

Overview of Bioscience Initiatives Included in the Introduced Budget

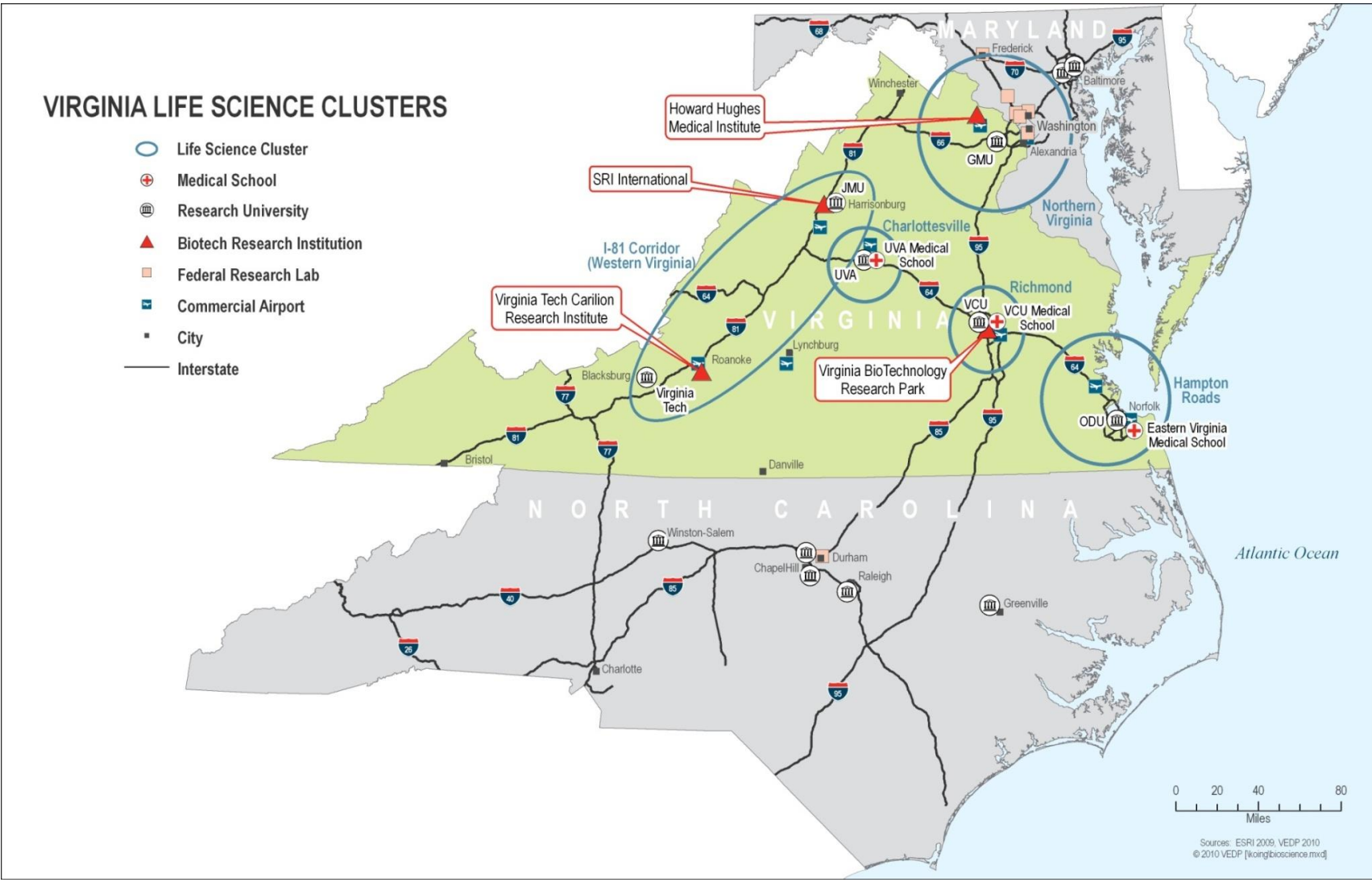
February 3, 2016

House Appropriations Committee

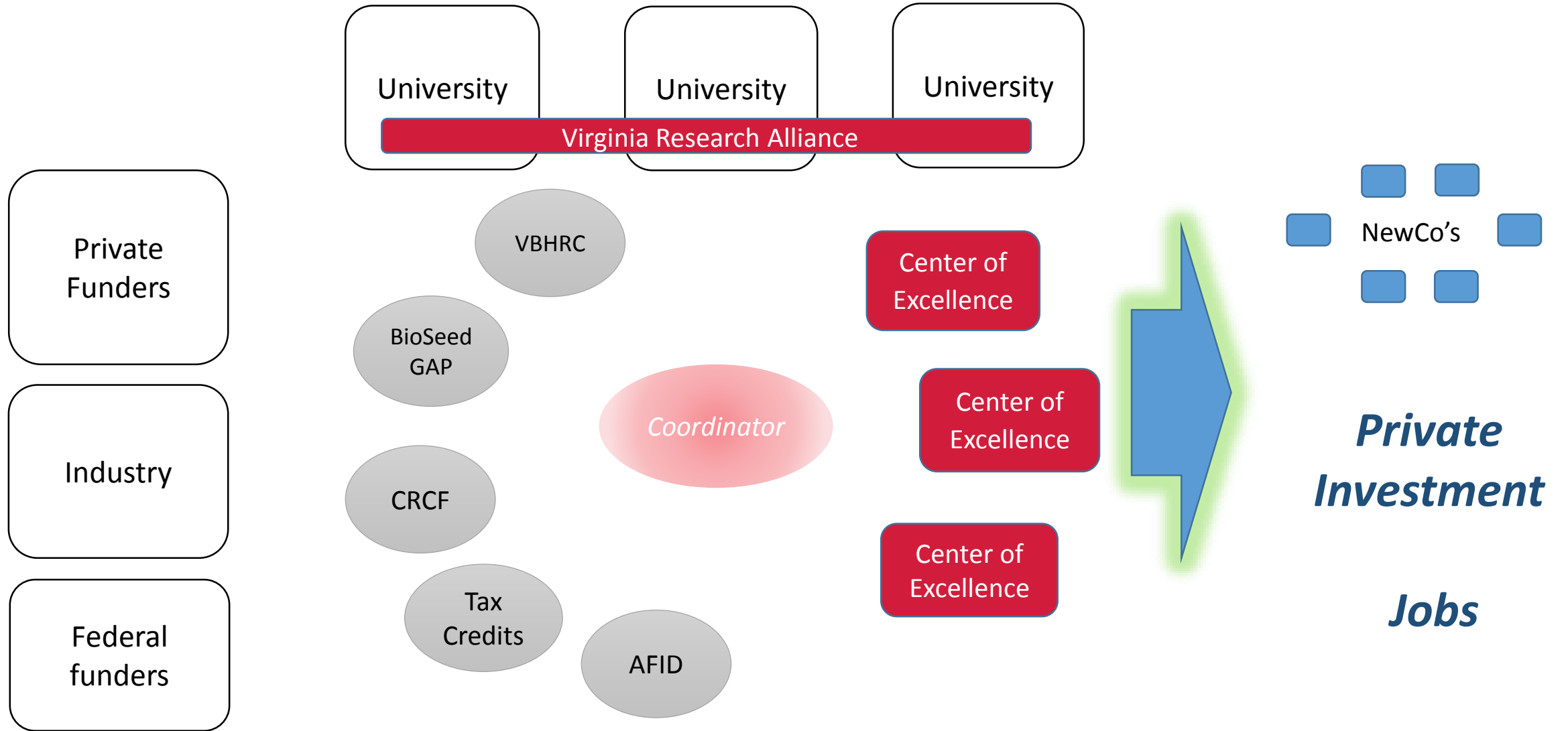
Sub-committee on Commerce, Agriculture, Natural Resources and Technology

Jeff Gallagher, CEO, Virginia Bio

Bioscience industry in Virginia



The Virginia Bioscience Economy Initiative - *Focused, Coordinated, Accountable*



Programs impacting bioscience economic development in Introduced Budget

Program	All fields or Bio only	Existing or new
R&D Tax Credit (Refundable)	All	Existing
Angel investor tax credit (subordinated equity and debt)	All	Existing
Commonwealth Research and Commercialization Fund (CRCF)	All	Existing
Virginia Biosciences Health Research Corporation (VBHRC) High impact commercial research project collaborations Research Tools - infrastructure for statewide collaboration	Bio	Existing
Higher Education Research Initiative Recruiting High Impact Researchers Seeding Centers of Competitive Excellence	All	New
Biotech Spinoff Fund	Bio	New
Global Genomics and Bioinformation Research Institute	Bio	New

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Virginia Biosciences Health Research Corp VBHRC, or “the Catalyst”

- Core program
 - competitive funding for commercial research projects with high scientific and commercial potential
 - Requires two Virginia universities to collaborate in a significant way in partnership with industry, which puts cash match + up front
 - Results
 - In 3 years funded 14 projects; \$6.7M state grants matched by \$19.6M private funds;
 - The first 4 projects alone (state grants totaling \$1.25M)
 - The companies added **45 jobs**, and received **\$36.9M follow on funding to date (29:1 ROI)**
 - Changed behavior at universities, and companies
- Research Tools (high impact collaboration infrastructure)

VBHRC – what makes it succeed

- Competitive applications, submitted by collaborations
- Vetted by experts for science, technology, business, financial
- Requires to combine strengths and to focus - not duplicate or silo
- Requires university cash buy-in to VBHRC and industry cash match+
 - leverages state \$, get “skin in the game”, shows commercial reality
- Then, carefully managed
 - Detailed contracts with workplans and milestones
 - Step payouts based on achieving milestones
 - Reporting and metrics

Higher Education Research Initiative

Recruiting

High-Impact Researchers

- A fund to support offers to hire outstanding candidate (or group)
- Competitive applications from universities, in turn
- Applications vetted by expert panel
 - World class science/technology
 - Commercial experience
 - Alignment with state strengths
 - Financial match

Seeding

Centers of Competitive Excellence

- A fund to seed creation of commercially focused centers
- Competitive applications from consortia of industry, university, philanthropy, regions or localities
- Applications vetted by expert panel
 - Outstanding scientific merit
 - Business plan, economic potential
 - Aligns with state's strengths
 - Leverages large private investment

Centers of Competitive Excellence – *illustrations*

Agriculture and Industrial biotech – IALR Danville, Virginia Tech CALS, Valley bio co's

Personalized health and genomics - universities partnering with Inova's new campus

Neuroscience - universities, health systems, companies in collaboration --**the Brain State**

Diabetes - universities, health care systems, locus in Hampton Roads, **EVMS and Sentara**

Next Generation Drug Manufacturing - **VCU Engineering** center of national effort to rebuild US drug manufacturing

Nanoscale Medicine - **Uva's** nanoSTAR Institute, universities and companies move nanotechnologies to the clinic

Big data and analytics for bio and healthcare - data analytics, modeling and IT, cyber protection of health records

Biotech Spinoff Fund

Global BioPharma Corporation (e.g. MedImmune)

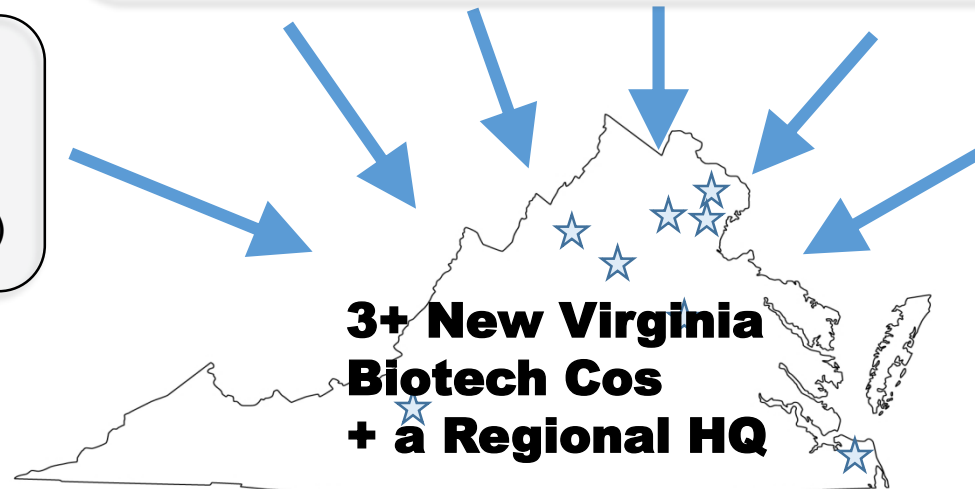
- Up to 6 high-value assets (\$65M-\$85M each)
- ~\$10M+ per asset (co + other investors)
- High-level executives + researchers
- Administrative supports and services

Commonwealth

Up to \$10M / asset
(1-time investment)

Virginia Universities

*Talent * Matching *
Assets



**3+ New Virginia
Biotech Cos
+ a Regional HQ**



Direct Impact:

- New co formation
- ~150-300 high-paying jobs by Y5 (for 3 cos)
- Cash leveraged
- Royalties back to Virginia

Indirect Impact:

- 600-1200 jobs by Y5 (3 cos)
- Local investment
- Sends a national message
- Supporting/supply industries
- Education and workforce

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