

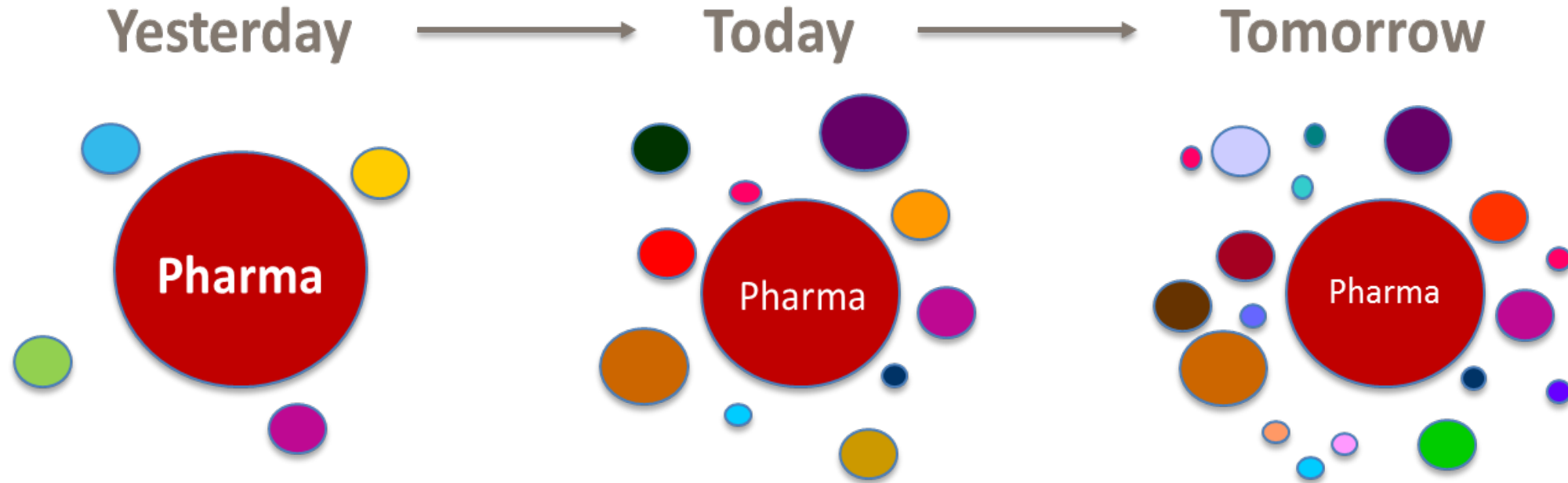


Innovation Strategies and Creation of Scientific Networks

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BioSpain 2018, Sevilla

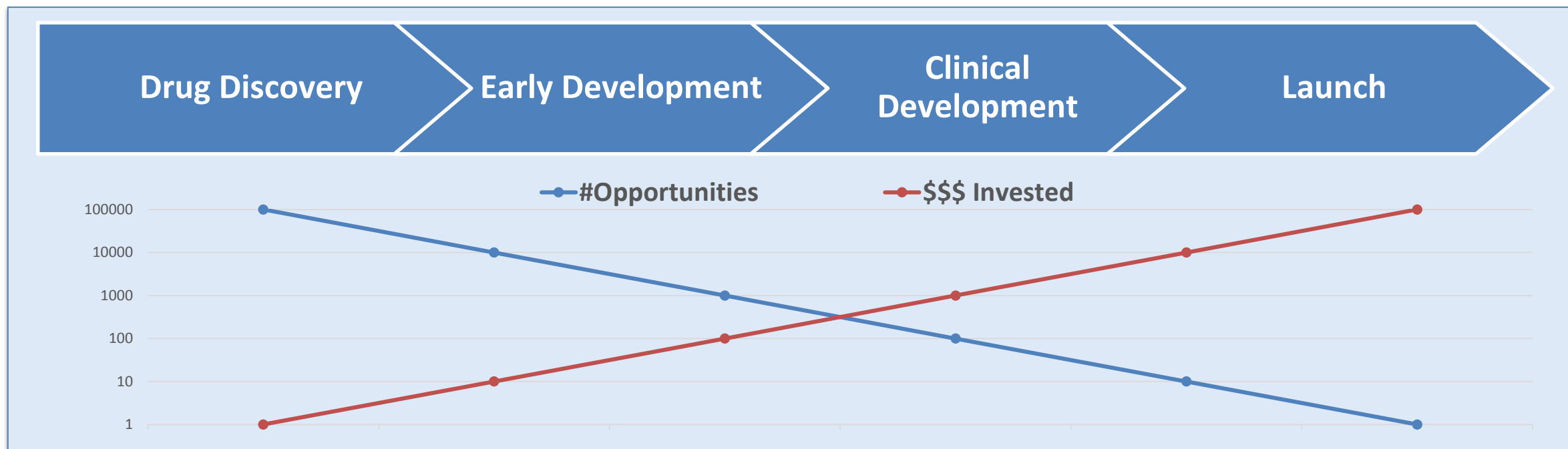
Lilly

Science Ecosystem is Evolving



	Internal	Searching for innovation	Collaborative
Innovation	Large Pharma	Biotechs	Academic, Start-ups
Partnership	In-license molecule	Options Buy company	Co-create value
Portfolio	Internally driven/owned	Partially shared	Shared
Phase	Late-phase assets	Early clinical (LO to POC)	Pre-IP Formation

External Innovation Approaches at Lilly



Early Stage External Innovation:

- Deals are platform/technology/target-based
- Relational mode of engagement
- Focus on concept/idea; specific asset undefined
- Range of validation (higher risk)
- Many deals, small \$\$
- IP frequently shared
- Quality of relationship often key for partner
- Can trade capabilities for access

Traditional External Innovation:

- Deals are asset-based
- Transactional mode of engagement
- Focus is on single asset or small number of assets
- Human validation if possible (lower risk)
- Fewer deals, larger \$\$
- IP frequently held by partner
- Financial return often key for partner
- Usually trade \$ for access

External Innovation Strategy in Drug Discovery

Opportunities supported and monitored across a variety of engagement modes at three strategic levels: Enabled Drug Discovery, Open Innovation and Technology

Enabled Drug Discovery

- Collaborations based on portfolio interest, prosecuted in synergy with Therapeutic Area objectives
- Opportunities to enable science across all areas of strategic interest

Open Innovation

- Over 930 participating scientists at 490 institutions in 39 countries
- More than 50 follow-up collaborations in the last 6 years, across chemistry offerings
- 35 scientists testing Lilly's BIC cassette to validate novel targets

Technology

- Opportunities focused on enabling technologies with application to all therapeutic areas
- Spanning a variety of scientific fields such as chemoproteomics, computational methods and data analysis
- Potential for disruptive innovation

Open Innovation Drug Discovery (OIDD) Program

- ◆ Lilly is exploring innovative approaches to improve success rates of drug discovery efforts
- ◆ Collaborations with universities, research groups and small biotechs through the OIDD program have been a key element of our strategy for more than a decade

CHEMISTRY OFFERINGS



Screening: Biological screening in strategic areas of interest



Neglected & Tropical Diseases: Work with non-profit partners



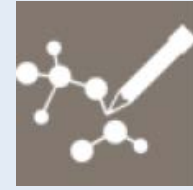
Compound Acquisition: Diversify the collection



Synthesis: Remote access to the ASL (Automated Synthesis Lab)



Animal Health: Biological screening in areas of interest for Elanco



Design: *In silico* tools

First priority for 2019 and beyond






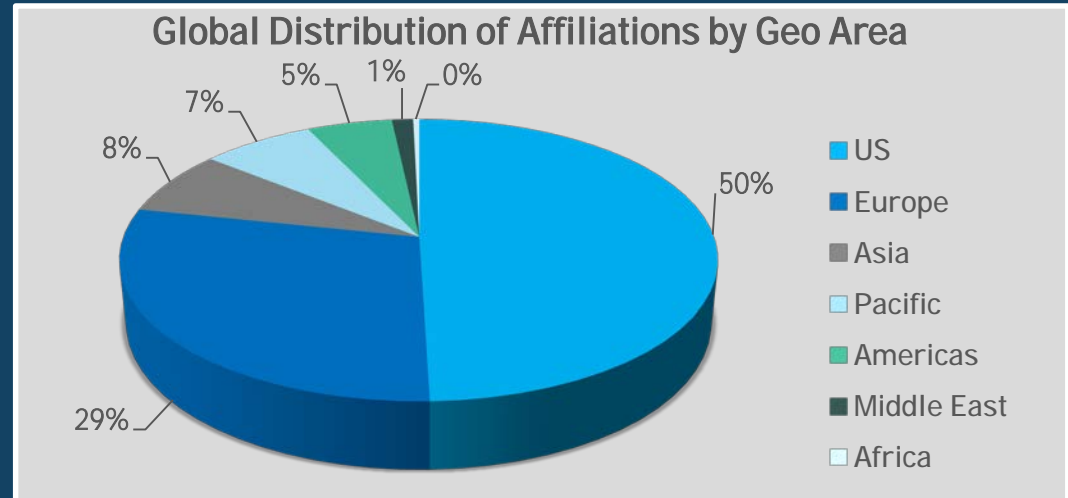
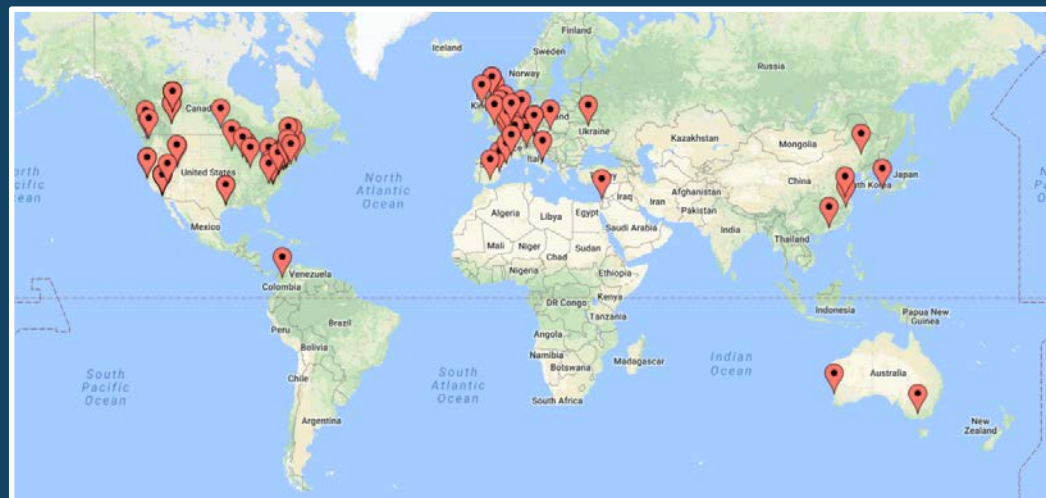
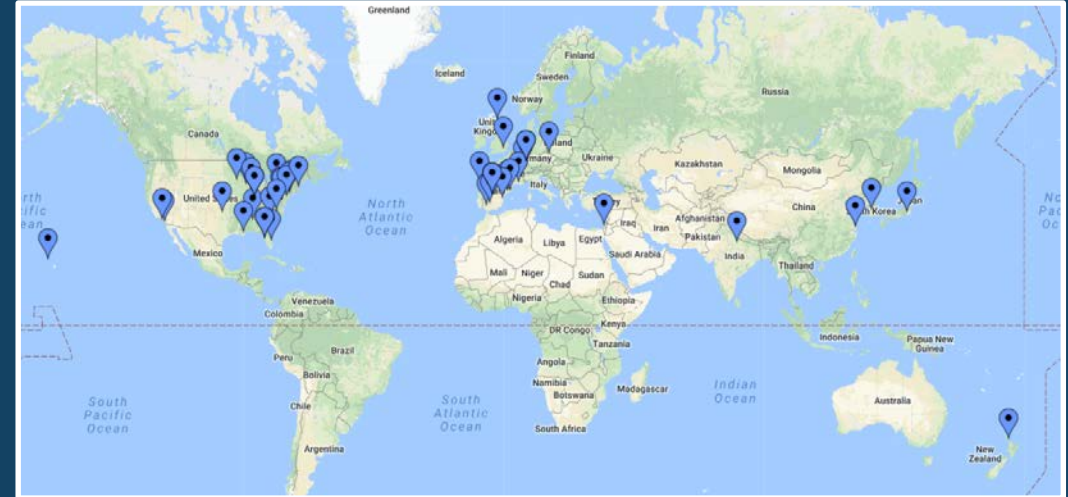
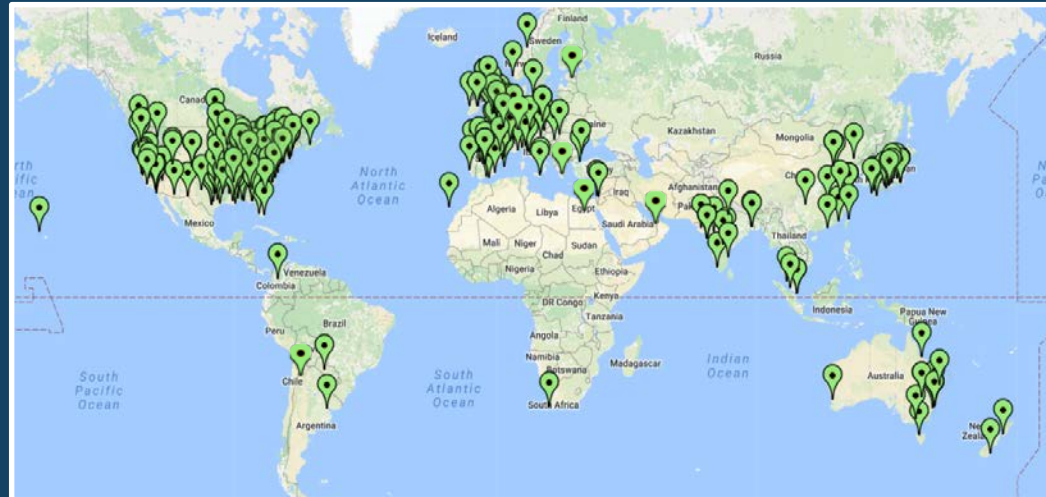
BIOLOGY OFFERING

BIC Cassette: Focused on identifying and validating novel biological targets aligned with Lilly's areas of interest

OIDD Scientific Network

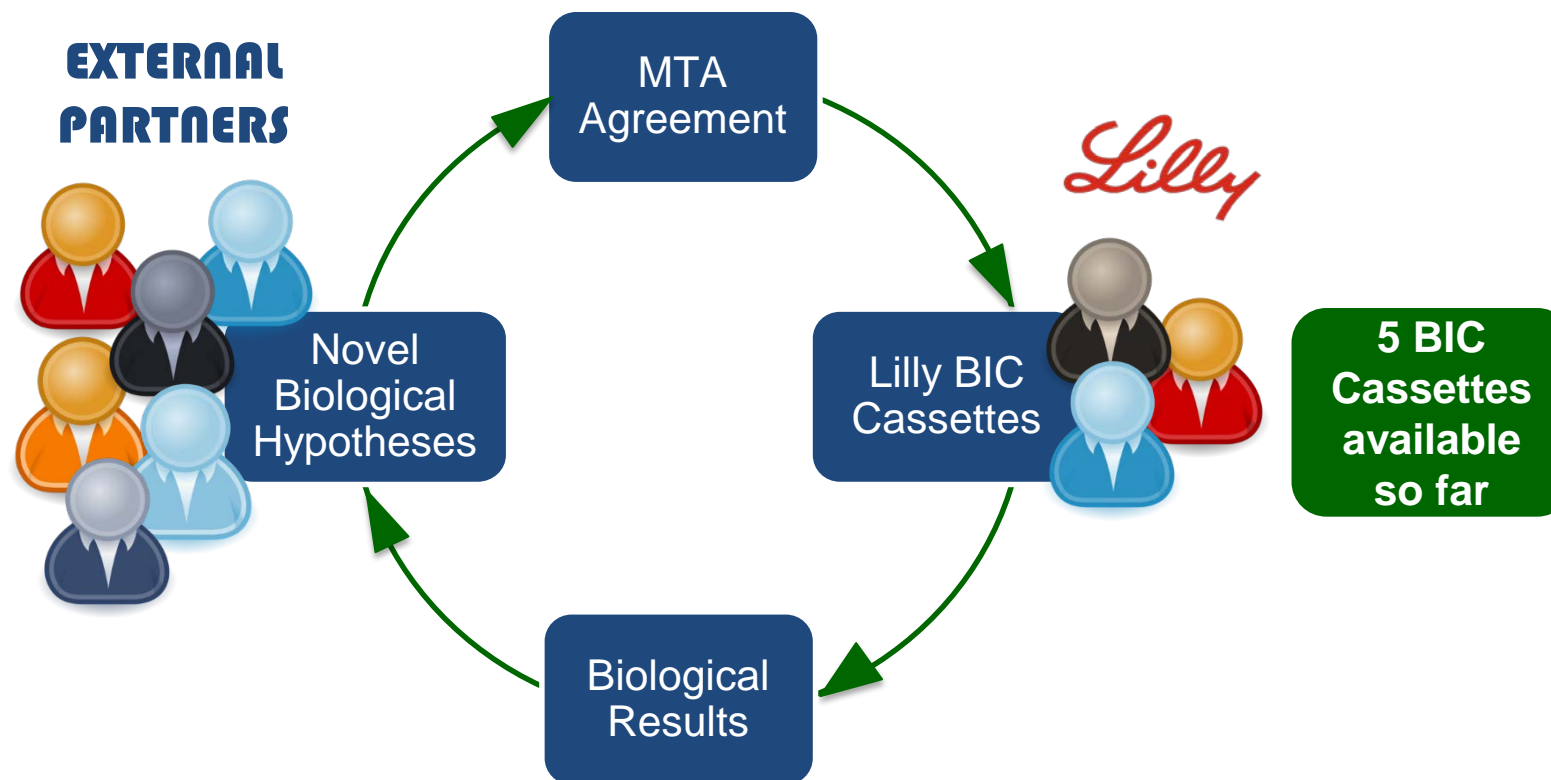
- 951 participating scientists from 498 affiliations in 39 countries
- 58K physical samples received; 36.5K currently available for screening

-  Universities (70%)
-  Small Biotechs (19%)
-  Research Institutes (11%)

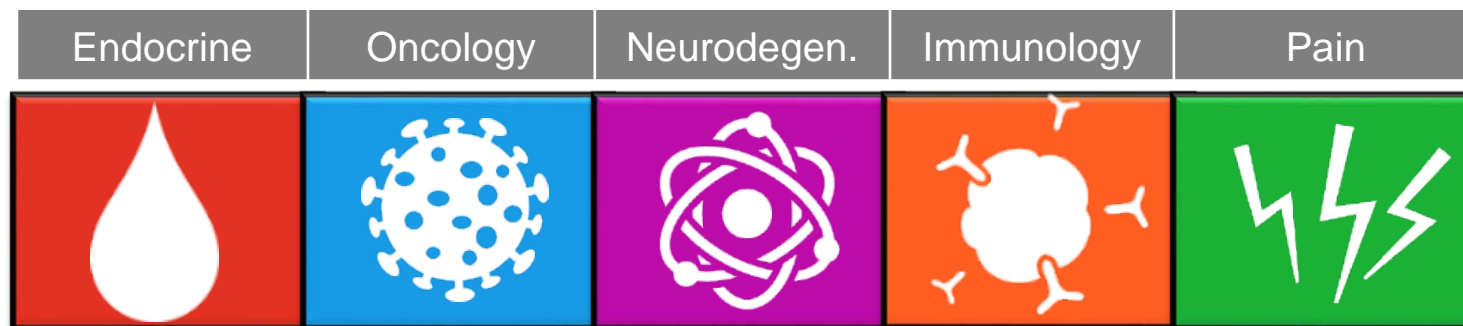


Biology Offering: BIC Cassette Process

Leveraging our compound collection to create an efficient external engagement tool to establish collaborations on novel targets



Therapeutic Areas of Interest



Getting Started

For additional information, please visit our OIDD web page:

<https://openinnovation.lilly.com>

Or contact us at:

openinnovation@lilly.com

If you are interested in a TC with Lilly, please contact:

Maria Angeles Martinez Grau in Europe
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Lilly HOME WHAT IS OIDD? GETTING STARTED WHAT WE OFFER OIDD IN ACTION

“ We realize it’s important to bring together, through partnership and collaboration, diverse scientific talent and capabilities to find the best possible outcomes for the people we serve.”
ALAN FALKOWITZ, PH.D.
Vice President, Scientific Operations

OPEN INNOVATION DRUG DISCOVERY

SECURE LOGIN ▶

For Scientists. By Scientists.
MAKING LIVES BETTER. TOGETHER.

The Lilly Open Innovation Drug Discovery (OIDD) program is founded on the belief that pharmaceutical companies, research institutions and academia share a mutual desire to advance innovative science. With secure design tools, iterative experimentation and expert analysis, OIDD creates a collaborative effort that pushes science forward. Read more in the OIDD Brochure.

DESIGN
Cheminformatics tools for designing molecules with desirable drug-like properties or suited to a particular biological target. [MORE](#)

SCREENING
Biological screening of your compounds in areas of strategic interest to Lilly. All data generated is available to you via the OIDD platform. [MORE](#)

COMPOUND ACQUISITION
Opportunity to have your compounds selected for inclusion into Lilly’s compound collection using structural diversity tools. [MORE](#)

SYNTHESIS
Access to the Lilly Automated Synthesis Laboratory, to explore new chemistry. [MORE](#)

NEGLECTED & TROPICAL DISEASES
Opportunities to work with non-profit, public-private partnerships to contribute to early-stage drug discovery for unmet medical needs. [MORE](#)

Thank you!