

# The National Center for Advancing Translational Sciences

*Catalyzing Translational Innovation*

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NCATS

GINAS WORKSHOP

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NCATS

# What is Translation?

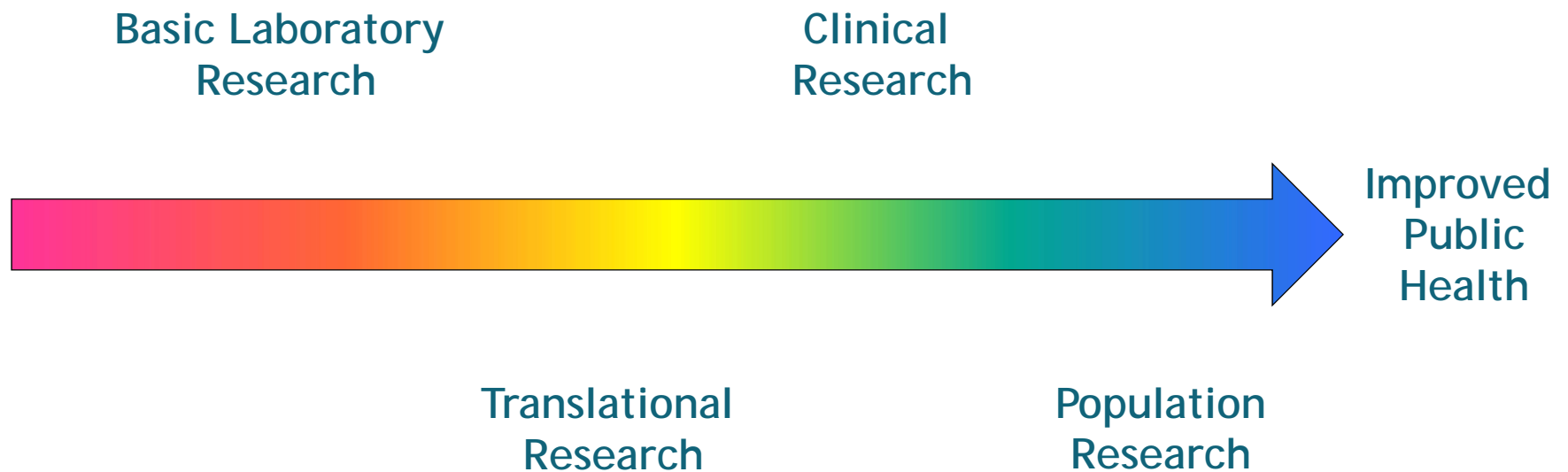
*Translation* is the process of turning observations in the laboratory and clinic into interventions that improve the health of individuals and the public - from diagnostics and therapeutics to medical procedures and behavioral changes.

# What is Translational Science?

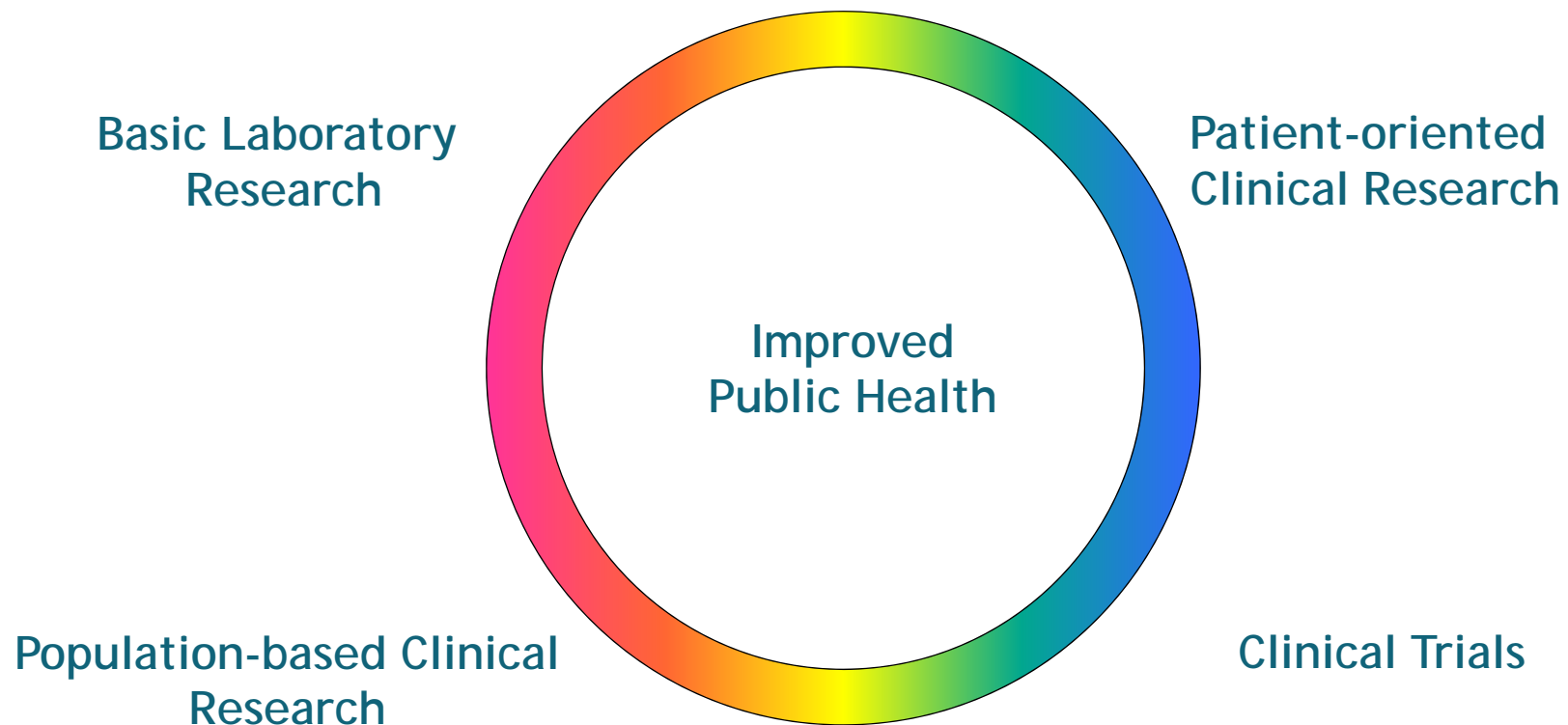
*Translational Science* is the field of investigation focused on understanding the scientific and operational principles underlying each step of the translational process.

NCATS studies translation as a scientific and operational problem.

# Standard Model



# The Way It Should Work



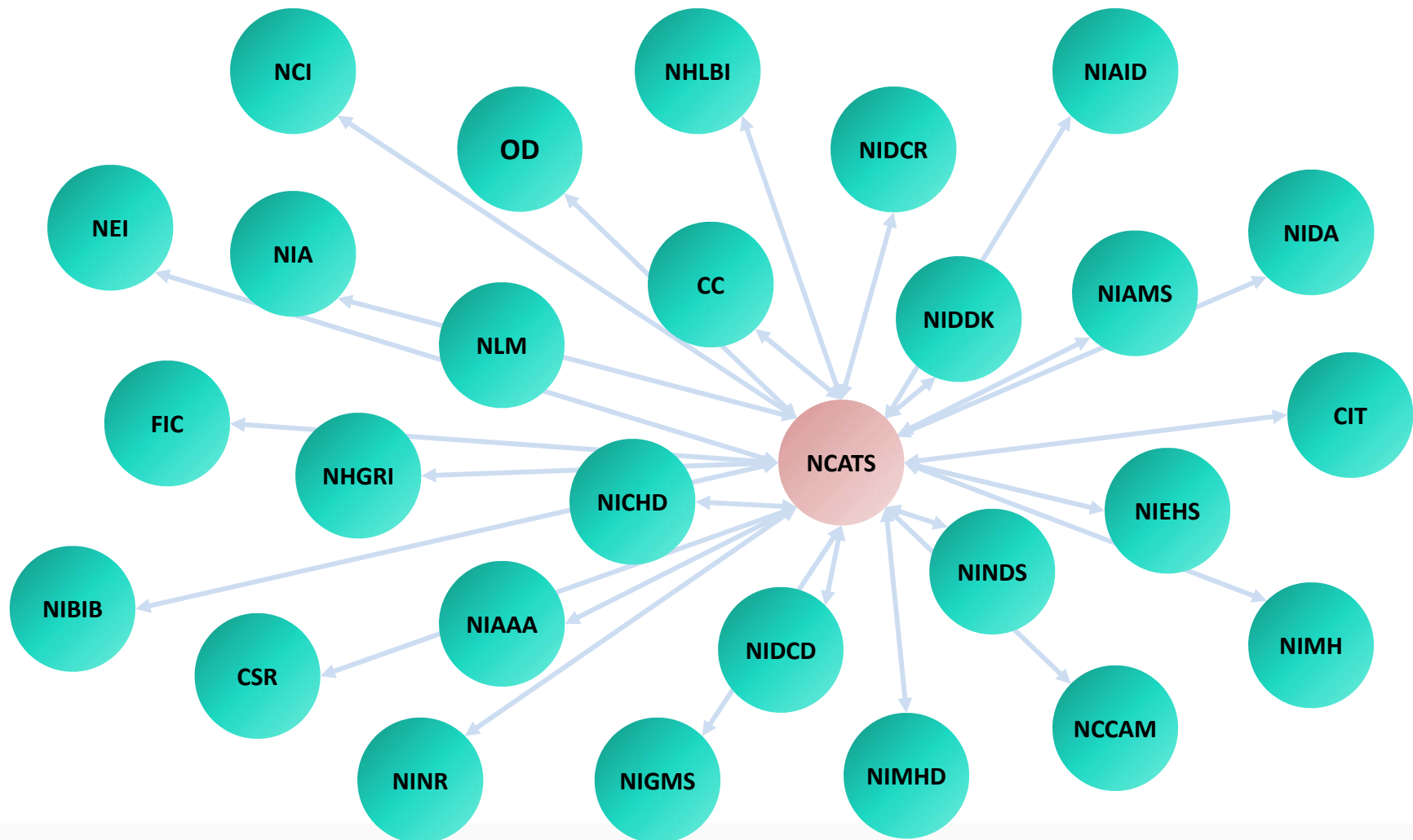
# NCATS Mission



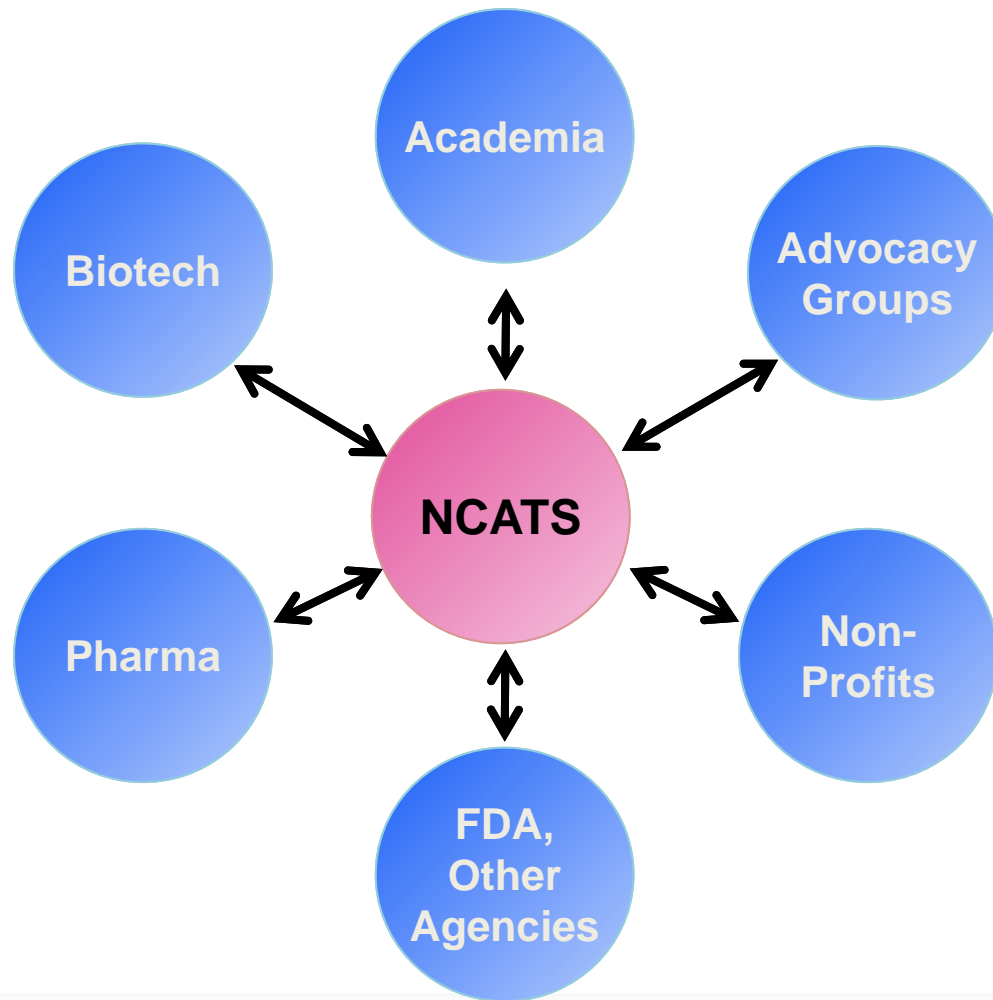
To catalyze the generation of innovative methods and technologies that will enhance the development, testing and implementation of interventions that tangibly improve human health across a wide range of human diseases and conditions.



# Catalyzing Collaborations Within NIH



# Catalyzing Collaborations Outside NIH





# NCATS Scientific Initiatives

- **Clinical Translational Science**
  - Clinical and Translational Science Awards
  - Rare Disease Clinical Research Network
  - New Therapeutic Uses program
- **Preclinical Translational Science**
  - **NCATS Chemical Genomics Center**
  - Therapeutics for Rare and Neglected Diseases program
  - Bridging Interventional Development Gaps program
- **Re-engineering Translational Sciences**
  - Toxicology in the 21st Century
  - Microphysiological Systems (Tissue Chip) program
  - Office of Rare Diseases Research

# NCATS Chemical Genomics Center

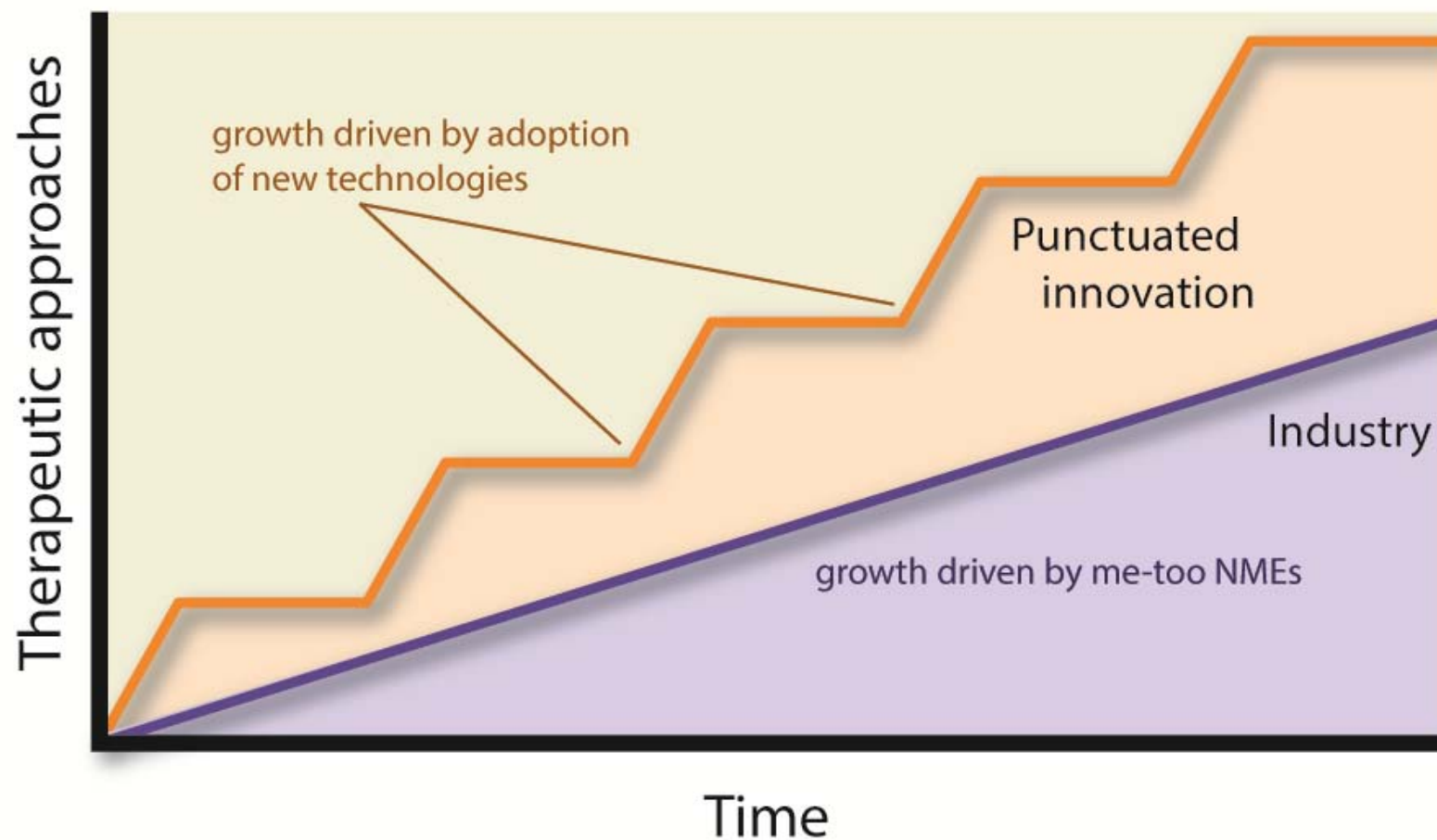
## NCATS MISSION

- To catalyze the generation of innovative methods and technologies that will enhance the development, testing and implementation of interventions that tangibly improve human health across a wide range of human diseases and conditions.

## NCGC MISSION

- To *develop chemical probes* that fundamentally change our understanding of the molecular basis of disease, *provide technologies and tools* that are able to validate new therapeutic and disease management approaches and *catalyze innovative translational research*.

# Therapeutic Approaches and New Technologies



# NCGC Highlights

qHTS Paradigm

NCATS Pharmaceutical Collection

Combination Screening



2005

2006

2007

2008

2009

2010

2011

2012

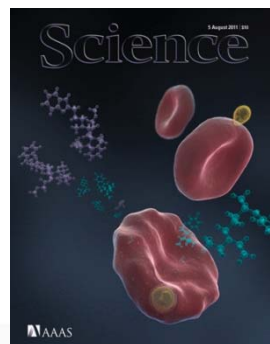
2013

2014

Novel Probes  
Novel Biology

Chemical Genomics  
Drug Repurposing

Novel Combinations  
Novel Insights



# NCGC Highlights

## Substance Registration



## Future Impact...

