The Global Leader in Multiplex Molecular Diagnostics

Company Overview



- About Seegene 3
 - Our Mission 5
 - Our Business 7
- High Multiplex MDx Products 8
- All MDx Assays in One Platform 9
 - Doing Less for More 11
 - Company History 12
- Global Reach with Growing Sales Network and Talents 14

We are dreaming of a world without diseases



About Seegene

Seegene tirelessly pursues innovation and takes on new challenges to build a better future for humanity.

With the development of proprietary high multiplex real-time PCR technologies, Seegene has produced and delivered molecular diagnostics (MDx) products capable of detecting multiple targets simultaneously. Seegene's products identify and provide a wide range of clinical information integral to diagnosis and care, enabling healthcare professionals to select the best treatment in the early stages of disease.

Also, by opening a new paradigm of diagnostics in medicine/healthcare, Seegene is playing a vital role in safeguarding humanity from diseases and allowing individuals to lead a healthy life.

Seegene's High Multiplex Real-time PCR Technologies





TOCE™ Technology for multiple target detection



MuDT™ Technology for multiple target real-time analysis

Simultaneous detection of multiple pathogens

Early diagnosis of multiple infections (co-infections by more than one causal treatment to be applied for each causal sponding to patient's condition. pathogen

Precise diagnosis

measure severity based on quantitative single test, allowing appropriate information of infection, supporting treatment regimens in the early stage. pathogen), allowing appropriate healthcare providers in tracking/re-

Timely diagnosis

Confirm certainty of infection as well as
Detect multiple causal pathogens in a

Affordable diagnosis

Cost-effective tests not only improve patient management but also relieve financial burden of healthcare system



Our Mission

Seegene presents a new roadmap for standardization of molecular diagnostics and brings a healthier, better future.

Based on its efforts over the years - high multiplex real-time PCR technology, extensive expertise in product development, and digitalized development system - Seegene aims to build a system that enables any patients to have access to MDx services at hospitals of any size at reasonable costs.

MDx for More Patients and Clinicians



High multiplex MDx technology



Expertise in assay/diagnostics design



Digitalized development system (oligo design, clinical trial, production, QC)



All-in-One platform solution

- Wide range of solutions applicable in diverse markets from clinical diagnostics to basic science research
 - Actionable results for disease prevention and personalized medicine
 - Rapid development of innovative diagnostic products
 - Fast and accurate results within clinically meaningful timeframe

Seegene aims to bring a healthy life for everyone by creating a new diagnostics paradigm

What is molecular diagnostics (MDx)?

Molecular diagnostics (MDx) is the latest in vitro diagnostics that detects causes of disease by analyzing nucleic acids such as DNA and RNA which contain genetic information. Powered by high accuracy and rapid result delivery, this diagnostics is suitable for early diagnosis and holds a strong potential for personalized care.

With high sensitivity and accuracy, molecular diagnostics is used to detect infectious/genetic diseases, and in recent years, it has been widely used to detect MERS, H1N1, and avian influenza infections.



Early Diagnosis



High Accuracy



Rapid Result Delivery



Personalized Care



Cutting-edge Technology



Our Business

As an active and reliable development partner Seegene is expanding its reach of MDx technology not only in diagnostics of human diseases but also in diagnostics of diseases in plants, animals and in contamination/infection of livestock, agricultural products, and seafood.

Seegene is venturing into new areas that include food safety testing and companion diagnostics through technology transfer contracts.

MDx assays*

Viral & Microbial infections



- Respiratory infections
- Gastrointestinal tract infections
- Tuberculosis
- Meningitis

Women's healthcare



- Sexually transmitted infections (STIs)
- Human papillomavirus (HPV)
- Vaginosis
- · MG & Azithromycin resistance
- MG & Moxifloxacin resistance

Drug resistance



- · Vancomycin-resistant enterococci
- · Clarithromycin-resistant H. pylori
- Multi-drug resistant tuberculosis (MDR)
- Extensively drug resistant tuberculosis (XDR)
- · Carbapenem-resistant enterobacteriaceae (CRE)
- Extended-spectrum beta-lactamases (ESBLs)
- MRSA

Oncology & SNP



- BRAF V600F
- Thrombosis
- ApoE
- · Leukemia (e.g. BCR-ABL)

Oligo and RUO reagents



Sepsis

Trofical fever

Thalassemia

Tick borne

- For basic research in life science, medical science, and healthcare supplies (illnesses in animal and plant)
- Inspection of livestock, food hygiene, agricultural products, and seafood
- $\boldsymbol{\cdot}$ Breed inspection and confirmation of descent/bloodline

Collaborative development



- Development of products to be applied on various diagnostic instruments
- Customized multiplex MDx products

Development and licensing of new technologies



- · IVD/RUO assay manufacturing technologies
- · Licensing: food safety testing, companion diagnostics, etc.
- Development of digital oligo design program (in silico system)

^{*} Product availability is based on timing of each country's relevant regulatory submission and approval, and not all tests are available in all countries.

Not Available for Sale in the United States.

High Multiplex MDx Products

Seegene's high multiplex assays deliver comprehensive clinical information in a single test and allows accurate and rapid diagnosis

Seegene's product pipeline

Respiratory infection	APOE*			
Gastrointestinal tract infection	CYP2C19*			
Sexually transmitted infection	EGFR*			
Bacterial vaginosis	KRAS*			
Human papillomavirus	BRAF*			
Mycobacterium tuberculosis	HBV Lami-R*			
Non-tuberculosis mycobacteria	HBV Ente-R*			
Thrombosis	Aerobic Vaginitis*			
Meningitis	Dermatophyte*			
Leukemia	Transplantation*			
MDR-TB/XDR-TB	Bacterial DR 6 panels*			
Entero-DR	MRSA*			
Vaginosis Screening	MG & AziR			
Vancomycin-resistant enterococci	MG & MoxiR*	MG & MoxiR*		
Clarithromycin-resistant H. pylori	Tropical Fever	Tropical Fever		
Lyme&Tick-borne*	Blood infection*			

* in development

Seegene's production system is certified by ISO9001 and ISO13485 and effectively supports product quality and manufacturing consistency. Seegene maintains the quality control of products and registers products in compliance to appropriate quality system requirement and country-specific regulations such as CE-IVD, Health Canada and Korean MFDS.

Product timeline

(The number of newly launched products)

+73	+77	+38	+40	+69
Products	Products	Products	Products	Products
2000~2005	~2009	~2014	~2016	

Products for gene research (animals, plants, humans, etc.)

High-multiplex PCR diagnostic products

High-multiplex real-time PCR diagnostic products

One-channel multiplexing real-time PCR products for diagnostic/research use



Digitalized Development System

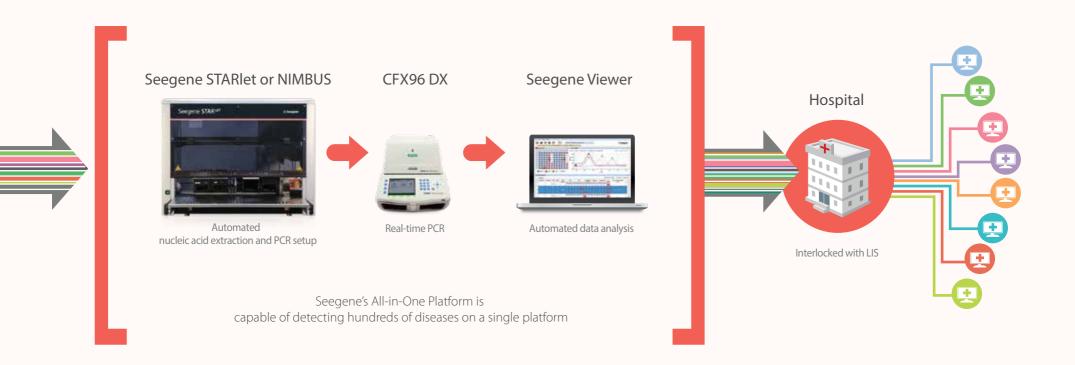
With diversified MDx built on end-to-end digitalized development processes, Seegene aims to deliver high-quality healthcare products and service.

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All MDx Assays in One Platform

Seegene's All-in-One Platform is a unique streamlined automation solution and comprehensive MDx testing system that covers infectious diseases, women's health, personalized medicine and etc.

The platform allows MDx to be widely used for fact-based decision making within clinically meaningful timeframe.



Less labor and space, but high productivity

- · Minimal labor required by running multiple assays simultaneously on Seegene's All-in-One Platform
- · Minimum hands-on time & no manual pipetting
- · Compact-sized instruments requiring less lab space

Cost-effective system

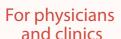
- Seegene's multiplex assay can reduce the number of singleplex tests
- Various assays can be performed in one platform system with no need to purchase additional instruments.



Doing Less for More

Seegene's technology leads to effective treatment.





- Timely care in early stages of illnesses thanks to detection of multiple pathogens in a single test
- Support in selecting the best care for each casual pathogen





For technicians and clinical labs

- Increased efficiency thanks to ability to test multiple pathogens in a single test
- Early and prompt treatment for critically ill patients by preventing delays in diagnosis

For patients

- Reliable treatment based on the most accurate prescription for each causal pathogen
- Effective illness prevention and medical cost savings thanks to accurate, early diagnosis



tients For basic life science researchers

- Development of novel medications ideally suited to patients' needs
- Diverse applications in the development of products for diagnostic and research purposes



For governments

- Rapid diagnoses of infectious diseases newly/epidemically spreading and reinforced national preventive measures
- Improvement of healthcare management with limited sources

2014

- Developed MuDT[™] technology
- Established a subsidiary in UAE
- Established a subsidiary in Italy

2015

- Awarded the 2015 South Korea In-Vitro Diagnostics Company of the Year (Frost & Sullivan)
- Established a subsidiary in USA
- Established a subsidiary in Canada

2013

 Selected as official 'World class product of KOREA'



2001

Company History

• Developed ACP™ technology Selected as a KIBO A+ Members Company (Korea Technology Finance Corporation)

2005

Developed DPO™ technology

2000

• Established in Seoul, Republic of Korea

2007

• Obtained ISO 13485: 2003 certification (Europe, BSI)

2008

- Awarded North American Infectious Disease Testing Healthcare Innovation Award (Frost & Sullivan)
- Obtained ISO 13485_CMDCAS certification (Canada, BSI)

2016

- Established Biodist-Seegene Diagnostics in Mexico, a joint venture with Biodist Group
- Launched SG Oligo designing system
- Awarded the 2016 South Korea In-Vitro Diagnostics Company of the Year (Frost & Sullivan)

2017

- Establish a subsidiary -Seegene Germany GmbH -in Germany
- Develop New Normalization Software Technology for molecular diagnosis

2018

 First successful development of molecular diagnosis reagents using SGDDS







2011

- Developed TOCE™ technology
- Obtained KGMP certification (MFDS)

2009

- Selected as official 'World class product of KOREA'
- Selected as one of the world's top 30 companies manufacturing MDx products for infections (Research and Markets)
- Approved for HT Certification by the Ministry of Health and Welfare of Korea

2010

- Listed on the KOSDAQ stock exchange
- Awarded the President's prize for Technology Innovation (SMBA)
- Established a branch office in Germany

2012

 Awarded the Executive of the Year as a Gold Stevie winner (The International Business Awards)

Global Reach with Growing Sales Network and Talents

Seegene has established global sales networks covering more than 60 countries around the world, and 6 overseas subsidiaries in North and South America, Europe and the Middle East that drive and support Seegene's global business operation. Seegene strives to satisfy customers in all these regions by listening and responding to their needs enthusiastically in a timely manner.

HEADQUARTERS

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SUBSIDIARIES

- · Seegene Germany GmbH
- Seegene TECHNOLOGIES Inc. (U.S.A)
- Seegene CANADA Inc.
- Seegene MIDDLE EAST
- Seegene MEXICO
- Seegene BRAZIL

EUROPE

- Italy
- Austria
- Belgium
- Bulgaria
- Czech Republic Denmark
- Estonia
- Lithuania Finland Macedonia
- Greece Hungary

France

Ireland

Latvia

Germany

- Poland
- Norway Portugal

Netherlands

- Romania Slovenia
- Slovakia Spain

Guatemala

Venezuela

Peru

- Sweden
- Switzerland
- Turkey Ukraine
- United Kingdom
- Uzbekistan
- - - Japan

ASIA

- Republic of Korea
- Bangladesh
- China
- Hong Kong India
- Indonesia
- Pakistan

 - Vietnam

AMERICA

- USA
- Chile Colombia
- Mexico Bolivia
- Brazil Canada
- · Costa Rica Ecuador El Salvador

OCEANIA

- Australia
- UAE Algeria
 - Egypt
 - Iran Israel
- Kenva

MIDDLE-EAST/ AFRICA

- Kuwait
 - Lebanon Nigeria

Philippines

Malaysia

Mongolia

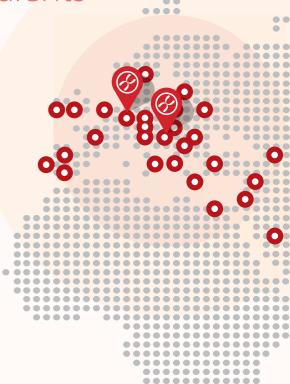
Singapore

Sri Lanka

Thailand

Taiwan

- Oatar Saudi Arabia
- · South Africa



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