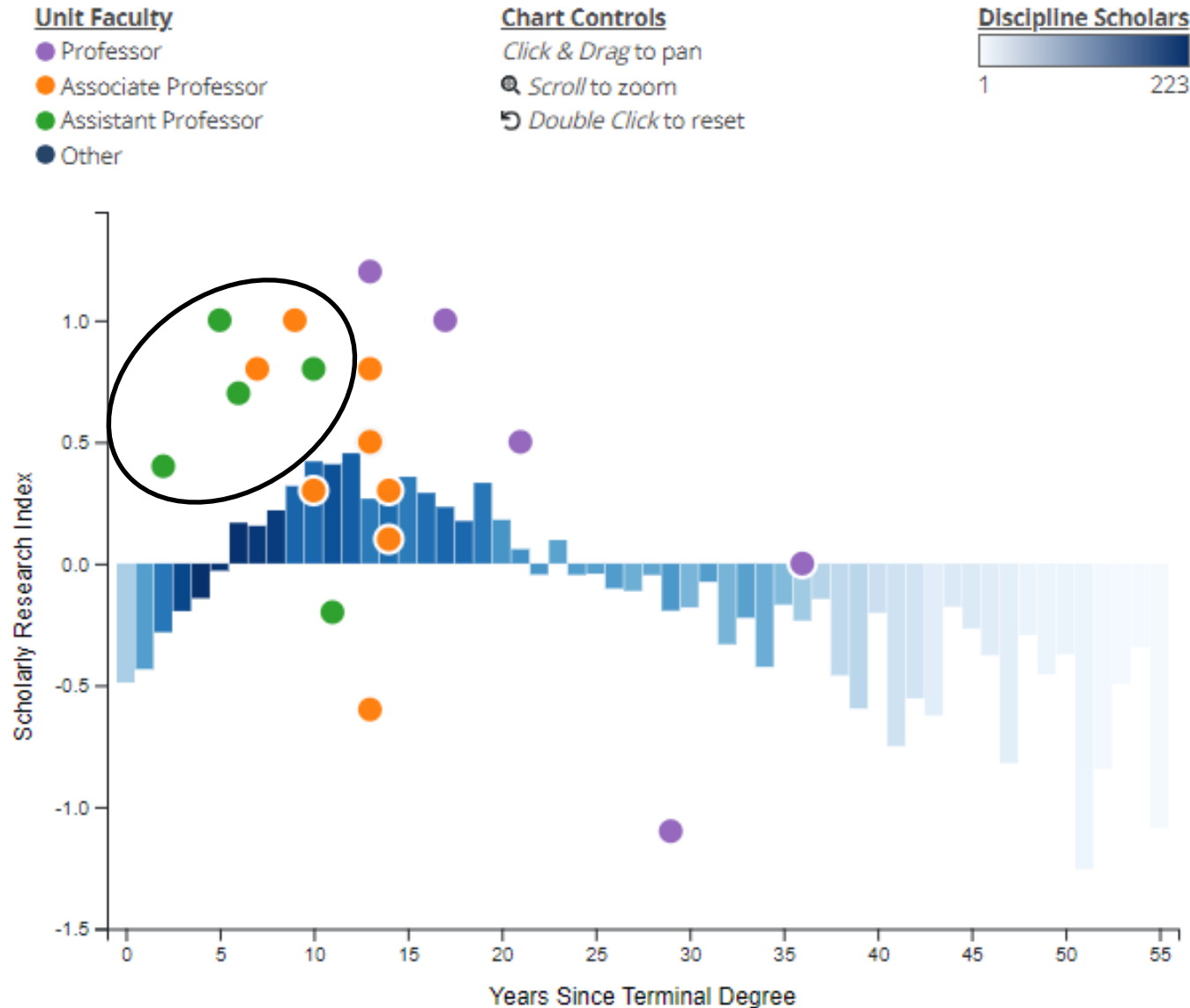
“

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

”

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

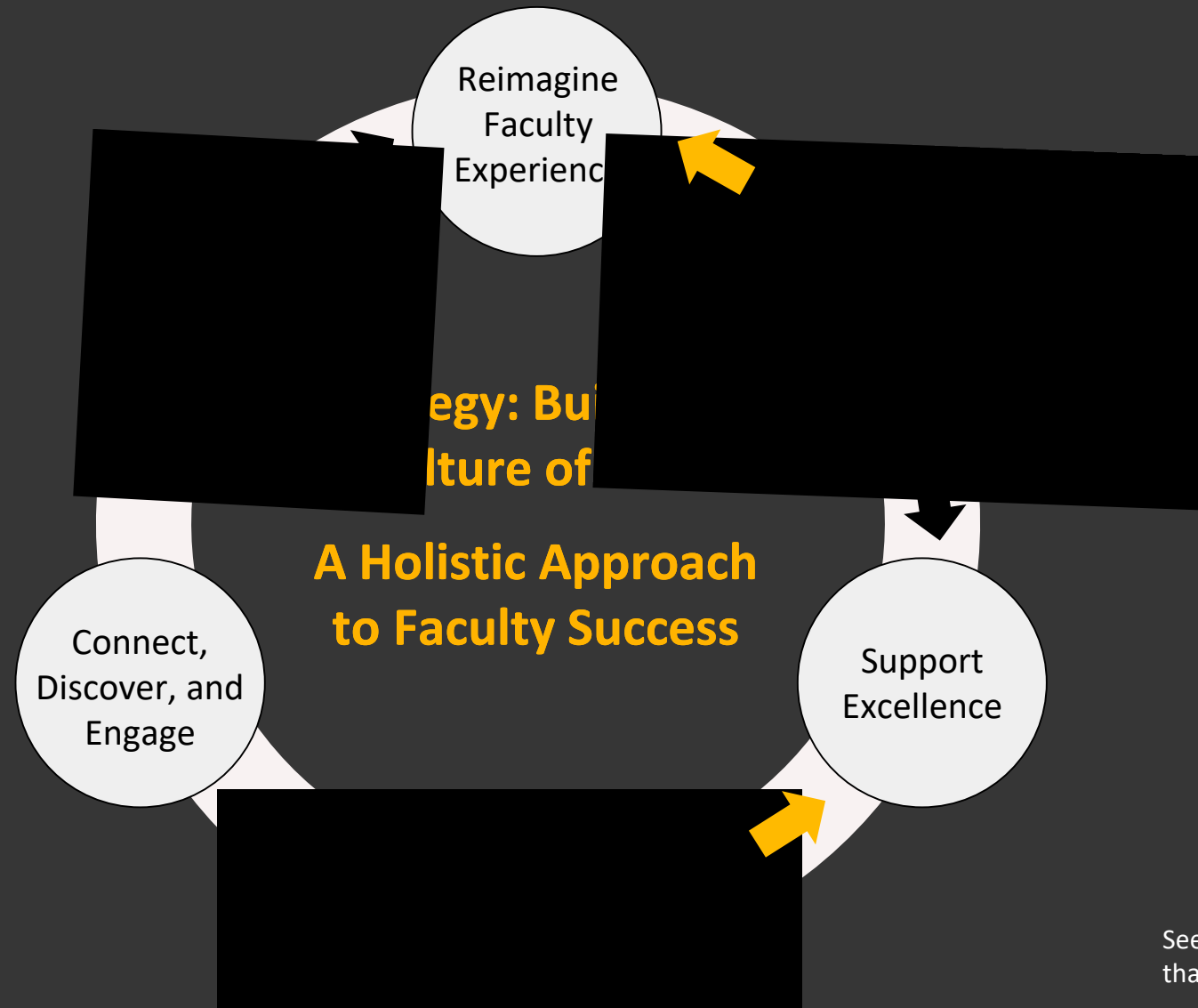


Jay Albanese, Ph.D. is a professor in the L. Douglas Wilder School of Government & Public Affairs and 2022 recipient of a State Council of Higher Education for Virginia Outstanding Faculty Award.

“

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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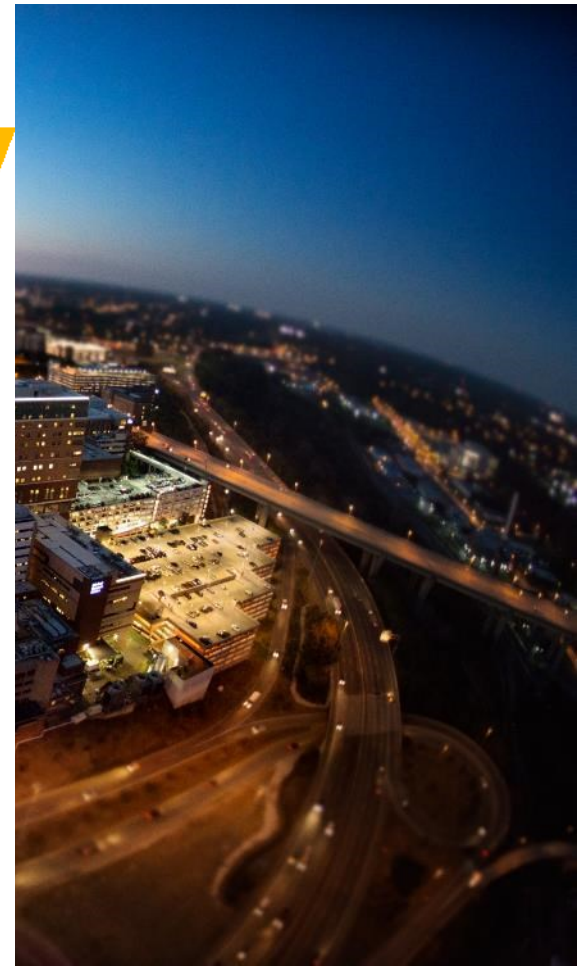
ATTACHMENT C

VCU Health Sciences

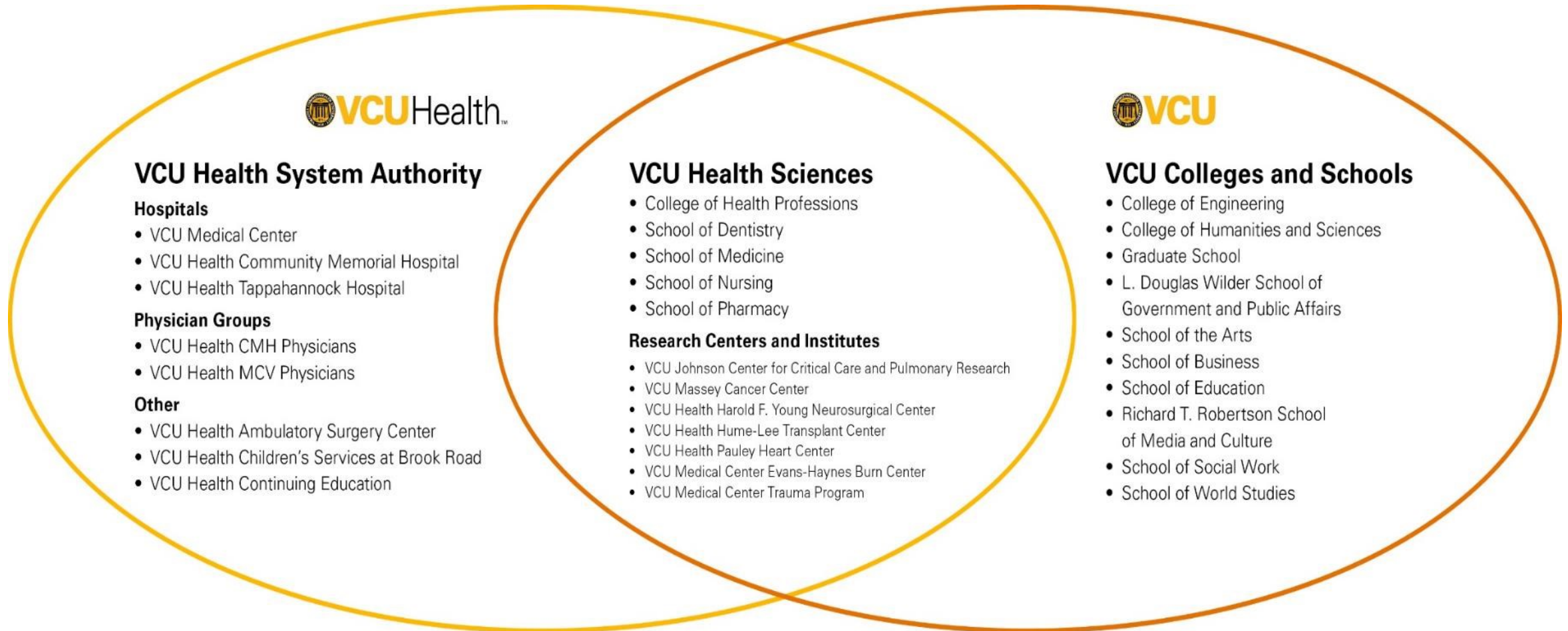
Dr. Art Kellermann

Senior VP Health Sciences & CEO VCU Health System

May 2022



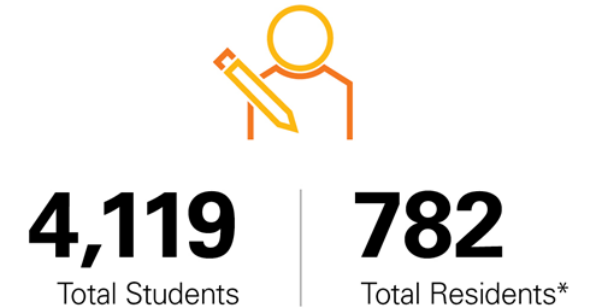
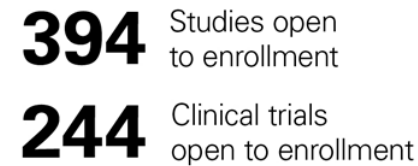
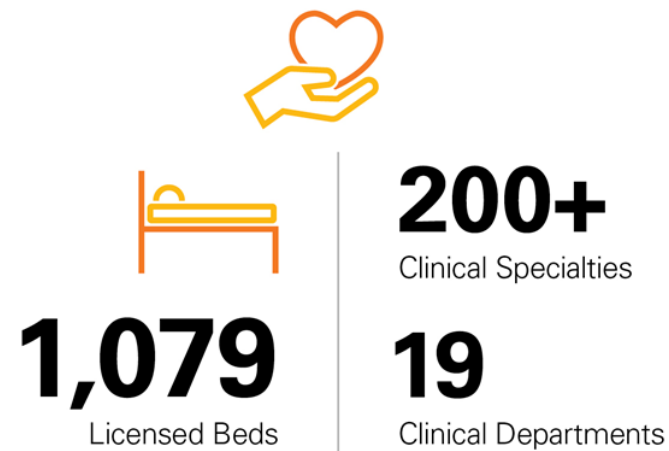
Two Organizations: *One VCU*



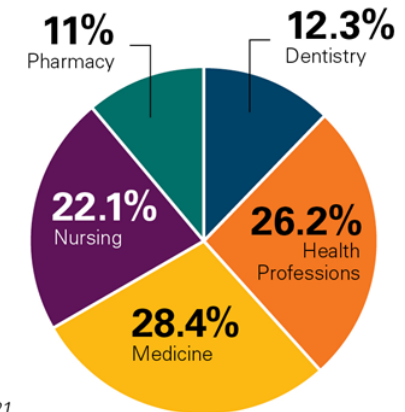
The Power of Partnerships



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

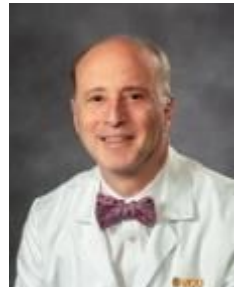
Recent Additions to Our Leadership Team



Roussos



Munoz-Price



Chelmow



McMillan



Elliott



Jenkins



Ogbonna



Barkin

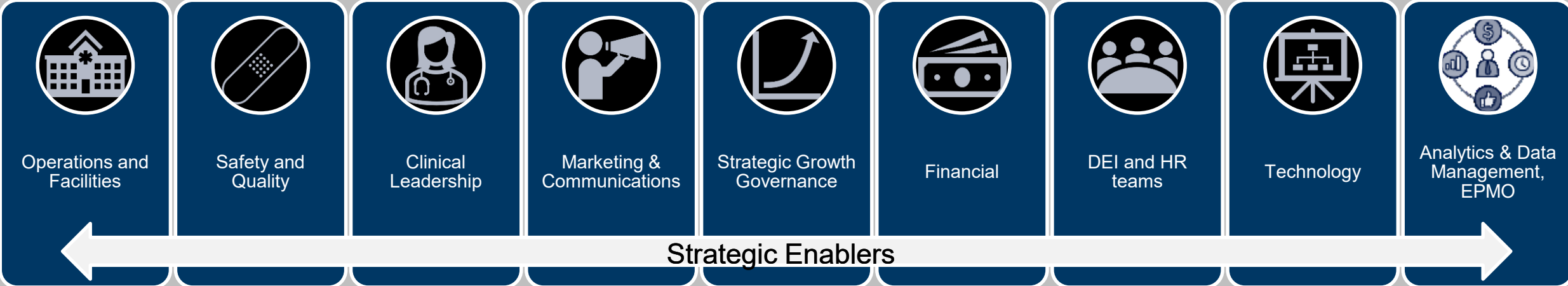


Cooper

- **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

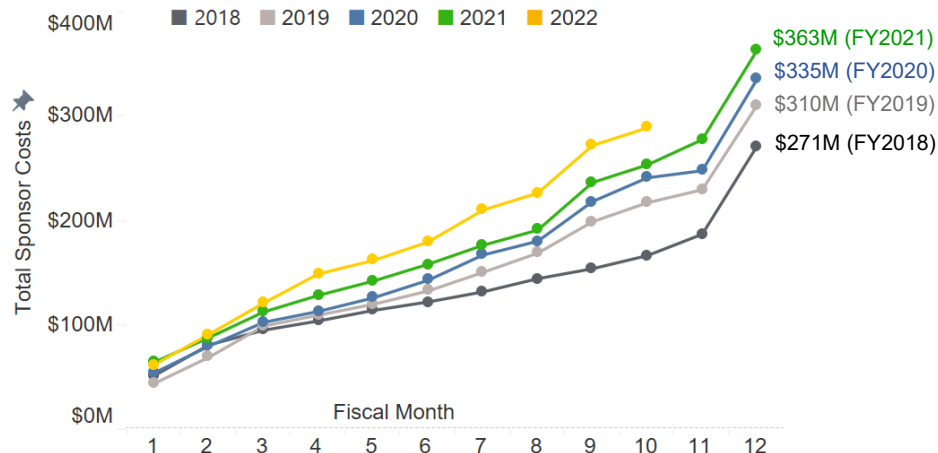
P. Srirama Rao, Ph.D.

Vice President for Research and Innovation | May 12, 2022

One VCU Sponsored Research - YTD Trends

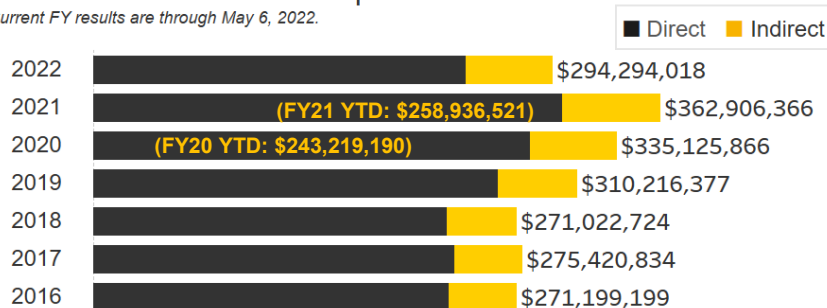
Variance (YTD) from FY2021: \$35.3M (14% ▲)

FY18 - FY22 *Only completed months.*



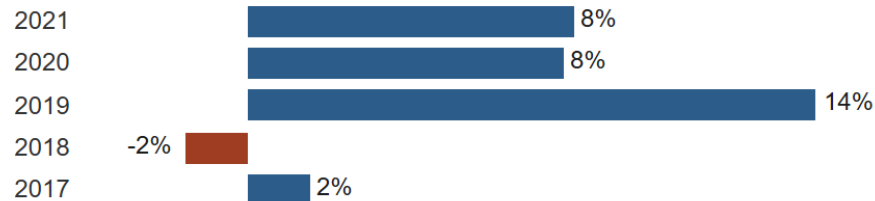
Year-over-Year Growth in Sponsor Dollars

Current FY results are through May 6, 2022.



Annual Growth Rate Over Previous Year

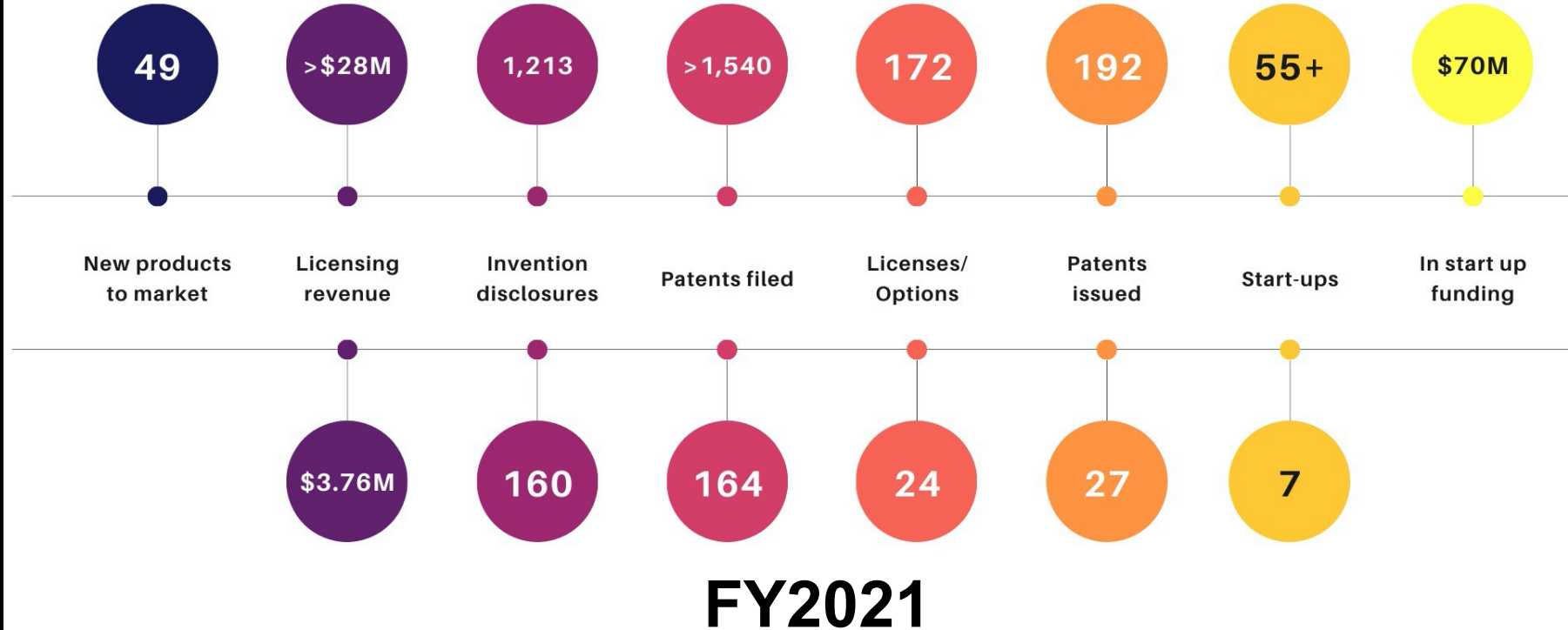
Only completed fiscal years. 2016 rate not shown because 2015 data not included.



YTD: May 6, 2022

Technology Commercialization

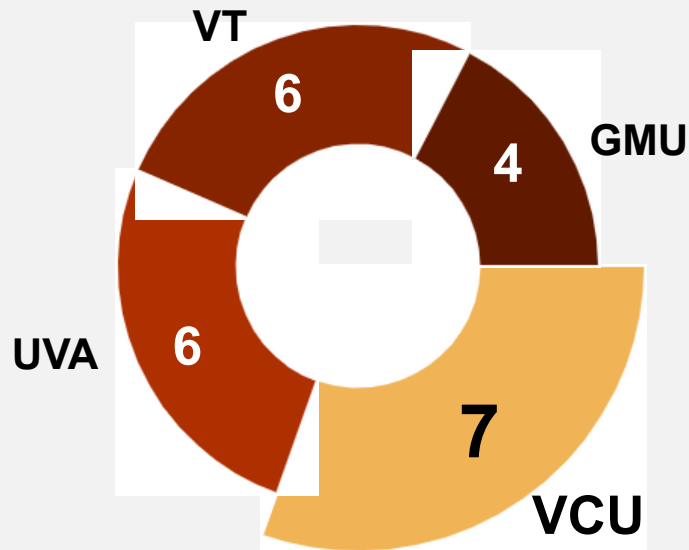
10 years of impact



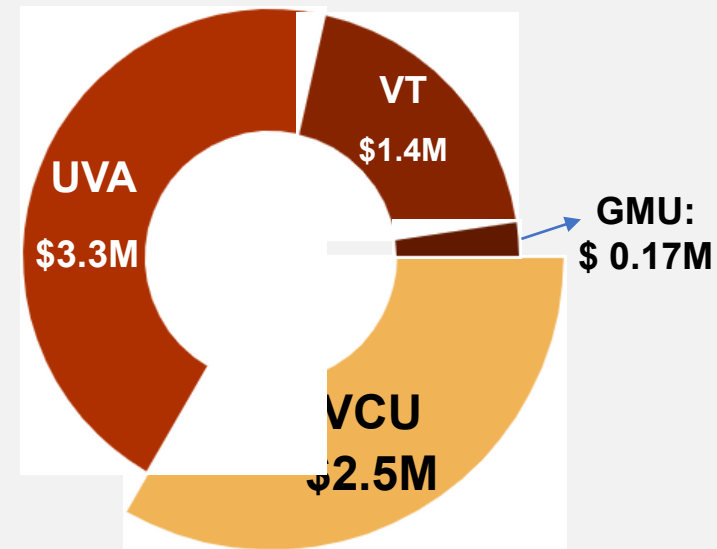
FY2020 Technology Commercialization

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

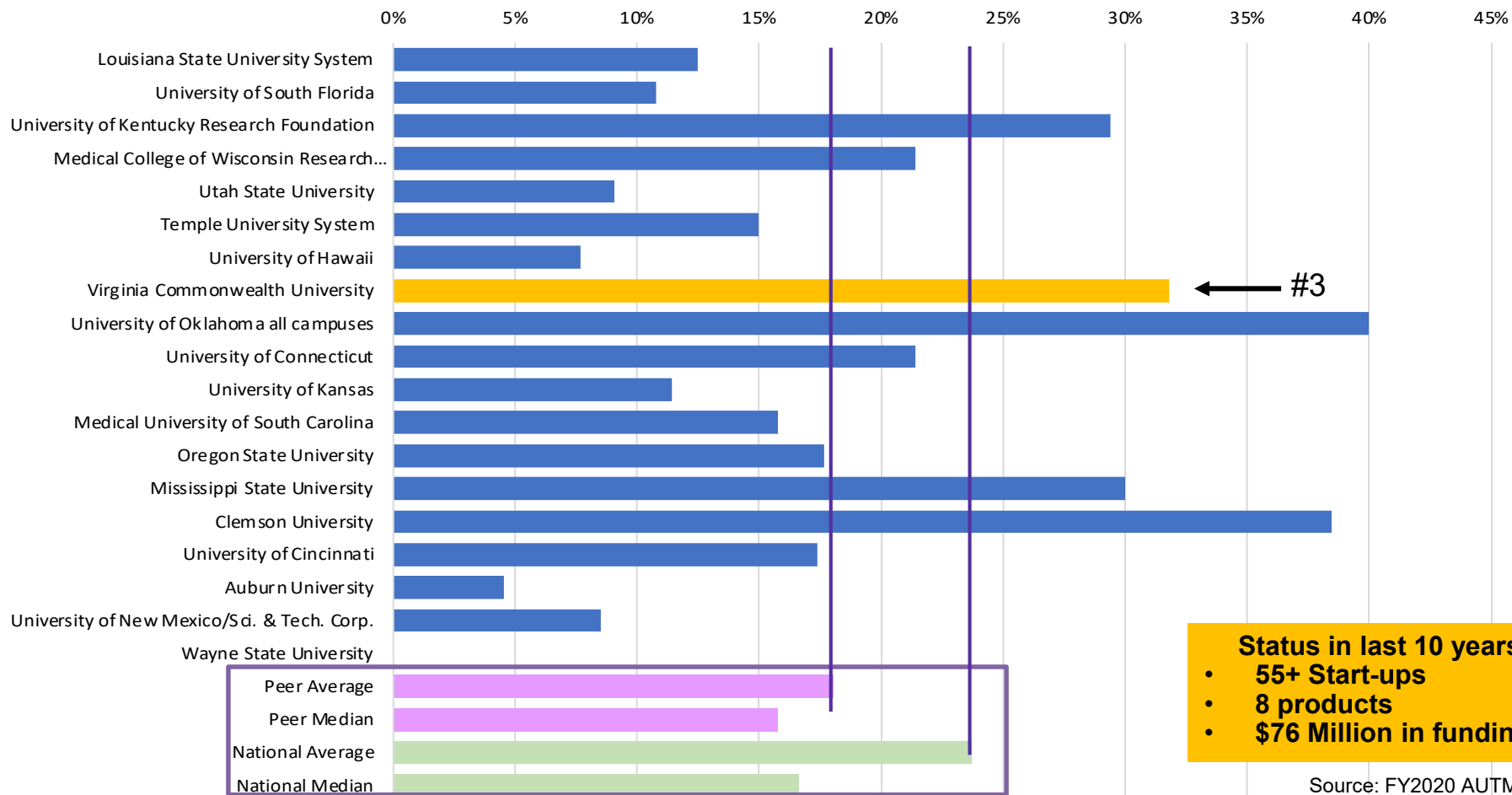
FY2020 Peer Analysis of 19 Public Universities



#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

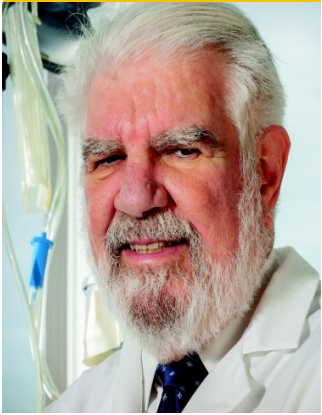


LightSwitchBio

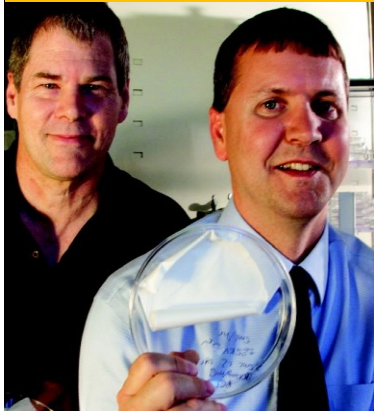


Impactful Innovators and Entrepreneurs

Wound Healing Patch



Clotting Bandage



Sickle Cell Drug



Lyme Disease Vaccine



Venting and Feeding Device for Infants



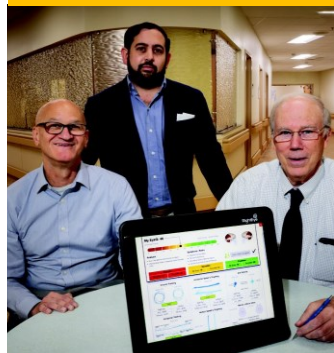
Biofilm for Infection Prevention



Automated Detection of Sexual Assault DNA



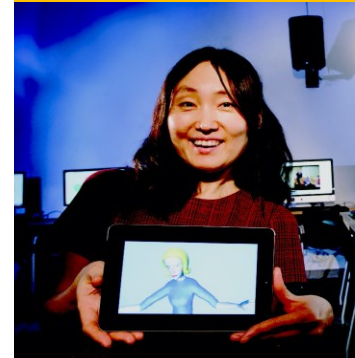
Early Detection of Parkinson's Disease



V-Coach – App for Mindfulness



VR for Improving End of Life Quality



Therapies for sickle cell, cancer, inflammation

Anti-sickling compounds



oneVCU

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

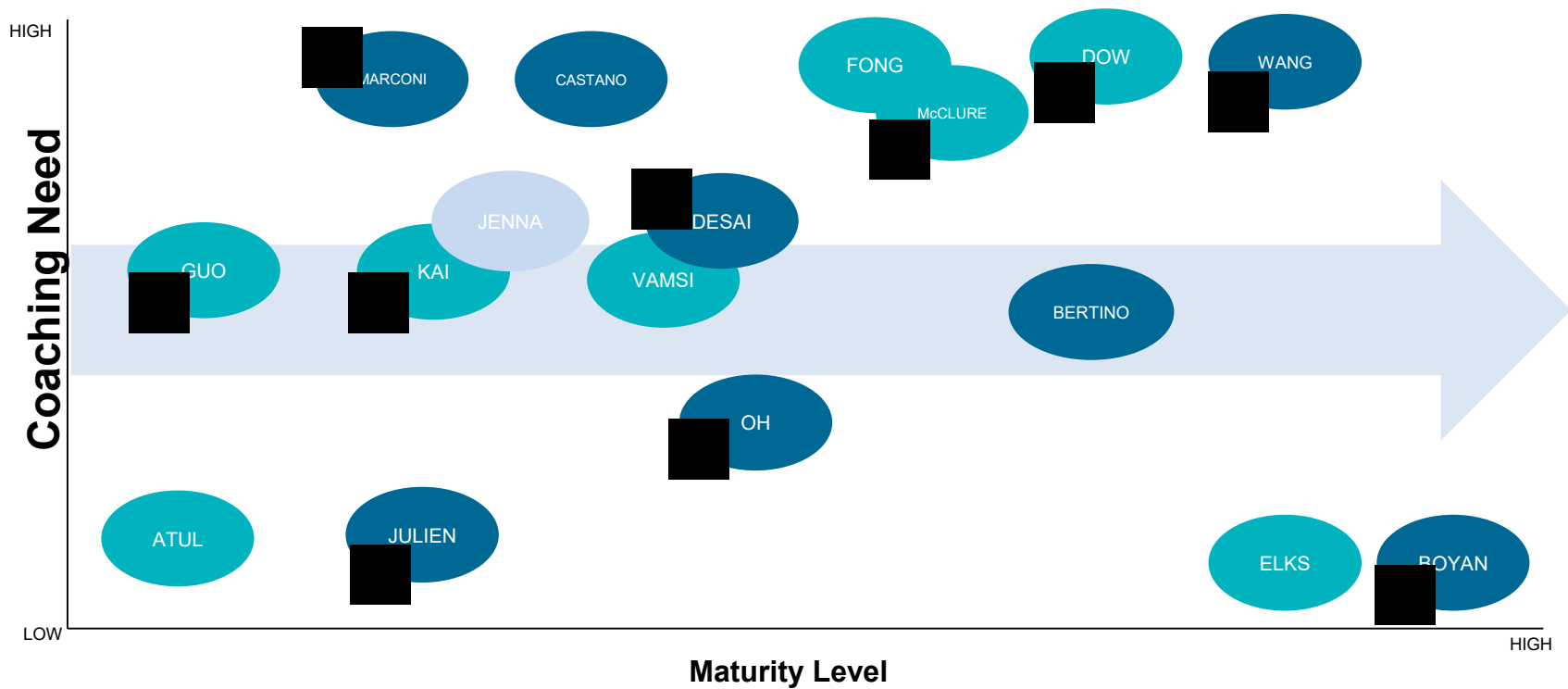
Vanguard® crLyme A Chimeric Recombinant Vaccine for Dogs: the best-selling Lyme disease vaccine for dogs in the U.S.

- **\$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



oneVCU

Team

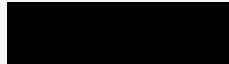
Highly experienced
New Ventures Director



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



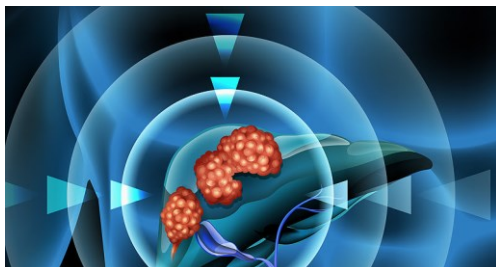
NorthernVirginia



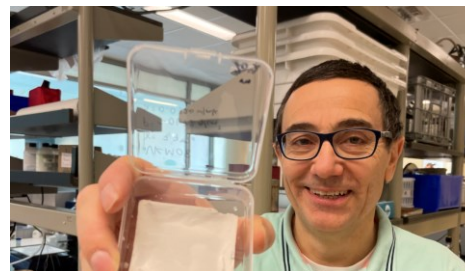
Venture Fund?
(Future)



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

