

Ohio Third Frontier Commission Meeting

July 11, 2023

Call to Order, Roll Call, and Approval of the April 18, 2023, Meeting Minutes

Technology Validation and Start-Up Fund (TVSF)

Jeremiah Shum, Program Manager



Program Purpose

Help transition technology from Ohio research institutions into the marketplace through Ohio startup companies.

Two ways to engage the program:

Phase 1: Validation Projects
(Institutional Funds).

Phase 2: Startup Fund
(New Companies).



Phase 1: Validation Projects

Institutions may apply to create a pool of funds to select and advance its technologies toward commercialization.

Lead applicant must be the institution that owns the IP.



Phase 1

Awards must be matched 1:1 by cash cost share from the institution for:

\$200,000 to \$500,000

\$1,000,000

No cost share requirement for:

\$100,000

- **Internship required**

Phase 2: Startup Fund



Eligible Project: Ohio startups and young companies licensing and commercializing technologies from institutions.

Awards up to \$100,000
(or \$150,000 for biomedical- related projects).

No cost share requirements.



Future Rounds:

Round 34: Phase 1 & 2

Application Opens: July 21

Awards: Approximately October 2023

Round 35: Phase 2

Application Opens: October 2023

Awards: Approximately January 2024

Technology Validation and Start-Up Fund (TVSF) Round 33 Evaluator Recommendation

Redwood Innovation Partners



Redwood
Innovation
Partners

TVSF Round 33 Evaluation

Herb Bresler PhD, Susan Stanton PhD
July 11, 2023

Outline

- Round 33 overview
- Funding Recommendation
- Analysis and Recommendations



Round 33 Overview

- 13 Phase 2 Applications were received, two applications were withdrawn without further review and are not included in the analytics results.
- 11 Phase 2 Applications evaluated, totaling \$1,550,000.
- Phase 2 Round only.
- Funding of 8 Phase 2 applications totaling \$1,100,000 is recommended.



Round 33 Overview (Continued):

- Round 33 recommendation rate is 73%: 8 of 11 Phase 2 applications.
 - Historical range of prior rounds is 27 to 100%

TVSF Round 33 Approval Rate by Round Phase 2

Round	\$ Recommended	Approval Rate
1 (APR 2012)	\$950,000	35%
2 (AUG 2012)	\$900,000	52%
3 (DEC 2012)	\$610,000	44%
4 (JUN 2013)	\$864,000	30%
5 (FEB 2014)	\$1,462,000	46%
6 (JUN 2014)	\$998,000	39%
7 (OCT 2014)	\$1,100,000	57%
8 (FEB 2015)	\$710,000	37%
9 (JUN 2015)	\$550,000	31%
10 (DEC 2015)	\$925,000	38%
11 (APR 2016)	\$1,239,000	46%
12 (OCT 2016)	\$3,537,269	46%
13 (MAR2017)	\$1,567,500	38%
14 (SEP 2017)	\$498,832	27%
15 (DEC 2017)	\$2,250,000	38%
16 (MAR 2018)	\$2,098,600	52%
17 (SEP 2018)	\$2,100,000	42%
18 (DEC 2018)	\$1,150,000	35%
19 (APR 2019)	\$2,250,000	43%

Round	\$ Recommended	Approval Rate
20 (NOV 2019)	\$1,350,000	43%
21 (FEB 2020)	\$3,944,000	56%
22 (JUN 2020)	\$1,398,630	53%
23 (DEC 2020)	\$900,000	50%
24 (MAR 2021)	\$2,092,900	55%
25 (JUN 2021)	\$800,000	75%
26 (OCT 2021)	\$1,700,000	55%
27 (FEB 2022)	\$850,000	43%
28 (APR 2022)	\$2,499,976	64%
29 (JULY 2022)	\$850,000	100%
30 (OCT 2022)	\$3,700,000	71%
31 (JAN 2023)	\$100,000	50%
32 (APR 2023)	\$850,000	64%
33 (JULY 2023)	\$1,100,000	73%
Total Funding	\$47,895,707	
Average/Round	\$1,451,385	49%



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5486	BioChip Labs, Inc.	<i>Rapid Hemoglobin-Oxygen Dissociation Assay (RHODA) for red blood cell health and disease</i>	\$150,000	Case Western Reserve University

- BioChip Labs (BCL) is an operating diagnostic laboratory company located in Cleveland. BCL provides a suite of diagnostic tests to improve outcomes for patients by testing red blood cell function.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5488	Genosera, Inc.	Development of GNE gene therapy	\$150,000	Research Institute at Nationwide Children's Hospital

- Genosera is a preclinical company developing a novel gene therapy for treatment of GNE myopathy (GNEM), a rare genetic disease that causes progressive muscle wasting.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5489	Kilele Health Inc.	Continuous Monitoring for Heart Health	\$150,000	University of Cincinnati

- Kilele Health Inc. is developing a button-sized sensor/chemistry detection device to be worn by patients to monitor a critical indicator of heart stress.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5490	Medical Interface Solutions, LLC	Strokenekt AI-Pre-Hospital Stroke Diagnostic Support App	\$100,000	University of Cincinnati

- Medical Interface Solutions, LLC (MIS) is developing a mobile application to aid first responders in detecting stroke signs, connecting them to an expert stroke clinician and directing them to the nearest treatment facility.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5492	NeoIndicate LLC	PTP (protein tyrosine phosphatase) mu targeted treatment of invasive cancer	\$150,000	Case Western Reserve University

- NeoIndicate is developing theranostic (therapeutic and diagnostic) products that can provide rapid, accurate information for clinicians to utilize a “detect and treat” strategy for diagnosing, imaging and selectively treating cancers as part of a definitive surgical treatment.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5493	Neucore Bio, Inc.	Extracellular Vesicle therapeutics for treatment of rare disease	\$150,000	Ohio State University

- Neucore Bio is a genetic engineering company developing technologies to enable the next generation of genetic medicine. The company designs and produces extracellular vesicles that provide cell-selective delivery of precision genetic medicines.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5494	PHope	PHope's Novel ECMO Cath and Docking Station	\$150,000	Ohio State University

- PHope's prototype consists of both a newly developed catheter and a complementary septal docking station which offers significant improvements in ExtraCorporeal Membrane Oxygenation (ECMO) patient outcomes.



Phase 2 Recommended Funding

Proposal	Lead Applicant	Project Title / Product Focus	Recommended Funding	Licensing Institution
23-5495	Raider Technologies LLC	Low Cost AAM Radar System	\$100,000	Air Force Research Laboratory

- Raider Technologies LLC leverages a unique frequency diverse array (FDA) radar architecture that is significantly lower in cost and complexity for acquisition, detection and tracking of targets.



Round 33 Analysis & Recommendations

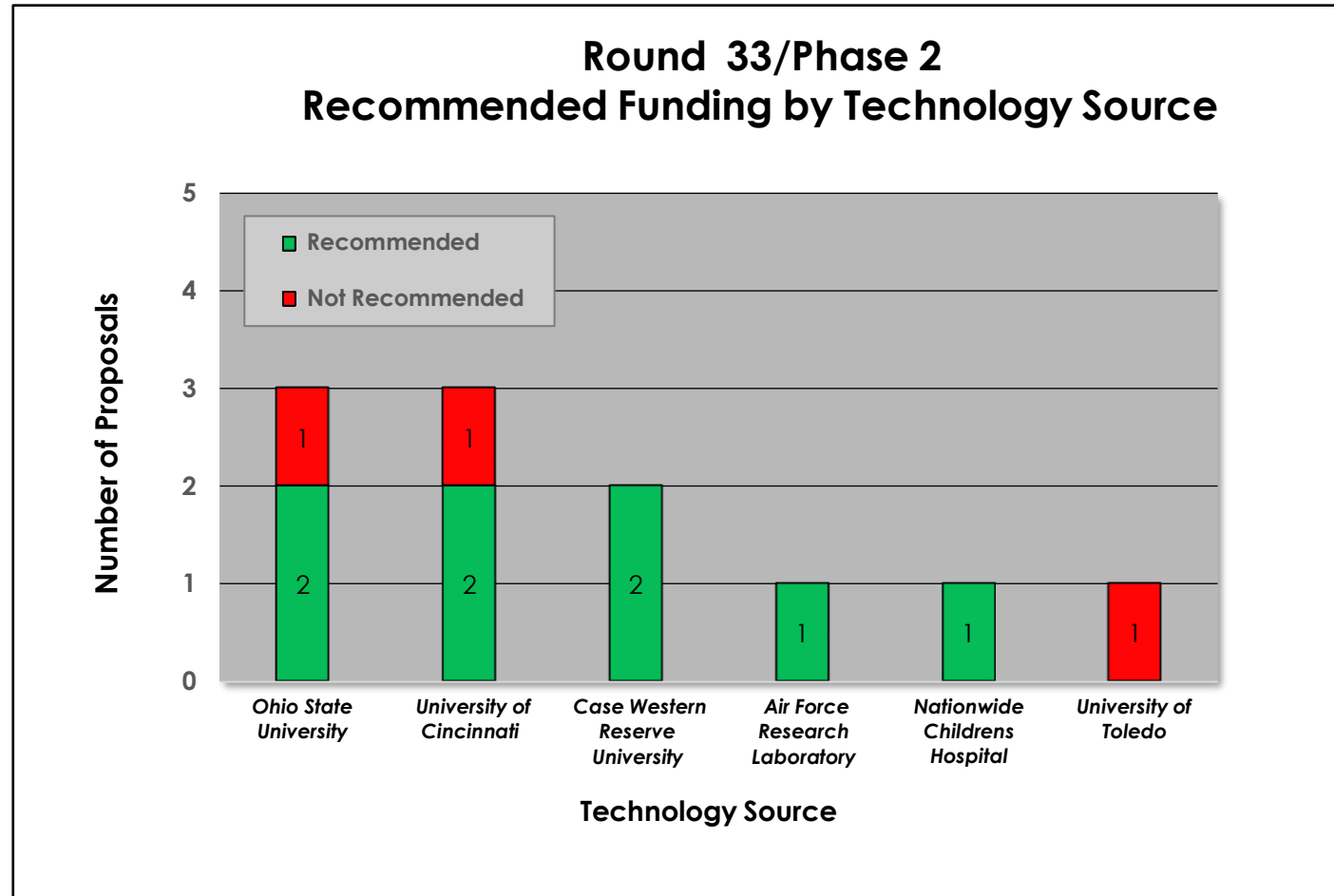


Phase 1 Carry Through and Reapplications

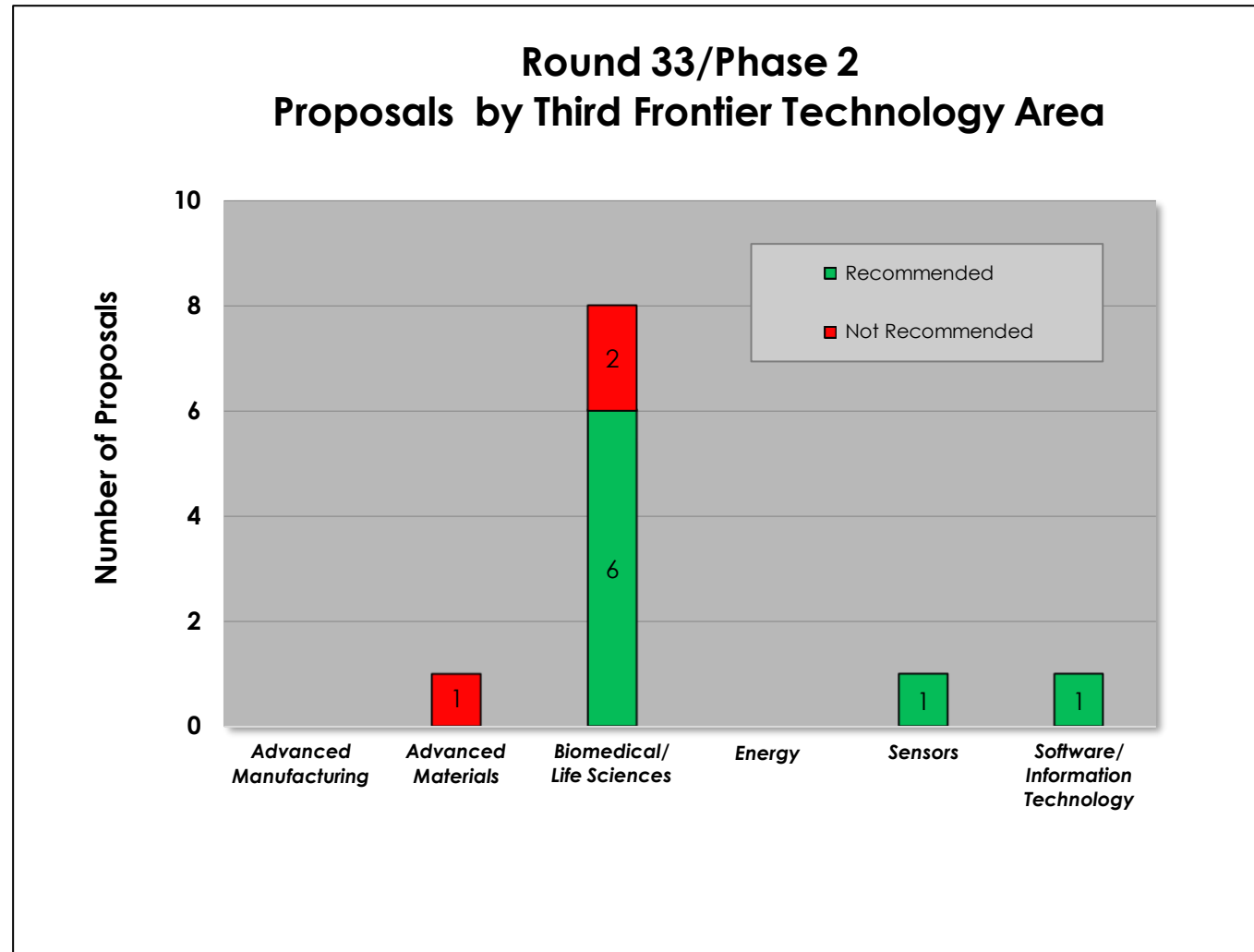
- Phase 1 Carry Through:
 - There were seven (7) Phase 2 applicants that previously received Phase 1 funding. Five (5) are recommended for funding
- Phase 2 Reapplications:
 - There were 2 Phase 2 first time reapplications (or Phase 2 second time applications) and 1 is recommended for funding.



Ohio State University and University of Cincinnati each were sources of technology to 3 applicants

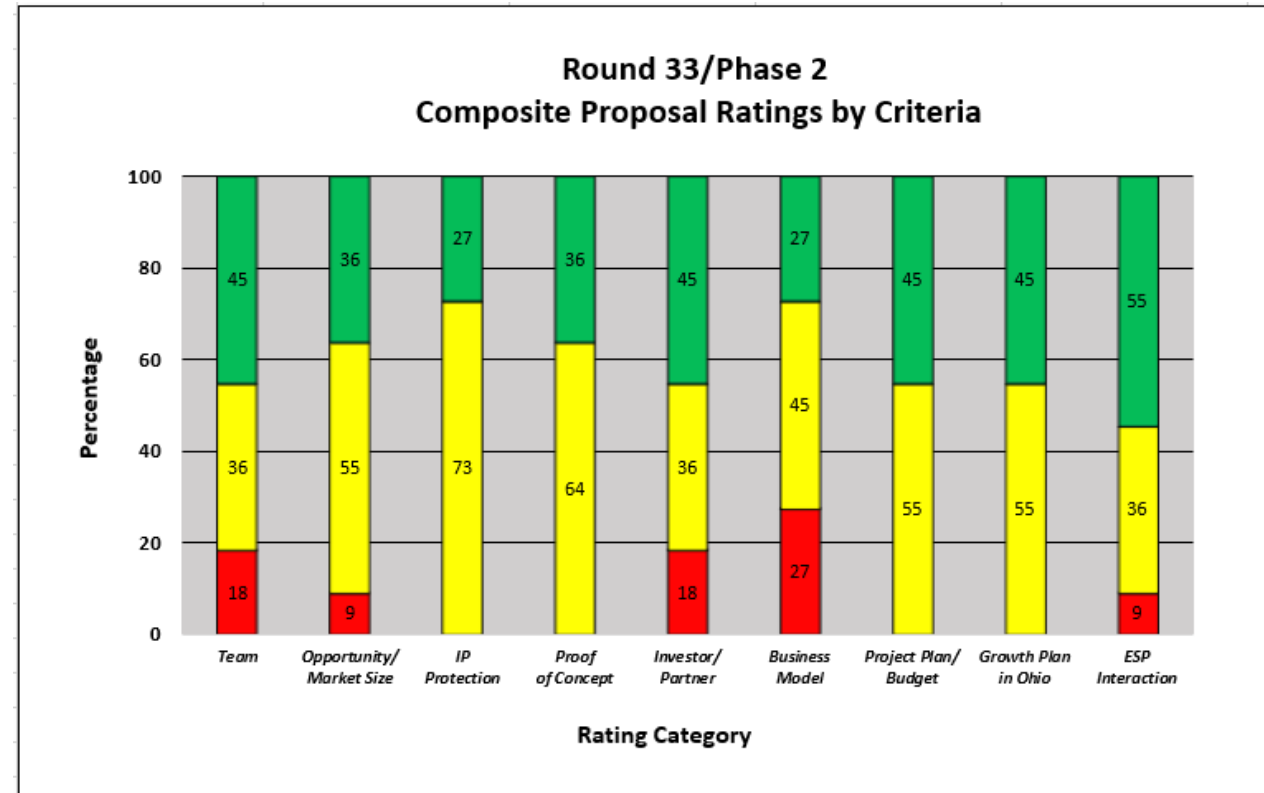


Biomedical/Life Sciences fraction is almost three quarters of applicants
(73% vs Round 20 – 32 Average of 55%)



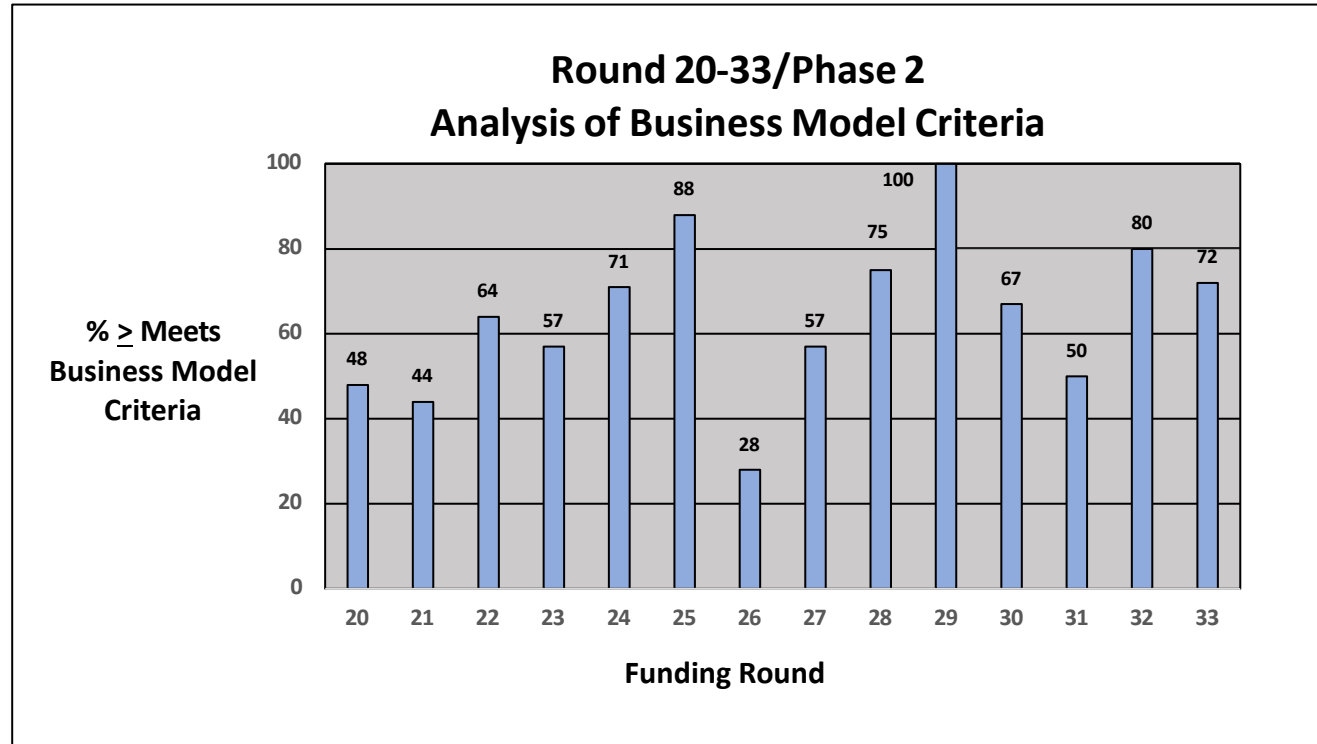
Phase 2 composite rankings show:

- IP Protection, Proof of Concept, Project Plan Budget, and Growth Plan in Ohio were the highest rated criteria
- Business Model was the lowest rated criteria



Phase 2 Business Model Analysis

- Business model average in Round 20-23 was 53% average $\geq$ meets
- Rounds 24 to 33 average was 69% average $\geq$ meets
- Average over all 13 previous rounds is 64%

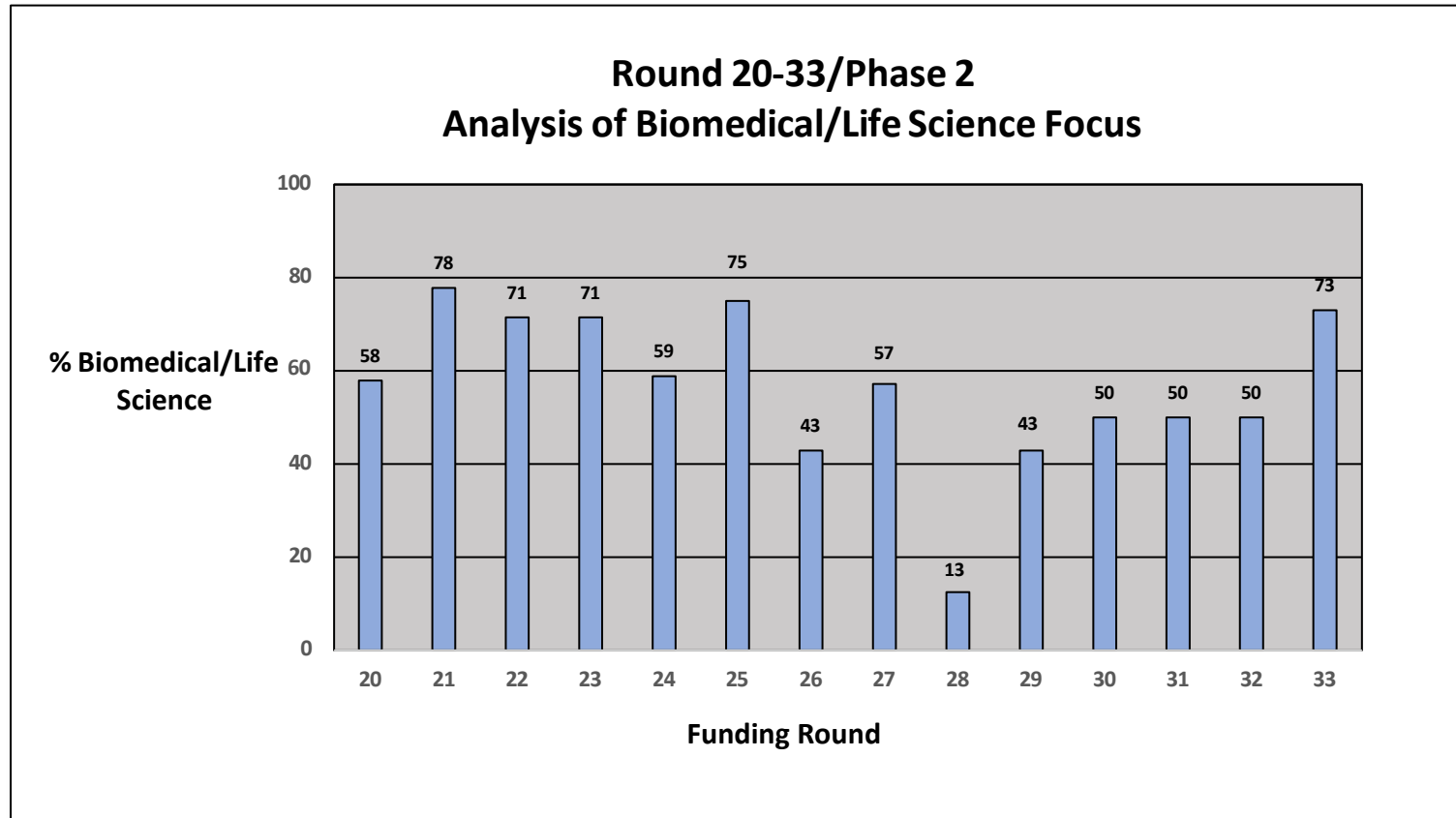


Observation: Business Model low seen in Round 26 appears to be an anomaly.



Phase 2 Biomedical/ Life Science Focus

- All 14 Rounds average 56% Biomedical/ Life Science



Technology Validation and Start-Up Fund (TVSF)

Summary: Round 33 Phase 2

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23-5486	BioChip Labs, Inc.	Red blood cell health and disease	\$150,000	Case Western Reserve University
23-5488	Genosera, Inc.	Development of GNE gene therapy	\$150,000	Research Institute at Nationwide Children's Hospital
23-5489	Kilele Health Inc.	Continuous Monitoring for Heart Health	\$150,000	University of Cincinnati
23-5490	Medical Interface Solutions, LLC	StrokeNekt AI-Pre- Hospital Stroke Diagnostic Support App	\$100,000	University of Cincinnati
23-5492	NeoIndicate LLC	Targeted treatment of cancer	\$150,000	Case Western Reserve University
23-5493	Neucore Bio, Inc.	Genetic treatment of rare diseases	\$150,000	Ohio State University
23-5494	PHope	ECMO Catheter and Docking Station	\$150,000	Ohio State University
23-5495	Raider Technologies LLC	Low Cost AAM Radar System	\$100,000	Air Force Research Laboratory
	8 Projects	Total Funding	\$1,100,000	



High School Tech Internship Program Update

**Governor's Office of
Workforce Transformation**
Eric Leach
Deputy Director

High School Tech Internship Pilot v3.0

- Opportunity for Ohio employers to receive reimbursement for establishing a recruitment pipeline by hosting high school interns in tech-related roles.
- Provide businesses with tech talent .
- Equip students with valuable work experience at an early age. Interns perform job duties similar to those expected of an entry-level employee.

Technology roles focus on

- **Software Development.**
- **Data, Cloud, and IT infrastructure.**
- **Cybersecurity.**
- **Broadband/5G.**
- **Other in-demand technology-focused roles.**



Governor's Office of
Workforce Transformation

HSTI Previous Performance

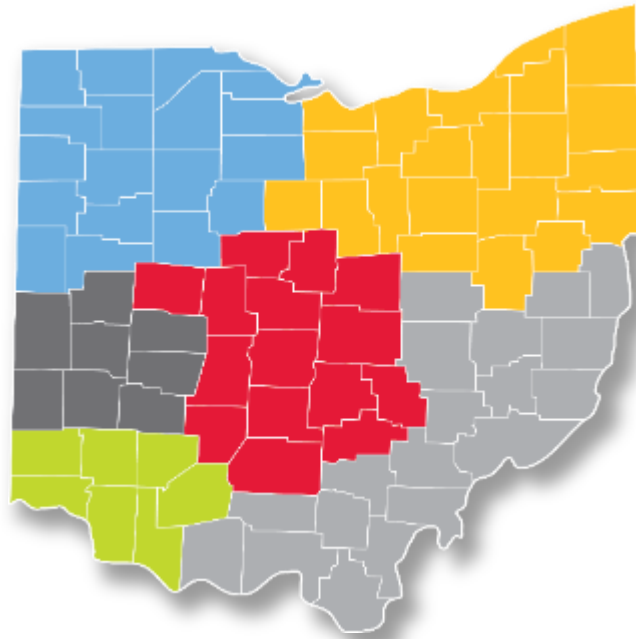


2021

**70 Internships
18 Counties**

2022

**38 Internships
7 Counties**



Educational entities and businesses described past program design as overly burdensome.

Cited a lack of resources to successfully implement the program and create lasting partnerships.

2023 Program Changes

Introduction of Intermediaries

- Strategic Ohio Council for Higher Education (SOCHE), INTERalliance of Greater Cincinnati, and Youth Opportunities Unlimited

Expanded Program Duration

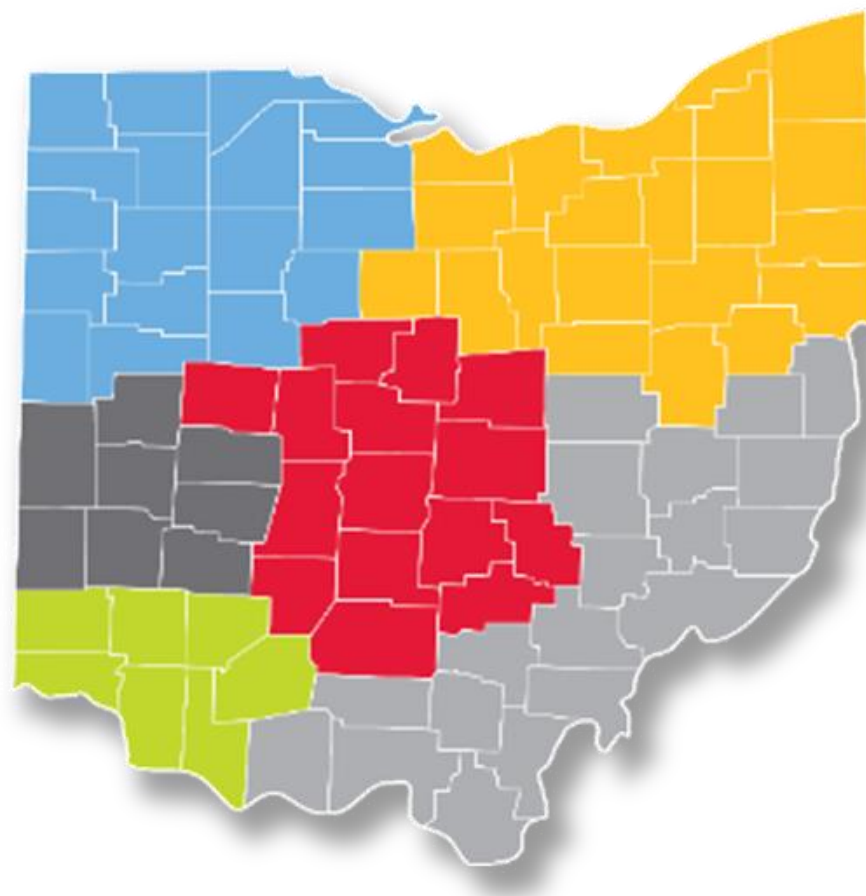
- January 3 – October 1

New Wage Reimbursement Model

- 200 hours or more: Full Reimbursement
- 120-199 hours: Two-Thirds Reimbursement

2023 Performance

Region	Interns
Southeast	15
Southwest	140
Northwest	6
Northeast	172
West Central	136
Central	66
Total	535



Future Program Plans

Intermediary Model Expansion

- **Intermediary in each JobsOhio region**
 - Enhanced support for educational entities and businesses statewide.
 - Increased outreach and partnerships.
 - Increased student internships and tech-related role exposure.



Funding Purpose

Reimbursement of student wages

- With a new enhanced program design, additional funds are necessary for the growth of the program.

Funding Request
\$2,000,000



Governor's Office of
Workforce Transformation

Other Business

Next Meeting

October 17, 2023

Adjournment