

# Welcome to the 2019



Advancing Science. Accelerating Innovation.

## Forum

Top 3 by 2023

State of the BioHealth Capital Region's EcoSystem



**Rich Bendis**

President & CEO, BioHealth Innovation Inc.





*The name might be gone.....*

*.....But will never be forgotten!*

*We look forward to continued growth in the  
BioHealth Capital Region...*

*With*

**AstraZeneca** 

# THANK YOU TO OUR BHCR ORGANIZERS AND OUR PLANNING COMMITTEE



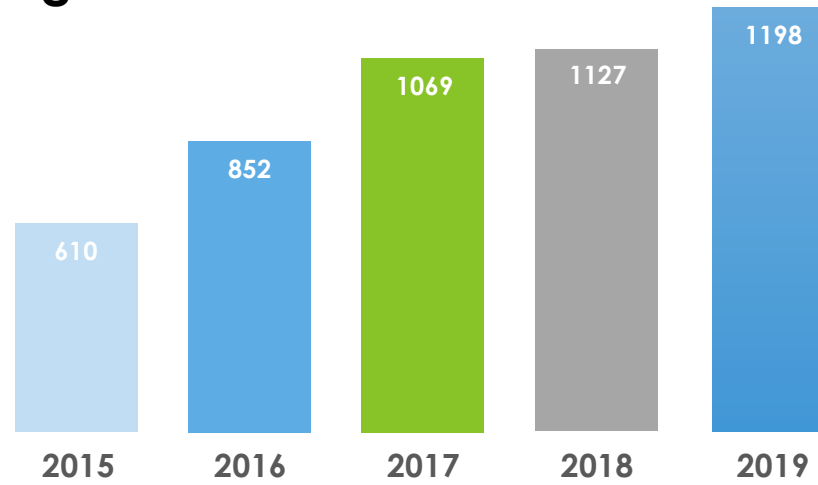
# Thank You Sponsors



# BioHealth Capital Region Forum Growth

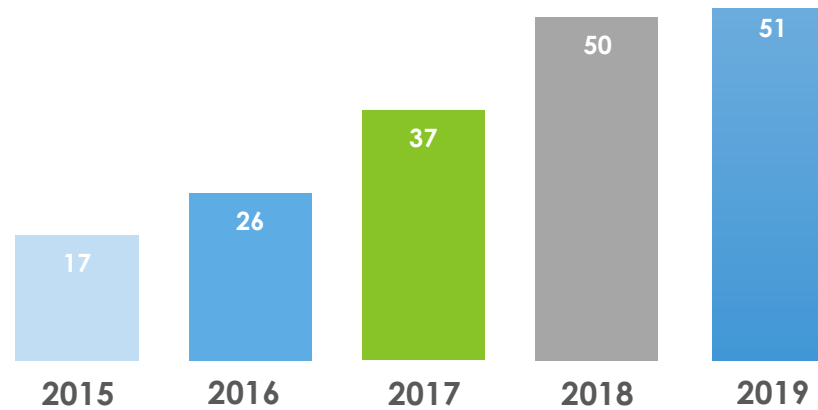
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## Registrants



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## Sponsors



# BHCR Support Organizations



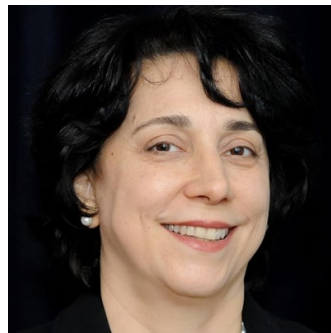
**Richard A. Bendis**  
President/CEO

"BHI sources and evaluates market-relevant biohealth intellectual properties, connects the IP with funding, and assists businesses in marketing and growth."



**Marty Rosendale**  
CEO

"We are a collaborative community that is actively engaged in building strong technology and life science industries by supporting the efforts of our individual members."



**Kolaleh Eskandanian, PhD, MBA, PMP®**  
Vice President and Chief Innovation Office

With a health care experience designed around kids' unique needs, we're the premier provider of pediatric services in the Washington, D.C., metro area and its only health system specializing in kids.



**George Davis**  
CEO

"TEDCO provides framework of knowledge, funding, and networking to support an innovation eco-system that nurtures researchers, entrepreneurs, start-ups, and early stage companies engaged in bringing innovation ideas to market."



**Jeffrey M. Gallagher**  
CEO

"We fuel the network of leaders that drive bioscience to eradicate disease, save lives, and feed the world.....one innovation at a time."



# Regional Initiatives

- Many independent regional initiatives highlighted in this Forum and for first time communication with each other
- Maryland Life Science Advisory Board implementing recommendations for Governor Hogan
- Greater Washington Partnership launched as well as Global Cities Export initiative
- MCEDC and WorkSource Montgomery two new private public partnerships operational



## LSAB





# Collaboration



“The strength of the team is each individual member.

**The strength of each member is the team.”**

*Phil Jackson*

# Goals of the Forum

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## The region's leaders will:

- create new connections, leverage strengths, seize opportunities
- share developments of the year across the region
- continue evaluating region's strengths, weaknesses, opportunities, threats
- further develop vision and identity for region

## BioHealth Capital Region Initiative leaders will:

- report progress against goals from last year's conference
- set new goals for coming year, informed by Forum participants



Genetic Engineering & Biotechnology News

# Top 10 U.S. Biopharma Clusters

## Ranking Based on Five Criteria:

2018

1. NIH Funding
2. Venture Capital Funding
3. Patents
4. Lab Space
5. Jobs

1. Boston / Cambridge, MA
2. San Francisco Bay Area
3. New York/New Jersey
4. **Maryland / Virginia / DC Metro**
5. San Diego
6. Greater Philadelphia
7. Los Angeles / Orange County
8. Raleigh-Durham, NC (inc. Research Triangle Park, NC)
9. Seattle
10. Chicagoland

# The Growth of the “BioHealth” Brand

**BioHealth** Innovation

**BioHealth** Capital Region

Office of **Biohealth** – Maryland Department of Commerce

**BioHealth** Capital Region – Genetic Engineering News

Institute for **Biohealth** Innovation – George Mason

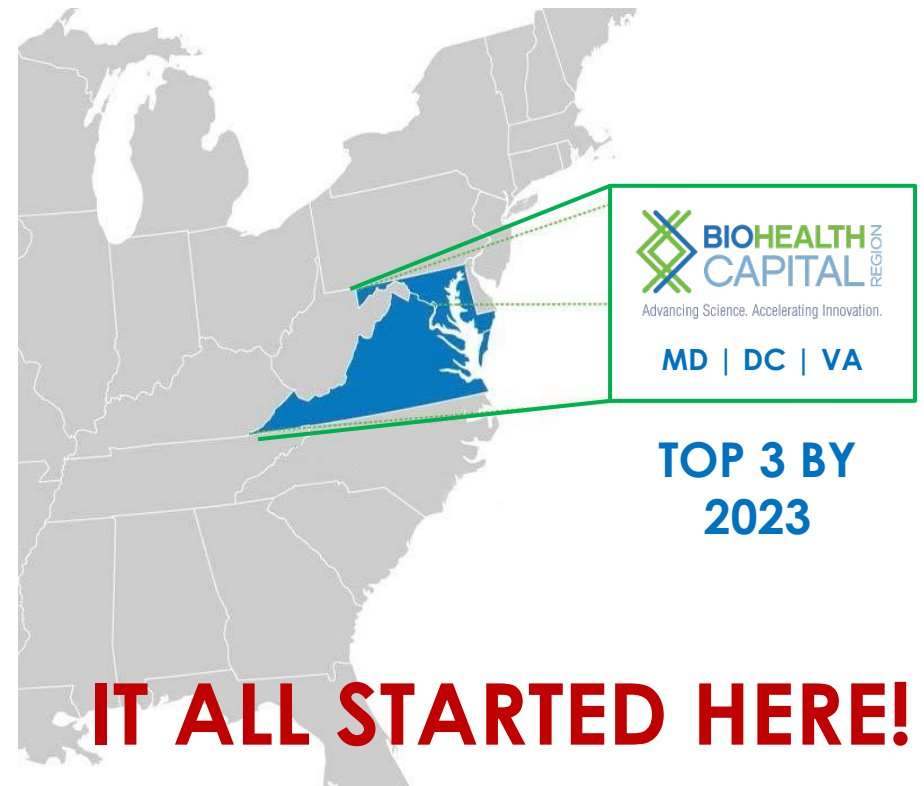
Wisconsin’s **Biohealth** Industry

Women in **Biohealth** – U.W. Madison

Growing **Biohealth** Cluster – Ohio

Luxembourg **Biohealth** Cluster

South Korea **Biohealth** Industry



**BioHealth Capital Region is on the way to achieving its stated goal of growing the Maryland / Virginia / Washington, D.C. region into a top-three cluster by 2023.** In addition to longtime anchors such as the NIH and FDA, and academic institutions led by the Johns Hopkins University and University of Maryland system, the life sciences have seen expanded business activity and support from officials led by Virginia Gov. Ralph Northam (D) and Maryland Gov. Larry Hogan (R). The region is already **third in NIH funding** (3103 awards totaling \$1.456 billion), 42% of which was awarded to Johns Hopkins (\$605.781 million). Three U. of Maryland schools (Baltimore, College Park, and Baltimore County) garnered a combined \$214.528 million.

BioHealth Capital is also **third in patents** (4943, just 32 ahead of San Diego), and **fourth in lab space** (with 22.5 million square feet according to Rockville, MD-based Scheer Partners, which measures the entire region [vs. JLL's 9.5 million for "suburban Maryland"]). **VC has improved from sixth in 2016: PwC/CB Insights ranks the region fourth with \$944.07 million in 44 deals, but JLL tallies \$1.1 billion, good enough for third.** This year's VC includes the \$250 million Series A financing completed in February by Viela Bio in Gaithersburg, MD, formed when AstraZeneca spun off six pipeline candidates of its Gaithersburg-based MedImmune subsidiary. However, BioHealth Capital appears to lag in employment: JLL has the region ninth with 41,322 jobs, though Battelle in June showed a more respectable 63,287 jobs as of 2016, good for sixth place.

# BHCR News Stories

WASHINGTON  
BUSINESS JOURNAL

“**Danaher** acquiring GE biopharma business for **\$21.4B**”

## BIOCENTURY

“**Macrogenics** raises **\$110M** following breast cancer data”

**MarketWatch**

“**Arena Pharmaceuticals** Enters **\$1.2 Billion Agreement** With **United Therapeutics**”



“**NextCure** Raises **\$93 Million** in Series B Financing”

WASHINGTON  
BUSINESS JOURNAL

“**K2M** closes **\$1.4B** sale to **Stryker**”



“**Autolus** Brings in **\$150 Million** in IPO, Continues Strong Investment Trend for Biotechs This Week”

[StreetInsider.com](http://StreetInsider.com)

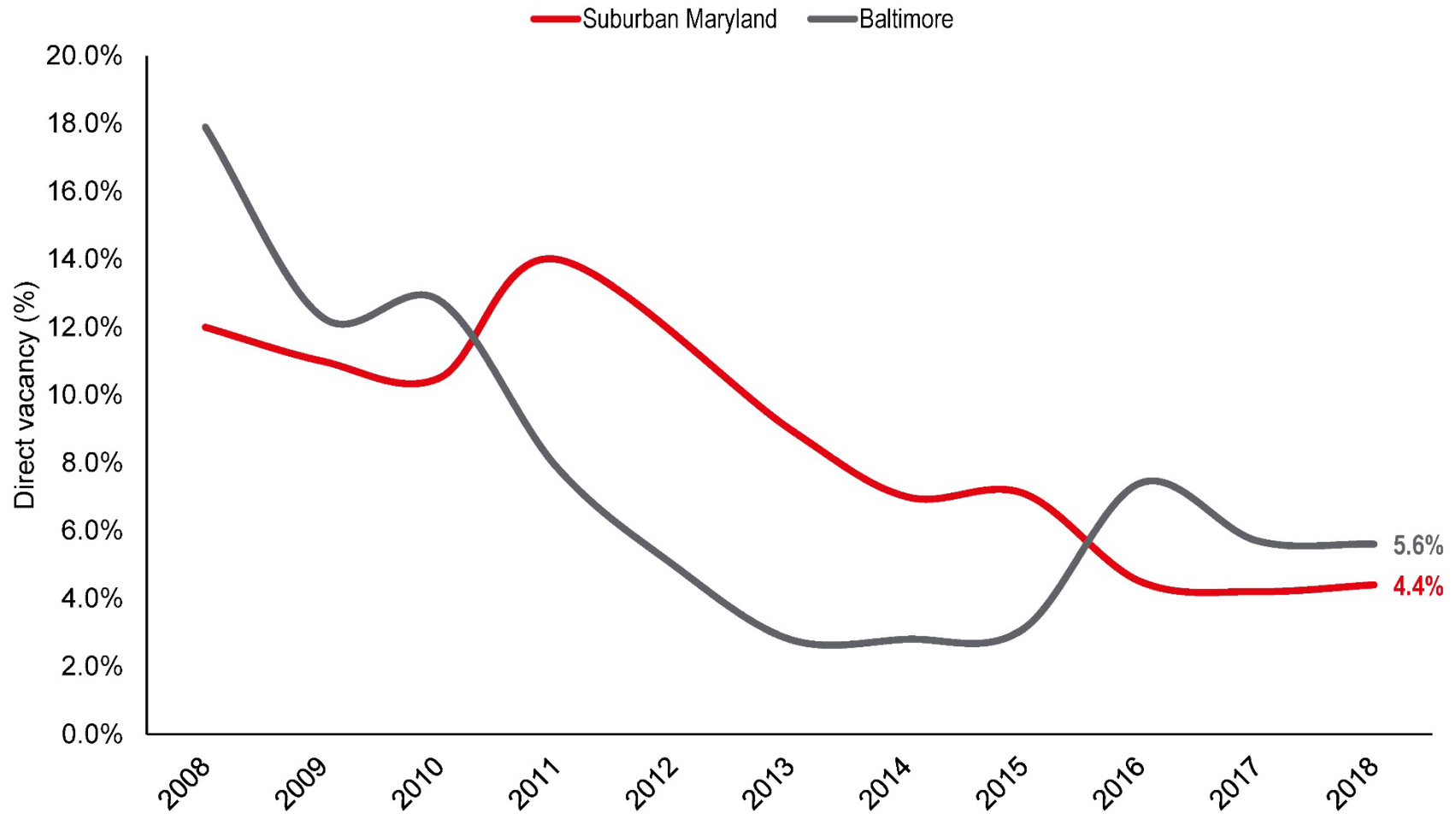
“**Regenxbio (RGNX)** Raised **\$208 Million** Public Offering Of Common Stock”

**FINSMES**

“**Emmes** Receives Investment from **Behrman Capital**”

# Biohealth Capital Region Historical Vacancy

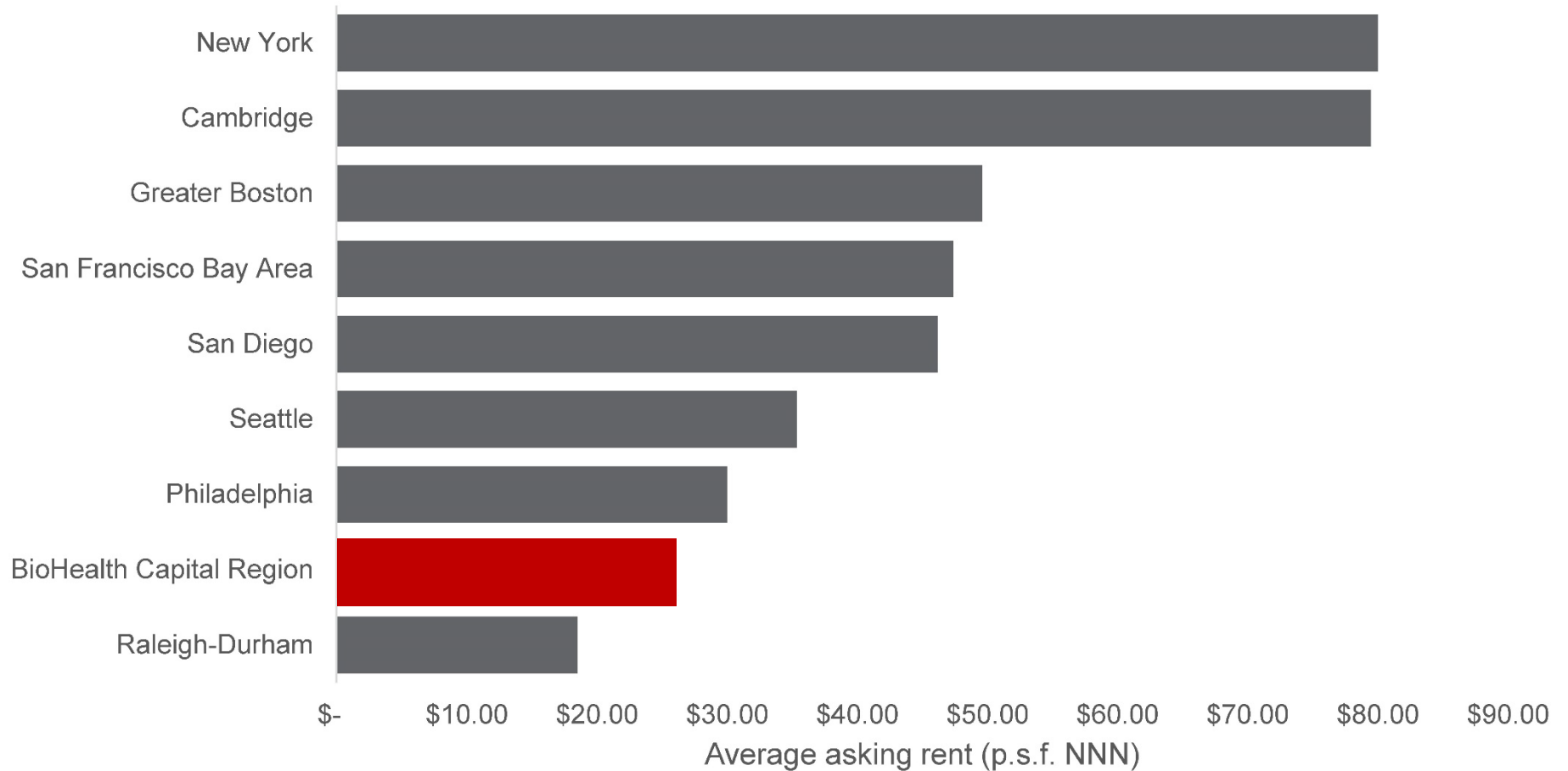
*Vacancy in Suburban Maryland has stabilized at record low levels.*





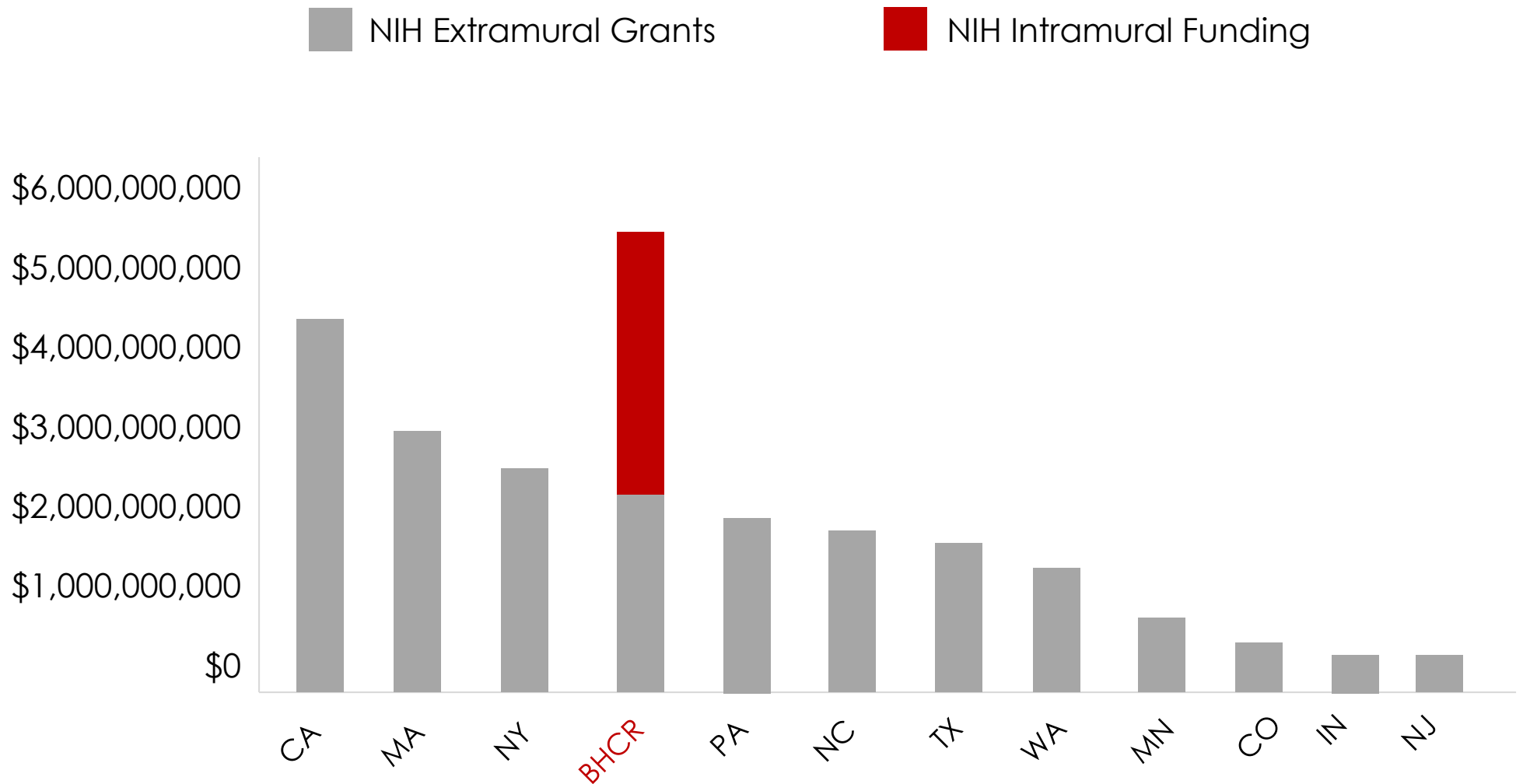
# Biohealth Asking Rents

*Suburban Maryland and the region offer competitive rates for life sciences space when compared against other top-tier biohealth clusters.*



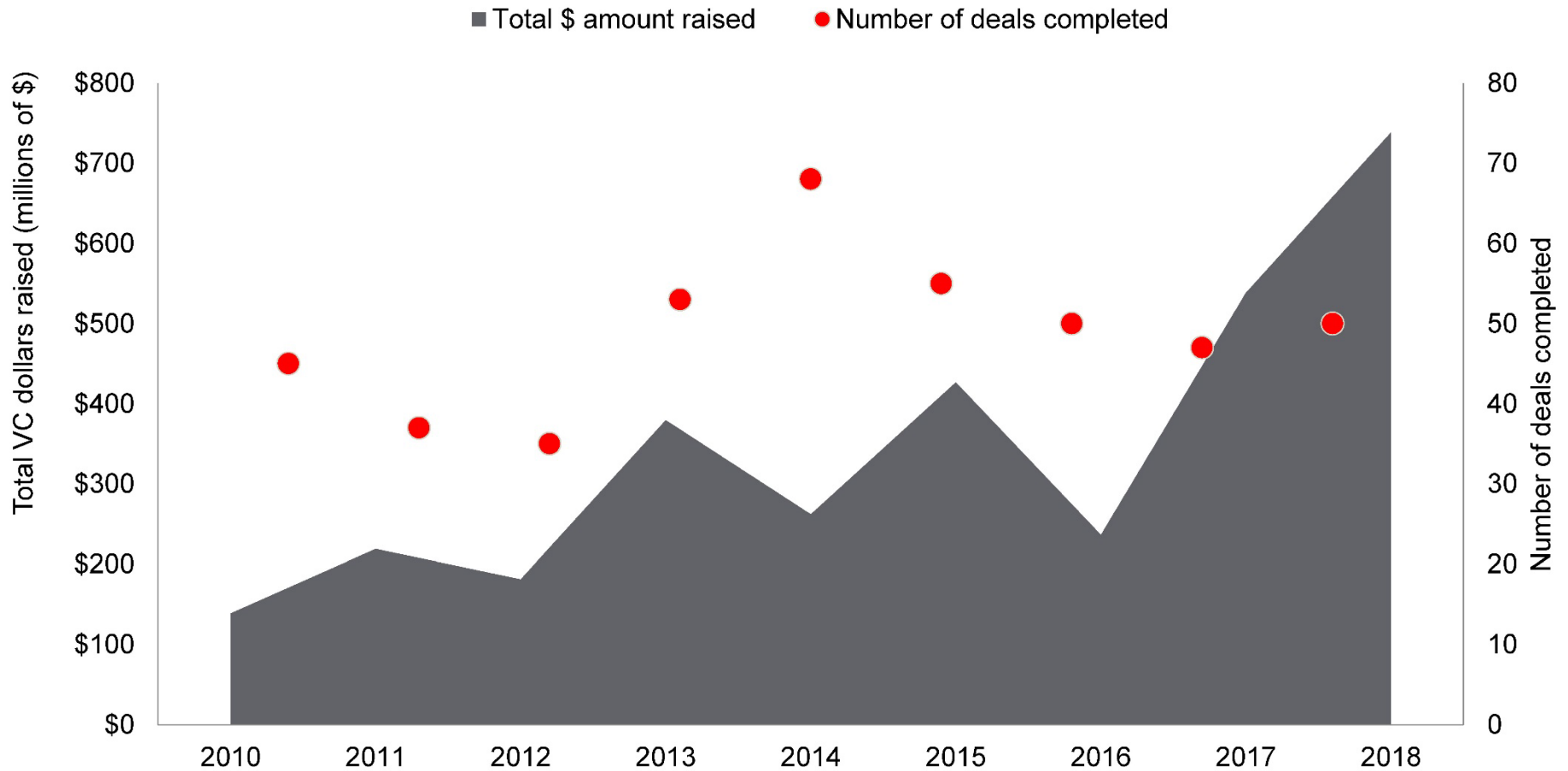
# NIH Extramural and Intramural Funding

*While ranked 4<sup>th</sup> nationally in extramural research, the region leads when combined with NIH's intramural research, which has over \$3 billion of funding per year and is conducted by nearly 6,000 scientists primarily in Bethesda, MD.*





# VC Funding in the BioHealth Capital Region

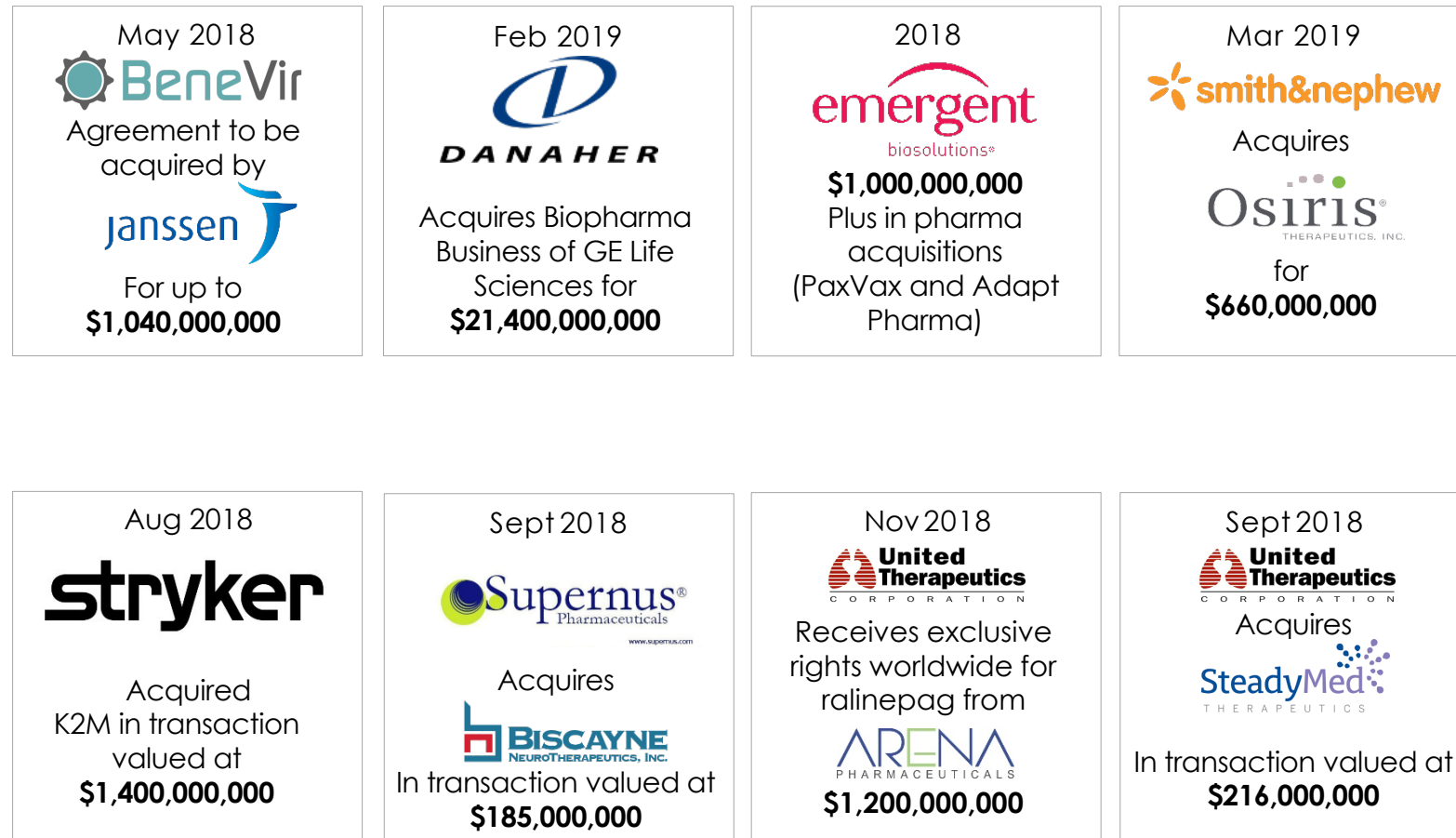
*Average deal size has climbed from **\$11.5 million** to **\$14.8 million** in 2018 as overall volume reached over **\$700 million**.*



# Recent Investment Successes in BHCR

<p>January 2019</p>  <p><b>\$56,150,000</b> In Venture Capital</p>	<p>October 2018</p>  <p><b>\$16,900,000</b> In Private Equity</p>	<p>November 2018</p>  <p>Raises <b>\$150,000,000</b> In Venture Capital</p>	<p>August 2018</p>  <p>Raises <b>\$10,000,000</b> In Private Equity</p>	<p>March 2019</p>  <p>Receives equity financing with Behrman Capital</p>
<p>February 2019</p>  <p>Raises <b>\$110,000,000</b> In Venture Capital</p>	<p>April 2018</p>  <p><b>\$20,500,000</b> In Venture Capital</p>	<p>January 2018</p>  <p><b>\$23,000,000</b> Series A; spin-out of</p> 	<p>November 2018</p>  <p>Raises <b>\$93,000,000</b> In Series B financing</p>	<p>July 2018</p>  <p>Raises <b>\$36,000,000</b></p>
<p>June 2018</p>  <p><b>\$92,000,000</b> IPO</p>	<p>August 2018</p>  <p><b>\$201,800,000</b> IPO projection contingent on market conditions</p>	<p>May 2018</p>  <p>Raises <b>\$357,000,000</b> Series A; spin-out of</p> 	<p>June 2018</p>  <p><b>\$32,500,000</b> In Venture Capital</p>	

# M&A in the BHCR



# Additional BHCR Successes



**K2m** In LEESBURG acquired by **Stryker** for \$1.6b and becomes and the hub going forward for Stryker spine innovation



**Adial Pharmaceuticals** Charlottesville successful IPO



**Fralin Biomedical Research Institute** at Virginia Tech Carilion receives \$50m gift, and Virginia Tech announces \$1B “Innovation Campus” adjacent amazon HQ2 in Alexandria



**All of Us** Program national enrollment launched successfully powered by **Vibrent Health** Fairfax, to create first ever Participant engaged national research cohort of +1 million Americans.



**NCATS CTSA** awarded to a new statewide clinical and translational research collaboration among **Inova, UVA, Virginia Tech** and **Carilion Clinic**, thus Virginia’s second NCATS CTSA awardee.



**Type zero** (artificial pancreas) Charlottesville acquired by **Dexcom**.



# 2019 Crab Trap Finalists



**BeCareLink** - Predictive Artificial Intelligence Digital Therapeutic Mobile Platform for Multiple Sclerosis and other neurological conditions.



**BRAINBOX SOLUTIONS** - Multi-Modality capability to diagnose and provide prognostic information for mild Traumatic Brain Injury.



**Floreo Inc.** - Leveraging the power of virtual reality to develop a subscription platform that delivers immersive, fun, and affordable lessons for children and adults with autism spectrum disorder (ASD).



**Spine Align** - Spine Align is a medical device company developing technologies that enable spine surgeons to make real-time intraoperative measurements of spinal alignment.



**Unleash Immuno Oncolytics** - Developing armed, oncolytic viruses to treat metastatic cancers. Our platform combines tissue-specific control of both viral replication and the expression of human cytokines to provide a dual punch in cancer cells.



# Crab Trap Previous Winners - Updates

## 2016



In 2016, the initial prize was awarded to **Sonavex**, a commercial stage Johns Hopkins spin-out focused on Empowered Patient Care. The company's first technology is a dual-component system comprising an FDA-cleared bioabsorbable implant (EchoMark) and an FDA-cleared custom automated ultrasound (EchoSure) to detect post-operative vascular complications prior to catastrophic surgical failures that represent a \$3B annual market and cost hospitals up to \$577,000 per instance. The company closed a \$4.5M Series A in 2018, recently secured a \$3M NIH grant and is currently raising its Series B.



## 2017

In 2017, the winner was another Johns Hopkins spin-out, **LifeSprout**, developer of a suite of products to address soft tissue needs in the aesthetic and reconstructive markets.

## 2018



Last year's winner, **Galen Robotics**, is developing, in partnership with JHU, a surgical robot to make minimally invasive surgeries faster, safer and more precise. The company plans a 510k submission next year, is raising Series A financing, and will be relocating the HQ team in CA to join their engineering experts in Baltimore.

# 2018 BHCR INVESTMENT CONFERENCE RECAP

## 95 Invited Companies

AAVogen	Enterin Inc.	Otomagnetics, Inc.
Adaptive Phage Therapeutics	Euclid Systems Corp.	Peptilogics
Advanced BioNutrition	ExPrimary, Inc.	Perceptive Navigation, LLC
Akan Biosciences	gel-e, Inc.	Remedy Plan Therapeutics
Algotmrx, Inc.	Gemstone Biotherapeutics, LLC	Renalert
American Gene Technologies	Glutalor Medical	Salveo Diagnostics
Antidote Therapeutics, Inc.	Glyscend, Inc.	SciTech Development
Anven Biosciences, Inc.	HeMemeics	Select OcuFLOW, Inc.
AscelpiX Therapeutics	HemoShear Therapeutics, LLC	Sequella, Inc.
Asulon Therapeutics Inc.	Ikigai Biotech Group Inc.	Seraxis Inc
Atrin Pharmaceuticals	Immunarray Ltd	Sisu Global Health Inc.
Avant Diagnostics	Immunomic Therapeutics	Sonavex, Inc.
Avidea Technologies, Inc.	Infinity	Stuart Therapeutics, Inc.
BioGraph 55, Inc.	Integrated BioTherapeutics	Surgibox, Inc.
Bonumose LLC	KinaRx	SuviCa, Inc.
BrainScope Company, Inc.	Landos Biopharma	TaiRx US, Inc.
BraneQuest	LifeSprout, Inc.	Teralmmune
CARISMA Therapeutics	Liffey Biotech Ltd.	Theradaptive
Cellphire, Inc.	Mavin Wear Inc.	Thermal Gradient
Cellth Systems	MDNA Life Sciences	TMPG Health
Ceres Nanosciences, Inc.	Micro Interventional Devices, Inc.	Trimeric Therapeutics
ChromaTan Corp.	Mirata Pharmaceuticals	True Bearing Diagnostics, Inc.
CoolTech LLC	miRecule	TruGenomix Health, Inc.
CorIT LLC	Nanochon	VakSea
Creative Bio-Peptides	Navimize	Veralox Therapeutics, Inc.
Cupron Inc.	NexImmune Inc.	Weinberg Medical Physics, Inc.
DermaSensor Inc.	NextStep Robotics Inc.	Western Oncolytics Ltd
Diffusion Pharmaceuticals Inc.	Novodux	WindMIL Therapeutics
eKare Inc.	Oncocoetics	ZyGood LLC
Embody	Opsidio, LLC	
Empower Telehealth	Orbit Genomics	

## 32 Invited Investors

AbbVie Ventures
Alexandria Real Estate Equities
Arch Venture Partners
Asahi Kasei Corporation
Brace Pharma Capital
CrossRoads Capital Strategy
Epidarex Capital
Emergent BioSolutions
Falls River Group
Hatteras Venture Partners
Illumina Ventures
Inova Personalized Health Accelerator
Intermountain Healthcare Ventures
Johnson & Johnson
J.P. Morgan
Keiretsu Forum
Leukemia & Lymphoma Society Venture Arm
LyfeCapital
Maryland Venture Fund (TEDCO)
Middleland Capital (VTC Innovation Fund)
MPM Capital
New Enterprise Associates
Ocean Capital
Orbimed
Predictive Tech Group
Prevail Partners
Quan Capital
Sands Capital Management
Sun Pharma
Taiho Ventures, LLC
Taiwania Capital
Tosoh USA

OCTOBER 15 + 16, 2019



# BioHealth Capital Region Investment Conference

One MedImmune Way, Gaithersburg, MD 20878

**Investment Conference**  
**October 15 + 16, 2019**  
**BY INVITATION**

To connect Quality emerging BioHealth companies  
seeking capital to Investors looking for Quality deals.

SPONSORED BY:



BioHealth Innovation J.P.Morgan



Advancing Science. Accelerating Innovation.

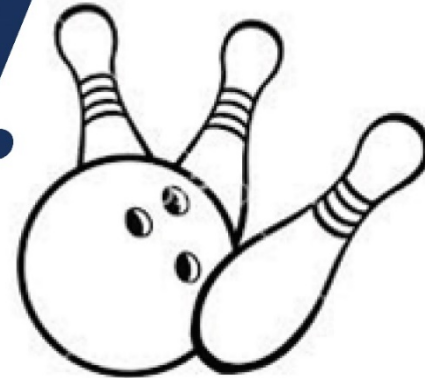


For more information contact: [BHI@BioHealthInnovation.org](mailto:BHI@BioHealthInnovation.org)

TOP 3 BY 2023

**SAVE THE DATE** October 10<sup>th</sup>, 2019

# 6<sup>th</sup> Annual BioBowl



**Come join us for the 6th Annual BioBowl!**

You and your company team will be competing against other biotech firms to win the coveted BioBowl Trophy and bragging rights! ...Until next year



Date **Thursday, October 10th, 2019**  
Time **4:00 - 6:30 PM (TBC)**  
Location **Bowlmor – 15720 Shady Grove Rd  
Gaithersburg, MD 20877**

Invitation to follow.

Hosted By:  **BioHealth Innovation** & **AstraZeneca** 





**SAVE THE DATE**

**BioHealth Capital Regional  
Forum**

**April 15 + 16, 2020**

**1 MedImmune Way, Gaithersburg, MD**

# BHCR Next Steps

- Continue marketing the Brand
- Increased Collaboration
- Leverage our Extensive Assets
- Accelerate Commercialization
- Grow the BioHealth Capital Region Cluster



Advancing Science. Accelerating Innovation.

[BioHealthCapital.com](http://BioHealthCapital.com)

**Our Goal: To become a Top 3 BioHealth Hub by 2023**

# SPONSOR NETWORKING TABLES





# A Call To Action



“ Somebody has to do something, and it’s just incredibly pathetic that it has to be US.”

*Jerry Garcia  
of the Grateful Dead*

**THIS “US” IS STILL YOU!**

A BIG THANK YOU TO

AstraZeneca 

