



**Development
Services Agency**

John R. Kasich, Governor

David Goodman, Director



Third Frontier
Innovation Creating Opportunity

www.OhioThirdFrontier.com

Commission Meeting

February 12, 2015

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Agenda

10:00	Call to Order Approval of 12/10/2014 Meeting Minutes (Vote)	David Goodman (Chair)
10:05	Industrial Research and Development Center Program: Parker Hannifin: Ohio Center for R & D of Human Motion Technology (Vote)	Anthony Howard/ Taratec
10:25	Technology Validation & Start-up Fund Awards (Vote)	Paul Jackson/ YourEncore
11:00	Commercial Acceleration Loan Fund (Vote)	Diane Chime
11:15	Program Updates <ul style="list-style-type: none">- Metrics Validation- Inclusion Language- ESPs- Marketing/Outreach	Staff
11:50	Other Business	
12:00	Adjourn	

Industrial Research and Development Center Program

Parker Hannifin Corporation

Center for Research & Development of Human Motion Technology

- **Applicant/Sponsor:** Parker Hannifin, Human Motion and Control Business Unit – Macedonia, Ohio
- **Parker Commitment:** \$27.15M
- **IRDCP Request:** \$2.25M
- **Ohio Collaborators:** Cleveland State University
- **Job Commitment:** Not significant

Parker Hannifin Corporation

Center for Research & Development of Human Motion Technology

Purpose of the Center

- Parker's HMC business unit is an existing operation of 19 personnel in 5,000 sq. ft. at Parker's Corporate Technology & Innovation Ctr., would double to 10,000 sq. ft.
- HMC currently developing/testing an exoskeleton system for the mobility impaired as a result of spinal cord injury – "Indego"
- Currently in clinical trials with potential additional applicability to stroke, MS, cerebral palsy, and spina bifida patients
- Support 5 Indego related projects: Software; Electrical Stimulation; Lite-weighting; Pediatric System; and Simulation Based Design

Parker Hannifin Corporation

Center for Research & Development of Human Motion Technology

Use of funds – Operations

- R&D/Engineering \$7.45M
- Clinical Trials \$1.35M
- Sales & Marketing \$7.45M
- Production & Operations \$5.60M
- Indirect/overhead \$4.15M

Use of Funds – Capital

- Building/Structures \$600k
- Architectural/Engineering \$200k
- Equipment \$200k

Parker Hannifin Corporation

Center for Research & Development of Human Motion Technology

Not recommended for funding

- Not aligned to the IRDCP – Use of funds
 - Business operations, sales/marketing, production (\$13M)
 - Very small capital investment, not a long term fixed investment
- Not aligned to the IRDCP – Intent
 - One of the primary short-term goals is to double existing space
 - Grow from a “small unit” to one of P-H’s “150 operating divisions”
- Low job commitment
- Lack of a clear sustainability plan and stated long-term commitment

Technology Validation & Start-up Fund

Technology Validation & Start-up Fund Program

Purpose

- Support Ohio institutions of higher education and other Ohio not-for-profit research institutions in doing a better job at licensing and monetizing their technological discoveries.
- Create economic growth in Ohio based on start-up companies that license and commercialize technologies developed by Ohio institutions of higher education, other Ohio not-for-profit research institutions and federal labs located in Ohio.

Technology Validation & Start-up Fund Program

- **Lead Applicants/Phases:**

Phase 1 – Technologies developed at Ohio research institutions needing additional validation/proof before an Ohio start-up company will license. Up to \$50,000 w/ 1:1 cash cost share.

Phase 2 – Ohio start-ups and young companies that are a prospective licensee of a technology from an Ohio institution. Up to \$100,000 as initial capitalization w/ no cost share.

- **External Evaluator:** YourEncore

Technology Validation & Start-up Fund Program

- **8th Cycle of the TVSF program.** To date, including this cycle:
 - Phase 1 proposals - 162 Phase 1 awards - 66
 - Phase 2 proposals - 105 Phase 2 awards - 44
- **To date, 17 Phase 1's and 9 Phase 2's are complete**
 - Including this cycle: 6 Phase 1's have received a Phase 2 award
- **Staff and Evaluators continued mandatory TVSF debriefs for proposals not recommended in Cycle 7**
- **Current cycle**
 - 30 proposals w/ 11 recommended for award
 - 8 proposals are re-submits, of which 3 are recommended



Innovative Results through Proven Expertise

Technology Validation and Start Up Fund-Round 8

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Cincinnati, OH 45242
www.yourencore.com

P: 513.794.9777
F: 513.794.9781

Overview

- 37% of grants submitted this round recommended for approval (11 of 30). Total grant dollars recommended is \$710,000.

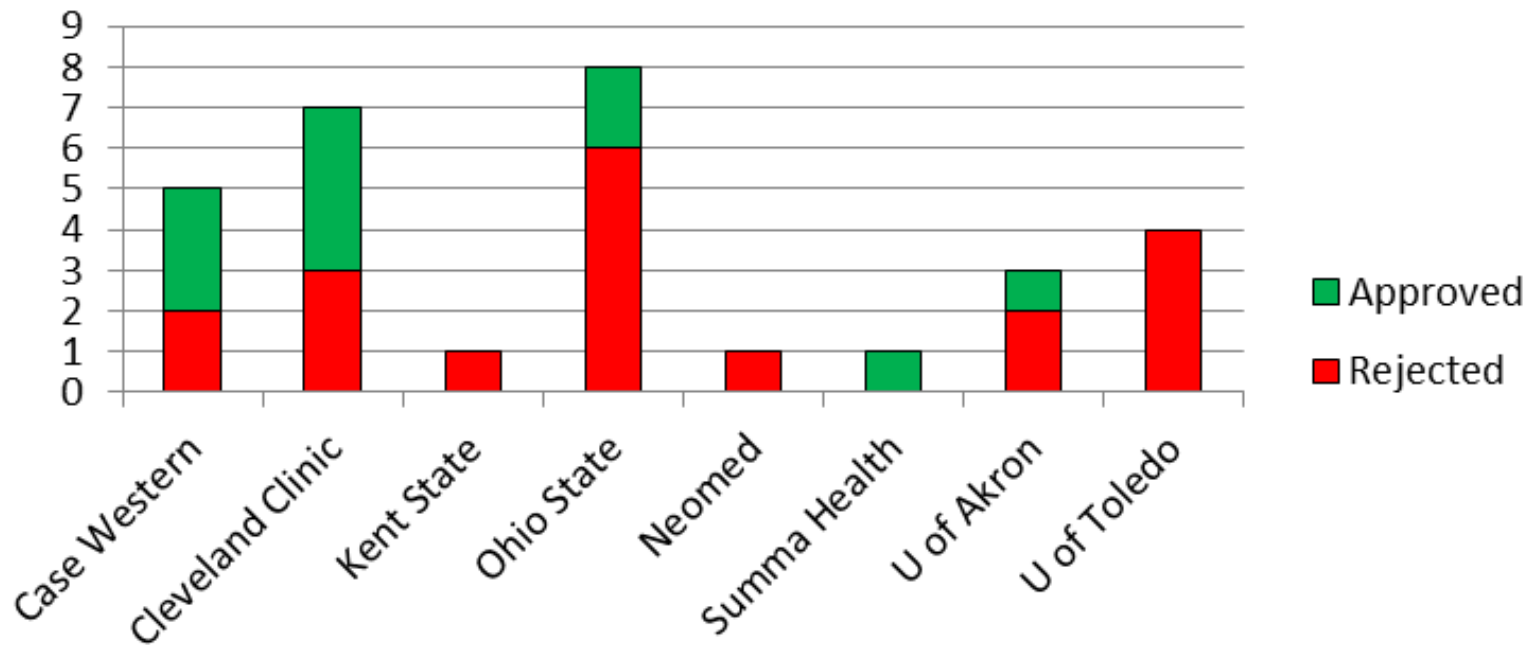
Round	Approval Rate	\$\$ Recommended
1	35%	\$950,000
2	52%	\$900,000
3	44%	\$610,000
4	30%	\$864,000
5	46%	\$1,462,000*
6	39%	\$998,000
7	57%	\$1,100,000
8	37%	\$710,000

- Proposal quality varied broadly.
 - However, Phase 1 submissions this round were of lower quality than last few rounds.*
- Continue to encourage potential resubmissions to take advantage of the opportunity to debrief.
 - It was evident that some benefited highly from the discussion, others disinclined advice given.*
 - Resubmission success rate was 38% overall.*

**Note: \$100K conditional award for 13-541 in round 5 was superseded by 14-524 in round 7 for the same amount.*

Overview

■ Round 8 Results: Applications by Institution



Trends

■ Phase 1

- *Strong with 3rd Party Review*
- *Primary opportunities for improvements were in Proof, Path to Market, and Market Opportunity.*
 - Lack of meaningful and/or measureable proof end points
 - Path to Market undefined or missing value proposition, or was subject to significant competitive pressures.
 - Market Opportunity undefined, overstated, or insufficient for sustainability.

■ Phase 2

- *Strong with IP, and Market Opportunity.*
- *Primary opportunities for improvement are Business Model and Budget.*
 - Business Models lacked financial robustness and market focus.
 - Budgets had objectives outside of RFP criteria.

Resubmission and Carry Through

Round 7

■ Resubmission

— Phase 1

- 6 of 23 (26%) Phase 1 proposals are resubmissions
- One of those six (17%) is Recommended for Funding

— Phase 2

- Two of seven (29%) Phase 2 proposals are resubmissions
- Two of two (100%) are Recommended for Funding

■ Carry Through

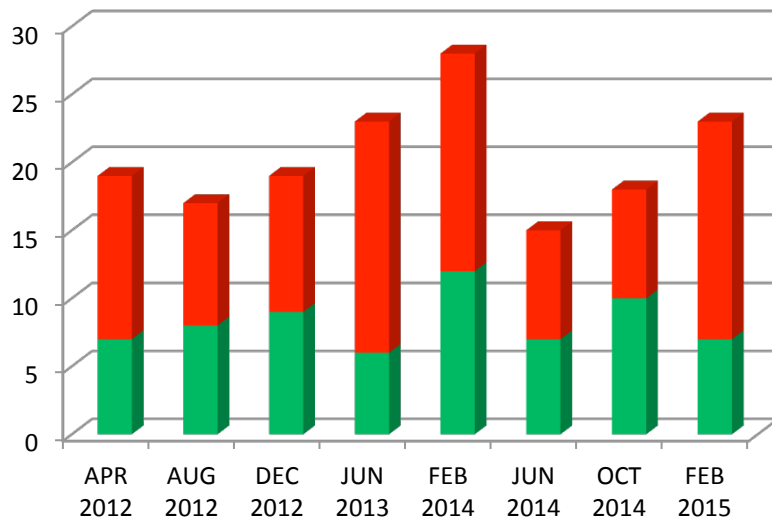
- *Two of seven (29%) Phase 2 proposals were previous Phase 1 awardees*
 - One (50%) is Recommended for Funding in this round.

Trends

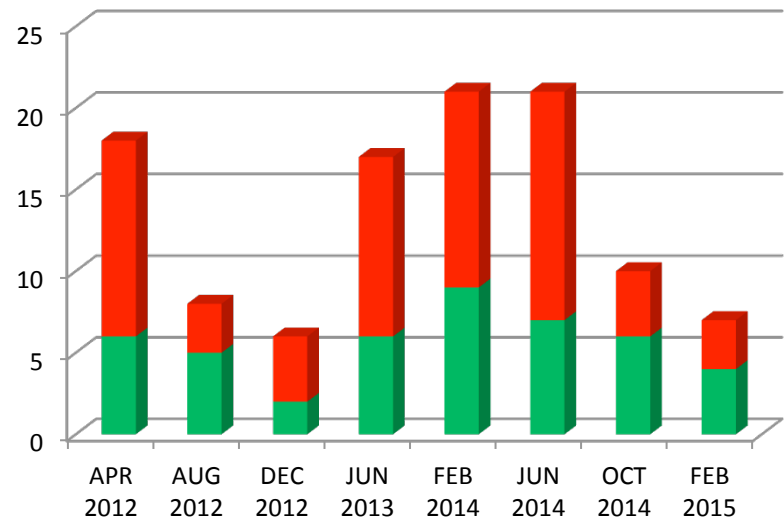
Comparative Results (all rounds to date)

Rounds 1 – 8 Results

Phase 1 Applications



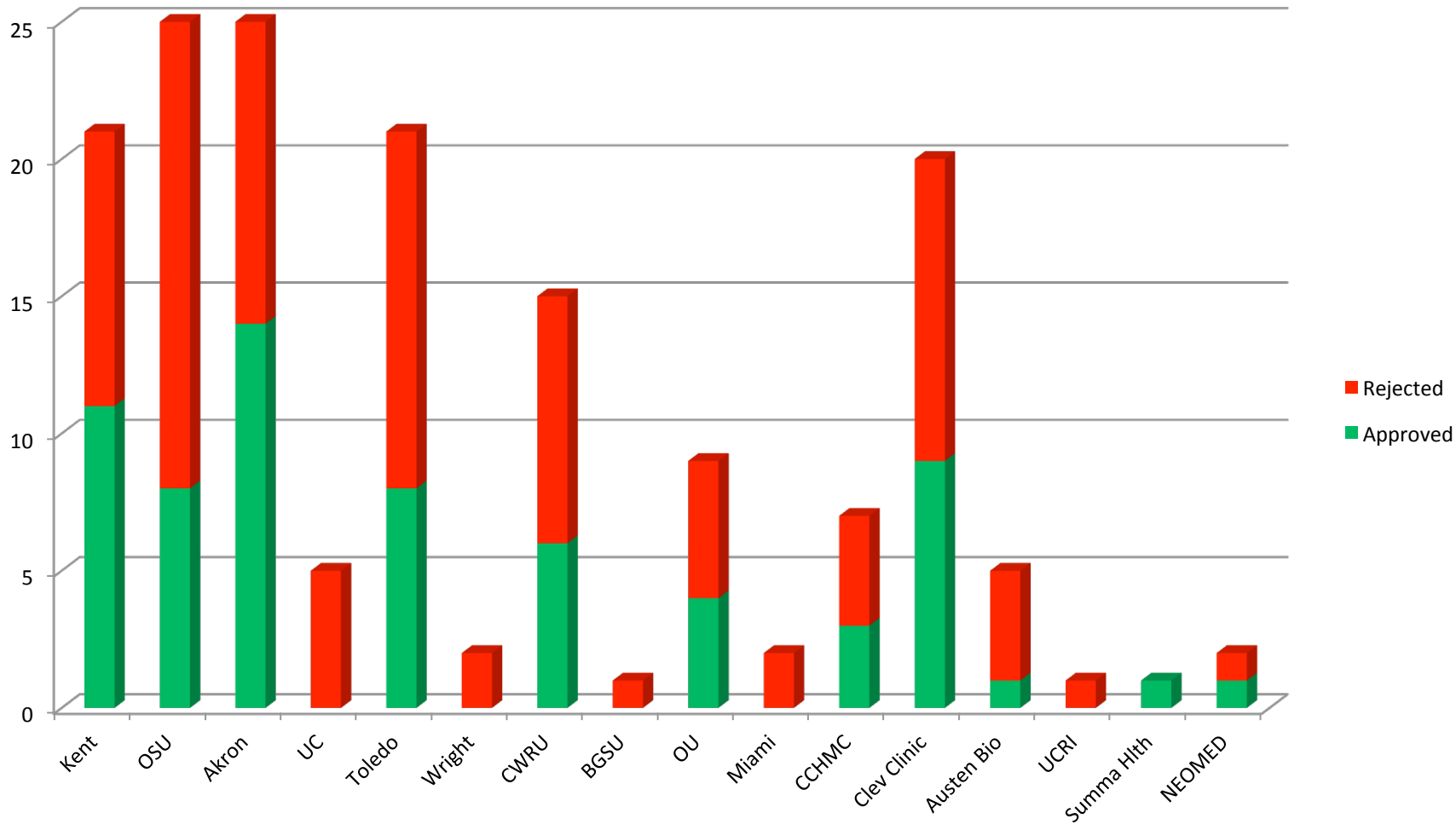
Phase 2 Applications



Trends

Cumulative Results – Phase 1 (all rounds to date)

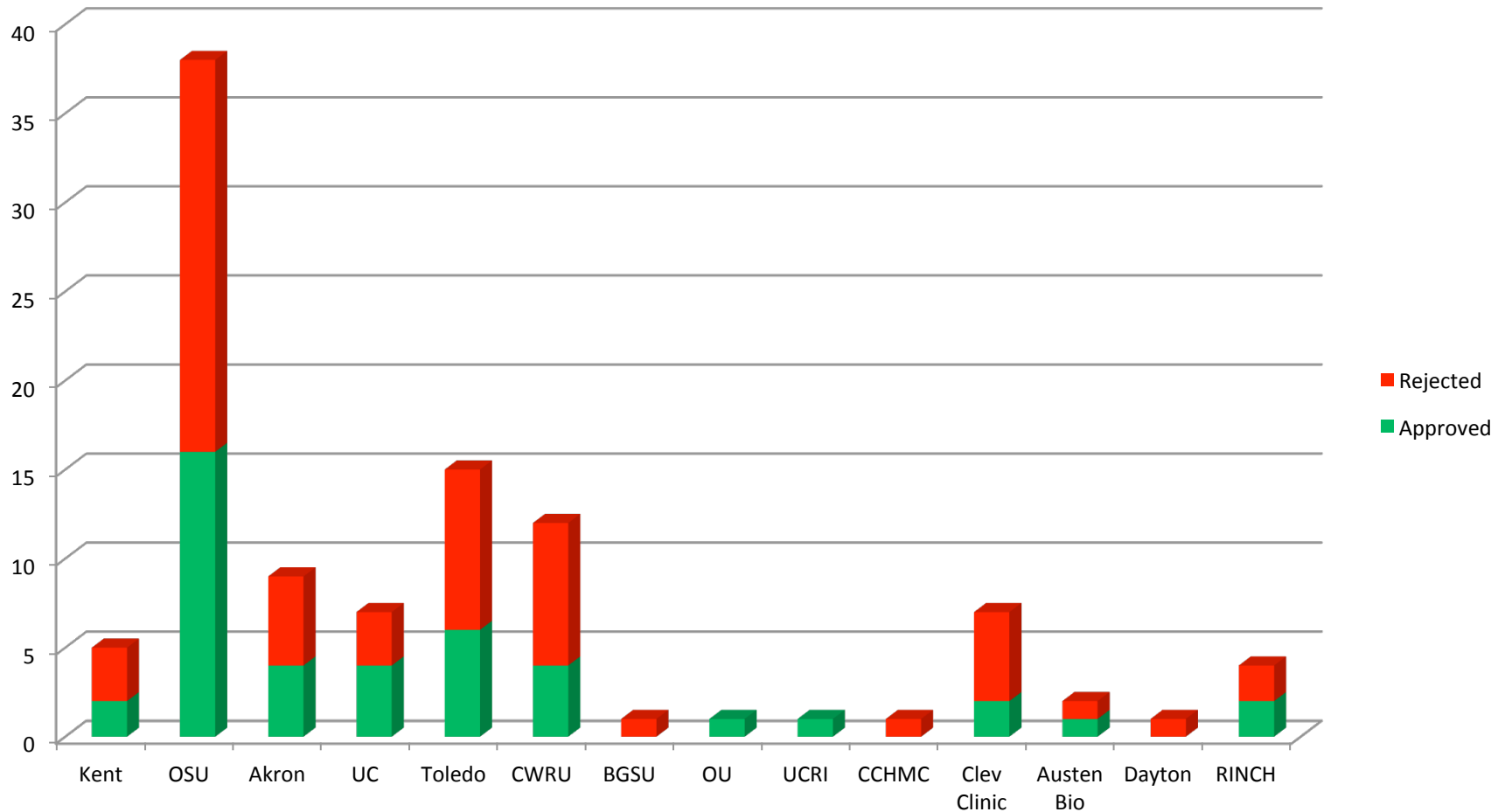
Phase 1 Approved/Rejected by Institution



Trends

Cumulative Results – Phase 2 (all rounds to date)

Phase 2 Approved/Rejected by Institution



Phase 1 Proposals Recommended for Funding

Proposal #	Lead Applicant	Title	State Funds Requested	Total Budget	Recommend
15-0185	Case Western	Cardiac Mapping for the treatment of Atrial Fibrillation	\$50,000	\$100,000	\$50,000
15-0189	Cleveland Clinic	Prostate Diagnostic Test	\$50,000	\$100,000	\$50,000
15-0190	Cleveland Clinic	Sleep Apnea	\$50,000	\$100,000	\$50,000
15-0191	Cleveland Clinic	Sim Vitro	\$50,000	\$100,000	\$50,000
15-0195	Ohio State	Technology Validation of Circular Wave Drive - A New Speed Reducer	\$50,000	\$100,000	\$50,000
15-0199	Summa Health System	CAMKK1: A Novel Gene Therapy	\$50,000	\$100,000	\$50,000
15-0202	University of Akron	A Microfluidic Device for Quantitative Roadside Detection of Cannabinoids in Saliva	\$50,000	\$100,000	\$50,000

Phase I

Summary of Recommendations

PROPOSAL #	Licensing Institution	PROJECT TITLE	Generation of Proof to be Licensed	Project Plan / Team (1 Year)	Independent 3rd Party Review	Reasonable Path to Mkt	IP Protection	Start-up in Ohio	Market Opportunity / Size	Budget Narrative / Use of Funds
15-0185	Case Western	Cardiac Mapping for the treatment of Atrial Fibrillation								
15-0189	Cleveland Clinic	Prostate Diagnostic Test								
15-0190	Cleveland Clinic	Sleep Apnea								
15-0191	Cleveland Clinic	Sim Vitro								
15-0195	Ohio State	Technology Validation of Circular Wave Drive - A New Speed Reducer								
15-0199	Summa Health System	CAMKK1: A Novel Gene Therapy								
15-0202	University of Akron	A Microfluidic Device for Quantitative Roadside Detection of Cannabinoids in Saliva								

Phase I

Summary of Recommendations (Cont.)

PROPOSAL #	Licensing Institution	PROJECT TITLE	Generation of Proof to be Licensed	Project Plan / Team (1 Year)	Independent 3rd Party Review	Reasonable Path to Mkt	IP Protection	Start-up in Ohio	Market Opportunity / Size	Budget Narrative / Use of Funds
15-0183	Case Western	<i>Validation of Wearable Sensor Technology for Development of Personalized Weight Management Advice</i>								
15-0184	Case Western	<i>NeuroRadVision</i>								
15-0186	Cleveland Clinic	<i>Bariatric Ring Clinical Evaluation</i>								
15-0187	Cleveland Clinic	<i>Bronchial Stent</i>								
15-0188	Cleveland Clinic	<i>Clinical Intelligence Program</i>								
15-0192	Kent State	<i>Low Cost Electrically Tunable Color Filter with Wide Tuning Range</i>								
15-0193	Northeast Ohio Medical University	<i>Development of a New Commercial Kit for Screening Cell Specific Gene Therapy vector</i>								
15-0194	Ohio State	<i>Buckeye PlanIT</i>								

Phase I

Summary of Recommendations (Cont.)

PROPOSAL #	Licensing Institution	PROJECT TITLE	Generation of Proof to be Licensed	Project Plan / Team (1 Year)	Independent 3rd Party Review	Reasonable Path to Mkt	IP Protection	Start-up in Ohio	Market Opportunity / Size	Budget Narrative / Use of Funds
15-0196	Ohio State	Gaze Tracking								
15-0197	Ohio State	Trellis Greenhouse Management Software								
15-0198	Ohio State	Ximera								
15-0200	University of Akron	Artificial Tactile Skins using Hybrid 3D Printing Technologies								
15-0201	University of Akron	Solution-Processed Ultrasensitive Infrared Polymer Photodetectors								
15-0203	University of Toledo	Meso-Scale Validation of Bio-Sourced Industrial Nylon Precursor Production								
15-0204	University of Toledo	Validation of Earth-Abundant and Copper-Free Back Contact for CdS/CdTe Solar Cells								
15-0205	University of Toledo	Additively Manufactured Patient Specific Implants								

Phase 2 Proposals Recommendations for Funding

Proposal #	Licensing Institution	Lead Applicant	Proposal Title	State Funds Requested	Total Project Budget	Recommended
15-0206	Case Western	Apollo Medical Devices	A Novel, Low Cost, Portable, Point-of-Care Blood Analysis System	\$100,000	\$100,000	\$100,000
15-0207	Case Western	Red5 Pharmaceuticals	Diagnostic Kits to Predict Patient Response to Chemotherapy	\$99,985	\$99,985	\$60,000
15-0208	Cleveland Clinic	Centerline Biomedical	Endovascular Intra-Operative Positioning System	\$100,000	\$100,000	\$100,000
15-0212	Ohio State	SightFourAll	The Eye Scan App	\$100,000	\$250,000	\$100,000



15-0207: The reduced \$60,000 amount will get the team to their critical proof point at which juncture either outside funds can be raised, or considerable re-work will be needed; in either case the additional money requested would not be an appropriate allocation of state funds.

Phase II

Summary of Recommendations

PROPOSAL #	Licensing Institution	Lead Applicant	PROJECT TITLE	Proof	Project Plan (one year)	Likelihood of Additional Funds	Team	Business Model	Company Backing	IP Protection	Opportunity / Mkt. Size	Budget / Use of Funds	Start-up in Ohio	License with Ohio Institution
15-0206	Case Western	Apollo Medical Devices	A Novel, Low Cost, Portable, Point-of-Care Blood Analysis System											
15-0207	Case Western	Red5 Pharmaceuticals	Diagnostic Kits to Predict Patient Response to Chemotherapy											
15-0208	Cleveland Clinic	Centerline Biomedical	Endovascular Intra-Operative Positioning System											
15-0212	Ohio State	SightFourAll	The Eye Scan App											

Phase II

Summary of Recommendations (Cont.)

PROPOSAL #	Licensing Institution	Lead Applicant	PROJECT TITLE	Proof	Project Plan (one year)	Likelihood of Additional Funds	Team	Business Model	Company Backing	IP Protection	Opportunity / Mkt. Size	Budget / Use of Funds	Start-up in Ohio	License with Ohio Institution
15-0209	Ohio State	Nikola Labs	Wireless Mobile Device RF Harvesting Products											
15-0210	Ohio State	JFB Technologies (Revolution Eyes)	RevolutionEyes Contact Lenses											
15-0211	University of Toledo	PMT Vascular	Universal Minimally Invasive Blood Clot Removal Device											



Visit our website at: www.yourencore.com

Technology Validation & Start-up Fund Program

- **Changes in the new RFP:**
 - Phase 2's in Medical Tech or Software Applications may apply for up to \$150k
 - Phase 2's must indicate their level of engagement with the ESPs
 - Application questions revised to get more complete responses and project plans
 - Phase 1 budget rules changed to better emphasize need for 3rd party validation

Commercial Acceleration Loan Fund

Ohio Third Frontier - Commercial Acceleration Loan Fund

February 12, 2015

Co-Borrowers	County	Industry	Project Amount	Loan Award	CALF Project Funding Percentage	New Jobs Created
Innovative Medical, LLC SmartCool, LLC	Cuyahoga	Medical Technology	\$3,262,250	\$1,400,000	43%	12

Summary Evaluator Recommendations

Market	Technology/ Product	Intellectual Property	Legal	Business Model	Financial Review	Management Team	Evaluator Recommendation
DevFi	DevFi	DevFi	DevFi	DevFi	DevFi	DevFi	DevFi

Program Updates

ESP Update

- Grant Agreements
- Accelerant and Rocket Ventures
- Company examples

ESP Update

- Grant Agreements executed
- New language
 - Inclusion
 - Outreach to minority and rural populations
 - Reporting of activities and outcomes
 - Site visits
 - Welcome letter
 - Metrics validation

ESP Update

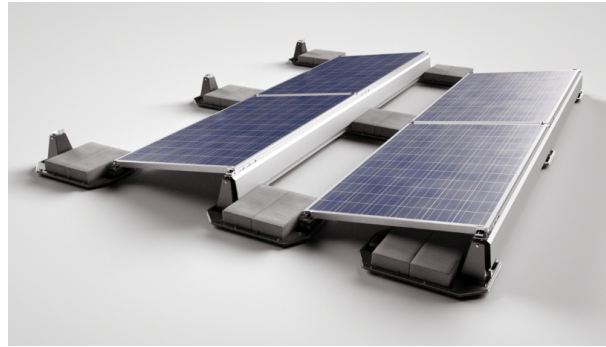
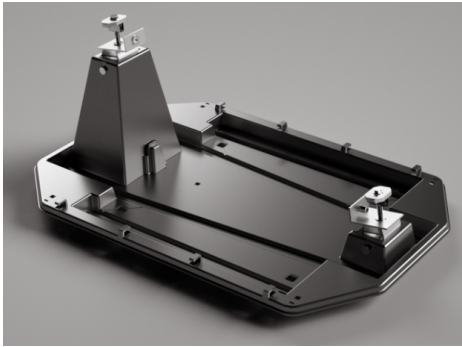


ESP Update



Company Examples

Industrial Products: EcoFoot Series



Residential Products: EcoX Series



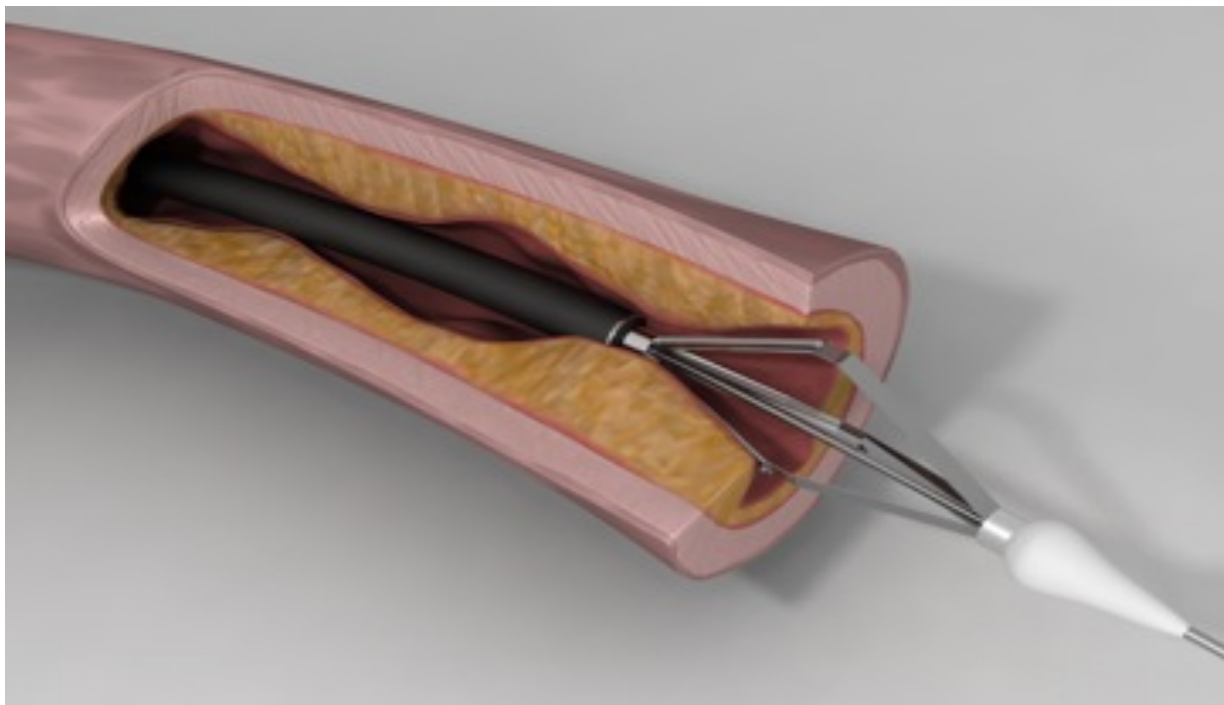
Twist & Lock



EcolibriumSolar



The Flex Scoring Cathether



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COVERING NORTHEAST OHIO

Cleveland startup CoverMyMeds achieved spectacular success by doing good



Sam Rajan, a pharmacist, co-founded CoverMyMeds to help sick people get medicines they were being denied by insurance companies. (Lynn Ischay/The Plain Dealer)



Columbus Biz Insider

CoverMyMeds hiring as fast as it can after Francisco Partners' investment

Nov 6, 2014, 2:05pm EST | UPDATED: Nov 6, 2014, 2:20pm EST



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Carrie Ghose
Staff reporter-
Columbus Business First
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Francisco Partners is not disclosing the exact amount of its investment in CoverMyMeds LLC, but a typical range for the San Francisco private equity firm is \$50 million to more than \$2 billion.

CoverMyMeds co-founder and principal Matt Scantland could confirm to me that the investment is a minority stake. The management team remains the same.



✚ Enlarge Photo

Carrie Ghose

Matt Scantland, co-founder and principal of CoverMyMeds, said he talked with a number of investors before choosing Francisco Partners, which took a minority stake in the company.

Believed to be one of 2014's largest U.S. healthcare IT investments