



Online Partnership to
Accelerate Research

*Advancing Research Discovery
and Drug Development while
Reducing Investment Risk*



2017

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A Global Public–Private Partnership

<https://onpar.leidosweb.com/>



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**Tech
Innovator
of the Year**

Agenda

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- ▶ Introduction to OnPAR
- ▶ The Problem
- ▶ OnPAR evolution
- ▶ Global Pillars: Partners, Members and Applicants
- ▶ Future of OnPAR
- ▶ Challenges & Solutions
- ▶ How does it work?
- ▶ Executive Summary

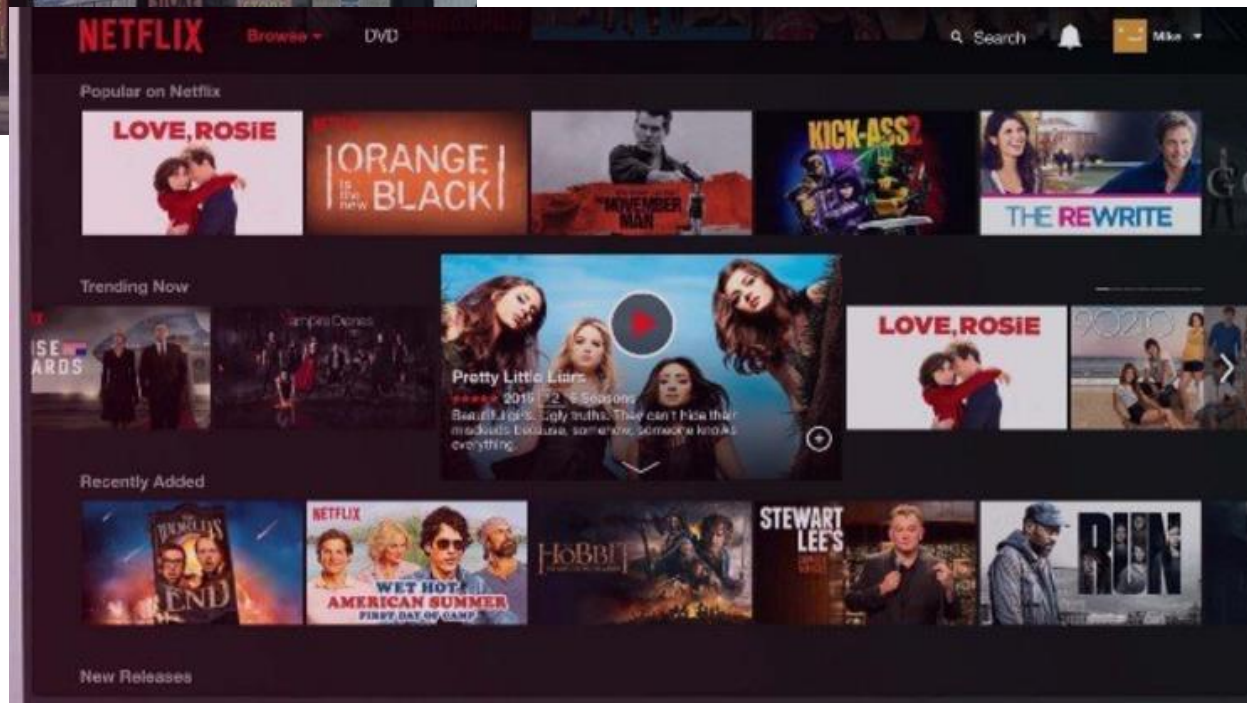
Vision: *To support the research ecosystem to advance medicines to patients faster*

Information flow

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- You went to get the information
- One place only
- Limited

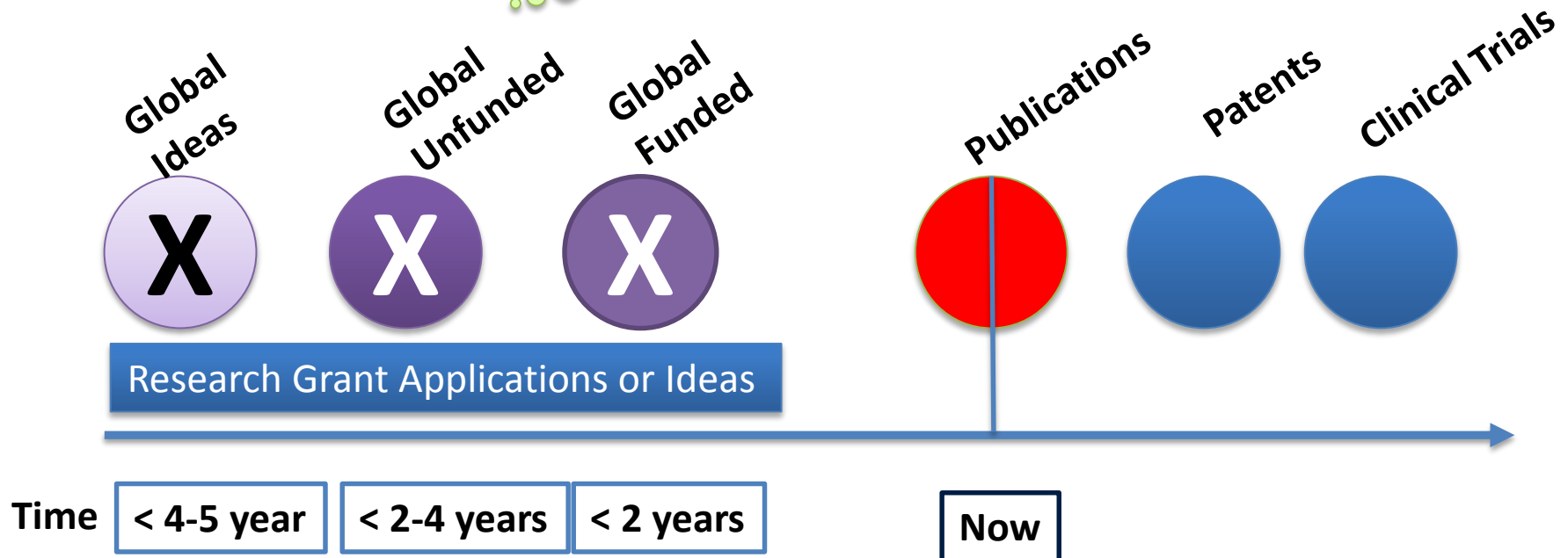
- Information comes to you
- Global
- Unlimited



OnPAR with Dimensions: Solutions Timeline

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Altmetric: Social Media



Providing research information 2-5 years ahead of current practices to de-risk R&D

X = only available through OnPAR with Dimensions – not in the public domain

OnPAR: Executive Summary

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Dimensions

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- ▶ Access to global high-quality, unfunded, biomedical research applications
- ▶ Future goals:
 - Pre-peer-review research ideas
 - Assets from pharma
 - Assets from tech transfer offices
 - Expansion to include energy, CMS, social science, NASA, and agricultural research applications

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- ▶ Funding database of >2.5M projects/awards
- ▶ Access to >26M publications
- ▶ Web-based metrics (altmetric) that track online activity
- ▶ Additional data available:
 - Patents
 - Clinical trials
 - FDA drugs
 - Policy documents



▶ Lowering research investment risk

- Information sharing, facilitating collaborations, and avoiding duplication of effort

▶ Accelerating research discovery and scientific advances



- ▶ Co-funding opportunities with members
 - Foundations, pharmaceuticals, venture capitals, and others
- ▶ Marketing and communication

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85-90% of high-quality, grant
research applications are unfunded

Funding by the NIH declined by 22%
between 2003 and 2015⁽¹⁾

(1) <https://www.wsj.com/articles/the-breakdown-in-biomedical-research-1491576749>

The Solution

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*A new funding model that advances
research discovery and drug development
while lowering investment risk*

A Global Public–Private Partnership

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A matchmaking platform...

OnPAR Goal: The goal of the Online Partnership to Accelerate Research is to match quality biomedical research unfunded applications with priority areas of interest of *private biomedical foundations, pharmaceutical and biotechnology companies, venture capital funds, and other private funds.*

OnPAR: <https://onpar.leidosweb.com/>

OnPAR Evolution

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*OnPAR has grown from a simple concept of optimizing high-quality, unfunded NIH applications to a **ONE-STOP** knowledge source to accelerate research discovery and drug development and enhance investment decision making*

We are here

Matching...
previously unavailable unfunded NIH applications with private foundations

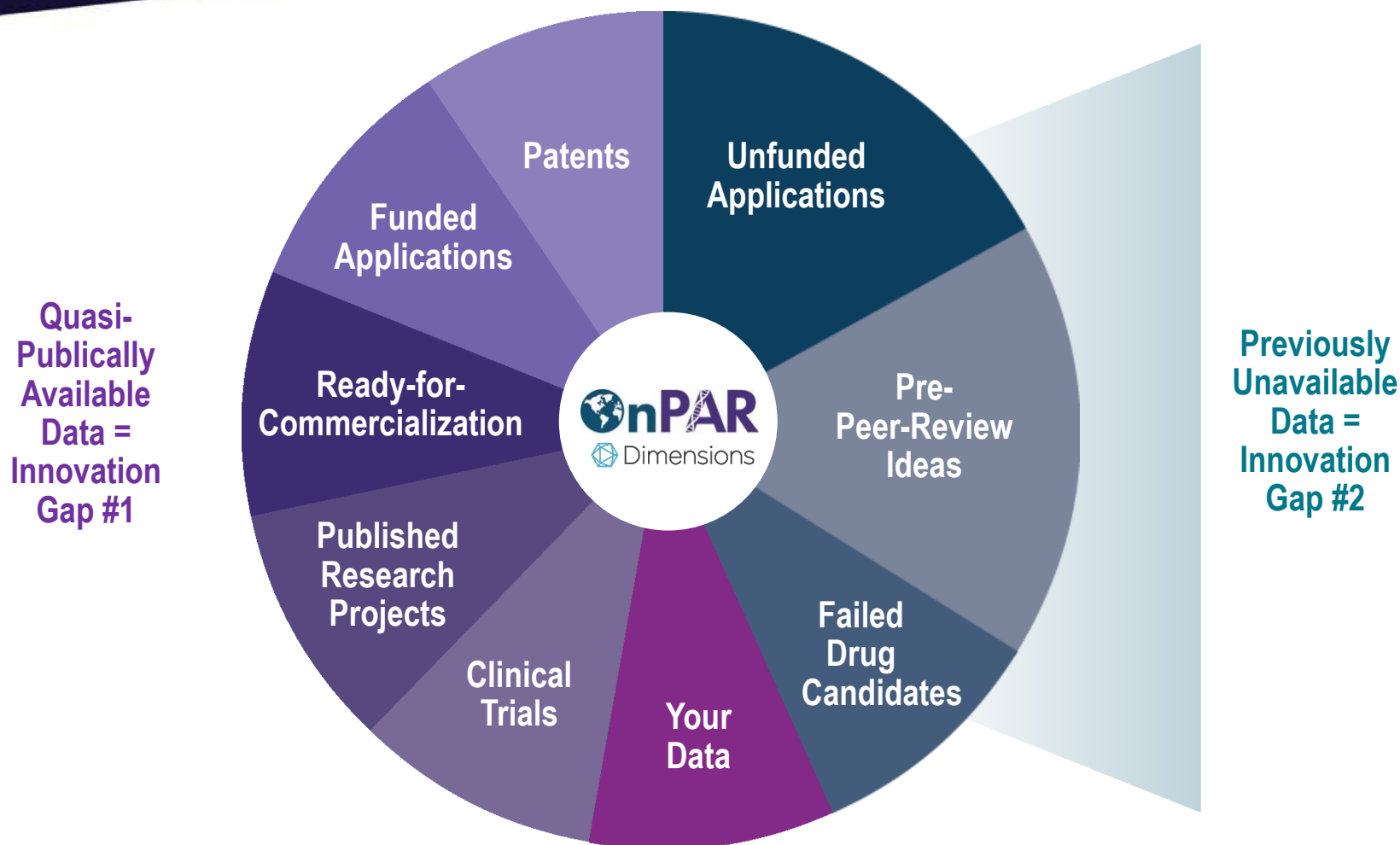
Global knowledge database access...
added via partnership with UberResearch to provide a comprehensive landscape of funded research projects and publications

Global matching...
unfunded applications from other U.S. funding agencies, Canada, U.K., Australia, and Japan with additional private foundations, pharma, venture capitals, and private funders

Further expansion...
to include additional information, i.e., failed pharma drugs, tech transfer assets. Also in talks with the DOE, CMS, PCORI, NASA and the DOA

A Knowledge Database to Lower Investment Risk and Accelerate Research

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- ▶ Matchmaking platform providing access to highly-scored global unfunded applications
- ▶ Ability to sustain potential new and innovative projects
- ▶ Ability to support new and young investigators
- ▶ Potential co-funding opportunities with other government and non-government organizations
- ▶ Potential to create a new innovative program that might have a key research impact, plus a great marketing and development opportunity
- ▶ Extensive global research knowledge to inform R&D investment decisions
- ▶ Expand your global outreach

OnPAR Pillars

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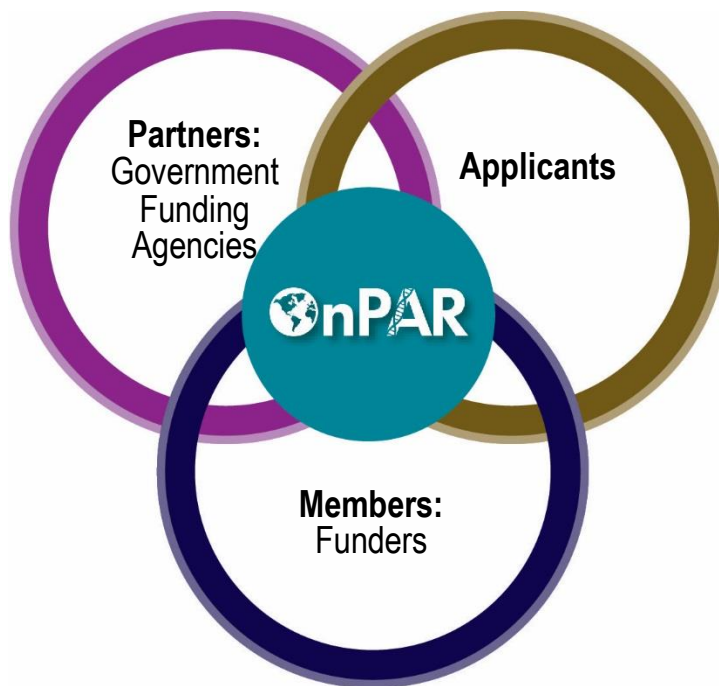
A Global Collaborative Effort

A Global Public–Private Partnership

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OnPAR is a **private business venture** that will provide access to a **global pipeline** of innovative, unpublished research projects that can either supplement internal projects or provide innovative new ideas for future medical products.



Potential Partners [Government Funding Agencies]:

NIH, Japan Agency for Medical Research and Development, Canada Institute of Health Research, EU Horizon 2020, United Kingdom Medical Research Council & National Institute for Health Research, Australia National Health Medical Research Council, Brazil Fundação Oswaldo Cruz, and others.

Applicants:

- ▶ Submit same applications submitted to Government agency
- ▶ No cost

Members [Funders]:

- ▶ **Non-Profit:** Private biomedical foundations and private funders
- ▶ **For Profit:** Pharmaceuticals, biotechs, venture capitals, others



Current/Future:

- ▶  National Institutes of Health
Turning Discovery Into Health
is a founding partner
- ▶ Leidos is in conversation with many organizations to join OnPAR as Partners in 2016
- ▶ Going forward, Leidos will continue to reach out to other organizations worldwide
- ▶ Leidos is in conversation with other sectors to expand OnPAR focus areas, i.e., Department of Energy, NASA, USDA, and others

Benefits:

- ▶ Potential funding for unfunded applicants
- ▶ Potential co-funding with OnPAR members
- ▶ Accelerated research discoveries that impact public health



Partners: Global Pipeline

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National Science Foundation
WHERE DISCOVERIES BEGIN



**HORIZON
2020**



Department of Defense



**Biomedical
Advanced Research
and Development
Authority (BARDA)**



Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



Australian Government
National Health and Medical Research Council

**Canadian Institutes
of Health Research**



CREATING GROWTH, ENHANCING LIVES



**Japan Agency for Medical Research
and Development**



Current/Future:

- ▶ U.S. research investigators that have applied to NIH
- ▶ Future: Global research investigators that have applied to all partner organizations



Benefits:

- ▶ Funding for unfunded Government applications
- ▶ No cost to apply
- ▶ No need to develop a new application — PIs must submit the same application that was submitted to the Government funding agency (along with the peer review summary statement)
- ▶ [Future] Access to “failed” pre- and clinical drugs information from pharmaceutical companies that can potentially impact research



Current/Future:

- ▶ Several U.S. foundations
- ▶ Future: In conversation with +400 global foundations, pharmaceutical companies, venture capital funders, and other private funders



Benefits:

- ▶ Access to fully peer-reviewed applications, U.S. and international
- ▶ [Future] Access to “failed” pre- and clinical drug information from pharmaceutical companies that can potentially impact research
- ▶ [Future] Access to “ready-for-commercialization” assets

Members: Additional Benefits

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- ▶ Customized OnPAR portal
 - Global unfunded applicants start uploading abstracts from fellowships and basic research grants through translational topics and Phase I/II clinical research
 - View of the top 25 funded and published projects related to unfunded application
 - ▶ Co-authoring an editorial to submit to a journal, if applicable
 - ▶ Marketing and outreach
 - Conferences and seminars
 - Universities and medical centers
 - Biotechnology companies
 - Others
 - ▶ International applications
 - OnPAR website is available in 8 languages
- ▶ Potential co-funding opportunities
 - With Government agencies, foundations, pharmaceuticals, or other organizations
 - ▶ Ideas of what other members are doing for marketing, communication, and fundraising efforts around OnPAR
 - ▶ Dimensions database (UberResearch), if applicable
 - Access to over 2.5 million funded projects and more than 26 million publications
 - Understanding of the global landscape of your research priority areas and related disease

- ▶ Adenoid Cystic Carcinoma Research Foundation
- ▶ Breast Cancer Research Foundation
- ▶ Children's Tumor Foundation
- ▶ EB Research Partnership
- ▶ Epilepsy Foundation
- ▶ JDRF
- ▶ National Alopecia Areata Foundation
- ▶ Parent Project Muscular Dystrophy
- ▶ Cystinosis Research Foundation - **New**
- ▶ HealthfundIT - **New**
- ▶ Daiichi Sankyo – **New**
- ▶ Cure Alzheimer's Fund - **New**

Future OnPAR Projects

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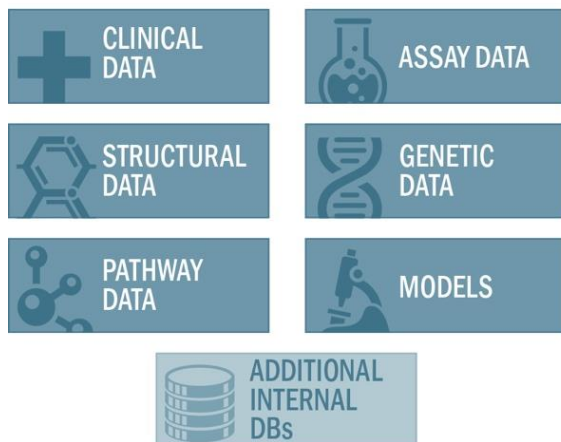
- ▶ **Submission/review of “ideas” – prior to peer-review**
- ▶ Direct requests for proposals (RFPs) through OnPAR
- ▶ Partners’ and funders’ RFPs (Innovative Medicine Initiative-like)
- ▶ **Access to pre-clinical and Phase I/II/III failed drug compounds from pharma/biotech**
- ▶ Access to NIH and global academic centers “ready for commercialization” pipeline
- ▶ **Expansion into other programs, i.e., Department of Energy, NASA, Department of Agriculture**

So What: Global Solution to Research Discovery and Product Development

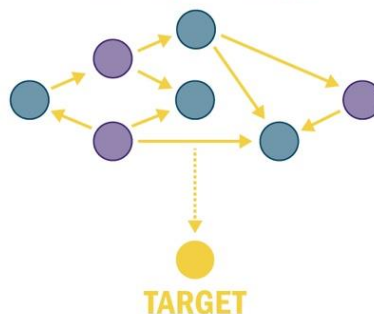
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Internal Data



De-risk & Accelerate Path



Ideas

Unfunded

Funded

Patents

Publications



OnPAR Global Data

FUTURE

- 'Failed' pre- and clinical drug candidates from pharmaceuticals
- Ready for commercialization projects from:
 - NIH
 - Academic Centers

Current Challenges in the Research Ecosystem

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- ▶ Agencies working on the same disease/problem have no standard data formats
- ▶ Sharing data, resources, and knowledge has not been fostered
- ▶ Government, industry, private foundations, and the international community are working in silos
- ▶ Lack of funding to support young investigators, innovation and bold ideas

OnPAR: Why is it different?

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- ▶ OnPAR is a matchmaking platform that provides access to:
 - Previously unavailable, unfunded applications, and eventually pre-peer review ideas, failed drug candidates, and other research data
 - The most comprehensive and accurate global research landscape in one place
 - Analytic tools to mine data and inform your investment decisions
- ▶ OnPAR facilitates collaboration through a global network of resources that continues to expand

Proposed Solution: OnPAR with Dimensions

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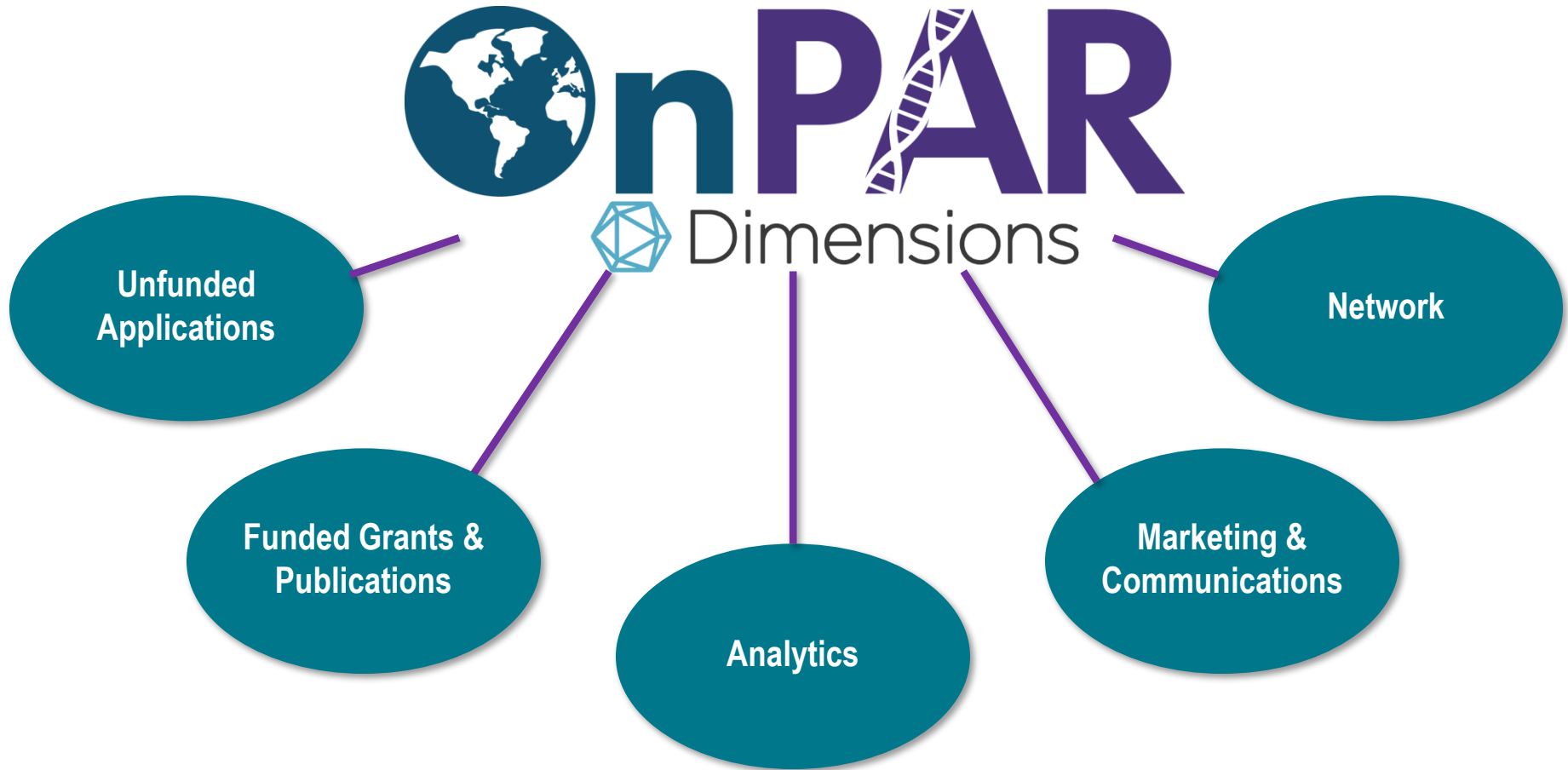


Provides improved data-driven, situational awareness about research projects and current funding investments to enhance future decision making

- ▶ Funding opportunities outside government
- ▶ Comprehensive database to avoid duplication
- ▶ Resources to develop informed research strategies
- ▶ Records of on-going and future research projects

A Knowledge Research Database & Network of Life Sciences Organizations

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OnPAR: How Does It Work?

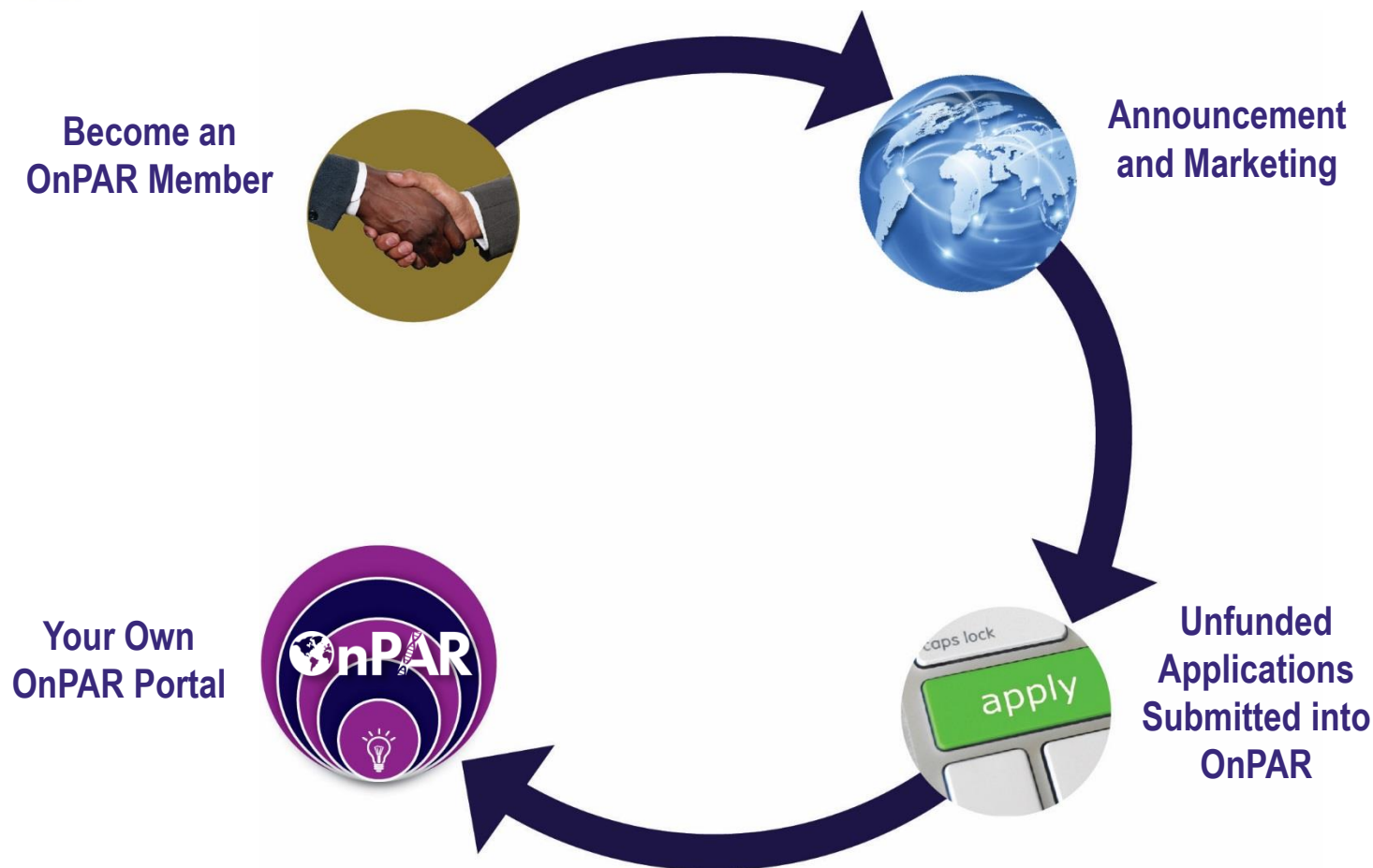
...Partners & Applicants

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How Does It Work? ...Members

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Process Summary

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**Government Funding
Agencies:**
Unfunded, off-priority
applications



OnPAR:
Submission and
review



**For- and
Non-Profit:**
Funding

Process Summary

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Submit Abstract:
If unfunded and scored
within 30 percentile



**Submit Full
Application &
Summary Statement:**
By invitation only



**Negotiate Final
Grant/Contract with
Member Organization:**
If selected for funding



[Future] “Failed” Pre- and Clinical Pharmaceutical Compounds

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Description of Project:
Short summary or “abstract”



Post on OnPAR:
1) Review
2) Full access by request and explanation only



Negotiate Terms





Editorial

► Funding Unfunded NIH Research Applications

Martin A. Dueñas, Isabelle Bisceglia, and James Pannucci; March 23, 2016.

Science Translational Medicine Journal

<http://stm.sciencemag.org/content/8/331/331ed3>

Funding Research Through the Online Partnership to Accelerate Research (OnPAR)

Martin A. Dueñas, Isabelle Bisceglia; September 2016

JACC: Basic to Translational Science

<http://basictranslational.onlinejacc.org/content/early/2016/09/08/j.jacbts.2016.08.005>

NIH

► A Pilot Partnership to Find Private Support for Unfunded Applications

Michael Lauer, NIH Deputy Director for Extramural Research; March 23, 2016.

NIH Extramural Nexus, Open Mike.

<http://nexus.od.nih.gov/all/2016/03/23/a-pilot-partnership-to-find-private-support-for-unfunded-applications/>



General News

- ▶ **New Funding Matchmaker Will Cater to NIH Rejects**
Kelly Servick, March 23, 2016. *Science*.
<http://www.sciencemag.org/news/2016/03/new-funding-matchmaker-will-cater-nih-rejects>
- ▶ **Leidos Launches Portal to Accelerate and Improve Biomedical Research Funding**
Morningstar/PR Newswire, March 24, 2016.
https://www.morningstar.com/news/pr-news-wire/PRNews_20160324PH54722/leidos-launches-portal-to-accelerate-and-improve-biomedical-research-funding.html
- ▶ **Finding Funding for Rejected NIH Proposals**
Catherine Offord, March 24, 2016. *The Scientist*. <http://ow.ly/ZVCS1>
- ▶ **Second Chance for Rejected Grants**
Andrea Widener, March 28, 2016. *Chemical & Engineering News*.
<http://cen.acs.org/articles/94/i13/Second-chance-rejected-grants.html?type=paidArticleContent>
- ▶ **OnPAR: A Second Chance for Unfunded NIH Proposals**
Jaclyn Lucas, April 12, 2016. Harvard University, Office of Sponsored Projects
<http://osp.finance.harvard.edu/blog/onpar-second-chance-unfunded-nih-proposals>

OnPAR: Executive Summary

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Dimensions

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- ▶ Co-funding opportunities with members
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- ▶ Marketing and communication

<https://onpar.leidosweb.com/>

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Take home message:

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- ▶ For Applicants: please submit your abstracts – *the more we get, the more members will join and the more opportunities for funding*
- ▶ For Members (Foundations, Pharmaceuticals, VC): Join and have access to innovative research that can support your mission and internal R&D
- ▶ For Agencies (Government and non-Government): Please join and help us provide unfunded applicants a second opportunity for funding

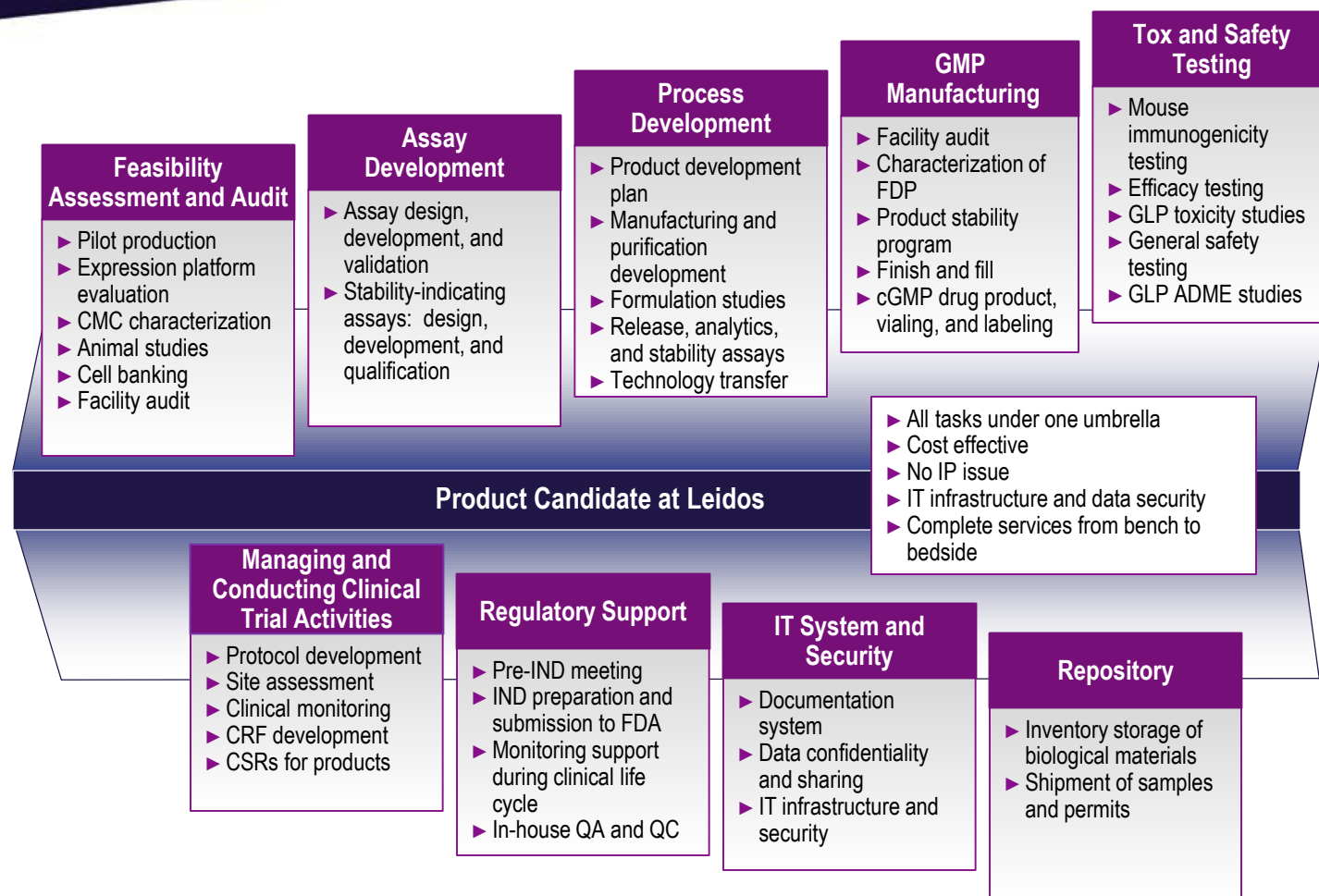
Appendix A



<https://www.youtube.com/watch?v=aQuLpMPYzYM&feature=youtu.be>

Leidos Life Sciences' Complete Spectrum of Preclinical Services

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Leidos Corporate Overview

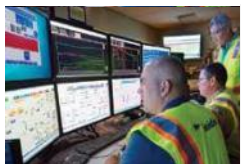
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Vision: To be the global leader in the integration and application of information, technology, and systems to solve critical customer problems. We will deliver innovative solutions and services through the collaboration of our diverse and talented employees. We will empower our workforce, contribute to our communities, and operate sustainably.



DEFENSE



CIVIL



**INTELLIGENCE &
HOMELAND
SECURITY**



HEALTH



**ADVANCED
SOLUTIONS**

Our new business is separated into five groups focused around four distinct markets and one cross-cutting market, which we call **Advanced Solutions**.

DEFENSE

\$3.0 billion
REVENUE

INTELLIGENCE &
HOMELAND SECURITY

\$2.7 billion
REVENUE

HEALTH

\$1.6 billion
REVENUE

CIVIL

\$2.7 billion
REVENUE

2016E
\$10B
REVENUE

Questions?

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Thank you!

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