

ANNUAL REPORT

Bringing Ideas to Life

21



**VCU**

Innovation Gateway

Office of the Vice President  
for Research and Innovation



Bringing Ideas to Life

# 21 Annual Report



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and the Senior Executive Director

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## Mission

*Our mission is to facilitate commercialization of university inventions for the benefit of the public, to foster a culture of innovation at the university, to promote industry collaborations and to support regional economic development.*

**COVER PHOTO:** *Up close with the tiny "hooks" used on the VCU surgeon-developed product Nerve Tape. See page 6 for more.*

Design: BN Design & Advertising  
Photography: Karl Steinbrenner

### Dear Colleagues and Friends,

For VCU Innovation Gateway, 2021 was another transformative year on the cutting edge of technology and innovation. We remained committed to our goals: to facilitate the commercialization of VCU discoveries and turn university research into products that improve health and enrich the quality of life within our communities.

We are pleased to report Innovation Gateway finished the year with a record 160 new invention disclosures — a 20% increase over the previous year and a more than 50% increase in licensing revenues, at \$3.7 million. Additional highlights include: 164 patent applications, 27 new patents, 24 license agreements, and seven new start-ups based on VCU inventions. This work mirrors VCU's own astounding research growth with a record-breaking \$363 million in sponsored funding in fiscal year 2021, demonstrating 25% growth over the last three years. The National Science Foundation ranked VCU no. 58, up from no. 65, on a list of more than 400 public-research universities. It is clear that our research enterprise is on a fast-paced trajectory for prominence.

Given the tremendous need for transformative research in the face of society's grand challenges, unwavering institutional support is a must. As part of the Office of the Vice President for Research and Innovation, Innovation Gateway is guided by the One VCU Research Strategic Priorities Plan and its four initiatives: enriching the human experience, achieving a just and equitable society, optimizing health, and supporting sustainable energy and environments. The plan is supported by a culture

of collaboration and funding that will guide Innovation Gateway in bringing national prominence, world-class recognition, and value to VCU and its inventors. Within this report, you will meet some of the great minds who are leading that charge.

Last year, while we remained committed to our overall goal of advancing technology commercialization, Innovation Gateway took on new and exciting responsibilities in supporting university-created startups. As VCU has intensified its commitment to research, Innovation Gateway is creating ways to turn university's most innovative discoveries into impactful new ventures.

As we look ahead, we know the accomplishments of the last year would not have been possible without the collaboration and partnership of our inventors and our community. Our success represents our collective achievement. We look forward to building upon these partnerships and striving for continued success in the years to come.

*With sincere gratitude,*

**P. Srirama Rao, Ph.D.**  
Vice President for Research and Innovation

**Ivelina Metcheva, Ph.D., MBA**  
Senior Executive Director, VCU Innovation Gateway



160

Invention Disclosures

24

Options/  
Licenses

7

Start-Ups

164

Patents  
Filed

27

Patents  
Issued

50

Industry  
Engagements

\$3.76

Licensing  
Revenue  
(millions)

# 21 FISCAL YEAR AT A GLANCE

## DEPARTMENTS WITH TEN OR MORE INVENTION DISCLOSURES

61 Human and Molecular Genetics

28 Medicinal Chemistry Pharmacy

10 Mechanical and Nuclear Engineering

## DEPARTMENTS WITH FIVE TO NINE INVENTION DISCLOSURES

9 Radiation Oncology

7 Internal Medicine

7 Microbiology and Immunology

6 Pharmaceutics

6 Biomedical Engineering

6 Chemical and Life Science Engineering

6 Electrical and Computer Engineering

## Distribution of Invention Disclosures

School of Medicine 101

School of Pharmacy 35

College of Engineering 30

College of Humanities  
and Sciences 4

School of Dentistry 3

School of Business 1

Research  
and Innovation 1

School of Nursing 1

College of Health  
Professions 1

# VCU PATENTS

7/7/2020 Patent No. 10,702,695

Richard M. Costanzo Ph.D.; Woon-Hong Yeo Ph.D.  
On a Wireless, Implantable, Artificial Taste System

7/28/2020 Patent No. 10,722,557

Antonio Abbate, M.D., Ph.D.; Stefano Toldo, Ph.D.  
Treatment of Acute Myocardial Infarction using Alpha-2  
Macroglobulin

7/28/2020 Patent No. 10,723,790

Jerome F. Strauss, M.D., Ph.D.  
Compositions and Methods for Prophylaxis and/or Therapy  
for Polycystic Ovary Syndrome

8/4/2020 Patent No. 10,730,752

Babak Ashourirad, Ph.D.; Hani El-Kaderi, Ph.D.  
Heteroatom Doped Porous Carbons for Clean Energy  
Applications

8/11/2020 Patent No. 10,736,951

Jason Carlyon, Ph.D.  
OmpA and Asp14 in Vaccine Compositions and As  
Diagnostic Targets

8/18/2020 Patent No. 10,744,172

Paul B. Fisher, M.Ph., Ph.D.;  
Devanand Sarkar, M.B.B.S., Ph.D.  
Tropism Modified Cancer Terminator Virus  
(AD.5/3 CTV;AD.5/3-CTV-M7)

9/29/2020 Patent No. 10,786,517

Shunlin Ren, M.D., Ph.D.  
Uses of Oxygenated Cholesterol Sulfates (OCS)

10/13/2020 Patent No. 10,800,751

Martin K. Safo, Ph.D.; Richmond Danso-Danquah,  
Ph.D.; Yan Zhang, Ph.D.; Tanvi M. Deshpande, Ph.D.;  
Jurgen Venitz, M.D., Ph.D.; Kevin Ward, M.D.;  
James Burnett, Ph.D.  
Ester Nitrates Derivatives of Aromatic Aldehydes with  
Multiple Pharmacologic Properties to Treat Sickle Cell Disease

11/17/2020 Patent No. 10,836,729

Martin K. Safo, Ph.D.  
Metabolically Stable 5-HMF Derivatives for the Treatment of  
Hypoxia

11/24/2020 Patent No. 10,842,860

Jason Carlyon, Ph.D.  
AipA, OmpA, and Asp14 in Vaccine Compositions and  
Diagnostic Targets for Anaplasma Phagocytophilum Infection

11/24/2020 Patent No. 10,844,089

William M. Pandak Jr., M.D.; Shunlin Ren, M.D., Ph.D.  
Nuclear Sulfated Okysterol, Potent Regulator of Lipid Homeo-  
stasis, For Therapy of Hypertriglycerides, Fatty Liver Disease  
and Atherosclerosis

11/24/2020 Patent No. 10,845,288

Qinglian Liu, Ph.D.; Daren Chen, Ph.D.  
Curved Classifiers and Classification Methods

12/1/2020 Patent No. 10,849,361

Thomas Eisenberg, Ph.D.  
Airflow Puff Topography Measurement Device and Method

12/8/2020 Patent No. 10,858,331

Martin K. Safo, Ph.D.; Kevin Ward, M.D.;  
Richmond Danso-Danquah, Ph.D.;  
James Burnett, Ph.D.; Jurgen Venitz, M.D.;  
Yan Zhang, Ph.D.; Tanvi M. Deshpande, Ph.D.  
Ester Nitrates Derivatives of Aromatic Aldehydes with  
Multiple Pharmacologic Properties to Treat Sickle Cell Disease

12/15/2020 Patent No. 10,865,448

Jerome F. Strauss M.D., Ph.D.  
Compositions and Methods Relating to DENND1A Variant 2  
and Polycystic Ovary Syndrome

12/29/2020 Patent No. 10,875,834

Yan Zhang, Ph.D.; Guoyan Xu, Ph.D.;  
Martin K. Safo, Ph.D.  
Prodrug and Protected Forms of 5-Hydroxymethylfurfural  
(5-HMF) and its Derivatives

1/12/2021 Patent No. 10,888,483

Charles Cartin, Ph.D.; Daniel Martinez;  
Ross Cruikshank; Melvin Rosario; Woon-Hong Yeo  
Ph.D.; Siyong Kim, Ph.D.; Mark Ostyn, Ph.D.  
Smart Patient Positioning System for Radiotherapy

3/16/2021 Patent No. 10,945,971

Sarah Spiegel, Ph.D.; Robert Zipkin, Ph.D.  
Sphingosine Kinase Type 1 Inhibitors and Uses Thereof

3/23/2021 Patent No. 10,957,372

Jayasimha Atulasimha, Ph.D.; Dhritiman Bhattacharya,  
Ph.D.; Md Mamun Al-Rashid, Ph.D.  
"Switching Skyrmions With VCMA/Electric Field for Memory,  
Computing and Information Processing"

4/20/2021 Patent No. 10,980,984

Ramya Nandigam, M.S.; Hilton Bennett, M.S.; W. Paul  
Murphy, M.D.; Bennett Ward, Ph.D.; Sara Um, M.S.  
Guidewire Retention Clip

4/27/2021 Patent No. 10,988,481

Hamid I. Akbarali, Ph.D.; William L. Dewey, Ph.D.;  
Dana E. Selley, Ph.D.; Yan Zhang, Ph.D.  
Potent and Selective Mu Opioid Receptor Modulators

5/4/2021 Patent No. 10,994,130

Jonathan E. Isaacs, M.D.  
Devices and Methods for Repairing Damage to a Nerve

5/18/2021 Patent No. 11,007,227

Martin J. Mangino, Ph.D.; Loren Liebrecht, M.D.  
Compositions and Methods for Restoring or Increasing  
Tissue Perfusion

5/18/2021 Patent No. 11,008,325

Paul B. Fisher M.Ph. Ph.D.; Swadesh K. Das, M.Sc.,  
M.Agg., Ph.D.; Mitchell E. Menezes, Ph.D.;  
Luni Emdad, Ph.D., M.B., M.S.  
Inhibitors of Cancer Invasion, Attachment, and/or Metastasis

5/25/2021 Patent No. 11,014,933

Yan Zhang, Ph.D.  
Non-Peptide Opioid Receptor Modulators

6/10/2021 European Patent No. 3 227 018

B. Frank Gupton, Ph.D.; Keith C. Ellis, Ph.D.  
Chelation Directed C-H Activation Reactions Catalyzed by  
Solid-Supported Palladium(II) Catalysts

6/29/2021 Patent No. 11,046,830

Massimo Bertino, Ph.D.  
Method for One-Step Synthesis, Cross-Linking and  
Drying of Aerogels



## Nurturing Startups through Partnerships

**Chandra Briggman**, President and CEO, Activation Capital  
**Gerard Eldering**, Director of New Ventures, Innovation Gateway



*“We must focus on our region strengths and assets in order to build a unique, compelling and diverse community. VCU’s research portfolio is one of those assets.”*

**Chandra Briggman**  
President and CEO, Activation Capital

**In 2021, Innovation Gateway was given the responsibility of fostering new university startup ventures. It’s an important pathway of technology commercialization and one that requires numerous community partnerships to thrive.**

One critical partner is Activation Capital, a Richmond-based entity championing a startup ecosystem in Central Virginia. It works with industry clusters, entrepreneur support organizations, and company founders to accelerate their development and growth in the region. Chandra Briggman leads that organization, housed within the same building as Innovation Gateway in downtown’s VA Bio+Tech Park.

“We want to develop a sustainable system to mature IP and technology coming out of VCU. This pipeline is important to building a robust entrepreneurial ecosystem. Our goal is to create an environment that produces more scalable businesses that are generating economic and social benefits for the region long-term,” says Briggman. She stepped in as Activation’s CEO in 2020 and, paired with an MBA from MIT, spent years supporting innovators and startups in New England.

Briggman is working closely with Gerard Eldering, Innovation Gateway’s Director of New Ventures.

“Relative to a lot of other universities, VCU’s research activity is enormous,” says Eldering. A successful serial entrepreneur, he also spent more than a decade consulting with university tech transfer offices before joining the team. “Now it’s about putting all these pieces together: turning university research into startups, and then working with the community to connect those startups with the infrastructure and relationships they need to succeed.”

So, what does success look like? “It is easy to mimic what other cities are doing to build their ecosystems and hope for their results. Instead, we must focus on our local strengths and assets in order to build a unique, compelling community,” Briggman says. “VCU’s research portfolio is one of those assets.”

Second, she says, Activation Capital and VCU must adopt an “agile mindset and methodologies” that allow for experimentation, validation, and course-correcting “to prove we are doing the right things to catalyze true growth. I want to be able to say we’re helping ‘X’ number of backable ventures to launch, scale, and make a global impact,” she says. “To me, that’s a signal we’re growing an effective pipeline.”

The partnership will initially focus on short-listing promising VCU technologies and pairing startup-worthy IP and academic inventors with experienced entrepreneurial leadership and talent.

Both partners say the foundation is in place. Last year VCU broke a record in sponsored research funding at \$363 million, marking a 25% increase over the previous three years.

“A university research portfolio of that size is a really good indication that VCU can create companies from its IP,” Briggman says. “Now it’s on us to make sure that we translate some of that research into businesses in the Central Virginia innovation ecosystem.”



## What if you could connect and repair torn peripheral nerves using high-tech tape?

VCU orthopaedic surgeon Jonathan E. Isaacs, M.D. believes it's possible. The hand surgeon and a group of collaborating engineers has patented and is seeking FDA approval for Nerve Tape, a device consisting of microhooks embedded in a biologic wrap. The tiny hooks bind firmly, safely, and reversibly to the nerve's outer connective tissues to align peripheral nerves following traumatic injuries. The tape can ultimately lead to better nerve regeneration and clinical recovery.

After nearly a decade working on ways to improve outcomes for patients with such injuries, Isaacs and the Atlanta-based BioCircuit Technologies Inc. have created the nerve-repair device to replace what the VCU hand surgery division chief calls the gold standard to this point: microsutures.

Isaacs said he's hoping Nerve Tape will make strides in an area where, at best, he sees high-quality results in only about half of nerve-reconstruction surgeries.

"When it comes to reconstructive surgery, nerve repairs are an unsolved problem. Even good surgeons sometimes can't get a good quality alignment of their repairs," Isaacs says. "I believe we have a concept that can truly improve outcomes."

Part of that challenge stems from current methods. Microsutures are time-consuming and require a great deal of skill. Another downside: they can generate scar tissue, which impedes nerve regeneration.

Nerve Tape, on the other hand, connects the two ends of a cut nerve with tiny hooks, then material is wrapped around the nerves to keep them closely aligned to promote regeneration.

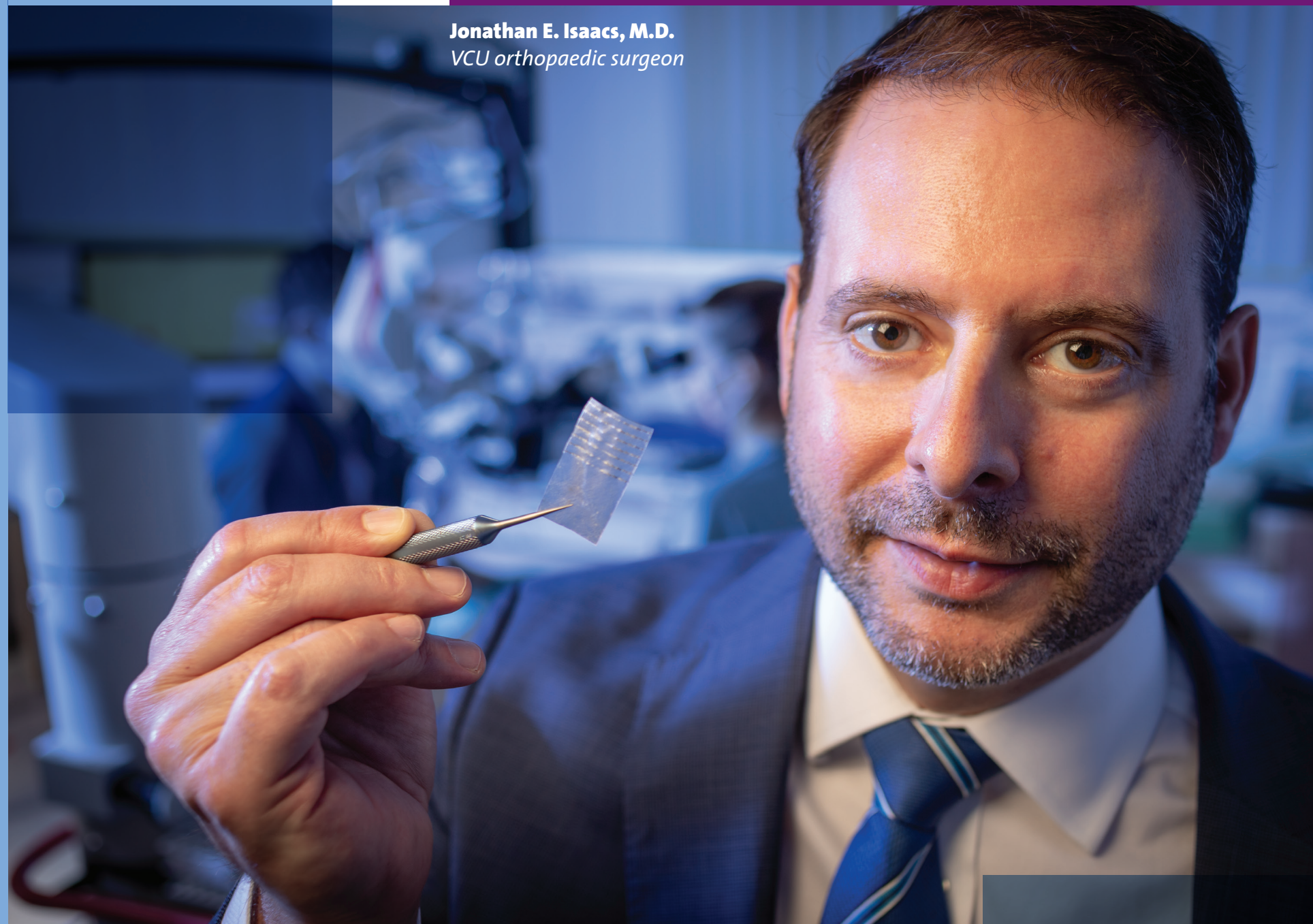
BioCircuit is "perfect partners for this endeavor," Isaacs says. The company has expertise in microfabrication and had used the technology to assess nerve damage. The microhooks, barely visible by the naked eye, are fabricated from nitinol, a metal commonly found in medical devices. Nitinol is more flexible and not as susceptible to crimping as stainless steel, yet is strong enough to penetrate tissue. Federal funding through a series of NIH grants has supported development and refinement to the prototypes, which appear to be a commercially viable tool.

"From what we've seen, it's remarkably more efficient than microsuture repairs," Isaacs said, "and seems to get consistently better alignment."

Isaacs is confident Nerve Tape will earn FDA clearance and will be available for clinical usage in the very near future.

## Repairing Injured Peripheral Nerves

**Jonathan E. Isaacs, M.D.**  
VCU orthopaedic surgeon



*Dr. Isaacs worked with Innovation Gateway to protect his Nerve Tape technology and to secure a partnership with BioCircuit Technologies, which the inventor calls "perfect partners for this endeavor."*



## Taking Temperature with Texts



**Aashir Nasim, Ph.D.**

*Vice President and Vice Provost for VCU's Office of Institutional Equity, Effectiveness and Success*

**Institutions of higher learning are increasingly making efforts to tap into campus climate as a mechanism for affecting policy.**

Few technologies, however, can analyze, translate and disseminate data collection results to policy makers and university leaders as quickly as VCU's Climatext.

Climatext is an anonymous text-messaging platform by which VCU students choose to participate in data collection on hyper-local issues. It's been used to check the temperature, if you will, on VCU's stance on remote learning or vaccination mandates. It's also been used to check broader regional and national issues of cultural, political, and socio-economic significance.

The product was envisioned in late 2018 by Aashir Nasim, Ph.D., vice president and vice provost for VCU's Office of Institutional Equity, Effectiveness and Success. The vision was realized with the support of Jim Yucha, deputy director of application services at VCU Technology Services, and Sam Yerkes, VCU's former webmaster. VCU Innovation Gateway worked with Nasim to protect the invention. Today, thanks to aggressive campus campaigns, it counts upwards of 1,000 participants that collectively represent the diverse VCU's student body — from gender and ethnicity to majors, first-generation status, and more.

Demographics are key, Nasim said. When a student opts in, Climatext uses their cell phone numbers to access student records. Identifiers that would link that phone number to an individual student are removed, so Climatext responses remain anonymous.

Climatext works fast, often aggregating data within a matter of hours so that it can be available for analysis within a day or two. Traditional collection methods, whether old-fashioned paper-and-pencil surveys or even modern online questionnaires, often take months to analyze, Nasim said, which means "whatever the issue was at the moment has already passed."

"It's not just about collecting the data in real time," Nasim says. "It's really about what we do with it and how it affects change."

One example: Climatext data was used by VCU President Michael Rao when decisions were made to open the campus for the fall of 2020.

"It plays a huge role in terms of our policy making," Nasim said, "but also for program support that we provide to students and faculty."

Within the last five years, collegiate senior administrators everywhere "have more of a vested interest in understanding student concerns and being able to meet students where they are," Nasim said, particularly with regards to issues of race and gender, "so they can make responsive decisions and provide accommodations to make sure all students see their institution as being inclusive and welcoming."

Just how universities and colleges do that, however, Nasim said, "is where we distinguish ourselves as an institution."

*Innovation Gateway protected the IP behind Nasim's text-messaging platform, Climatext, which is used to assess what's on VCU students' minds. There's strong interest from other universities looking to adopt Climatext for insight into their own students' sentiments.*



# Revolutionizing Academic Scheduling

## The crash cart. Color-coded IV lines. Neonatal phototherapy.

Some of the most influential medical inventions of the last century were created by nurses.

Because of their unique and irreplaceable position within the medical system, nurses often identify needs and create solutions where no one else can. VCU School of Nursing Dean and Professor Jean Giddens, Ph.D., RN, FAAN — known nationwide for her influence on nursing education and developing innovative teaching and learning strategies — is one of these remarkable inventors.

The problem Giddens wanted to solve was clear: course scheduling. But the solution was a few years in the making.

“While serving as the Associate Dean of Academic Affairs at the University of New Mexico College of Nursing, it never ceased to amaze me how much time we were losing just to the logistics of academic scheduling every semester,” she says. “There wasn’t a way to track requirements across multiple degree programs, or even to easily project class sizes and capacity concerns. That’s how I knew there was a need for a software that could do all that.”

Invented by Giddens in collaboration with the Richmond-based technology consulting firm SingleStone, coursFACTS is poised to become a gamechanger for universities. An integrative database that allows for prospective course planning and a multi-year outlook, coursFACTS is designed to synthesize multiple plans of studies across four nursing degree programs. The software also takes into account faculty members’ teaching, committee work, clinical practice, and research-related activities.

The result is a scheduling system that saves administrators countless hours every semester, freeing them up to focus on their many other responsibilities.

“We developed coursFACTS with input from our associate dean for academic affairs, program directors, department chairs, and schedulers, and that collaboration was crucial,” says Giddens. “What we were able to create fulfills the needs of so many different stakeholders.”

Guided and supported by Innovation Gateway, Giddens and SingleStone created software that’s intuitive, user-friendly, and fast to learn. CoursFACTS is so easy to operate that the VCU School of Nursing implemented the software in January 2020. As a larger emphasis is put on developing more person-centered practices in the workplace, coursFACTS enables faculty and administrators to spend less time managing logistics of classes, and more time focused on educating the next generation of healthcare professionals. And with coursFACTS now available to other universities, educators nationwide will be able to reap the benefits of a VCU-born, groundbreaking software.



*“It never ceased to amaze me how much time we were losing just to the logistics of academic scheduling every semester. That’s how I knew there was a need for a software that could do all that.”*

**Jean Giddens, Ph.D., RN, FAAN**  
VCU School of Nursing Dean and Professor



*"I didn't really envision revenues coming out of it, but I think it's appropriate to charge pharmaceutical companies that rely on it for their clinical trials."*

**Curt Sessler, M.D.**  
Department of Internal Medicine

## **Restaurants, Culture and a Sedation Scale**

*Richmond shines thanks to VCU intensive care doctor*

**In recent years Richmond has been put on the map for its food scene, arts and outdoor events, and quality of life.**

VCU's Curt Sessler, M.D. gave Richmond another accolade, albeit one known more to clinicians and researchers: perhaps the most widely used ICU sedation scale in the world.

The Richmond Agitation-Sedation Scale (RASS) was created two decades ago out of a challenge, Sessler says, to better understand the comfort level of patients in the ICU.

"Our intent was to make the scale accurate and reliable, and something that was also simple to use and recall easily," he says. Sessler assembled a multidisciplinary team of professionals responsible for ICU patients — nurses, pharmacists, physicians — and created the RASS. Scale in hand, they submitted it for peer review, which validated its effectiveness in 2002.

Today, the RASS is used in hospitalized patients to describe their level of alertness or agitation. The scale scores guide sedation therapy and titration and improve communication among providers. The scale is mostly referenced for mechanically ventilated patients in order to avoid over- or under-sedating them. Excessive sedation, for example, can delay a patient's recovery, while under-sedation may leave a person in discomfort.

Ten years after it was developed, Sessler worked with Innovation Gateway to copyright the RASS. The protection allows the scale's use free of charge for health systems, clinicians, and researchers (it's easily Google-able). Meanwhile, pharmaceutical companies must license the scale, a proven reliable tool, in clinical trials that are comparing sedative medications.

"We want to have the RASS as widely used as possible, without any barriers to use in the clinical setting, and I give my complete support and approval for its use in research," Sessler says. "I didn't really envision a revenue stream for VCU out of it, but I think it's appropriate to charge pharmaceutical companies that rely on it for their clinical trials, similar to use of validated instruments."

For Sessler, it's about improving patient care and creating more effective medications. "I've really just enjoyed hearing from people around the country and around the world with their interest in RASS, and their clever ideas to incorporate it into their research and patient care," Sessler says. "It's rewarding."





## Disabling COVID's 'Key'

**Disarming the virus that causes COVID-19 until it's no worse than the common cold is a powerful strategy researchers are using to attack the disease.**

As COVID-19 mutates, VCU College of Engineering's Michael Peters, Ph.D. is accelerating efforts to disable the "spikes" that give the coronavirus particle its familiar shape — and its power to prey on cells.

Peters, a professor of chemical and life science engineering, has watched the behavior of the SARS-CoV-2 spike protein like a detective tracking a suspect at large. With the emergence of new variants, the criminal gets craftier.

The virus uses the spike protein to latch on to human epithelial cells that line the lungs and vasculature. Peters likens this process to a burglar trying to break into a house. The surface of the spike protein — or "key" — is composed of subunits called protomers. Each protomer is in an "up" or "down" state. Think of these states as grooves on the key: The "up" state appears to allow binding, while the "down" state is believed to be relatively inactive. Therefore, forcing protomers into a "down" state may be a step toward future treatments.

"With the original strain, the key didn't fit very well, so it had to jiggle and turn a couple of times before opening the door," Peters explains. "New variants are more problematic, because, through the

multitude of mutations that result from infection and replication, the virus has stumbled onto a better key."

Peters urges people not to wait for a COVID treatment, however, which he said is risky and far in the future. "They can mitigate this virus now by getting vaccinated," he said.

In 2020, Innovation Gateway launched the COVID-19 Innovation Center, an online portal dedicated to research around the virus. Peters, a regular collaborator with the Innovation Gateway team, placed his invention on the site. The work caught the attention of Hoth Therapeutics Inc., a clinical-stage biopharmaceutical company based in New York that develops therapeutics for, among other conditions, asthma, chronic wounds, psoriasis and acne. And now, COVID-19.

Within a matter of weeks an exclusive licensing deal emerged, Innovation Gateway director of licensing, Magdalena K. Morgan says. Under the agreement, Hoth is able to check Peters' therapies against the virus and its variants. The relationship has prompted two rounds of Hoth funding to continue Peters' research.

"Hoth really wanted to jump on the research," Morgan says. "It really was one of the quickest licensing deals we've ever done."

*"This was one of the quickest licensing deals we've ever done."*

**Magdalena Morgan, Ph.D.**  
VCU Innovation Gateway Director of Licensing

**Michael Peters, Ph.D.**  
Professor, Department of Chemical and Life Science Engineering  
VCU College of Engineering





# Commercialization Advisory Board

**David R. Beauregard**  
Managing Director and Founder  
Monument Square Advisors, LLC

**Geoffrey D. Beecher**  
Mid-Atlantic Sales Manager  
Focal Therapeutics

**Reinhold Brand**  
President (retired)  
Evonic USA

**Chandra Briggman**  
President/CEO  
Activation Capital

**Kevin Corby**  
R&D Director (retired)  
DuPont

**William Daughtry**  
Group Managing Partner (retired)  
PWC

**Gerard Eldering**  
President  
InnovateTech Ventures

**Alex Euler**  
Investment Director  
CIT Gap Fund

**Bruce Ferris**  
Managing Partner  
SPARK Product Development LLC

**Anthony Fung**  
CEO  
GovInsight

**Jeffrey M. Gallagher**  
Not-for-profit Manager  
Community Leader

**Tracey Greene**  
Founding Executive Director  
Charlottesville Angel Network

**Mark Lambert**  
Founder  
VArtisans

**Chris Little**  
Founder  
SingleStone

**Sean Mallon**  
VP, Commercialization  
Virginia Innovation Partnership  
Corporation

**William McPheat**  
Principal Scientist (retired)  
AstraZeneca

**Matthew Miessau**  
Associate  
Epidarex Capital

**John Newby**  
CEO  
Virginia Bio

**Paul Nolde**  
Managing Director  
Riverflow Growth Fund

**Dan O'Korn**  
Partner  
Hutchison PLLC

**Kevin Passarello**  
Shareholder  
Buchanan Ingersoll & Rooney PC

**Richard Pellegrino**  
Sr. Director, Global Innovation  
Stryker

**Erin Powell**  
Executive Director  
Lighthouse Labs

**Kirsten Rieth**  
Director, Strategy and Innovation  
RTI Innovation Advisors

**Dennis Schafer**  
Director  
Life Science Management

**William Weber**  
VP, General Manager (retired)  
DuPont

**Vida Williams**  
Advanced Analytics Solution Lead  
SingleStone



## VCU Innovation Gateway Team

### **Standing from left:**

Jeff Kelley, Magdalena Morgan, Ph.D., Gerard Eldering,  
Ivelina Metcheva, Ph.D., MBA, Koffi Selom Egbeto, Ellie Linkous, Barry Carver

### **Sitting from left:**

Michael Berger, Meg Thornton, Brent Fagg, M.S.

### **Board of Directors**

L. Franklin Bost, MBA  
Reinhold Brand, Ph.D.  
Nancy Eberhardt, M.S.  
Gopinath Jadhav, M.D.  
Gary LeClair, J.D.  
Spencer Williamson, MBA

### **Ex-officio:**

P. Srirama Rao, Ph.D.  
Ivelina Metcheva, Ph.D., MBA





**VCU**

## Innovation Gateway

Office of the Vice President  
for Research and Innovation

Non-profit Organization  
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