

# Welcome to the 2018



## State of the BioHealth Capital Region's EcoSystem



**Rich Bendis**  
President & CEO, BioHealth Innovation Inc.

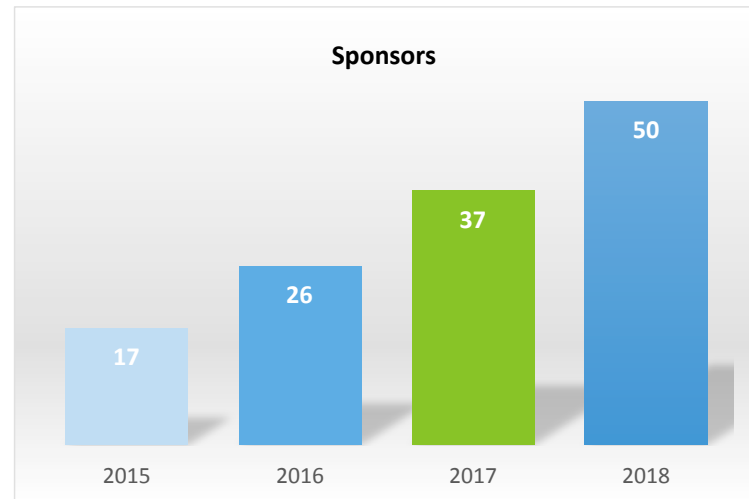
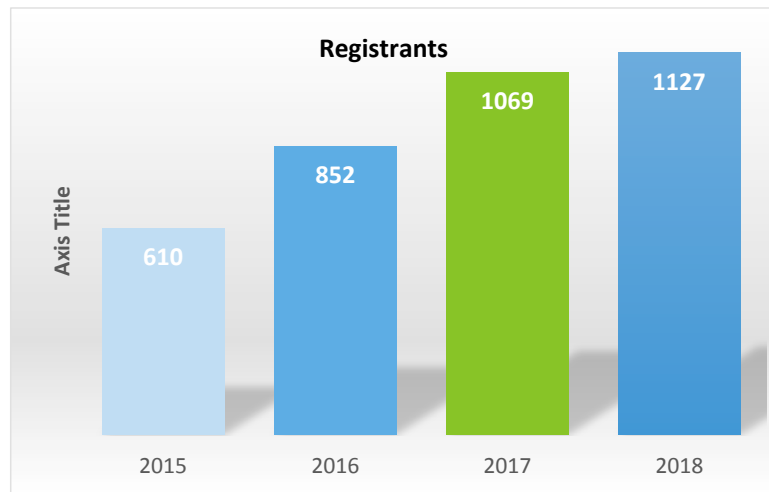
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APRIL 23, 2018

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# BioHealth Capital Region Forum Growth



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# 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



**Tami Howie, 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."



**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."

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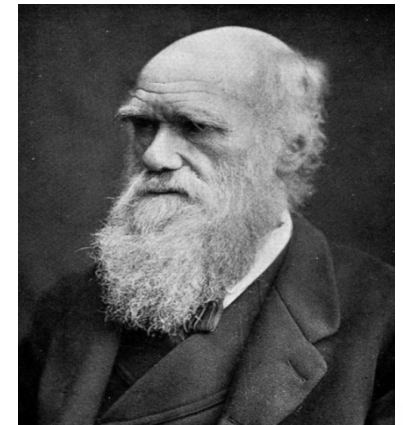
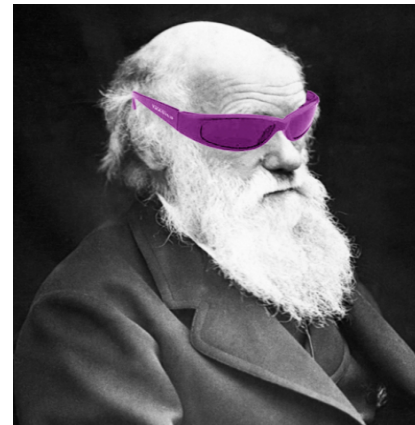
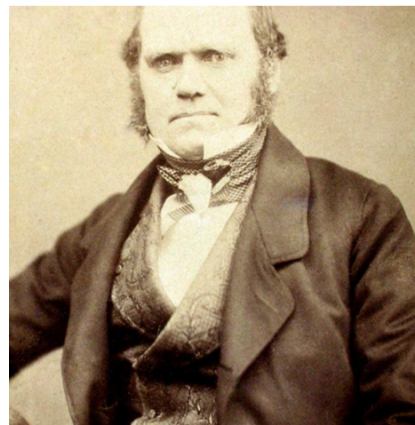
# Darwin of Collaboration

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“It is a long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed.”

- Charles

Darwin



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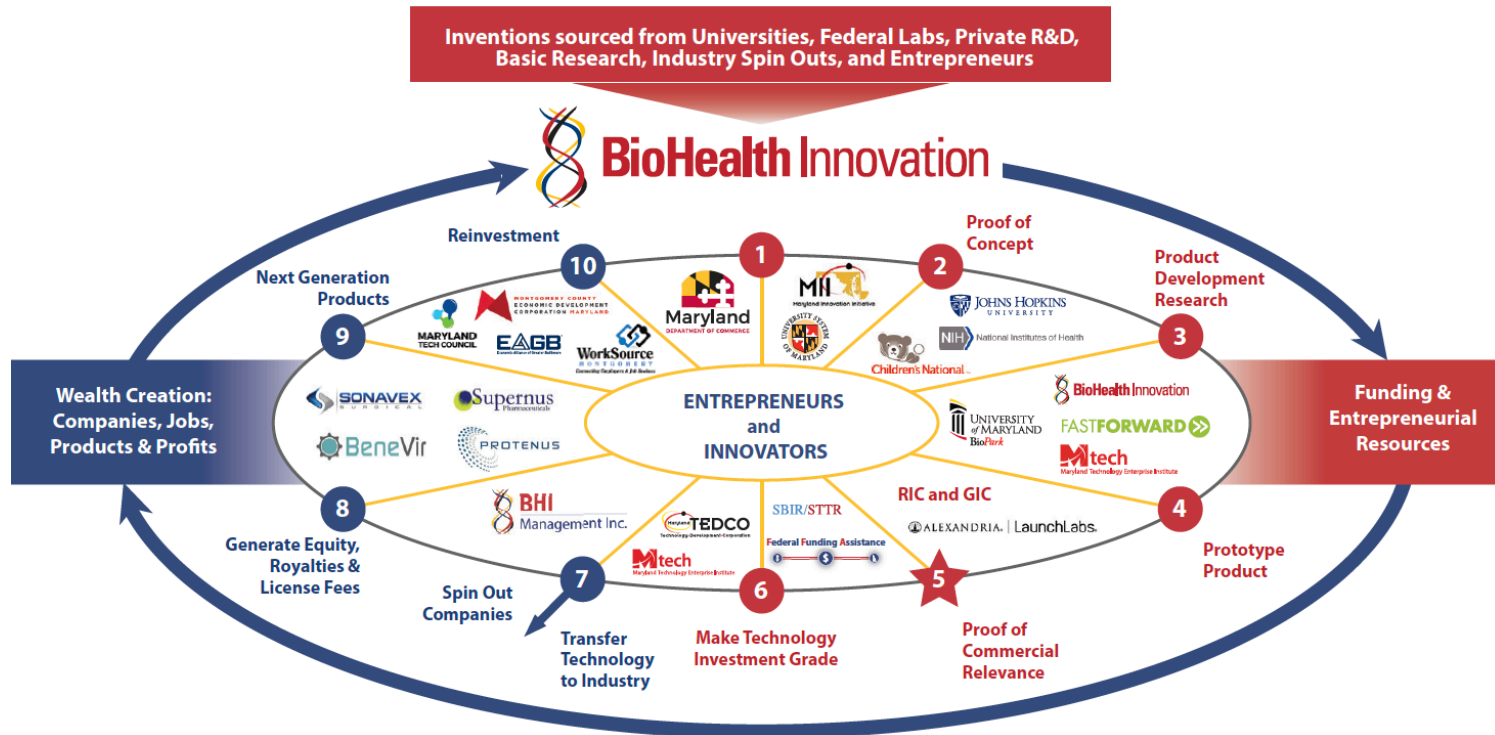
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# BHCR Innovation & Commercialization Network



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# 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

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# Top 10 U.S. Biopharma Clusters

## Ranking Based on Five Criteria:

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

## 2017

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

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# BHCR News Stories



## MedImmune spins out Viela Bio....

“Viela Bio Spins Out of MedImmune; Launches with Up to \$250 Million Series A Financing from Investor Consortium Led by Boyu Capital, 6 Dimensions Capital, and Hillhouse Capital”



## Deerfield \$40 million investment in Dracen....

“Health care-focused Deerfield Management leads Baltimore biotech's \$40M round”



## Emergent major contract or opens innovation Center in Baltimore....

“Emergent BioSolutions opens expanded East Baltimore vaccine plant”



## Paragon Biosciences expansion....

“Paragon Bioservices Announces New Commercial Manufacturing Facility Expansion”



## Supernus expansion ....

“Supernus To Expand, Will Move From Rockville To Gaithersburg”



## Precision medicine raises \$275 million....

“Precision Medicine Group Raises \$275M to Support Biomarker-Guided Drug Development”



## Sucampo sale .....

“Sucampo Pharmaceuticals closes on its \$1.2B sale to a U.K. company”

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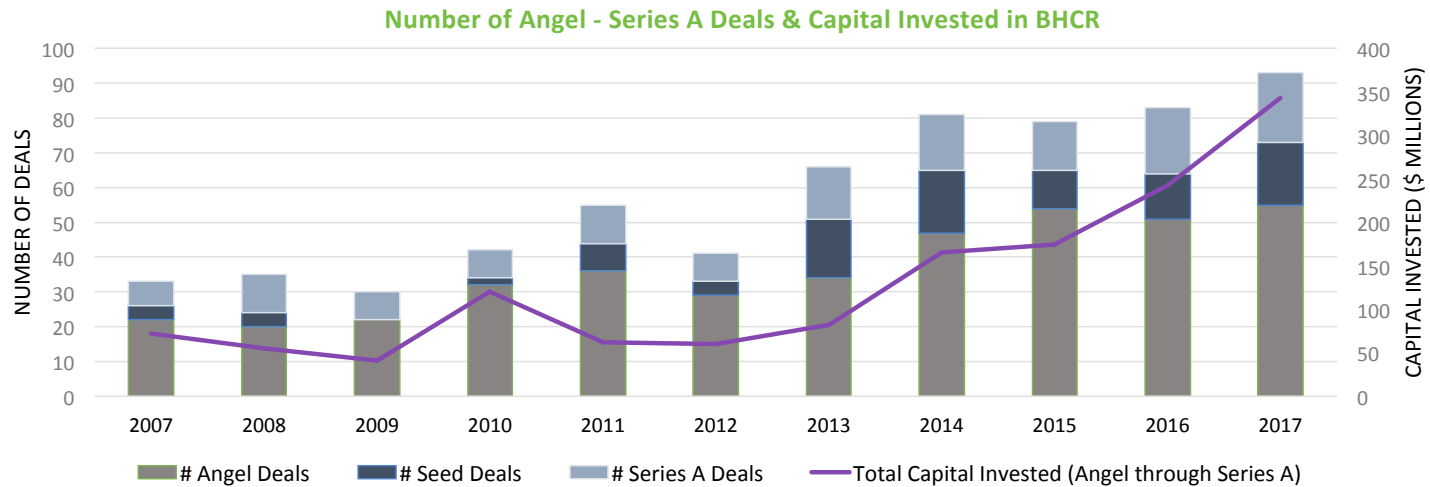
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# STATE OF VENTURE-BACKED STARTUPS IN HEALTHCARE

## Venture Investment in Healthcare in the BHCR



### Strong Angel activity

Active ecosystem of independent angels, angel groups, and angel syndicates that invest in an average of 45 deals per year

### Consistent Series A activity

Numerous regional and national funders are active in the BHCR for Series A and late-stage venture capital deals

### Growing Gap at Seed Stage Deals

With an average 15 seed deals per year, strong startups don't receive funding to conduct necessary experiments for a Series A investment

Data gathered from Pitchbook 2018

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# Recent Venture Capital Company Successes in BHCR



**ARCELLX**  
Raised \$26M to date



**INSILICO MEDICINE**  
Johns Hopkins spin-out  
Raised \$14M to date

**PGD**  
Personal Genome Diagnostics

Johns Hopkins spin-out  
Raised \$99.3M to date

**SONAVEX**

Johns Hopkins spin-out  
Raised \$6.6M to date

**BeneVir**  
Raised \$14M to date

**Dracen**  
Pharmaceuticals  
Johns Hopkins spin-out  
Raised \$40M to date

**NexImmune**  
Johns Hopkins spin-out  
Raised \$28.2M to date

**PRECISION**  
FOR MEDICINE  
THE FUTURE OF MEDICINE IS PRECISION

Raised \$275M to date

**SpringWorks**  
therapeutics

Pfizer spin-out  
Raised \$103M to date

**GRAYBUG**  
VISION  
Johns Hopkins spin-out  
Raised \$49M to date

**Nextcure**  
Technology from Yale  
Raised \$67M to date

**PROTENUS**  
Raised \$10M to date

**VIELABIO**

MedImmune/AstraZeneca spin-out  
Raised \$250M to date

Data gathered from Pitchbook 2018

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# Additional BHCR Successes



**Hemoshear and Takeda Pharmaceutical Company** announce a multimillion dollar partnership to discover and develop novel therapeutics for liver diseases, including nonalcoholic steatohepatitis (NASH)

**Landos Biopharma** Raises \$10 Million in Series A Financing

**Medicines for All Institute** created with additional \$25M Gates Foundation Grant to VCU School of Engineering to increase global access to life saving medicines.

**Ceres Nanosciences** raises \$7 Million in Series A Funding; receives DARPA award to adapt Nanotrap® and, with GMU, Tasso & USAMRIID receives \$4.25M from DTRA

**ivWatch** raises \$14.8M; receives FDA 510 (k) clearance on device advancing the safety of IV therapy for pediatric patients



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# BioHealth Capital Regions Serial Entrepreneurs



**Mark P. Clein**

- Precision for Medicine, Inc.
- United BioSource Corporation
- Infoscriber Corporation
- U.S. BioServices, Inc.



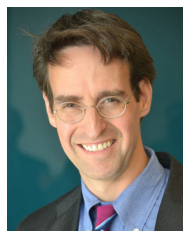
**Rachel King**

- GlycoMimetics
- NEA
- Genetic Therapy, Inc.



**Michael Richman**

- NextCure
- Amplimmune



**James S. Gammie, MD**

- Correx, Inc.
- Harpoon Medical, Inc.



**Ethan D. Leder**

- Precision for Medicine, Inc.
- United BioSource Corporation
- U.S. BioServices, Inc.



**Martine A. Rothblatt Ph.D., J.D.**

- United Therapeutics Corporation
- GeoStar
- SiriusXM Satellite Radio



**Murat V. Kalayoglu**

- Cartesian Therapeutics
- Topokine Therapeutics
- HealthHonors Corporation



**Wendy Perrow**

- AsclepiX Therapeutics
- Alba Therapeutics Corporation



**Steve Turner**

- Protea Biosciences Group, Inc.
- Clinomics BioSciences Inc.
- Quorum Sciences

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## STATE OF VENTURE-BACKED STARTUPS IN HEALTHCARE

### BHCR has Several Good Exits

Apr 2017  
  
Vtesse  
acquired for  
\$200 million  
by  
  
SUCAMPO

Nov 2017  
  
VWR  
acquired for  
\$6.5 billion  
by  
  
avantor

Dec 2017  
  
SUCAMPO  
acquired for  
\$1.2 billion  
by  
  
Mallinckrodt  
Pharmaceuticals

Jan 2017  
  
altimmune  
Merger and IPO with  
  
PharmAthene

Dec 2017  
  
HARPOON  
MEDICAL  
acquired for  
\$250 million  
by  
  
Edwards  
LIFESCIENCES

47

M&As since 2012

\$10.2  
billion

Total M&A value

18

IPOs since 2012

\$28.3  
billion

Total IPO value

Data gathered from Pitchbook 2018

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# University Progress

- USM and JHU have had over 52 life science startups in last 18 months, many receiving venture capital, 4.0 billion in research expenditures, 104 licenses executed, \$60 million in license income, 1208 patent applications filed 258 Patent's issued
- USM has created a new \$25 million momentum venture fund
- New Bluefield Innovations Fund, operated by Deerfield Management to capitalize \$75 million fund to support JHU startups
- UVA entered into partnership with Inova to create a Northern Virginia research and education campus



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# 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
- MTC Merger Completed
- MCEDC and WorkSource Montgomery two new private public partnerships operational



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**BioHealth Capital Region  
Investment Conference**

OCTOBER 9 + 10, 2018  
One MedImmune Way, Gaithersburg, MD 20878

TOP 3 BY 2023

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

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# Investment Conference

## October 9 + 10, 2018

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## BHCR Next Steps

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- Market the Brand
- Increase Collaboration
- Leverage our Extensive Assets
- Accelerate Commercialization
- Grow the BioHealth Capital Region Cluster



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

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

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# A BIG THANK YOU TO

AstraZeneca 

 MedImmune

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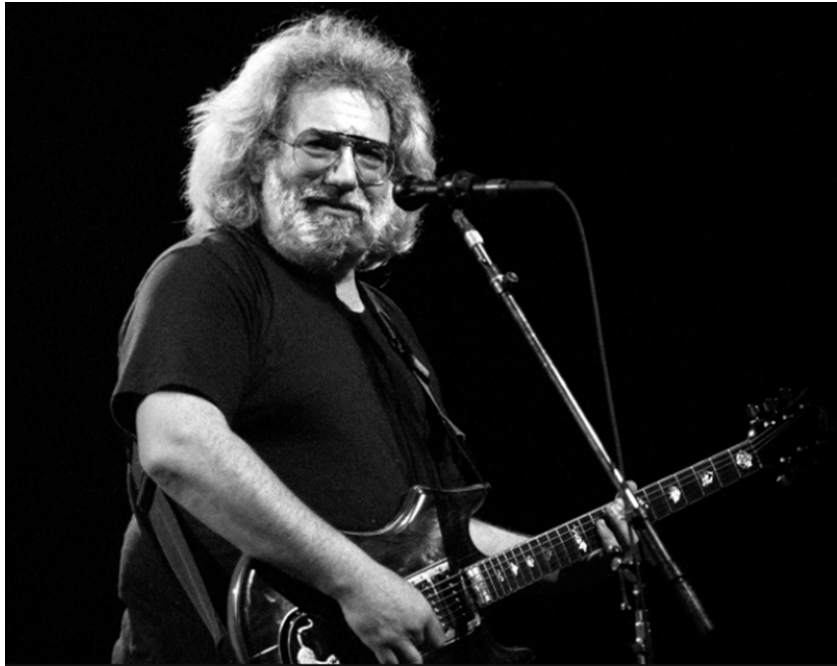


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## A Call To Action

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

**-- Jerry Garcia  
of the Grateful Dead**

**THIS US is YOU!**

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