

# The Bioscience Ecosystem of the Future

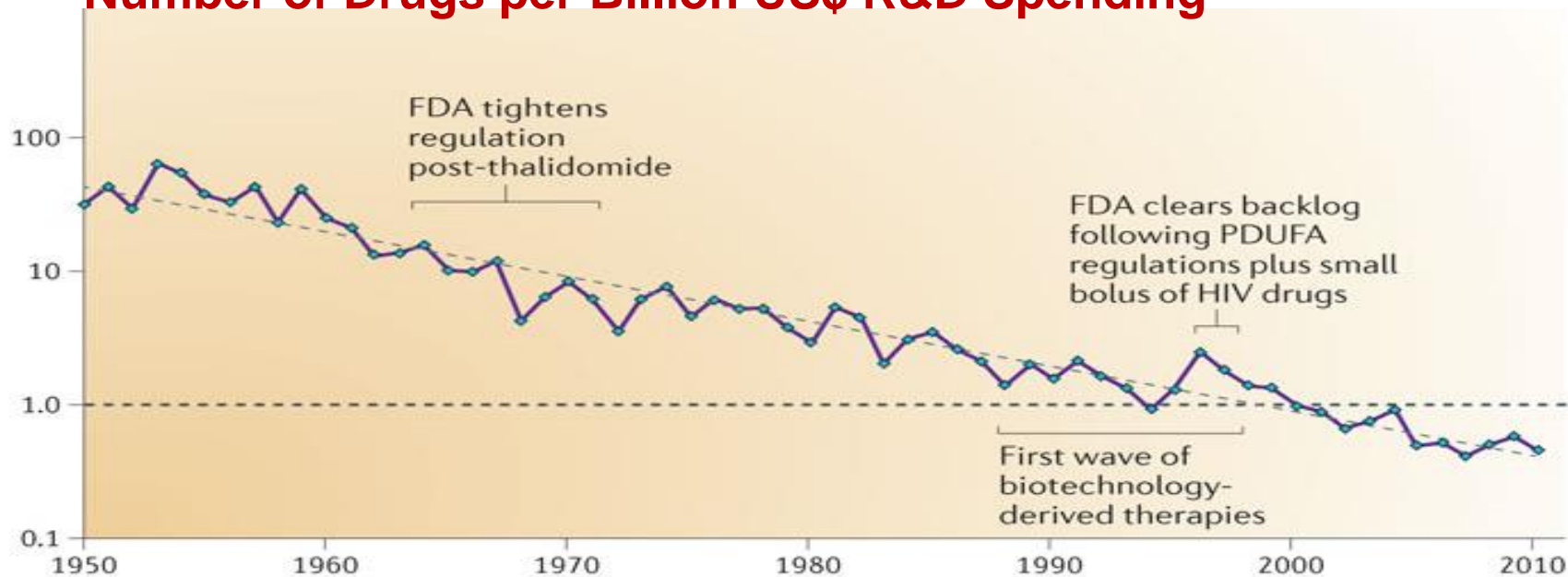
*John C. Lechleiter, Ph.D.  
Chairman, President, and Chief Executive Officer*

*CED Life Science Conference  
March 3, 2015*

*Lilly*

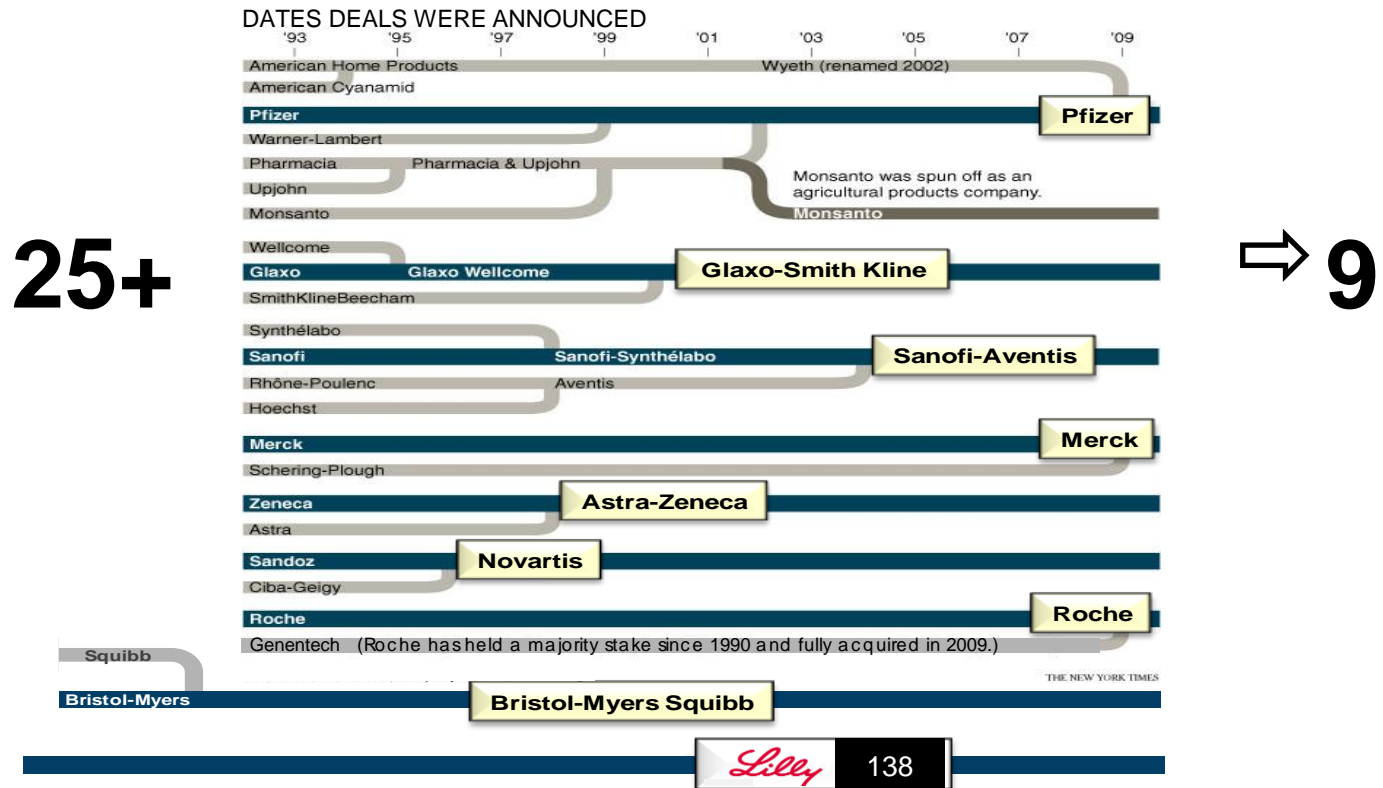
# Trend in R&D efficiency

## Number of Drugs per Billion US\$ R&D Spending



Modeled after: Jack W. Scannell, Alex Blanckley, Helen Boldon & Brian Warrington, "Diagnosing the decline in pharmaceutical R&D efficiency," *Nature Reviews Drug Discovery* 11, 191-200 (March 2012)

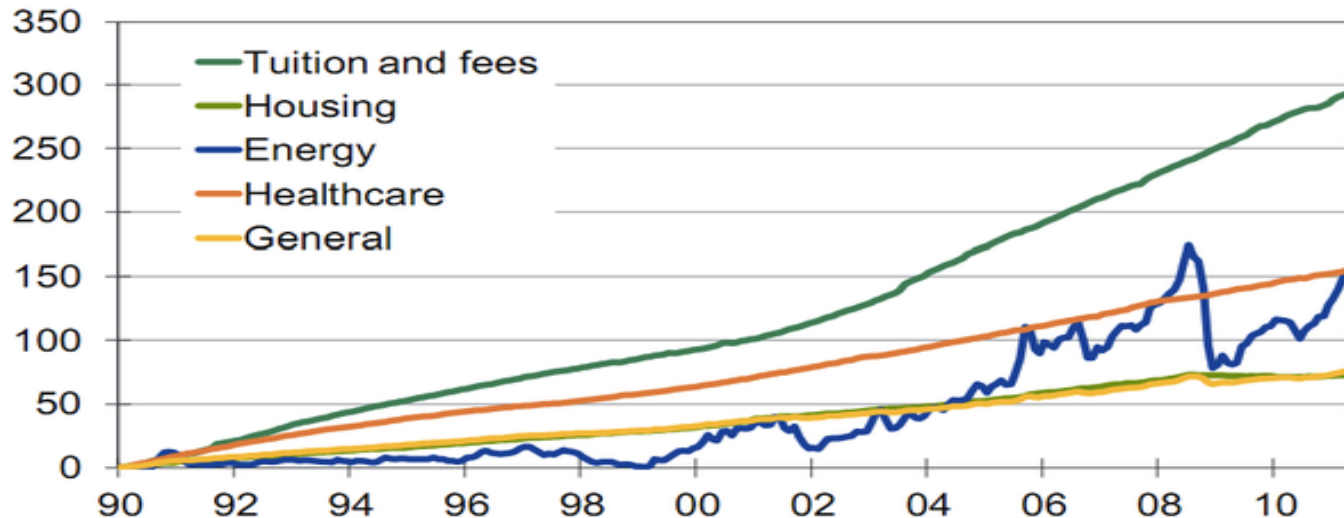
# Pharmaceutical industry consolidation



# Threats to academia business model

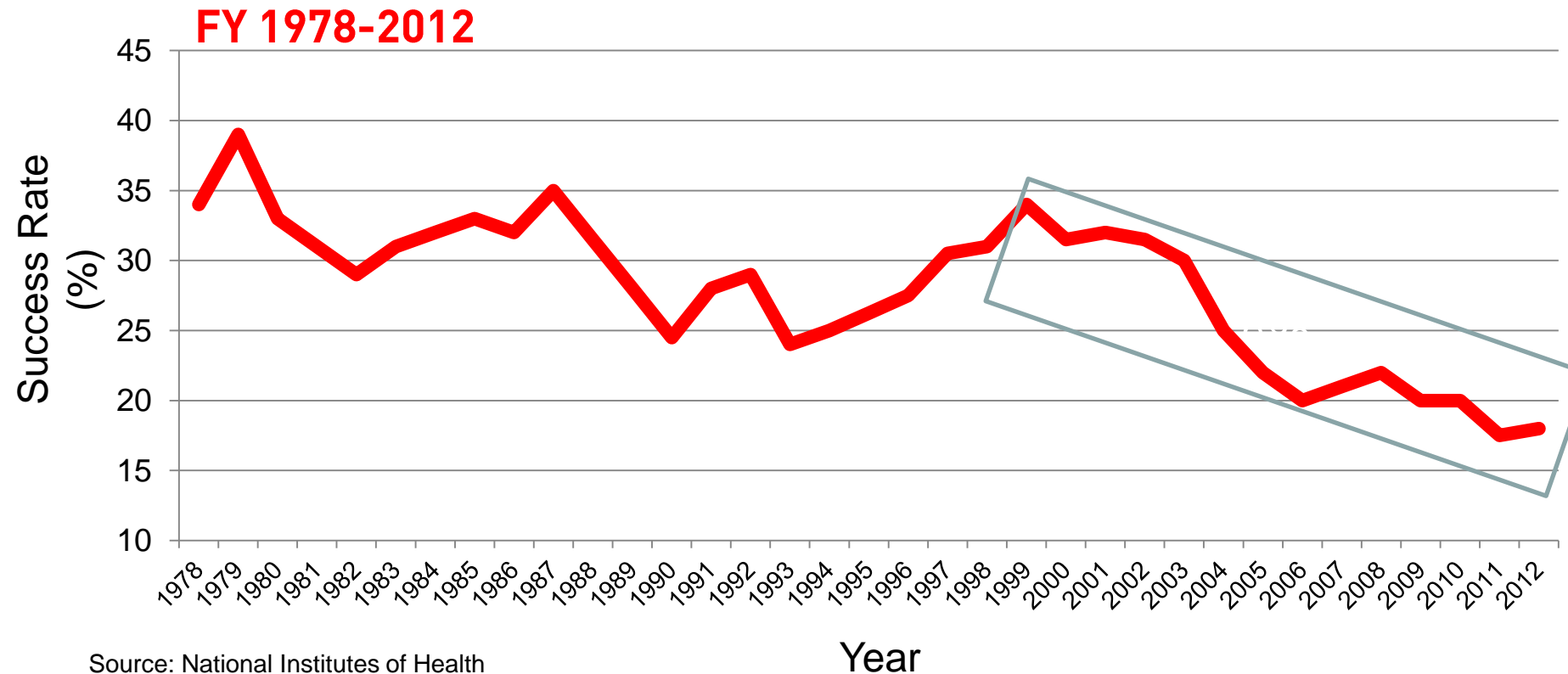
## Tuition Vs. Other Price Indices

CPI, cumulative % change since 1990



Source: Moody's Analytics, *Regional Financial Review*, July 2011

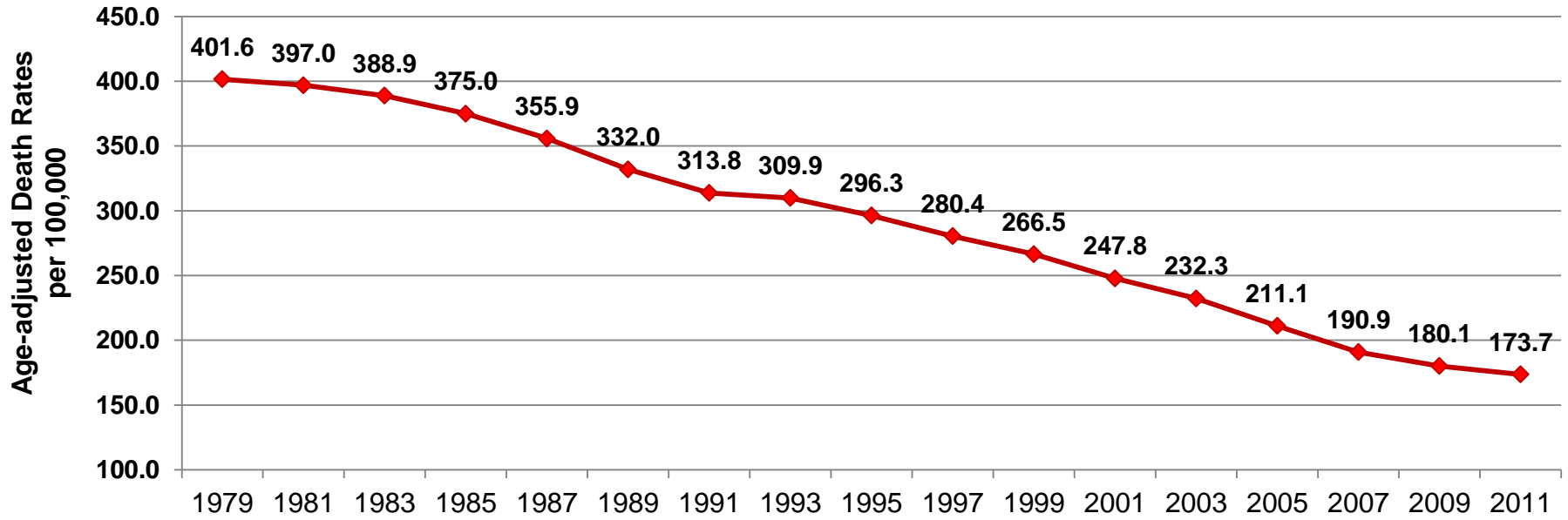
# Grant application success rates



Source: National Institutes of Health

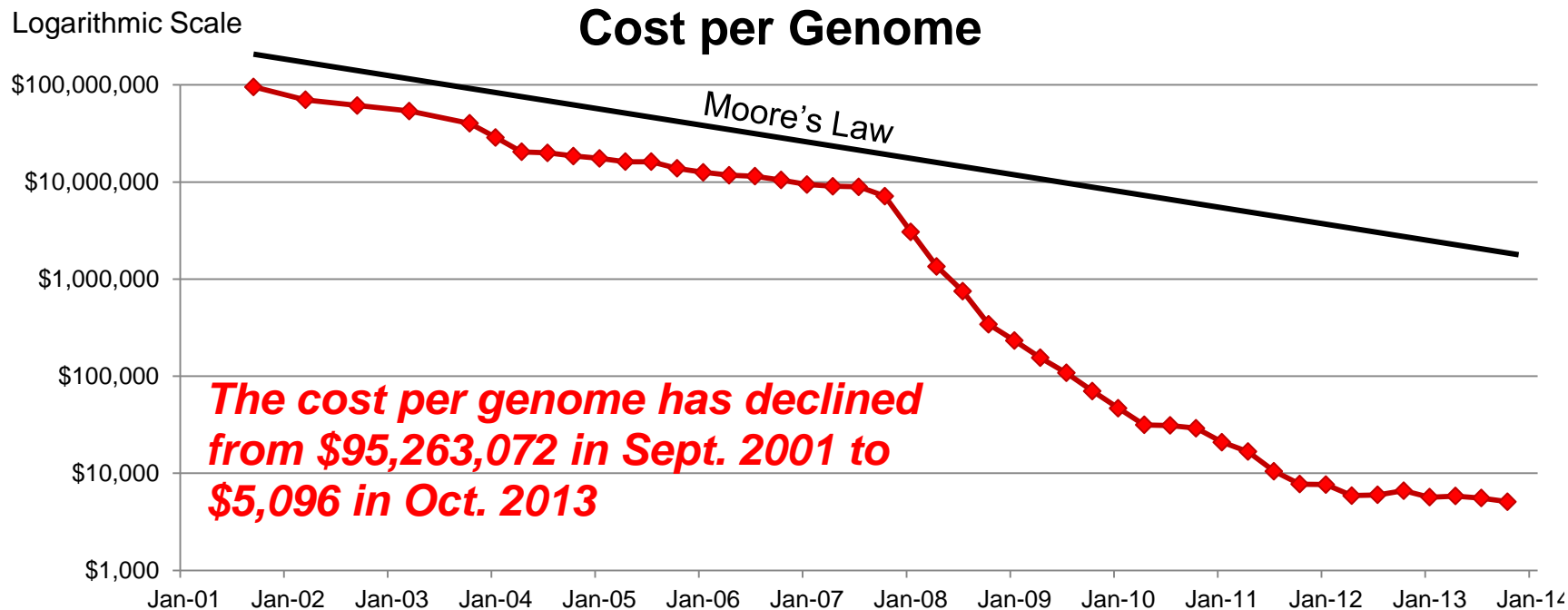
# Bioscience contributes to health gains

## U.S. Death Rates Due to Diseases of the Heart



Sources: U.S. Centers for Disease Control; PhRMA

# Science has made dramatic advances



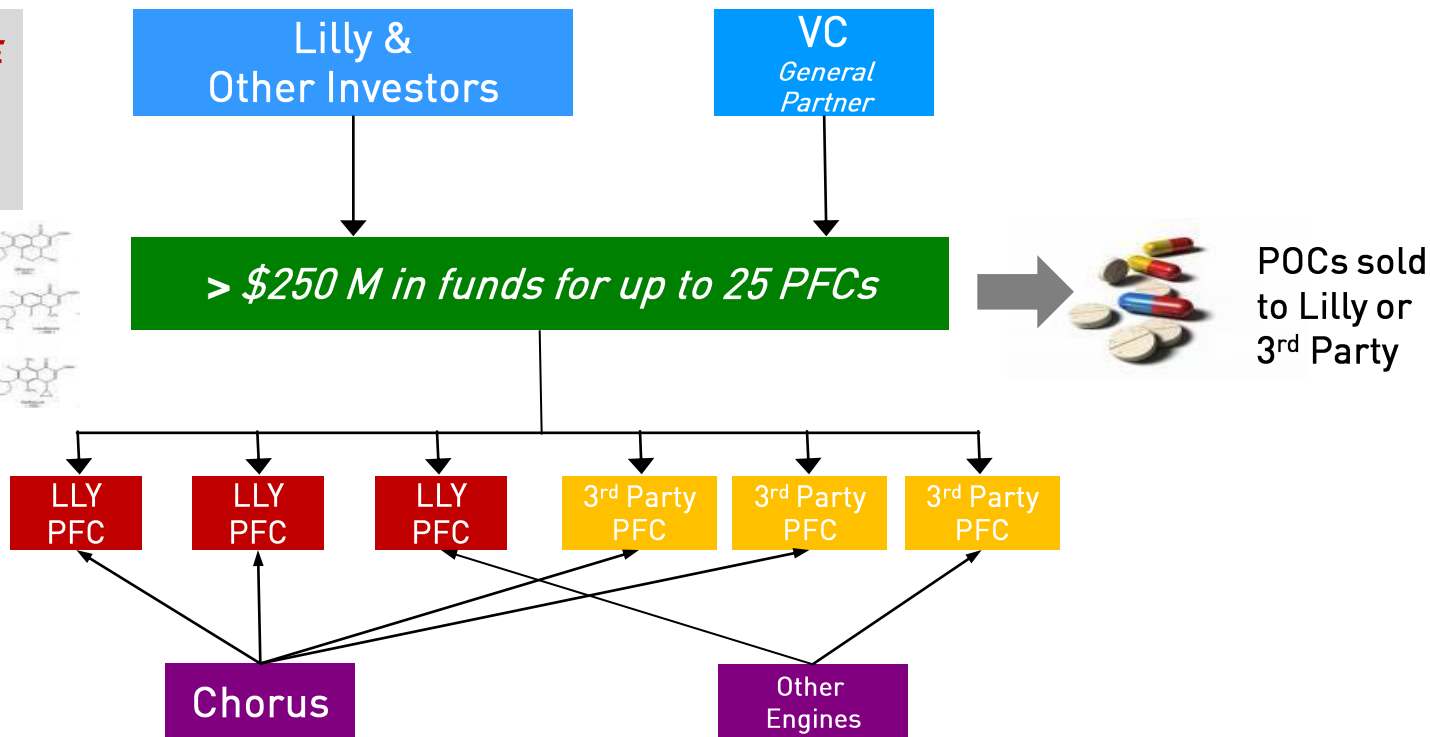
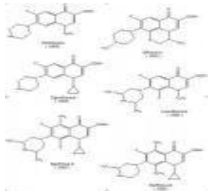
Source: NIH, National Human Genome Research Institute

# Project-focused companies (PFCs)

## Lilly Contributions:

- Capital
- Compounds
- Capabilities

Candidates licensed from Lilly or 3<sup>rd</sup> Party





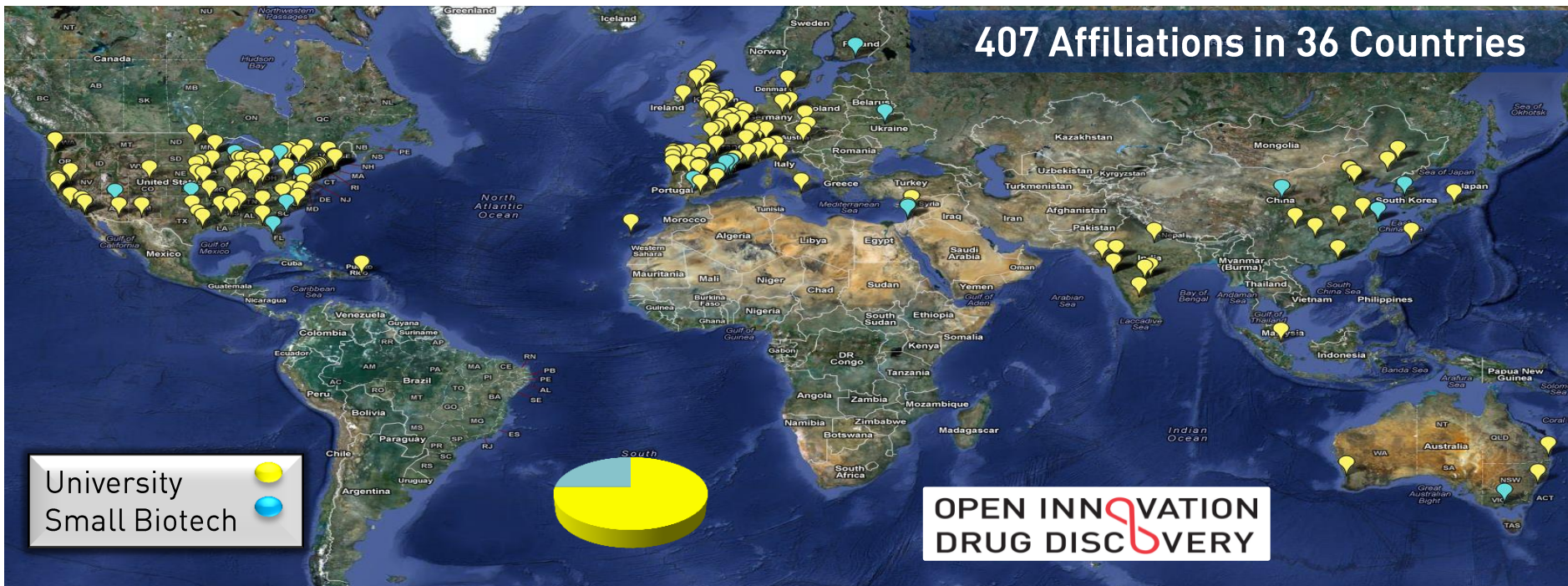
# New vehicles to access and advance clinical-stage molecules

Model/Company	Therapeutic Area	Investors	Origin of Asset
PFC: Tensha	Oncology	HealthCare Ventures	Academia
PFC: Ixchelsis	Men's Health	TVM	Pharma
PFC: GLWL Research	Diabetes	TVM	Lilly
PFC: Kaneq	Diabetes	TVM	Pharma
PFC: Apofore	Diabetes	HealthCare Ventures	Academia
PFC: FAAH	Pain	TVM	Biotech
PFC: PRCL	Autoimmune	TVM	Biotech
Non-PFC: Edinburgh Molecular Imaging	Oncology	Epidarex	Academia
Non-PFC: Sirakoss	Bone	Epidarex	Medical Device
Non-PFC: Enterprise	Respiratory	Epidarex	Biotech

PFC: Project Focused Company

# Lilly Open Innovation Drug Discovery

## February 2015



[openinnovation.lilly.com/dd](http://openinnovation.lilly.com/dd)

# Public-private partnerships in Alzheimer's Disease research

ADNI

## **Alzheimer's Disease Neuroimaging Initiative (ADNI)**

- Important role in mapping out the natural history of AD, thus facilitating biomarker assessment

A4

## **Anti-Amyloid Treatment in Asymptomatic Alzheimer's Disease (A4)**

- Prevention clinical trial treating patients with deposited amyloid in the brain but minimal symptoms

DIAN

## **The Dominantly Inherited Alzheimer's Network (DIAN)**

- Washington University School of Medicine conducting worldwide clinical study of early-onset AD

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