

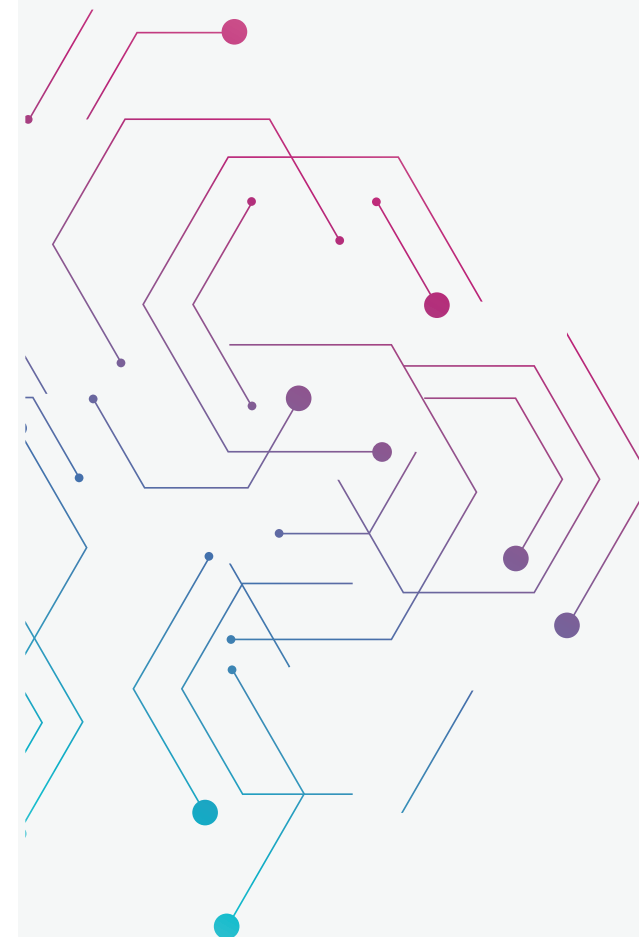
# Achievements of KCB

## Achievements

- Derived a number of new drug discovery based on research using KCB library (>50 projects)
- Published papers using KCB library (>20 papers per year)

## Contribution on technology transfer

- **2011** Discovery of fluorescence marker selectively tagging adipose cells  
Technology transfer to pharm
- **2011** Preclinical candidate for osteoporosis  
Technology transfer to pharm (Shinpoong)
- **2012** Preclinical candidate of DGAT1 inhibitor for diabetes/obesity  
Technology transfer to pharm (Handok)
- **2013** Preclinical candidate for glaucoma  
Technology transfer to pharm (Kookje)
- **2014** Preclinical candidate for HRV  
Technology transfer to global pharm (Novartis)
- **2015** Preclinical candidate for cancer  
Technology transfer to pharm
- **2016** Preclinical candidate for metabolic diseases  
Technology transfer to pharm
- **2017** Preclinical candidate for neurodegenerative disease and cancer  
Technology transfer to pharm
- **2018** International collaborative research for anticancer drug
- **2018** Lead compound for colorectal cancer targeted treatment  
Technology transfer to global incubator(FutuRx)
- **2019** Preclinical candidate for hepatitis B  
Technology transfer to pharm
- **2020** Preclinical candidate for SARS-CoV-2(COVID-19)  
Technology transfer to pharm (legochembio)
- **2021** Multi-drug resistant anti-bacterial compounds  
Technology transfer to pharm



# Korea Chemical Bank

Value up of Chemical Libraries through Open Sharing

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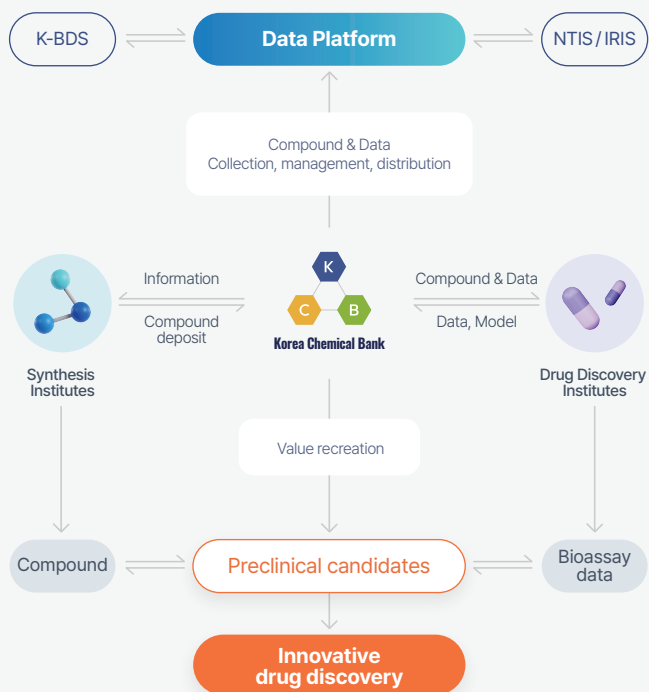
Homepage [www.chembank.org](http://www.chembank.org)  
Data Platform [korea.chembank.org](http://korea.chembank.org)

# Role of KCB

The national hub through chemical library and data for drug discovery

- Establishment of national platform on collection, management, and distribution of chemical libraries for new drug discovery
- Designated as the National Chemical Repository since 2008 by the MSIT of Korea
- Promotion of collaborative researches between depositors and users of KCB compounds

## Open Innovation Platform Sharing Chemical Libraries and Data



# Chemical Library Types

## Focused KCB Library

KCB provides focused libraries for user's conveniences.

### Diversity Library

Number of compounds: 7,000

Library that represents the chemical space of KCB library

### Clinical Collection

Number of compounds: 3,200

Clinical compound library which were treated to humans (Phase I-III & approved drugs)

### PPI Library

Number of compounds: 17,000

Selectively purchased from compound suppliers

### GPCR Library

Number of compounds: 8,600

Selectively purchased from compound suppliers

### Kinase Library

Number of compounds: 2,700

Selected by docking study on kinase active site

### Natural Product Library

Number of compounds: 1,600

Single-component from natural product & natural product-like compound library

### Fragment Library

Number of compounds: 1,600

Satisfied to RO3, suitable for fragment-based drug discovery

### PharmaCore Collection

Number of compounds: Customized

Library of personalized collection by request of users

Chemical Library  
**730,000**  
Drug Discovery

Served amount : 5μL, 5mM in DMSO

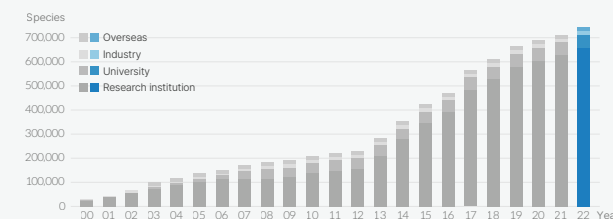
# Collection & Utilization of KCB Library

## Collection of KCB Library

Collection of chemical library for drug discovery

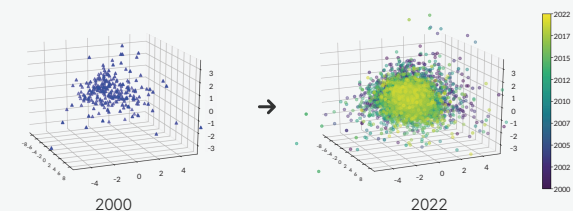
- Deposit from researchers as their research achievements
- Commissioned syntheses by experts
- Strategically purchased from compound suppliers to expand the diversity

## Number of compounds in KCB



## Diversity of KCB Library

Chemical space of KCB chemical library is continuously expanding by increments of scaffold diversity.



## Utilization of KCB Library

KCB has provided more than 10 M compounds for >1,300 bioassay projects to industry and academia.

## Number of bioassay projects using KCB library

