AGENDA FOR OPEN SESSION

1. **Renewing Committee Charge**

2. **Research and Economic Development Roundup -- Vice Chancellor of Research and Economic Development Michele Masucci**
   - Carnegie Classification Changes
   - EDA Tech Hub Designation
   - National Academy of Inventors Rankings

3. **Update on University of Maryland-Institute for Health Computing – Co-Director Sujal Bista PhD, Co-Director Bradley Maron PhD, and Vice President for Research Gregory Ball**

4. **Momentum Fund Update – Mike Ravenscroft**
   - Venture Fellows Update

5. **Launch Fund Update – Executive Director of Economic Development Lindsay Ryan**
Renewing Committee Charge
Charge:

The Committee on Economic Development and Technology Commercialization shall provide strategic leadership for the USM's research, economic development, technology commercialization, innovation, and entrepreneurial initiatives, programs, and policies.

Role and Responsibilities:

The Committee on Economic Development and Technology Commercialization shall consider and report or recommend to the Board of Regents on matters concerning economic development and technology commercialization, innovation and entrepreneurial initiatives, and research, including translational research and technology transfer.

Members of the Committee on Economic Development and Technology Commercialization are appointed annually by the Chairperson of the Board. The Committee shall meet as needed, but no fewer than four times during the fiscal year.

Created in July 2011 in recognition of the increasing importance of translational research, entrepreneurship and innovation, and the supply of skilled workers in STEM fields for the State of Maryland, the Committee, working with the Vice Chancellor for Research and Economic Development, may expect to receive information for review in order to consider, and/or act on any of the following matters:

A. Aligning resources with market demand

B. Leveraging USM resources through collaborations

C. Enhancing partnerships with industry, state, and federal entities

D. Strengthening the USM Research and Innovation ecosystem, including engaging with research funding and commercialization partners, enhancing research administration and compliance infrastructure, and fostering excellence in scholarship, research, creative, and innovation

E. Strengthening the USM entrepreneurial ecosystem, including engaging the investment community and enhance access to capital for USM affiliated startups and innovators
2. Research and Economic Development Roundup -- Vice Chancellor of Research and Economic Development Michele Masucci
Office of the Vice Chancellor for Research and Economic Development

Board of Regents Committee on Economic Development and Technology Commercialization

Update

November 30, 2023
Agenda

1. Renewing Committee Charge
2. Research and Economic Development Roundup
   - Carnegie Classification Changes
   - EDA Tech Hub Designation
   - National Academy of Inventors Rankings
3. Update on Maryland Institute for Health Computing
4. Momentum Fund Update – Venture Fellows Update
5. Launch Fund Update

Q and A
1. Renewal of Committee Charge

Committee on Economic Development and Technology Commercialization Charge update:

- Recommendation to continue use of current charge, updated in December 2022
- The December 2022 update reflected development of new Office of Vice Chancellor for Research and Economic Development, with new charge:

  "The Committee on Economic Development and Technology Commercialization shall provide strategic leadership for the USM's research, economic development, technology commercialization, innovation, and entrepreneurial initiatives, programs, and policies."

- The charge expanded focus to include research and related initiatives, programs, and policies and has led to refinement of charge for other committees that previously included research oversight
Carnegie Classification of Institutions of Higher Education Changes

• American Council on Education (ACE) has undertaken a comprehensive assessment of the classification system

• Introduced a revision to the rankings in November 2023 that will go into effect in 2025

• These include two basic changes and one proposed change:

  ▪ Shift of Basic Classification to multidimensional characterization
  ▪ Changes to research designation methodology – including new research designation and more transparent criteria for research characterization
  ▪ Proposed new Social and Economic Mobility Characterization to advance equitable, learner centric outcomes – More here:

## Potential application of multi-dimensional basic classification in 2025

<table>
<thead>
<tr>
<th>EXAMPLE A</th>
<th>EXAMPLE B</th>
<th>EXAMPLE C</th>
<th>SEPARATE LISTINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree and certificate mix</td>
<td>Instructional program mix</td>
<td>Size</td>
<td>Instructional program mix</td>
</tr>
<tr>
<td>Residential-ness</td>
<td>Instruct. program mix</td>
<td>Location type</td>
<td>Distance learning/learning modality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Primary degree awarded</th>
<th>Residential-ness</th>
<th>Instruct. program mix</th>
<th>Location type</th>
<th>Distance learning/learning modality</th>
<th>Transfer</th>
</tr>
</thead>
</table>

Potentially use different characteristics based on primary degree awarded

## 2. Research and Economic Development Roundup

### New Research Classification Categories

<table>
<thead>
<tr>
<th>Research 1: Very High Research Spending and Doctorate Production</th>
<th>Research 2: High Research Spending and Doctorate Production</th>
<th>Research Colleges and Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Spent at least <strong>$50 million</strong> in total R&amp;D in a year, as reported to the NSF HERD Survey <strong>AND</strong></td>
<td>• Spent at least <strong>$5 million</strong> in total R&amp;D in a year, as reported to the NSF HERD Survey <strong>AND</strong></td>
<td>• Spent at least <strong>$2.5 million</strong> in total R&amp;D in a year, as reported to the NSF HERD Survey</td>
</tr>
<tr>
<td>• Awarded at least <strong>70 research/scholarship doctorates</strong> in a year, as reported to IPEDS</td>
<td>• Awarded at least <strong>20 research/scholarship doctorates</strong> in a year, as reported to IPEDS</td>
<td>• <em>Does not include institutions designated R1 or R2</em></td>
</tr>
</tbody>
</table>

For the 2025 classifications, institutions will receive the higher of either:

- Three-year average (2021, 2022, 2023)
- Most recent single year (2023)

2. Research and Economic Development Roundup

Potential Impacts for USM:

• More nuanced characterization of institutions based on mix of programs, students served, locational setting, and impacts

• More streamlined research categories to reflect doctoral degrees granted, research funding, and scale

  ▪ Decoupling of research productivity from range and breadth of graduate degrees offered

  ▪ Research designation applicable to all institutions with more than $2.5 Million in research expenditures

  ▪ Research 1 designation decoupled from “Comprehensive institution” characterization, leading to potential for new R1 institutions in the system

  ▪ Research 2 designation within reach of multiple USM institutions that meet at least one of current criteria

• Potential recognition for social and economic mobility based on student outcomes
EDA Regional Technology and Innovation Hub Designation for Greater Baltimore in AI and Biotechnology – October 23, 2023

• Greater Baltimore Committee led effort to be designated as an EDA Tech Hub, creating eligibility for funding to support intersection of AI and biotechnology aimed at improving health outcomes by developing new medicines and therapies.

• Hubs are meant to catalyze the advancement of critical technology ecosystems through job creation and retention, leveraging capital investments, and stimulating the growth and development of businesses.

• Phase 1 - Designation as a Hub

• Phase 2 - Propose program concept and funding requests for component projects aimed at removing barriers for regional ascent to global competitiveness in core technology focus area; due Feb 29, 2024

2. Research and Economic Development Roundup

National Academy of Inventors

• In August 2023, the University System of Maryland was designated 25th in the U.S. based on the number of patents filed in 2022

• The National Academy of Inventors is a member organization comprising U.S. and international universities; governmental agencies; and non-profit research institutes with over 4,600 individual members, including Fellows, Senior Members, and Chapter Members, affiliated with more than 300 institutions worldwide

• The Top 100 Worldwide Universities Granted U.S. Utility Patents in 2022 report was released in August by the National Academy of Inventors (NAI) and the Intellectual Property Owners Association (IPO) using data obtained from the US Patent and Trademark Office (USPTO)

3. MARYLAND INSTITUTE FOR HEALTH COMPUTING

Greg Ball, PhD, Vice President for Research UMCP, UMB
Sujal Bista, PhD, Co-Director UM-IHC, UMD
Bradley Maron, MD, Senior Associate Dean for Precision Medicine and Co-Director UM-IHC, UMSOM
Warren D’Souza, PhD, VP Enterprise Data and Analytics, UMMS

11-30-2023
4. MOMENTUM FUND

Mike Ravenscroft  
Managing Director  
University System of Maryland  

11-30-2023
5. LAUNCH FUND

Lindsay Ryan
Executive Director for Economic Development
University System of Maryland

11-30-2023
4. Q and A
Contact OVCRED

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Administrative Assistant II
OVCRED - USM
mjenkins@usm.edu
3. Update on University of Maryland-Institute for Health Computing – Co-Director Sujal Bista PhD, Co-Director Bradley Maron PhD, and Vice President for Research Gregory Ball
MOU SIGNED IN NOVEMBER 2022
MONTGOMERY COUNTY LOCATION

Federal Agencies
NIH, FDA, NIST, NCI, etc.

Industry
300+ Biotech companies

Talent
40K+ Biotech workers in Maryland

Academia
Montgomery College and The Universities at Shady Grove
INSTITUTIONAL CONTRIBUTIONS

Computing and Data Science
Computational Infrastructure

School of Medicine
Learning Health System

16 Medical Centers
2M Patients 17M patient encounters
GOALS

• Economic development and placemaking in Montgomery County

• Be an asset to the biotech industry in Montgomery County

• Develop and deploy computational tools that improve human health

• Bring together academia, industry, and federal agencies to collaborate and innovate
RESEARCH AREAS

Bioinformatics

Applied AI

Immersive Visualization

Real-World Evidence & Adaptive Clinical Trials

Therapeutic Target Discovery

Population & Community Health
Develop AI tools to mitigate bias, promote fairness and explainability in decision-making

Use machine learning to identify hidden patterns and relations in data

- Patient health records
- Medical device data
- Bio-monitoring wearable data
BIOINFORMATICS

- Harmonize and analyze data to create multi-omics data sets to advance systems biology and clinical analytics
- UMD already has a very strong bioinformatics research program and software used in the industry
IMMERSIVE VISUALIZATION

Develop augmented and virtual reality tools for health care scenarios

• Scientific, medical, information visualization
• Visual knowledge discovery
• Remote medical assessment
• Training tools
REAL-WORLD EVIDENCE AND ADAPTIVE CLINICAL TRIALS

• Develop and deploy an adaptive platform that identifies patients that can benefit and limits the risk of a patient receiving a treatment that does not work.

• Leverage the electronic health records to conduct community-based studies that broaden access to participation.
POPULATION AND COMMUNITY HEALTH

• Identify early signs of disease from electronic health records that enable early intervention

• Address fairness in training data and software tools to reduce disparities due to race, gender, and socioeconomic status
THERAPEUTIC TARGET DISCOVERY

• Identify novel therapeutic targets
• Apply data science to chemical assay results and biospecimen data
• Develop real-time algorithms, software systems and toolkits that ingest, filter, visualize, and analyze multiple interacting data streams
UMMS is Rare: A State-Wide and Diverse Health System

A Network Greater Than the Sum of Its Parts

UMMS provides care to 2 million unique and diverse patients across Maryland.

HOSPITAL LOCATIONS
1. UMMC Downtown Campus
2. UMMC Midtown Campus
3. UM Baltimore Washington Medical Center
4. UM Capital Region Medical Center
5. UM Laurel Medical Center
6. UM Charles Regional Medical Center
7. UM Harford Memorial Hospital
8. UM Rehabilitation & Orthopaedic Institute
9. UM St. Joseph Medical Center
10. UM Shore Medical Center at Chestertown
11. UM Shore Medical Center at Easton
12. UM Shore Medical Center at Cambridge
13. UM Shore Emergency Center at Queenstown
14. UM Upper Chesapeake Medical Center
15. Mt. Washington Pediatric Hospital Joint venture by UMMS and JHHS
MODEL OF SUCCESS: EARLY EXAMPLE

- Atmospheric Analysis (UMCP)
- Clinical Content Expertise (UMB)
- Clinical Dataset (UMMS)
- IHC

>1 Million Individual Data Points

- Age
- Sex and Race
- Date Discharge
- Length of Stay
- Hospital
- Date admission
- Geolocation
- Chest X-ray Use

Heart-Lung Clinical Encounters: Hotspots vs.

- June 2023 +32%
- 2018+19 +38%

Ave. PM >2.5 µg/m³

City of Baltimore

- PM 2.5 µg/m³
- May
- June
- July
- Aug

Week of the Month

- 2018
- 2019
- 2022
- 2023
MODEL OF SUCCESS: EARLY EXAMPLE

• Current Goals:
  - Optimizing analyses
  - Geolocalize affected patients, assess for health equity trends
  - Build models to quantitate economic impact for future planning

• Next-Step Goals:
  - Use data science to build predictive models (Abba Gumel, Ph.D.)
  - Establish preventative strategies to deploy resources for future events

• Intermediate-Range Goals:
  - Approach Dept. of Public Health to address policy opportunities
  - Build business model for evidence-based ‘AQI detection-deployment’
    e.g., Target high-risk patients for ‘mail-out inhaler’ program
CURRENT MODEL
Sick patients seek out health

UM-IHC MODE L
Bring healthcare to patients.

Enabled by data science:
- Artificial Intelligence
- Bioinformatics
- Immersive Reality
- Other Digital Health Technologies

UM-IHC: Bringing Health Care to the People

- Limits Access to Care
- Favors Health Inequity
- Imprecise, ↓Outcomes
- Slow, stagnate, costly
AUTOMATING REFERRAL TO AN EXPERT

Pulmonary Hypertension

• Ultra-silent killer
• >81,000 publications
• Evolved expertise

- Internist
- Lung doctor
- Lung vascular doctor
- Pulmonary hypertension expert
"No physician can diagnose a condition [she or] he never thinks about."
- Michael DeBakey, American Cardiac Surgeon

- Common Medical Tests
- Diverse Indications

12-Lead ECG
Cardiac Imaging

Deep Learning

Identify Hidden Patterns that Diagnose Patients at ↑Clinical Risk

Automated Referral to a Specialist

Pulmonary Hypertension

- Ultra-silent killer
- >81,000 publications
- Evolved expertise

- Internist
- Lung doctor
- Lung vascular doctor
- Pulmonary hypertension expert
Geolocalization of Patients At-Risk for Pulmonary Hypertension

Social Vulnerability Index

- 0.9 - 1
- 0.8 - 0.9
- 0.7 - 0.8
- 0.6 - 0.7
- 0.5 - 0.6
- 0.4 - 0.5
- 0.3 - 0.4
- 0.19 - 0.3
- 0.09 - 0.19
- 0 - 0.09
Current Clinical Trials

- Medicine
- Site Selection
- Hunt for Patient
- Restrictive
- Disruptive
- Costly
- Centralized
- Controlled
- Artificial

Pragmatic Trials

- UMMS Clinical Data
- Biologics Environmental Drivers
- Set Enrollment Criteria
- Enroll at >15 Hospitals at Point-of-Care
- Scalable
- Effective
- Personalized
- Accessible
- Rapid
- Dynamic

Impact

- FDA Advances Program for Real-World Evidence
- Geometric Impact
- Cancer
- Heart Disease
- Trauma
- Mental/Neuro Health
- Maternal/Fetal
- Medical System
- Diverse Populations
- NIH National Institute on Minority Health and Health Disparities
- "Why Diverse Clinical Trial Participation Matters" by Ann L. Schwartz, M.D., Ph.D., Marietta Rojas, M.D., Ph.D., Robert J. Myers, M.D., and Scott D. Halpern, M.D., Ph.D.

ADVANCING REAL-WORLD DATA
HIGH TECH ECONOMIC HUB

• Advance research in computing and life sciences as a driving force for economic development
• Develop skilled talent
• Strong collaboration with industry and federal agencies
• Community building events, classes, and workshops
• Support for start-ups
• Attract companies
• Grow supercluster
PARTNERSHIP EXAMPLES

First founding partner
PI: Sujal Bista
Grant: $750K for one year
Location: IHC, North Bethesda
Research Area
• AI-enabled data analytics
• Medical Visualization
• Immersive medic to treat pain and addiction
PARTNERSHIP EXAMPLES

Industry-University Cooperative Research Center (IUCRC)
PARTNERSHIP EXAMPLES

**Funded**

Prevalence and Burden of Pulmonary Hypertension  
— *Cardiovascular Medical Research and Education Foundation*

Developing InnoVative Equity-focused Regulatory SciencE (DIVERSE)  
— *Food and Drug Administration* (Partnership with PATIENTS Program)

**Likely Funded**

Pharmacological Management of Diabetes with Chronic Kidney Disease  
— National Institutes of Health (Partnership with University of Miami)

Pragmatic Trials to Treat Pregnancy-Induced Hypertension  
— *Philanthropic Donor*

**Submitted or in Preparation**

Individualizing the Management of Obesity  
— Pharma
PARTNERSHIP EXAMPLES

Advances in the Management of Type 2 Diabetes

Bleeding and Myocardial Infarction in Acquired Factor VIII Deficiency
Kim J, Stern R, Maron BA. 2023 In press.

Automated CT-Based Quantification of Pulmonary Veins
Synn A…Maron BA…Rahaghi F. In press 2023

Manuscript in Preparation
Building A Statewide Learning Health System: Advancing Health Equity at Scale
Authors: from the UM-IHC

American Heart Association
CURRENT STATUS

• **Lease Signed**: 27,000 sq. ft. space, adjacent to NIH, FDA, NCI

• **Recruits**: 21 Faculty and staff members, 3 Students and trainees, 3 Extramural collaborator groups

• **Partners**: Cardiovascular Medical Foundation, NIH, FDA, WiPro

• **Active Projects**: 10

• **Research Grants**
  - $15 million to the CDC (submitted)
  - $750K from WiPro (funded)
  - $500K to a Top-15 Pharma company (submitted)
  - $400K to a Philanthropic donor (submitted)
  - $300K to the Cardiovascular Medical Research and Education Foundation (funded)
  - $250K to the FDA (submitted)
  - $100K to the NIH (submitted)

6116 Executive Boulevard, North Bethesda, MD
Return on Investment

The First Five Years

Recruits

- Generates $1M/year in grants and contracts
- Generates $9K/year in state and local tax revenue

Multiplier
- Hires research staff and programmers
- Founds a new company
- Generates licensing revenue for novel intellectual property

FACULTY MEMBER

Innovation

- Generates $19M in venture capital funding
- Creates 45 new jobs

Multiplier
- Attracts established firms to an area rich with startup energy
- Provides internship and employment opportunities for students and alumni

Montgomery County (BIO)TECH COMPANY

Education

- Generates $11,000/year in tuition
- Generates $22,000/year in rent and local spending

Multiplier
- Enhances hiring pool for local companies
- Remains in Maryland and builds the tax base

STUDENT

Research Infrastructure

- Generates $1M in pharmaceutical funding
- Supports the employment of 20+ people

Multiplier
- Early access to novel therapeutics for historically underrepresented populations
- FDA drug approvals for Maryland-based pharmaceutical companies

CLINICAL TRIAL

For all of Maryland

$93.5M+
280 New Jobs

25 Faculty = $50M+
20 Students = $660K
2 Start-Ups = $38M
5 Clinical Trials = $5M

ANALYZE | INNOVATE | PREVENT | TREAT | ADAPT
We thank our alums and friends from the following companies for attending tonight's event:

- Aparna Sain Consulting
- AstraZeneca
- Bechtel
- The Centers for Advanced Orthopaedics
- Children's National
- CLEARPATH
- Deloitte
- Essex
- Freddie Mac
- gcom
- GeneDX
- General Dynamics
- Genesics & IVF Institute
- Imperium Global Advisors
- Kite Biopharmaceuticals
- Luminis Health
- MacroGenics
- VWR
- MITRE
- Sigma
- Millipore Sigma
- MITRE
- NIST
- National Institute of Standards and Technology
- U.S. Department of Commerce
- noblis
- Otsuka
- NVIDIA
- RRD International
- Synergy
- ThermoFisher Scientific
- United Therapeutics Corporation
- VERISTA
SUMMARY AND CONCLUSIONS

Key to success: Unified Collaboration

Avoid over-programming a vertical hierarchy: Stunts creativity and slows progress

Build projects that leverage UMD-UMB-UMMS

Be highly productive:

    Academics, Innovation, Entrepreneurship

Try to have fun 😊 while doing it…!
A NOVEL CONVERGENCE POINT

• Centralize collaboration
• Ethos: “Sum is greater than individual parts”
• Deconstruct Silos and Historical Barriers to Progress
• Build a Wall of Success

The University of Maryland IHC Partnership
UMD IS #1 IN APPLIED AI, BIOINFORMATICS, VR/AR

<table>
<thead>
<tr>
<th>#</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Maryland - College Park</td>
</tr>
<tr>
<td>2</td>
<td>Carnegie Mellon University</td>
</tr>
<tr>
<td>3</td>
<td>Univ. of Illinois at Urbana-Champaign</td>
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<td>7</td>
<td>Stanford University</td>
</tr>
<tr>
<td>8</td>
<td>University of North Carolina</td>
</tr>
</tbody>
</table>

All Areas: [off | on]
- AI (on)
  - Artificial intelligence
  - Computer vision
  - Machine learning
  - Natural language processing
  - Web & information retrieval

Systems (off | on)
- Computer architecture
- Computer networks
- Computer security
- Databases
- Design automation
- Embedded & real-time systems
- High-performance computing
- Mobile computing
- Measurement & perf. analysis
- Operating systems
- Programming languages
- Software engineering

Theory (off | on)
- Algorithms & complexity
- Cryptography
- Logic & verification

Interdisciplinary Areas (off | on)
- Comp. bio & bioinformatics
- Computer graphics
- Economics & computation
- Human-computer interaction
- Robotics
- Visualization
OFFICE LOCATION:
6116 EXECUTIVE BLVD, NORTH BETHESDA

MOVE-IN PLANNED FOR DECEMBER 2023
IHC: AMPLIFYING ANALYTICAL POWER

**Build out**

- **Data Security**
  - Secure Research Environment (SRE) for Investigations (hosted by UMB)

- **Access Points**
  - IHC
    - Complete Datasets
    - Limited/De-Identified Datasets
  - UMB On-premises
    - Recorded IRBs
  - UMD On-premises
    - Recorded IRBs

**Function**
- ↑↑ Project Capacity
- ↑↑ Project Complexity
- ↑↑ Productivity of IHC
- ↑↑ Innovation at IHC
- ↑↑ Personnel at IHC

**Benefits**
- Data Security
- Complete Datasets
- Limited/De-Identified Datasets
- Recorded IRBs

**Access Points**
- IHC
  - ↑↑ Speed
  - ↑↑ Throughput
- UMB, campus wide
- UMCP, campus wide
USING THE LEARNING HEALTH SYSTEM TO IMPROVE OUTCOMES

Learning Health System

- Integrate clinical and operational data to identify successes and quality improvement opportunities.
- Devise novel approaches to diagnosis, treatment, and delivery of care.
- Gather and observe data as practice trends rollout.
- Translate knowledge and evidence into practice improvements.

LUNG CANCER


Use Computational Sciences to:
Anticipate Disease › Detect Early › Proactive Screen › Save Lives
ON-SITE ENGAGEMENT AT IHC

- Workstations
  - Graphics
  - AI

- High Performance Computing
- Secure Research Environment
- Existing Dataset
- Intensive Computing

- Immersive Visualization Lab
- XR devices

- Flow of ideas
- Anti-silo
- Inclusion
- Training
- Collaboration

- Experience
- Opportunity
- Engagement
Maryland Momentum Fund

USM Venture Fellows Program

Presented By:
Mike Ravenscroft
Managing Director
Our North Star:
Equip USM students with the skills, connections, and professional experience they need to build careers in venture capital.
About me:
Managing Director, Maryland Momentum Fund
University of Maryland, College Park MBA ‘21
Consulting, accelerators, venture capital
INTRODUCTION

THE PROBLEM
There are few opportunities for USM students to gain exposure to venture capital. As a result, the industry remains insular and difficult to access.

THE SOLUTION
Create a robust regional talent pipeline using the Maryland Momentum Fund’s network of VCs and our access to the USM talent pool.

VENTURE FELLOWS
The University System of Maryland’s Inaugural Venture Fellows Program will select talented undergraduated and graduate students, educate and train the fellows on the foundations of venture capital, and match them with top-tier funds for summer internships.
ABOUT THE FELLOWSHIP

OUR MISSION:
Empower students of all backgrounds to enter and explore the venture capital and early-stage finance industries confidently and fearlessly.

GOAL
Serve as a critical talent pipeline for venture funds in the Mid-Atlantic and beyond, providing USM students an on-ramp to enter the industry.

PROGRAMS
The Venture Fellows Program consists of three phases: Applications and Matching, Educating & Training, and mentorship through their Summer Internship.
The USM Venture Fellows Program

How it Works:
APPLICATION & PROGRAM TIMELINE

- **Application Opens**: October 5, 2023
- **Application Closes**: November 30, 2023
- **Interviews & Matching**: October - November, 2023
- **Internships Confirmed**: December, 2023
- **Curriculum Training & Mentorship**: February - May, 2024
- **Summer Internships**: June - August, 2024

Timeline:

- **2023**:
  - Application Opens: October 5
  - Application Closes: November 30
  - Interviews & Matching: October - November
- **2024**:
  - Curriculum Training & Mentorship: February - May
  - Internships Confirmed: December
  - Summer Internships: June - August

Date: 2023
How are we doing so far?

20 venture funds, angel groups, and accelerators committed to interview our applicants

57 student applications from UMD, UMB, UMBC, Bowie State, Frostburg State, Towson, University of Baltimore

3 internship offers out, 1 accepted

VC fund manager feedback so far: “You made this process easy to manage and this is a high quality group of applicants.”
Our goals with the pilot:

- Refine program design and build playbook for execution
- Build and strengthen relationships with partner venture funds and angel groups
- Market the program across the system
- Deliver value-add interns to our partner venture funds via a seamless, curated hiring experience
Our goals with the program:

Build the nation’s leading Venture Fellows Program

Become an indispensable aspect of the regional talent pipeline for VC firms and angel groups

Foster knowledge sharing and collaboration across USM institutions

Create opportunities for alumni to give back, participate, and fund student scholarships / program participation
Where does this go next?

In talks with UMD to make a “Veterans in VC” track

Expanding out to cover national venture funds

Creating a similar fellows program for students seeking startup and/or growth tech company experience

Alumni sponsorship of fellows (i.e. scholarships or subsidized internships)
The University of Maryland climbed into the nation's top five colleges for cultivating student entrepreneurialism, according to rankings by The Princeton Review and Entrepreneur magazine. UMD placed No. 5 across all institutions, No. 4 among public universities and No. 1 in the Mid-Atlantic in the 2024 edition of the annual list of undergraduate entrepreneurship programs; this marks Maryland's ninth straight year in the top 10.
LAUNCH FUND BACKGROUND AND COMPONENTS

**Charge:** “Enable relatively small amounts of capital (under $75,000) to be deployed to USM-affiliated entrepreneurs and ventures in order to demonstrate the generation of economic development activity...to enable flexible, non-prescriptive early capital to be deployed alongside resources and accountability”

**Components:**

1. Microgrants for students and employees – launched!
2. Grants and investments for ventures – grants launched!
3. Pre-entity funding, e.g. proof of concept – in development
EARLY IMPLEMENTATION SUCCESS AND CONTINUOUS IMPROVEMENT

Encouraging preliminary evaluation of values by Executive Committee and external reviewers (average rank of 4-5 out of 5):

- Diversity, equity, and inclusion
- Transparency
- Adding value to all applicants and institutions

“The fund is a lot more transparent than other opportunities I've seen, and I think the thoughtful, personalized feedback is well appreciated.” – Launch Fund Reviewer

“An amazing service to the start up community in Maryland!” – Applicant

Future improvements identified (e.g., sustainability in adding value back).
VALUES SPOTLIGHT: DIVERSITY EQUITY & INCLUSION

Progress

• Attracted a diversity of ventures and founders
• Sought and supported ventures with barriers to capital inclusion
• Ensured recipient pool reflected applicant pool
• Reporting on DEI in terms of representation

Future Work *(informed by applicants, reviewers, & Executive Committee)*

• Is the above enough; what is true equity? Any applicant/recipient goals?
• Consider total DEI effects, including DEI impacts of ventures.
• Continue assessment of inclusion through feedback.
• Keep DEI central when marketing the Fund (e.g., intentional outreach)
DIVERSITY EQUITY & INCLUSION: APPLICANTS AND RECIPIENTS

Institutional Affiliation

All 12 institutions represented!

Awardee mix: Generally similar
DIVERSITY EQUITY & INCLUSION: APPLICANTS AND RECIPIENTS

Industry

Entity County

Awardee mix: ↔ Generally similar, less IT/Cyber representation

Awardee mix: → Generally similar
DIVERSITY EQUITY & INCLUSION: APPLICANTS AND RECIPIENTS

Founder Identities

Awardee mix: Generally similar

3 Veteran Founders
9 Founder with a Disability

- Another gender identity
- Female
- Male
- Nonbinary

- African American Afro-Caribbean
- American Indian or Alaskan Native
- East Asian or Asian
- Latinx or Hispanic
- Native Hawaiian or Other Pacific Islander
- Non-Hispanic white or Euro-American
- South Asian or Indian

54.9% 42.9%
DIVERSITY EQUITY & INCLUSION: APPLICANTS AND RECIPIENTS

Previous Funding

Awardee mix:
About half <$10k
Almost all <$100k

Industry
- Arts; Media; and Entertainment
- Community and Economic...
- Deeptech
- Food; Drink; and Hospitality
- Healthcare and Life Sciences
- Retail; Product; and Persona...
- Technology; IT; and Cyberse...

Former Entrepreneurial Experience:
- About 50-50 for applicants and awardees!
VENTURE GRANT Awardee Impacts

The Fund is addressing a wide spectrum of early capital gaps, with early impacts and progress in advance of structured reporting:

- Completing a critical milestone to get started
- Enabling a needed pivot
- Accomplishing critical milestones during the long process of raising dilutive venture funds (e.g., congrats to ReBokeh on recent investment!)
- Scaling/expanding

Takeways from awardee conversations:
- Funding has enabled more serious identification and consideration of non-financial resources that can move the needle
- Founders are values-driven and community-minded
- Funds have been critical but (as expected) are not enough
PLANNING FOR ENHANCED IMPACT

Potential and growth across USM is high. Pilot funding and implementation continues to focus on sustainability and expansion.

<table>
<thead>
<tr>
<th>Demand Information</th>
<th>Scale-Minded Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Microgrant</strong> demand is high leads to more activity and ventures.</td>
<td>Complete 2nd round and articulate value</td>
</tr>
<tr>
<td><strong>Venture grant</strong> need is already greater than pilot funds ($225k distributed for $3M in requests, at least $1.5M recommended to be funded!).</td>
<td>Tailor 2nd round with input from potential outside funders</td>
</tr>
<tr>
<td><strong>Research translation</strong> is even more capital-intensive.</td>
<td>Develop with input from potential outside funders</td>
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PLANNING FOR ENHANCED IMPACT

Expand beyond the Launch Fund by convening other USM Funds and major resource center leaders:

1. Increase USM cohesion of USM ecosystem to benefit programs, applicants, recipients
2. Help articulate USM resources hopefully -- $10M+ annual funds across 13+ sources!
3. Strategize to collectively address gaps, enhance resources, and look ahead
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