Your one answer

Diagnosis to Treatment for Rare Disease Patients

3billion

Global Innovator
in Rare Disease Diagnosis

Founded in

2016

Countries

70+

Physicians

1600+

Cumulative Examination Patients

75,000+

Institutions

700+

Diagnostic Rate

32%

Mission

Diagnosis to Treatment for Rare Disease Patients

3billion entered the genetic testing market in 2016 to provide answers for patients with rare disease.

We are committed to helping patients and their families on their journey, starting with genetic testing and diagnosis.

We strive towards a world where rare disease patients are not neglected in diagnosis and treatment.

Company Timeline

Continuous growth in the last 9 years

2016
- Oct. Founded 3billion

2017
- Mar. Launched the beta version of Direct-to-Consumer (DTC) rare disease diagnostic service

2018
- Apr. Participated in national project (NIPA) to establish an AI-driven diagnostic system for pediatric rare diseases
- Jun. Raised Series A funding

2019
- Feb. Launched <3B-EXOME>, a WES-based rare disease diagnostic test
- Oct. Raised Series B funding

2020
- Feb. Established facilities for next-generation sequencing analysis

2021
- Mar. Raised Series C funding
- Apr. Participated in the national Bio Big Data project
- Dec. Obtained CAP certification

2022
- Apr. Raised Pre-IPO funding
- Jun. Launched <3B-GENOME>, a WGS-based rare disease diagnostic test
- Dec. Obtained CLIA certification

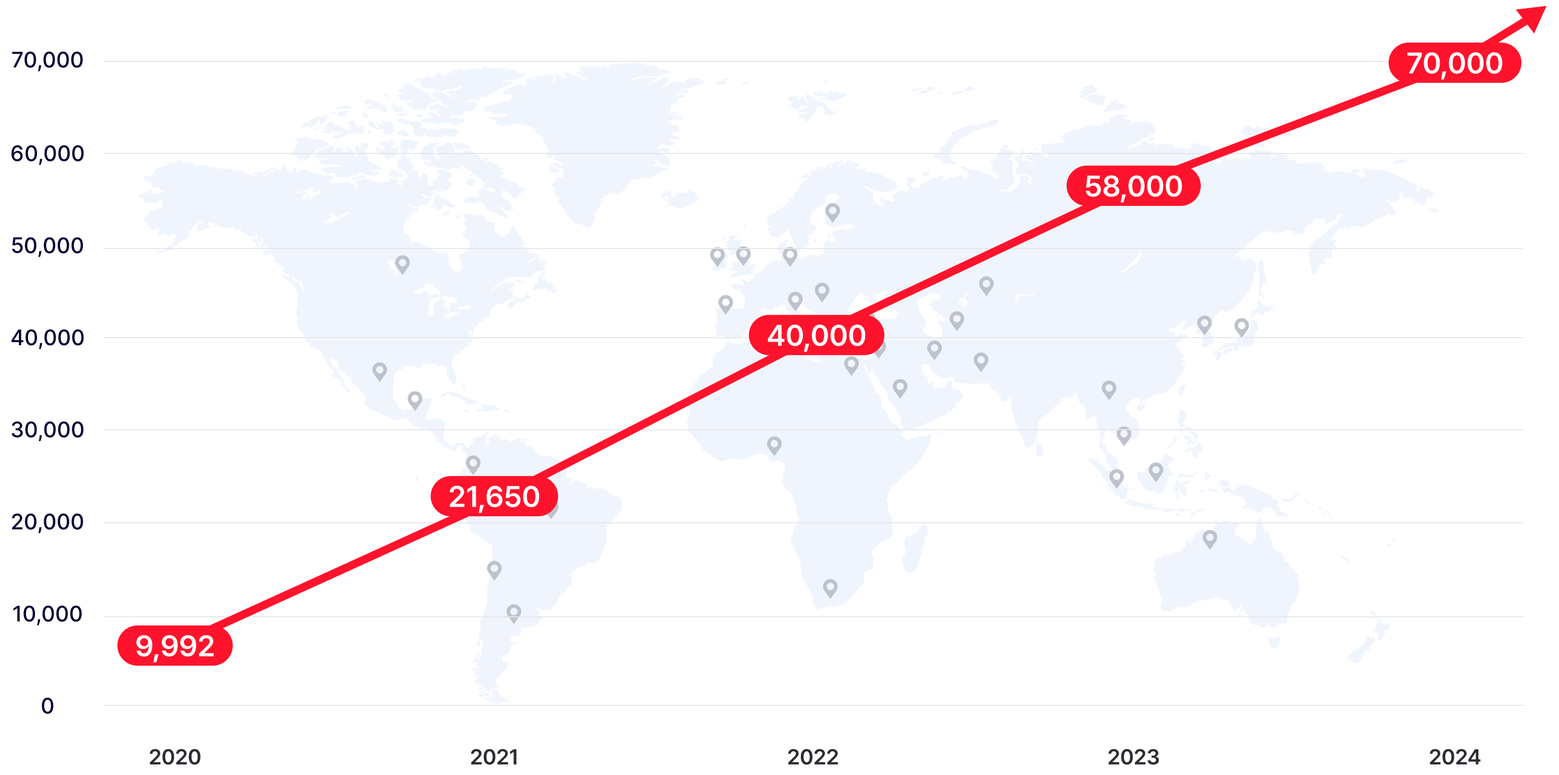
2023
- Apr. Obtained CDPH Laboratory License
- Dec. Data-Based Genetic Testing <3B-INTERPRETER> Launched

2024
- Jul. Participation in non-metropolitan genetic diagnosis support project (KR-RDSP)
- Nov. Listed on KOSDAQ

Rapid Growth of Genomic Database

Since 2020, we have accumulated over 70,000 genomic data entries

Cumulative number of data



National Project

Contributing to the public by participating in national projects

Dr. Answer

Development of intelligent S/W that connects and integrates medical data on 8 major disease areas

- Development of web-based variant diagnostic S/W for patients with hereditary hearing loss and developmental delay
- Selected as Top 12 out of 70,000 national projects in 2020

AI for Children

AI solution for the diagnosis, treatment, and management of pediatric rare disease patients

- Selected as the developer for AI S/W solution for pediatric rare disease patients
- Currently in the development and certification process for diagnostic S/W

국가 통합 바이오 빅데이터 구축 사업
The National Project of Bio Big Data

Establishing a National Genomic Database to predict and diagnose population-specific diseases

- Analysis of 10,000 patients' genomic data (WGS) to produce diagnostic reference reports

Korean Regional Rare Disease Diagnostic
비수도권진단사업(KR-RDSP)

The Korea Centers for Disease Control and Prevention's project to enhance rare disease prognosis through early diagnosis and timely treatment in non-metropolitan areas

- Conduct full-genome tests for suspected rare disease patients in non-metropolitan areas to aid early diagnosis.

Research Achievements

Advancing knowledge of rare disease through continuous research

Publications

111+

Genome analysis

3Cnet: pathogenicity prediction of human variants using multitask learning with evolutionary constraints

Dhong-Gun Won, Dong-Wook Kim, Junwoo Woo and Kyoungyeul Lee

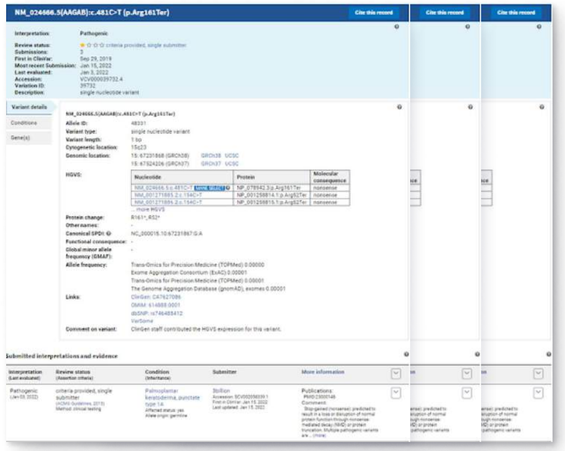
Research and Development Center, 3Billion, Seoul 08590, Republic of Korea

Patents for Filing

38+

Variants Registered

5,800+



Awards and Recognition

Establishing diagnostic capabilities through global competitions

2017

Nov.

Selected as finalist for Fx2017 Startup Award

Jul.

Selected as finalist for Roche's Future X Healthcare 2017 Startup Award

Won the Korean representative selection for the 1776 Challenge Cup global startup competition

Jan.

Won first place at IPMC Precision Medicine Startup Competition

2020

Sep.

Won the Next Unicorn award at ASEAN-Korea Scale Up Competition

2021

Dec.

Selected as tech innovator by Novartis' 2nd Health X-Challenge Seoul

2022

Nov.

Selected as Korean Society of Medical Genetics and Genomics Autumn Conference (Individual) Best Research Award: Excellent Poster Award

Oct.

ASHG Poster selected for Reviewers' Choice

Aug.

Selected as a Top Tech Company of 2022 by Global Data Analysis Company Tracxn (2 consecutive years)

May.

Won in CAGI6, a global AI genomics analysis competition

2024

Nov.

Korea Wins 'Excellent Award' for Venture-Startup Patent

Global Partnerships

Working with over 700 institutions in over 70 countries worldwide

SNUH
SEOUL NATIONAL UNIVERSITY HOSPITAL

CHA UNIVERSITY
BUNDANG MEDICAL CENTER

한양대학교병원
HANYANG UNIVERSITY SEOUL HOSPITAL

SAMSUNG 삼성창원병원

JNUH
제주대학교병원

NEUROLOGIA INFANTIL
HC FMRP USP

RIEM
NAGOYA UNIVERSITY

HKL
HOSPITAL KUALA LUMPUR

Instituto de Oftalmologia
"Fundación Conde de Valenciana IAP"

Clinic for Special Children

UNIFESP
UNIVERSIDADE FEDERAL DE SÃO PAULO
1933

National and Kapodistrian University of Athens
Medical School
Department of Medical Genetics

LohGuanLye
SPECIALISTS CENTRE

UPM
UNIVERSITI PUTRA MALAYSIA

SINGAPORE EYE RESEARCH INSTITUTE

UNIVERSITE DE MONASTIR

ICB
UFG
UNIVERSIDADE FEDERAL DE GOIÁS

Centre Hospitalier Ibn Sina

KOHAT UNIVERSITY OF SCIENCE & TECHNOLOGY
KOUST

H.E.P
HÔPITAL D'ENFANTS RABAT

جامعة بيروت العربية
BEIRUT ARAB UNIVERSITY

UNIVERSITY OF MALAYA

Business Area

We collaborate throughout the entire journey, from the diagnosis of rare diseases to the development of drugs.

3billion provides NGS-based diagnostic services and provides custom diagnostics to pharmaceutical companies to increase patients' access to treatment.

3billion also develops and provides an AI platform for the development of new rare disease therapies.

Diagnostic
Testing Services

Genetic Testing
Support Programs
with Pharma

AI-Driven
Drug Discovery

Business Area

Diagnostic Testing Services

Identify the causative variants of a patient's symptoms with 3billion, using next generation sequencing (NGS)

3billion continues to improve the accuracy of diagnosis by leveraging its diagnostic and AI technology.

3billion also provides lifetime reanalysis at no additional costs to reflect the latest research.

Services

Various coverage options, all for rare disease diagnoses

3B-GENOME

Diagnosis based on **Whole genome sequencing**

Search for disease-causing variants in the entire human genome

3B-EXOME

Diagnosis based on **Whole exome sequencing**

Identify disease-causing variants in exon regions of over 20,000 genes and adjacent regions

3B-VARIANT

Diagnosis based on **Sanger sequencing**

Confirm specific variants found in 3B-EXOME / 3B-GENOME testing and for family testing

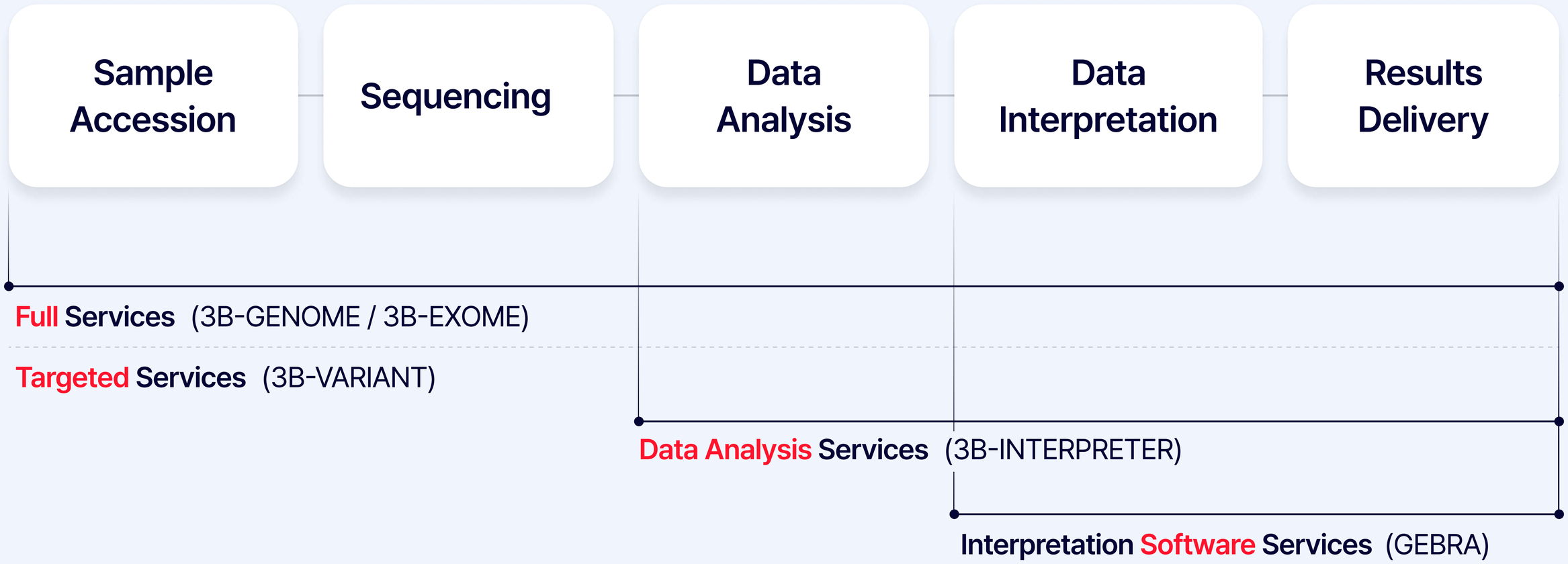
3B-INTERPRETER

Diagnosis based on **FASTQ, VCF Data**

Genomic data analysis and interpretation service

A Wide Range of Services

End-to-end services for rare disease diagnosis



Advanced Diagnostic Technology

Proprietary data analysis technology for diagnosis using AI and big data

EVIDENCE

Examines vast amounts of variant data to prioritize variants of interest

EVIDENCE reduces potential diagnostic biases and the time needed for analysis.

- Daily update of variant database
- Interpretation and classification of 100,000 variants within 1 minute
- Utilization of proprietary genomic database

3Cnet

An AI-based tool for predicting variant pathogenicity

3Cnet predicts the pathogenicity of detected variants by learning from various types of data.

- High sensitivity with a 99.99% accuracy in predicting pathogenicity of variants
- Algorithm minimizes bias through learning from multiple data sets

3ASC

Assists clinical geneticists in diagnosis

Using the information extracted by EVIDENCE, clinical geneticists select final candidates for causative variants associated with symptoms.

- Determines artifacts (data errors due to equipment)
- Includes causative variants within the top 5 results with a 96% success rate

Rare Disease Diagnostics

Reliable Laboratory

Internationally certified laboratory infrastructure, protocols in line with global standards

Accreditation by College of American Pathologists
CAP License # 8750906,
AU-ID# 2052626

Certification by Clinical Laboratory Improvement Amendments
CLIA ID # 99D2274041

MSCB-113
International Information Security Management System (ISMS) Standard Certification
ISO 27001:2022

CDPH(California Department of Public Health)
Clinical and Public Health Laboratory License

Business Area

Genetic Testing Support Programs with Pharma

Identify the most relevant rare disease patient population with 3billion

Since orphan drugs have a small patient population who have difficulties with diagnosis, it can be challenging to recruit patients.

Find the right patients for the right treatment with 3billion.

Genetic Testing Support Programs with Pharma

Service

Helping you find patients who will benefit most from treatment

Genetic Testing Support Programs with Pharma

Collaboration with Global Pharma

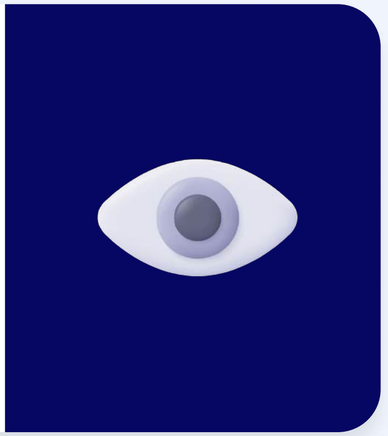
Offering customized genetic testing for certain rare diseases

Support Program for Lysosomal Storage Disorders

3billion is providing accessing to genetic testing to patients suspected with Lysosomal Storage Disorders in collaboration with a global pharmaceutical company.

Support Program for Inherited Retinal Disorders

3billion is providing a joint genetic testing program for patients with inherited retinal disorder with a global pharmaceutical company.

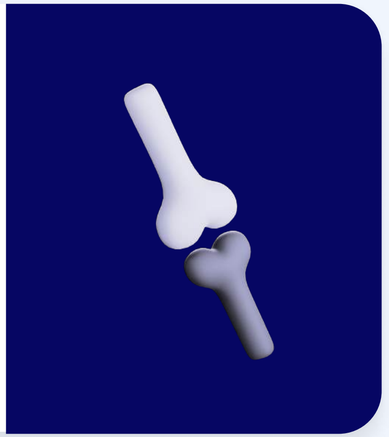


Support Program for Atypical Cerebral Palsy

3billion is providing access to genetic testing for patients with suspected Atypical Cerebral Palsy in collaboration with a global pharmaceutical company.

Support Program for Dysplasia & Seizure

3billion is providing access to genetic testing for patients with suspected Skeletal Dysplasia and Seizure in collaboration with a global pharmaceutical company.



Partner Benefits

A cooperative structure that benefits each stakeholder group

Pharmaceutical Company

Expand access to treatment

Healthcare Provider

Propose genetic testing to patients at no additional cost

Patient

Receive financial support for genetic testing and quickly identify the cause of disease

Business Area

AI-Driven Drug Discovery

Support pharma in developing new orphan drugs using MIN-T, an AI-based drug development technology

3billion’s drug discovery technology meets various demands of pharmaceutical companies, such as target identification, target validation, hit-to-lead, and experimental validation, aiding in new drug development.

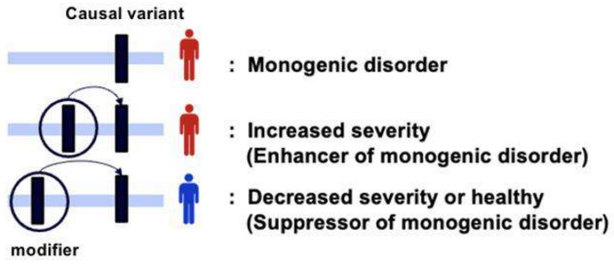
AI-Driven Drug Discovery

Service

Utilizing patient genomic data to discover novel targets and pockets for small molecules so that we can treat the diseases known to be undruggable target

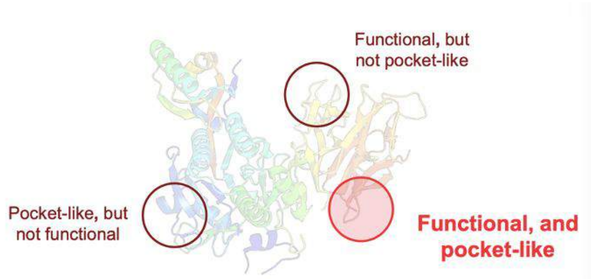
Target Discovery

- Finding modifier gene for the disease using WES/WGS patient data
- Finding unknown GoF mechanism diseases which could be promising targets for SM



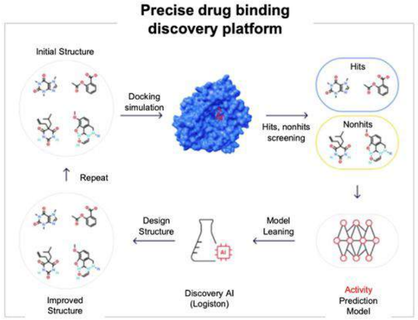
Pocket Discovery

- Find effective pockets even without references based on the variant interpretation
- The active site indicates the site of the protein target which is both functional and pocket-like.



Active Compound Design

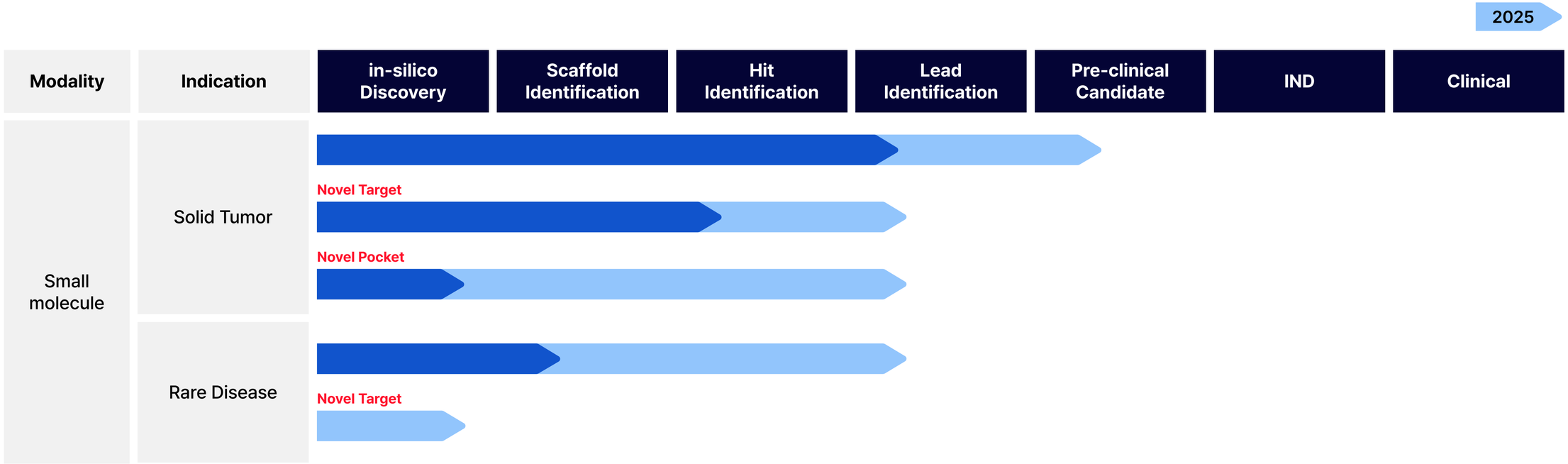
- Reaction based novel compound synthesis and active compound design methods
- Structurally novel but synthesizable compounds generated by AI



AI-Driven Drug Discovery

Drug Development Platform Pipeline

We are utilizing AI to discover leads, currently in the validation stage
In 2025, we aim to expand into lead validation for rare disease drug development



Partner Benefits

A drug discovery structure that benefits all participating groups

Pharmaceutical Company

Significantly reduce time to discovery and costs for drug development

Healthcare Provider

Increase the probability of finding optimal treatment for patients

Patient

Improve chances of accessing treatment more quickly through shorter drug development cycles

We strive to provide end-to-end solution through our Genomic data platform for patients through diagnosis, treatment, prevention

3billion is changing the rare disease diagnostic ecosystem through technology and our passion.

We hope to change the world by applying AI to genomic data to provide the best-in-class diagnostic technology and development of rare disease treatment.

We will create value throughout the patient’s entire journey, including diagnosis, treatment, and prevention, with our genomic platform.

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Last Updated 2025.01.