

Guide to Industry and Venture Capital Engagement

Office of Industry and Economic
Partnerships

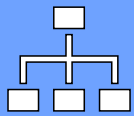


University of
Pittsburgh

Office of Industry and Economic Partnerships
Office of Innovation and Entrepreneurship

5/20/2022

Topics



ABOUT - OFFICE of INDUSTRY &
ECONOMIC PARTNERSHIPS

01



PARTNERING with INDUSTRY

02



WORKING with VCs and UPMC-E

03

The Office of Innovation and Entrepreneurship

OIE Mission

To create, support and sustain a culture and environment of *innovation, commercialization, entrepreneurship and collaboration* on-campus and off-campus for the benefit of the University community, its partners, the region and society.



Office of Industry and Economic Partnerships


1. Develop and facilitate industry partnerships
2. Develop and facilitate venture capital engagement
3. Advance the region's innovation ecosystem




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Innovation &
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OIEP Develops and Manages Industry & VC Partnerships

Core Services



DEVELOP STRATEGIC
INDUSTRY & VC
RELATIONSHIPS

HELP STRUCTURE & PLAN
THE RELATIONSHIP



DEVELOP FACULTY &
DEPARTMENT PARTNERING
STRATEGIES

HELP FACULTY &
PARTNERS NAVIGATE
UNIVERSITY PROCESSES



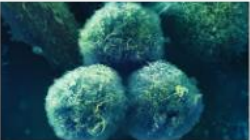
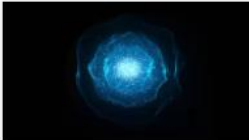
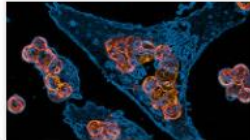


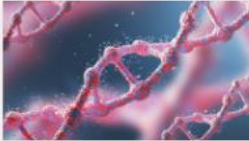
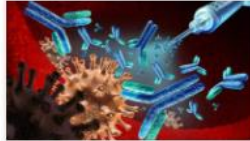
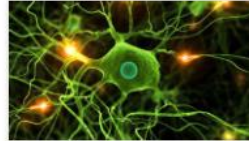
IDENTIFY ENGAGEMENT
OPPORTUNITIES

FACILITATE ENGAGEMENT &
PROVIDE SUPPORT
THROUGHOUT



Industry Partnering Interests Library (oiep.pitt.edu)

Quick Links

 ONCOLOGY	 PLATFORM TECHNOLOGY	 IMMUNOLOGY	 OPHTHALMOLOGY
 CARDIOVASCULAR & RESPIRATORY	 RARE DISEASES	 VACCINE	 NEUROSCIENCE

Industry RFPs



SPARC Town Hall at Univ. of Pittsburgh
18 November 2021

sparc

BSE:532872 • NSE: SPARC • BLOOMBERG: SPADV@IN • REUTERS: SPRC.BO • CIN:L73100GJ2006PLC047837

Monthly Newsletter

University of Pittsburgh | Office of Industry and Economic Partnerships

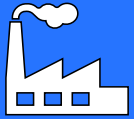
The Partnering Pulse

Industry Funding Opportunity with SPARC

Nov 18, 10 a.m.
Sun Pharma Advanced Research Company (SPARC)
In-Person & Virtual Presentation

Sun Pharma Advanced Research Company (SPARC) is seeking partnership opportunities with Pitt faculty for therapeutic development in the areas of oncology, immuno-inflammatory diseases, and neurodegenerative diseases. Selected projects will be eligible to receive up to \$750,000 in research support over 3 years, plus additional in-kind services from SPARC.

We invite you to join us on Thursday, November 18 at 10:00 AM, in-person or online, for an exclusive informational session with SPARC executive Dr. Rajesh Ranganathan, Vice President, Partnerships and Portfolio Strategy. [Register today!](#)



PARTNERING with INDUSTRY

02

Industry Partnerships Profile

Fiscal Year 2021

Industry Research Investment

\$47 Million 

Active Industry Projects

652 

Unique Industry Partners 

382

Market Segments

-  • Pharmaceuticals and Vaccines
-  • Medical Devices
-  • Advanced Materials (biomaterials, advanced materials in energy)
-  • Energy
-  • Circular Economy and Sustainability

Partnership Examples



[Pitt and Covestro Team to Create Groundbreaking Circular Economy Program.](#)



[Pitt and BridgeBio Collaborate to Identify and Advance Therapies for Genetic Diseases and Cancers.](#)



[Pitt and Duquesne Light Partner for a Powerful Future.](#)



[Pitt and RevBio Collaborate on Bone Experiments on the International Space Station.](#)



[Pitt partners with Astellas on new eye treatment options](#)

Why Partner with Industry

1

To Drive Research Impact

Provide societal benefit

Drive economic & environmental impact

Push university technology to market

2

To Expand Research at the University

Enable complimentary research

Diversify research funding sources

Enhance access to external innovation

3

To Support Talent Development

Improve student employment prospects

Attract leading researchers & students

Advance internship opportunities

4

To Drive Regional Economic Development

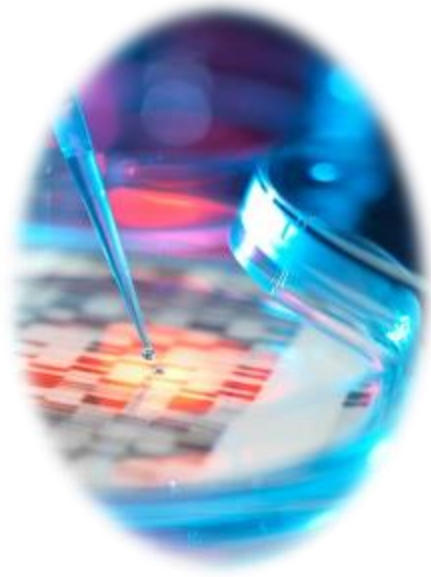
Attract industry to the region

Attract investment to the region

Support start-up formation

How Companies Engage at Pitt

Research, Innovation



- Sponsored Research
- Licensing
- Clinical Trials
- Grants
- Gifts

Access to Resources



- Core Facilities
- Space sharing
- University access to industry facilities

Institutes, Centers



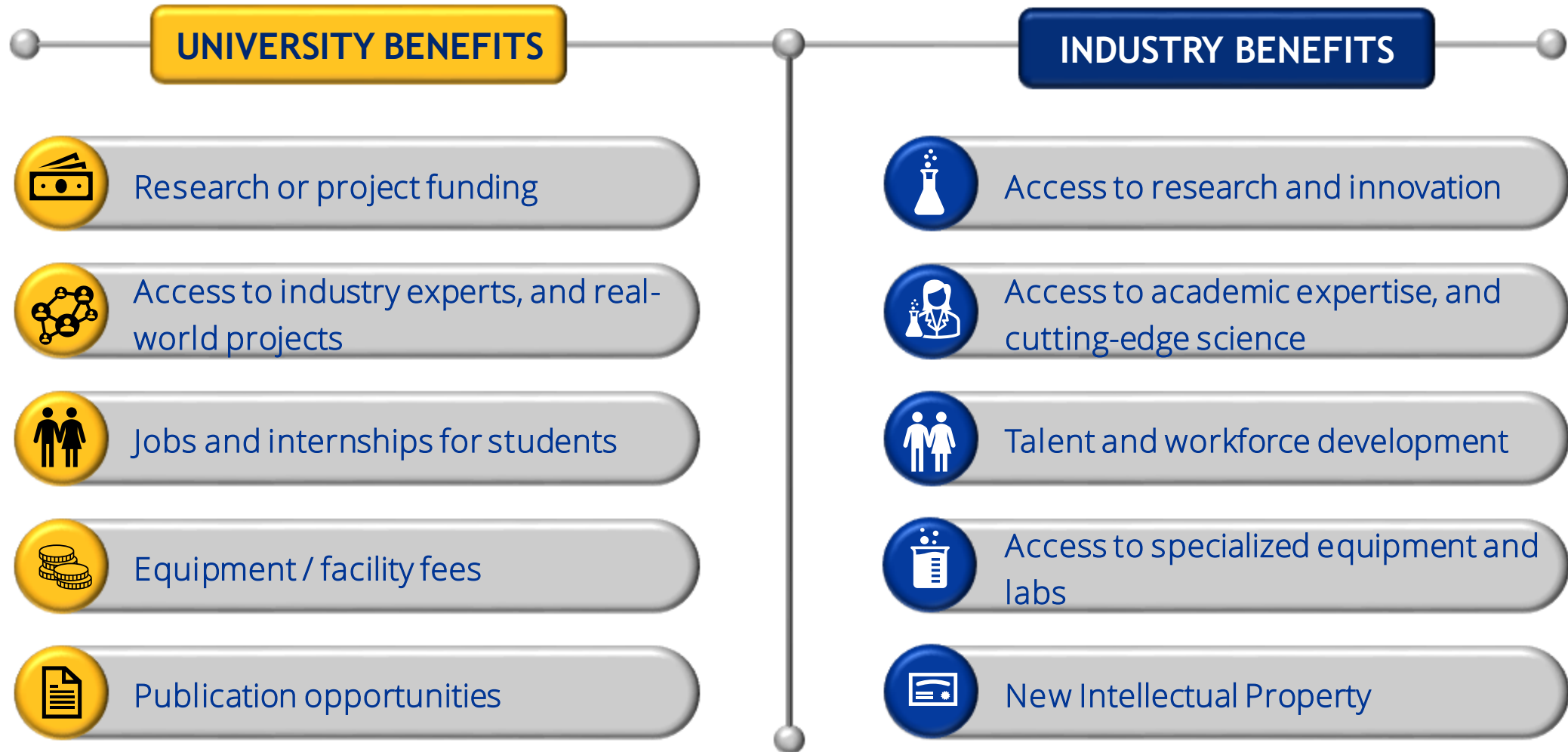
- Advisory Boards
- Industry Affiliate Programs
- Large Grant Proposals

Student Engagement



- Career fairs
- Internships
- Capstone projects
- Scholarships / Fellowships

Both the University & Industry Benefit from Research Collaboration



University & Industry Research Priorities



Distinction between fundamental and applied research

Industry partnering misconceptions



✗ COMPANY OWNS ALL IP

Ownership follows inventorship
Use rights negotiated



✗ CAN'T PUBLISH

Publishing encouraged
Some timing / content restrictions



✗ COMPANY CONTROLS RESEARCH

SOW negotiated
Both parties' needs met



✗ CAN'T USE RESULTS

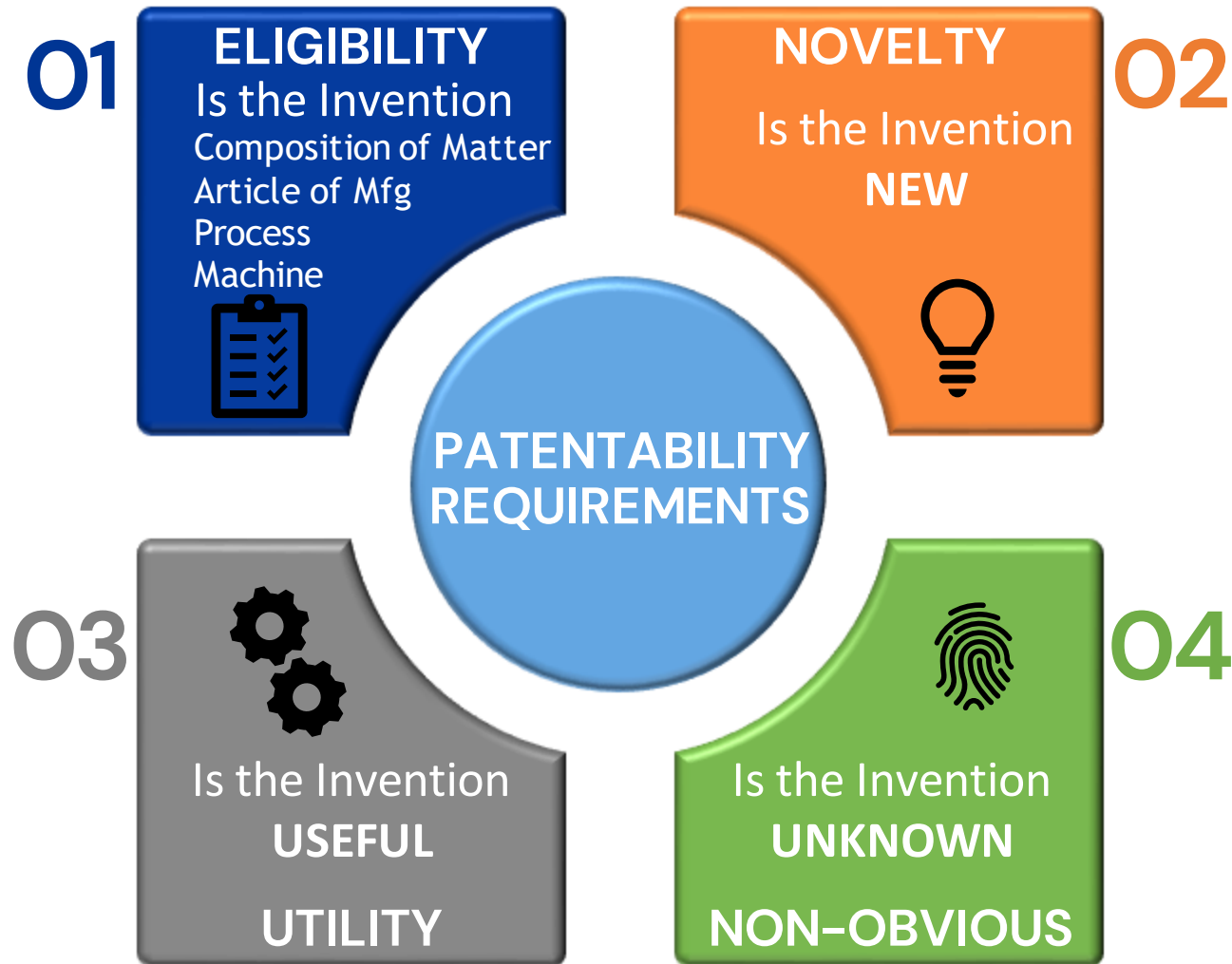
Pitt retains research rights
Other use rights negotiated



✗ APPOINTMENT / PROMOTION

















Guidelines include considerations
for commercialization & licensing

4 Legal Requirements to get a Patent



Block Buster Drugs from University - Industry Collaborations

Societal and Financial Impact

Drug / Compound	Target / Indication	Peak Sales ¹	Partners	
Alimta	Non-small cell lung cancer	\$2.8b	 PRINCETON UNIVERSITY	
Lyrica	Fibromyalgia; neuro disorders	\$3.5b		
Yervoy	Melanoma	\$1.6b	 THE UNIVERSITY OF TEXAS MD Anderson Cancer Center	
Kymriah	Leukemia	\$1.0b	 Penn	
Lagevrio	COVID-19 Oral Antiviral	--	 EMORY UNIVERSITY	
Ocrevus	Multiple-sclerosis	Est \$7.8b		
Herceptin	HER-2 metastatic BC	\$6.0b		
Kalydeco	Cystic Fibrosis	<\$1.0b	 THE UNIVERSITY OF IOWA	

1. Various public sources - estimates

A Few Key Partners



Keys to Research Collaboration Success

 Mutual interest in the science

 Clear expectations

 Open, transparent communication

Mutual respect and trust 

Focus on achieving each party's expectations 

Managing & nurturing the relationship 

OIEP's Industry Research Partnering Approach

Aligning Pitt's strengths and capabilities to the research needs of industry partners

Partner

Alignment?

University of
Pittsburgh

BACKGROUND

Partnering History

Industry sponsored research funding, licensing, purchasing, philanthropy, other

SCIENCE

Research Strategy & Focus
External innovation needs

Can Pitt solve important problems for Partner? Would partnership advance Pitt's research mission?

Pitt Partnering Assets
Research strengths, unique capabilities, IP

PEOPLE

Connections to Pitt
Prior work, execs, alumni

Is there faculty interest? New or established connections? Can our teams work well together?

Connections to Partner
Faculty, administrators

TERMS

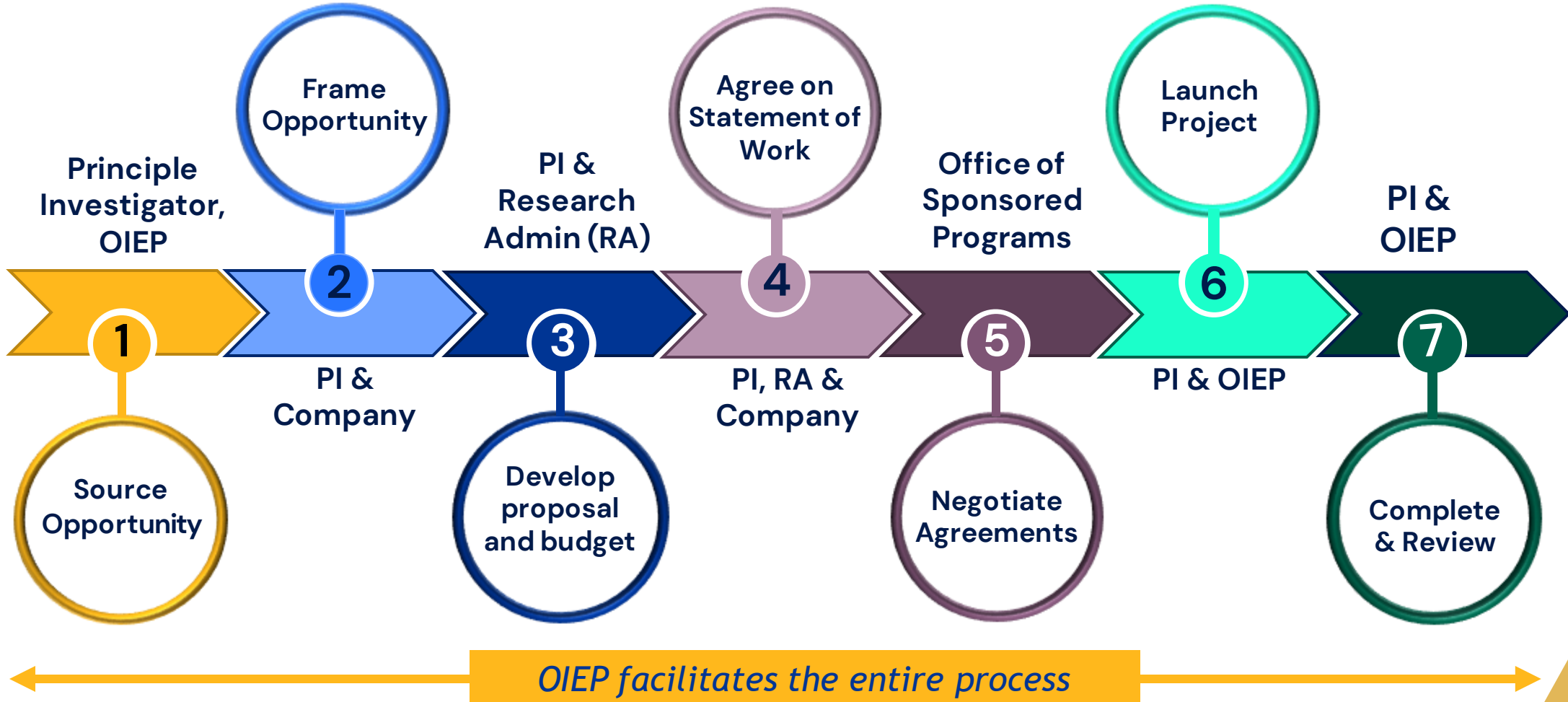
Business Requirements
Budget, Deliverables, IP, Legal terms

Can we align around mutually beneficial partnership terms?

Business Requirements
Budget, Deliverables, IP, Legal terms

PARTNERSHIP

Industry Sponsored Research Engagement Steps





WORKING with VCs and UPMC-E

03

Pitt Start-Up Profile

Past 5 years

87 Pitt start-ups formed in the past 5 years 

Over **\$900** million invested 

Unique Investors **> 110** 

Segments



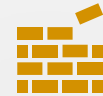
• Therapeutics



• Medical Devices



• Advanced Materials



• Platform Technologies



• Software

Start-Up Examples



Alung Technologies is a leading developer of advanced respiratory devices.



Bluesphere Bio's novel TCXpress platform makes it possible to identify and clone patient-specific TCRs.



Forge Biologics is a hybrid gene therapy CDMO company.



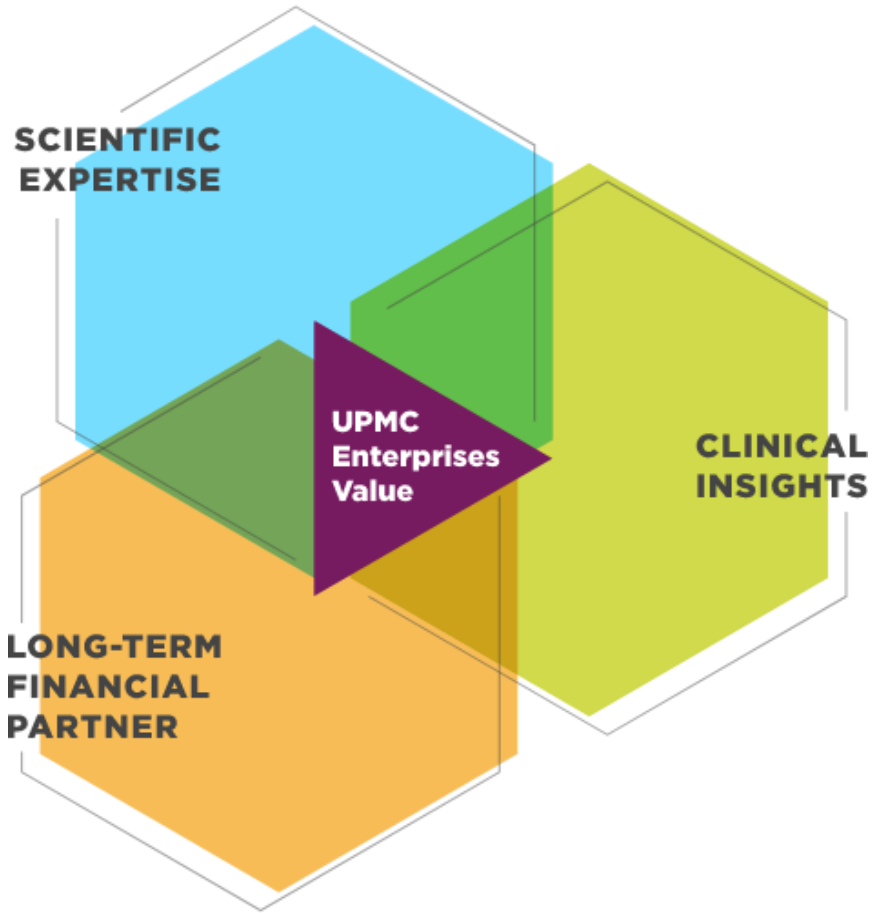
Oncorus is developing a portfolio of locally and systemically administered oncolytic virus therapies.



LyGenesis Inc. is an organ regeneration company enabling a patient's own lymph nodes to be used to regrow ectopic organs.

UPMC Enterprises


Translational Sciences & Digital Solutions



Disease Areas

-  Oncology
-  Ophthalmology
-  Immunology
-  CNS

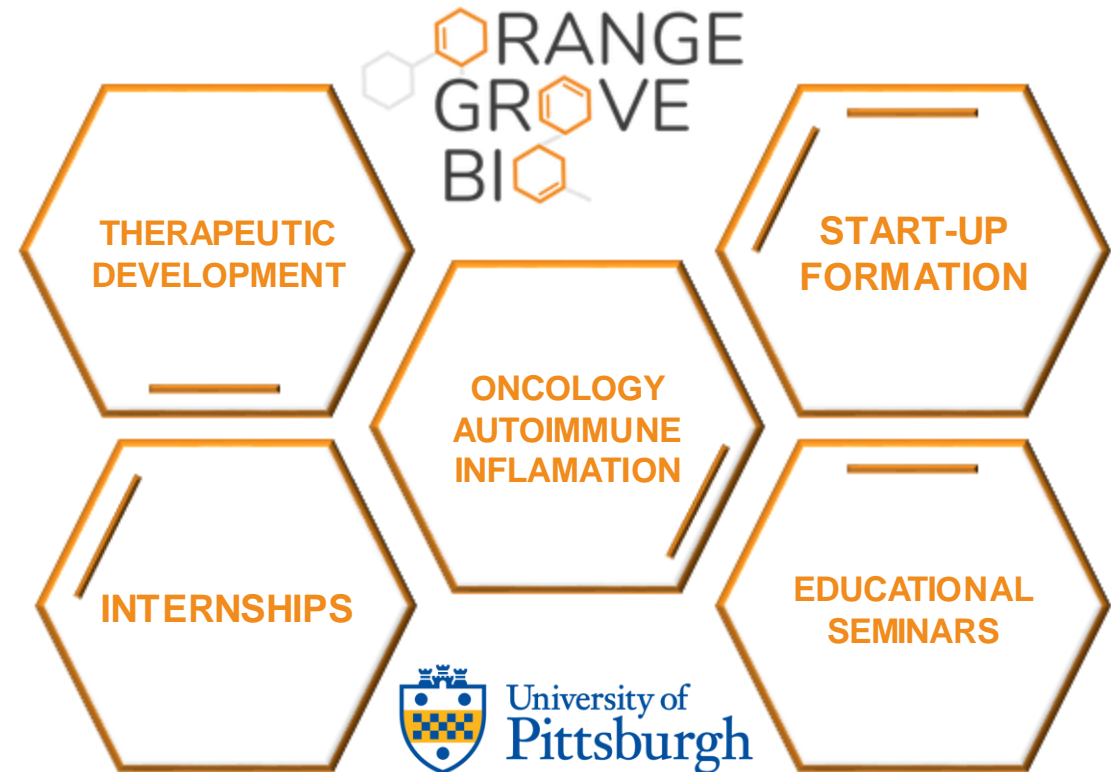
Approaches

-  Precision Health
-  Cell Therapy
-  Transformative Platforms
-  Gene Therapy

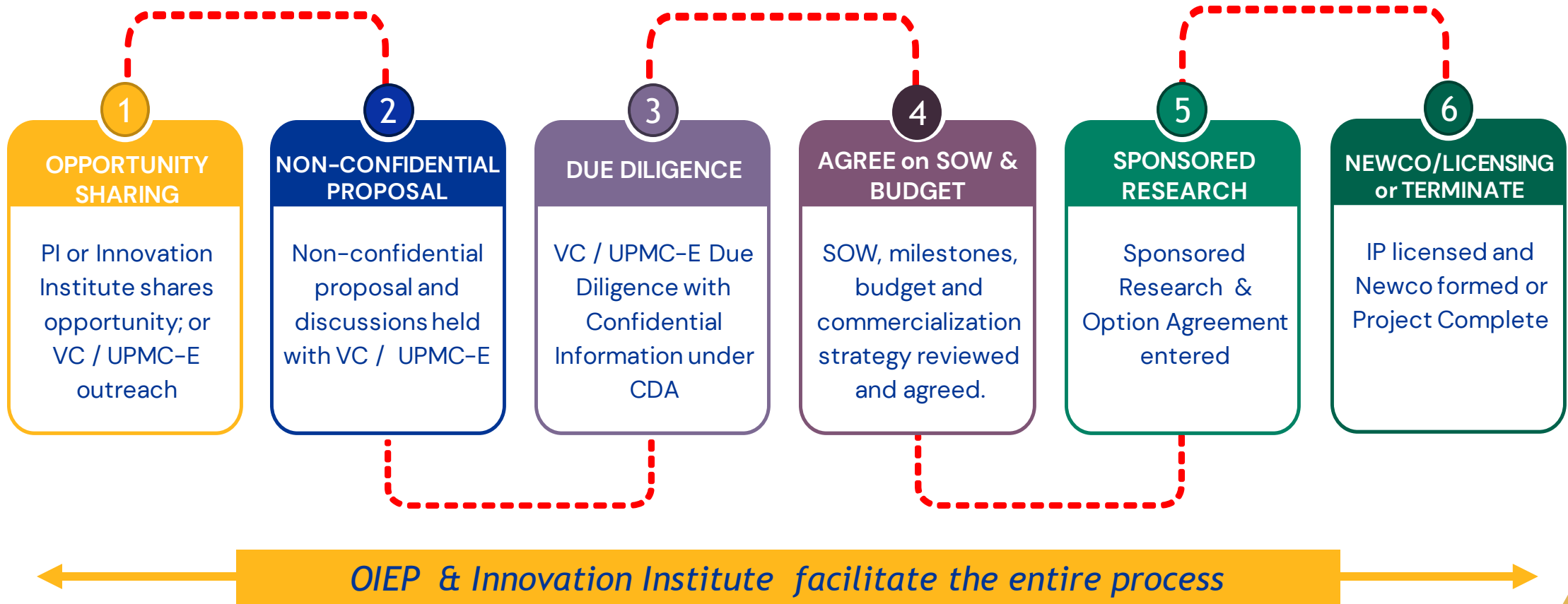
The University of Pittsburgh and Orange Grove Bio Establish Partnership to Develop and Commercialize Novel Therapeutics

November 17, 2021

“The newly established partnership will aim to cultivate the Pittsburgh biotech landscape by increasing entrepreneurship, education, and scientific translation of promising technologies. These efforts will be focused in the areas of oncology and autoimmune and inflammatory diseases. Orange Grove Bio will provide commercialization guidance and support to the University, an internship program for the university’s Ph.D. students, and educational seminars for primary investigators and researchers at the university.”



WORKING with VCs and UPMC-E



Typical VC Consideration Criteria

- ▶ Meets VC's investment thesis / focus
- ▶ Addresses an area of unmet need
- ▶ Convincing evidence of a significant improvement over current approaches
- ▶ Viable, defensible IP strategy
- ▶ Viable regulatory pathway
- ▶ Stage of development
- ▶ Risk reduction steps
- ▶ Technology potential to be a platform technology

Additional Health Sciences Considerations

- ▶ Demonstrated target validation via in vivo or equivalent proof of concept data
- ▶ Supported by well-established and elucidated disease
- ▶ Pathway / receptor biology
- ▶ Ideally have biomarker strategy for measuring PK/PD in clinic and to stratify/select patients

Pitching a Technology, Project or Start-up

Important pitch deck information

Health Sciences Technology or Project

- ▶ Title
- ▶ Project or Technology Description
- ▶ Sector / Therapeutic Area
- ▶ Clinical Importance and Unmet Medical Need
- ▶ Degree of Innovation
- ▶ Differentiation Over Standard of Care or Current Clinical Practice
- ▶ Stage of Development / Future Development Needs & Steps
- ▶ Regulatory Pathway
- ▶ Intellectual Property Status / Protection
- ▶ Commercial Potential (patient population)

Start-Up

- ▶ Title
- ▶ Company Purpose
- ▶ Unmet Need / Problem Being Addressed
- ▶ Solution / Value Proposition
- ▶ Market Size
- ▶ Competition / Differentiation
- ▶ Product
- ▶ Business Model
- ▶ Team
- ▶ Financials

Who Do I Contact and When



Finding / Engaging with External or VC Partners
Scott Morley

When contacted by industry or VC
When interested in finding a partner



Patenting, IP Protection, Licensing
Alex Ducruet

With questions about patent protection
When interested in licensing technology



Start-up Formation, Support or Development
Paul Petrovich

When interested in forming a start-up
When needing start-up support



For Engagement with UPMC Enterprises
Colleen Cassidy

When contacted by UPMC Enterprises
If interested in working with UPMC-E



Unsure of Who to Contact
Cigdem Benam

When unsure of who to contact
For Innovation Institute questions



University of
Pittsburgh

Office of Industry and Economic Partnerships
Office of Innovation and Entrepreneurship

Please reach out for ...

- Help with developing an industry partnering strategy or approach
- Assistance in finding an industry partner for collaborative research
- Support in engaging with venture capital firms or seeking investors
- Alliance management support for ongoing external partner collaborations
- For more information visit – oiep.pitt.edu

Contact us at: partner@pitt.edu

End