

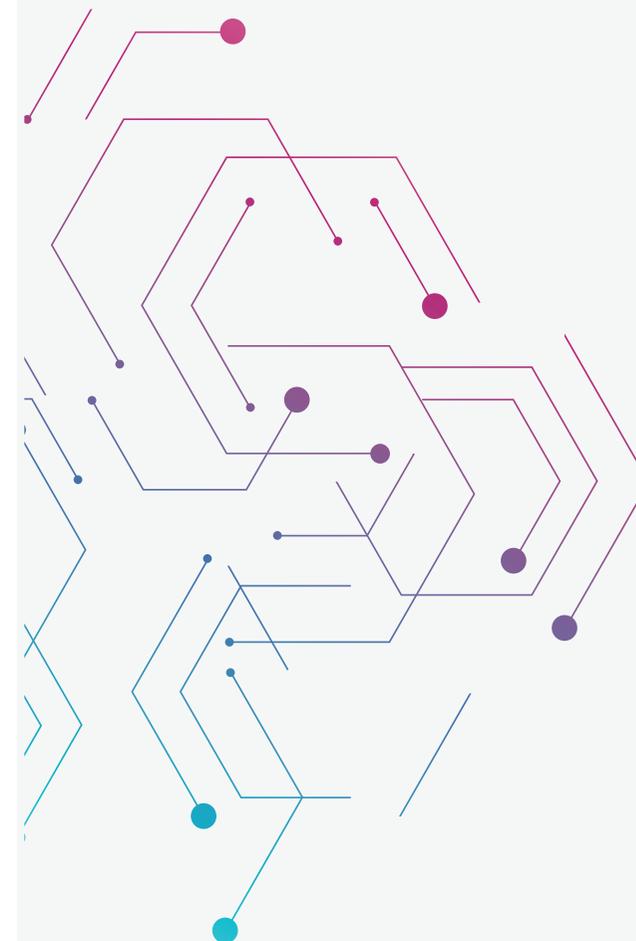
Achievements of KCB

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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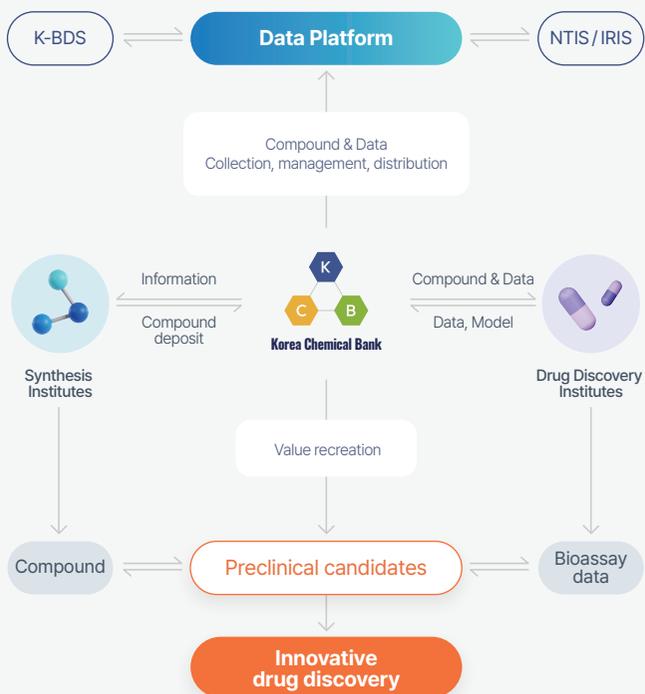
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Role of KCB

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

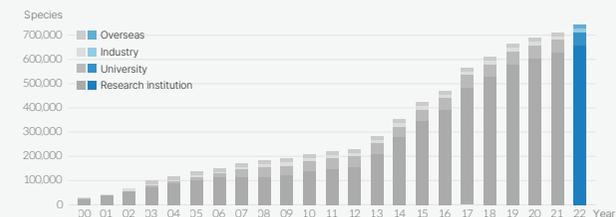
Collection & Utilization of KCB Library

Collection of KCB Library

Collection of chemical library for drug discovery

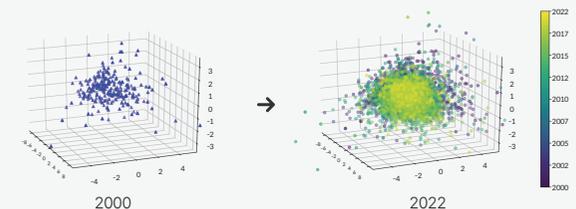
- Deposit from researchers as their research achievements
- Commissioned syntheses by experts
- Strategically purchased from compound suppliers to expand the diversity

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

