GENEX

GENEX, Inc.
ARK Mori Building 25F
1-12-32 Akasaka, Minato-ku, Tokyo 107-6025, Japan
TEL: +81-70-2490-8411 | FAX: +81-3-4323-4052
https://genex.co.jp | support@genex.co.jp

FOR IMMEDIATE RELEASE:

GENEX redefines the genetic analysis landscape with cutting-edge whole-genome molecular testing services

TOKYO, April 4, 2024 – GENEX, Inc. (headquarters: Tokyo; Representative Directors and Co-CEOs: Ken Yagi, Atsushi Iida; hereinafter, GENEX) is pleased to announce that GENEX's Whole-Genome Test, which was launched in December 2022, was rebranded and a new product called GENEX's Genome Test Entry, which focuses on the analysis of specific important genetic regions, has been introduced.

Service features

1. Utilizing an overwhelming volume of data, the test examines all of approximately 20,000 genes at one time. We deliver the benefits of technology to as many people as possible.
2. The test allows users to discover any predispositions to hereditary cancers or rare diseases. It is their choice what information they wish to learn—it is the users' decision.
3. The genome remains the same throughout life, yet the associated knowledge evolves daily. In an easy and safe manner, we facilitate users in obtaining their genomic data as an asset.

Genetic testing is effective for risk assessment, detailed classification and prognosis prediction of genetically influenced diseases. Modern genetic testing technology facilitates gene panel tests, which examine multiple target genes, as well as exome tests and whole genome tests, both of which examine all genes at once.[*1] However, there have been strong concerns that without proper knowledge, genetic information can lead to discrimination and prejudice that may affect not only the person in question, but family members as well. In addition, the number of physicians and medical institutions able to provide pre- and post-testing counseling is limited. Given its sheer volume and specialized nature, the information is difficult to interpret scientifically and accurately. With high test costs and the challenges in managing sensitive information, non-medical private companies have found this a difficult field to enter.

In anticipation of advancements in the establishment of anti-discrimination measures and counseling support following the enactment of the Genome Medicine Promotion Act[*2], GENEX provides expanded services with the aforementioned features to deliver the benefits of genomic analysis technology to as many people as possible. GENEX's Genome Test Entry (29,800 yen before tax, 32,780 yen after tax) examines 60 million

base pairs, which is equivalent to 10 to 100 times more than conventional genetic tests and covers all important regions of human genes. The GENEX's Genome Test Standard (59,800 yen before tax, 65,780 yen after tax) goes 50 times beyond that to examine 3 billion base pairs, which covers the whole genome (see diagram). As of March 29 2024, based on a GENEX survey, there have been no instances of domestic private companies in Japan adopting exome analysis used in our "Entry" Test, excluding medical institutions, universities and research institutions.

	Industry's highest standards by GENEX		
	"Standard"	"Entry"	Other tests
Regions covered	5,000x more = 3000M base pairs 	100x more = 60M base pairs 	0.6M base pairs 
Diseases covered	100x more = 10,000 disease entries		100 disease entries
Characteristics	- Examines the whole genome. - Detects all areas that differ from the reference sequences and reports which are related to disease. - Provides the benefits of the latest research findings that may not be available in the "Entry" Test.	- Examines the exome with a focus on protein-coding regions. - Detects all areas that differ from the reference sequences and reports which are related to disease. - Captures many of the most important mutations while being highly cost effective.	- Examines pre-specified positions, about 0.02% of the whole genome. - Estimates the statistical probability and disposition of disease based on the sequence combinations. - Why a particular sequence contributes to disease is unknown in many cases.

These services were developed guided by our corporate mission to help individuals own, leverage and act upon any data about themselves, and thus are designed to meet the needs of those who wish to know more information. After the test, each user will receive a personalized report that reflects his or her individual genes. Special explanations prepared for each user will be given for genetic changes that should be noted in particular from the viewpoint of prevention, diagnosis and treatment. These explanations are based on highly reliable databases that are referenced and contributed by researchers worldwide, and we break down technical verbiage to present valuable information in an easy-to-understand manner. Our explanations clarify how the results relate to disease and their potential impact on family members, which we believe facilitate further delivery of medical care. Let us also note that, in consideration of users' right to remain uninformed, and recognizing that the test may reveal sensitive results such as predispositions to hereditary cancers or rare diseases, we respect all customer requests upon purchase to limit the results they receive.

These tests provide a valuable asset in the form of genomic data. The genome is often described as "the blueprint of life" and remains unchanged throughout a person's lifetime. However, our understanding and the significance of the genome are updated daily. Even if the "A>T" alteration found in the test has unclear significance today, it may be the subject of a report next year. Moreover, if the "A>T" alteration is found to be extremely rare and the user possess it, he or she may be invited to participate in research studies. GENEX's genome tests serve as the gateway for individuals to invest in and manage their genomic assets, fostering a foundation of knowledge.

For information about GENEX's genome tests: https://genex.co.jp/lp/

Since our first product launch back in December 2022 (*past press release 1), GENEX has been committed to earnestly delivering reliable information and engaging in product development.*3 Assisting panel sequencing for rare intractable diseases has been one of such efforts (*past press release 2; Japanese only). The provision of this new service represents GENEX's next endeavor to contribute our accumulated technology and know-how to society at large.

Explanation of terms and supplemental information

*1 The exome and the whole genome

In the process of synthesizing proteins from human genetic DNA, DNA is initially transcribed into RNA to create primary transcripts (pre-mRNAs), which undergo splicing and other processing to become mature mRNAs. These mature mRNAs are then translated into proteins. The segments removed during splicing are referred to as introns, while the remaining segments are called exons.

The exome refers to the entirety of exons, which as a whole is said to constitute about 2% of the approximately 3 billion bases (A, G, T and C) of the entire genome. While there are many exons that are not translated into proteins, in the context of genomic analysis, the term is often conventionally used interchangeably with "all regions translated into proteins" or "gene coding regions." Because protein-coding exonic regions tend to have important functions, variations in these regions are often considered to be associated with the development of diseases.

*2 Genome Medicine Promotion Act

Enacted in June 2023 as a Nonpartisan Parliamentary Association legislation, the act calls for the comprehensive and systematic promotion of measures to ensure that citizens receive high-quality, appropriate and reliable genomic medicine services. It is essentially a conceptual law, and discussions are currently underway to formulate a national basic plan based on it. GENEX believes that with this law, education about genetics and genetic outpatient services will expand and evolve, leading to greater societal acceptance of diversity.

*3 History behind GENEX's genome testing services

The currently available GENEX's Whole-Genome Test examines the sequences of all of approximately 3 billion A, G, T and C bases contained in DNA to detect millions of genetic variations that all individuals have. The saliva test is easy and can be performed anytime, anywhere. While being affordably priced for individuals, the test provides a detailed report of all characteristic base sequences that specialists consider possibly disease related.

GENEX's Genome Test Standard provides the same level of service as GENEX's Whole-Genome Test with the addition of the latest version of our original analytical algorithm and an update of our database.

GENEX's Genome Test Entry is limited to the exome (2% of the whole genome) but is otherwise similar to the Standard test.

Unlike blood, imaging and other types of tests, our genome tests do not examine the body's current state to discover signs of disease. And because these genetic tests are designed for consumers, they cannot be used as tests for diagnostic or medical examination purposes.

While the Standard test can detect more genetic changes than the Entry test, our experience suggests that the Entry test can detect about 80% of the genetic changes when the test focus is limited to important areas. It

should be noted, however, that there can be significant variations from individual to individual, and the figures could change as more information about intronic and intergenic regions becomes available in the future.

About GENEX, Inc.

GENEX plans and operates genome and healthcare-related data platforms. The company was established in August 2019 as a start up with Monex Group, Inc., TAUNS Laboratories, Inc., Sugi Holdings, Co., Ltd., Kaken Pharmaceutical Co., Ltd., TIS, Inc., and others as shareholders.

Past press releases

1. “GENEX begins whole-genome molecular testing service for people concerned about rare, intractable “*Nanbyo*” diseases” https://genex.co.jp/pdf/press20221222_en.pdf
2. “GENEX supports panel sequencing for analyzing mitochondrial diseases with its software” (Japanese only) https://genex.co.jp/pdf/press20231211.pdf

---

###