

THE INNOVATION LEADER







1983~1994

EONE Test Center is established
Obtained license for the use of radio isotopes
Joined the Korean Association of External
Quality Assessment Service
Joined the Quality Assessment Association
of IAEA

Medical Corporation EONE Laboratories Established

Joined the National Committee for Clinic Laboratory System(NCCLS) Designated as the official institution for testing inborn errors of metabolism

#### 1995~2001

Joined the Korean Society for Cytopathology Joined the Quality Assurance Program of Japanese

Certified as an official institution for outsourced testing of clinical pathology (Certified as a test Lab of excellence)
Outsourced testing of anatomical pathology
Developed Laboratory Information System
Carried out quality assessment on the tests for inborn errors of metabolism (Korean population, health and welfare Association)

Moved to new corporate neadquarters in Noryangjin-Dong, Seoul Technological alliance with Korea Genetics Research Center Acquired certification for ISO 9001:2000 Joined Asia Association of Quality Assessment Recognized as an official institution for genetic testing(Ministry of Health and Welfare)

Selected as most outstanding testing institution for seven types of tests for the BNIBT RIA Kit

Signed an agreement with Mayo Medical Laboratory(MML) in the U.S.A.
Strategic alliance with UB Care Co., Ltd.
(for commitissioned testing connection services with EMR)

Conducted quality assessment on the CAP(College of American Pathologists) survey of U.S.A.
Adopted an automatic system for test labs (Lab.Cell System, Bayer, USA)
Obtained NGSP Level. 1
Obtained CAP(College of America Pathology)
Laboratory Accreditation Program(Certified for all categories, a first in Korea) certificate



#### By constantly rising to the challenge, EONE Laboratories aims to become a major player in Korea and beyond.

Every step that EONE Laboratories have taken has contributed to major progress in healthcare system in Korea. EONE remains committed to achieving better results.

EONE Laboratories was established in 1983 with the belief that only when the medical field in Korea is specialized to match the economic progress made in Korean society can patients be offered accurate diagnosis and treatment. EONE has thus adopted the latest technologies and equipment in general testing, genomics, molecular diagnosis and special chemistry to establish a specialized testing system on a larger scale.

Of particular note is the automated testing system that is upgraded annually to become one of Korea's best. Cutting-edge equipment is added to each lab, while test-related data are shared across the organization through an IT system for more efficient work processes that improve the accuracy and promptness.

Quality assessments are thoroughly carried out based on the accreditation from CAP and CDC of the U.S.A., and a one-stop-shop medical IT system offering a seamless process from reception of cases to notification of results ensure high reliability for healthcare workers.

I, along with all of the staff at EONE Laboratories, will guard against falling into any complacency and will always look to the continued progress of the company. We will continue to transform EONE Laboratories into a global leader that serves as a proper platform for a new era of healthcare 4.0 by incorporating Big Data, AI and genomics.

I thank you for your continued interest in and support for EONE Laboratories.

lee dug-goo

President of EONE Laboratories



#### We will chart a new course for future medicine by drawing on our passion and continuing to rise to challenges

EONE Laboratories are committed to playing a major role in an era of medicine 4.0, by combining cutting-edge information technology, Big Data, Al and genomics.

### Steps towards innovation that started with a small change

EONE has worked hard over the years to upgrade test-related work to an automated and digitized system which is updated annually. The system is now recognized both at home and abroad as one of the very best in Asia.

#### **Automation & Digital**

The automated system of EONE has become one of Korea's largest of its kind, thanks to its annual upgrades. The dedicated IT programs linked to the system are able to produce statistical data in real time on a dashboard for each test lab. The test labs can take in an overall view of the tests underway and their progress in real time, which allows them to optimize workflow and cope with emergency testing, too. With such an automated and digitized system, EONE aims to create a future-oriented testing environment that will improve the accuracy of diagnosis and cater to a wider range of analytical needs.



#### A real-time test monitoring system

A large dashboard dedicated to each test lab offers a bird's eye view of the tests received and being worked on.



#### One of Asia's largest automated systems (TLA, Total Laboratory Automation)

The entire process from reception of the specimen to its separation, transport, testing and storage, is tracked in real time to provide prompt yet accurate results.



#### One of Korea's first and largest automated entry and release system for specimen

Specimens that have completed testing are stored in a stable environment within the automated entry and release system. If re-testing or additional testing is needed, the relevant specimen is quickly identified to progress forward with.

# Time-Saving Service More services offered for overnight testing

- One of the broadest range of tests offered among outsourced testing institutions in Korea
- Prompt and accurate diagnosis on over 540 test items
- 24 hr Running system

Prompt patient treatment is possible thanks to major tests being carried out overnight.

7 days

Customer service

The result of a variety of tests, including tests for allergy and infectious diseases, can be received the following morning.

#### Al(Artificial Intelligence)

With technological progress, Al is now applied in almost all walks of life. EONE Laboratories are one of the first testing institutions to adopt an Al robot in the test labs to carry out simple, repetitive tasks such as emergency transport of specimen. This helps relieve the workload of specialized personnel in the labs so they can focus on the tasks that matter. The robots currently in operation leverage a patented technology and are free to roam through the test labs and even board elevators. They are expected to play an even larger role in the future for the test center.







#### Al robots adopted by EONE Laboratories

The Al robots adopted by EONE Laboratories are free to roam on the premises to collect and transport emergency specimen.



#### Negative pressure room

With a larger negative pressure room for infectious specimen, EONE Laboratories are able to carry out mass testing.





#### The first and largest automated entry and release system for specimens in Korea

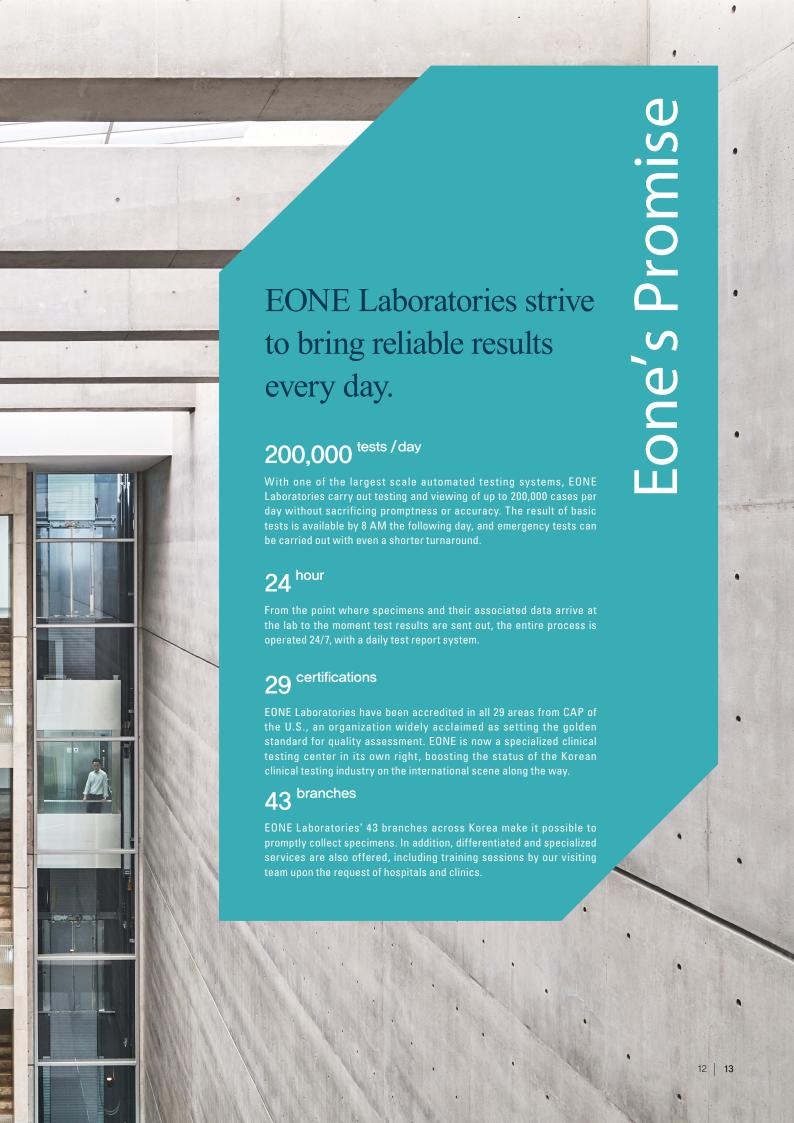
Once the tests are conducted, the specimens are stored safely via the automated entry and release system, which makes it easier, prompter and more accurate in identifying a specific specimen if re-testing or additional testing is needed.

#### Large scale

Located in Songdo, EONE Laboratories represent not just a cluster of testing equipment but a specially designed clinical testing center where the HVAC system (e.g. air pressure, strength of air, temperature and humidity) can be adjusted for each individual lab for most optimal testing.

The equipment at EONE Laboratories undergo annual upgrading to ensure optimized testing environments and accurate yet prompt test results. Since the COVID-19 pandemic, the Laboratories have also installed a negative pressure room to safely conduct large-scale testing in case another pandemic breaks out.





# Certifications

EONE's thorough quality assessment is now made more thorough with global accreditation

EONE Laboratories are the first institution in Korea to be accredited for 29 areas by CAP of the U.S. The Laboratories have also been officially recognized by LABORATORY MEDICINE FOUNDATION as an outstanding clinical laboratories testing lab.

Standardized tests ensure quality at EONE, which in turn improves the reliability of the diagnostic services. EONE Laboratories have standardized the entire process from the collection of specimens to the reporting of results to provide accurate and prompt test reporting. Continuous efforts to improve the quality of testing has led to EONE taking part in quality assessment and accreditation initiatives both at home and abroad, which is testament to the excellence of EONE as a test lab.

In addition to the accreditation from Korean organizations such as the Korean Society for Laboratory Medicine, the Korean Association of External Quality Assessment Service, Korean Institute of Genetic Testing Evaluation, the Korean Society of Pathologists and the Korean Society of Nuclear Medicine, EONE Laboratories have also received accreditation from international organizations including CAP, NGSP, G-EQUAS and CDC.







CAP



NGSP





IQNET



CDC-NSQAP

Certification of accreditation as an outsourced diagnostic testing institution





Accreditations as an outsourced diagnostic testing institution



Accreditations as an outsourced medical testing institution (survey on reliability)



Certification as an outstanding testing lab



Certification as an outsourced institution for the pathology department



Certification as an institution for quality assessment of the pathology department



Certification of quality for genetic testing institutions



Certification as an outsourced institution for nuclear medicine tests

## An automated test system that promises promptness and accuracy

EONE Laboratories, with one of the largest scale of automated testing systems in Asia, are able to accurately process over 200,000 tests per day.

By adopting the latest technologies for the entire process of automation for the pre-treatment of specimens to the storage of specimens, EONE Laboratories has established one of the largest automated systems for testing in Korea. This has significantly reduced the turnaround time for testing and maximized efficiency. For overnight tests, in particular, the results are delivered by 8 AM the following day to facilitate prompt diagnosis. Automation of the entire process also helps prevent errors in testing.



One of the largest automated testing systems in Korea

A quick, one-day turnaround for testing

A quick and accurate interpretatio<u>n</u> system run by medical doctors

Largest number of tests per day conducted in Korea

**Latest testing** methodologies and items are applied for analysis



#### **Clinical chemistry tests**

A variety of chemical substances are detected and analyzed from specimens such as blood, urine or body fluids. The latest automated chemical analysis equipment and strict quality assurance at EONE ensure prompt and precise results.

Liver function | Kidney function | Electrolytes | Diabetes | Lipids | Therapeutic drug monitoring | Special chemistry



#### Urine chemistry test

The urine chemistry test assesses the physical and chemical profile of the urine and uses a microscope to diagnose diseases in the kidneys or the urinary path, as well as endocrine disorders or systemic illnesses. EONE Laboratories have brought in a fully automated and integrated urine testing equipment to provide reliable results.

General urinalysis | Urine microscopy test



#### **Immunological tests**

A small amount of specimen and an antigenantibody reaction are used to conduct tests on quantitative hormone levels, tumor markers and serological tests for infectious diseases. The fully automated system in the testing lab complete most of the tests, with the results reported by 8 AM the following day.

Hormone tests | Viral serology tests | Serologic markers for infectious diseases | Tumor markers

## Fast and accurate results, thanks to a testing system run 24/7

Blood tests, as well as cytogenetic tests are some of the most fundamental tests needed to diagnose and treat illnesses. EONE Laboratories' cutting-edge automation technology further shorten the turnaround and improve the accuracy of these tests.

EONE Laboratories carry out tests 24/7. The quick turnaround in blood tests and cytogenetic tests, in particular, is helpful with diagnosis. The blood department receives requests for tests through its fully automated system that is connected with the automatic blood counter and the automated slide stainer. Over 1,000 tests per hour are conducted with high accuracy. The A1C tests conducted at EONE Laboratories, in particular, maintain an NGSP level 1 which is an internationally recognized accreditation indicating accuracy.



#### **Blood tests**

The diagnostic blood test department conducts essential tests needed to diagnose blood diseases such as anemia and blood tumors. The tests include those related to blood coagulation and transfusion.

Diagnostic hematology test | Blood coagulation test | Tests for blood transfusion







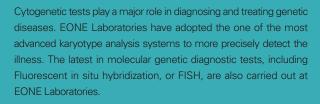


#### **Cytogenetic tests**

Chromosome karyotypes are analyzed from the blood, amniotic fluid and tissue to diagnose congenital genetic diseases such as Down Syndrome or acquired genetic diseases in blood tumors.

Chromosomes (blood, amniotic fluid, bone marrow, etc.) | FISH







#### Microorganisms are cultured, extracted and analyzed to quickly provide diagnosis of infectious diseases

Microorganism tests identify and analyze bacteria, fungi, viruses and parasites that cause infectious diseases.

The microorganism department at EONE Laboratories adopted MALDI-TOF for a more accurate analysis and quicker turnaround. The Laboratories have specialized in pathological bacteria tests and tuberculosis tests, in particular, have installed negative pressure facilities that block out all sources of infection to increase the stability and accuracy of the tests.

In addition, the various tests on pathogens and anti-bacterial sensitivity are reported in accordance with the guidelines of the CLSI (Clinical Laboratory Standards Institute) so they can be applied to patient treatment and also infection management at hospitals.

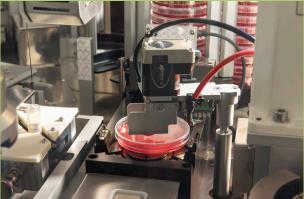


#### Microbiology tests

With the goal of accurate and timely diagnosis and treatment of patients for each infectious disease, EONE Laboratories handle the culturing of microorganisms, status tests and anti-bacterial tests. To ensure safety of the testing rooms and prevent the contamination of specimens, negative pressure facilities, exclusive ventilation systems and double doors have been installed in a space separate from the rest of the Laboratories' premises.

 $General\ microorganism\ test\ |\ Virus\ culture\ test\ |\ Tuberculosis\ culture\ and\ status\ test\ |\ Fungi\ test\ |\ Parasite\ test\ |\ Parasi$ 





#### **WASP(Walk Away Specimen Process)**

WASP is a system that automates the reception and processing of specimens to increase the safety of the tester and shorten the turnaround time by standardizing how the specimens are received. This helps upgrade the quality of diagnostic services offered for infectious diseases.





#### Negative pressure test lab for tuberculosis cultures

Testing for tuberculosis or other viral diseases that are considered highly infectious is conducted in a separate negative pressure test lab to prevent contamination while producing accurate test results. The large monitor allows for real-time monitoring of progress.



#### **MALDI-TOF** mass spectometers

With one of the highest number of MALDI-TOF mass spectometers in Korea, EONE Laboratories are able to carry out analyses using the latest methods to provide an accurate overview of microorganisms within a short turnaround.

# Special tests offered with the expertise of EONE Laboratories that open up new frontiers in testing

With a wealth of experience and adoption of the latest technologies, EONE Laboratories offer a wide range of specialized tests. The high expertise of EONE allows the institution to foray into new frontiers when it comes to testing.

A variety of new attempts are made in the field of diagnostic testing as technology progresses to improve the quality of the tests. EONE Laboratories' special tests focus on the identification of the root cause of various diseases commonly found in those leading busy, contemporary lives.



#### Special chemistry tests

Tandem mass spectometers are used to detect inborn errors of metabolism, analyze amino acids, organic acids and heavy metals in the body, carry out protein fractionation, analyze isoenzymes, and detect any congenital anomalies in the fetus.

Metabolome analysis | Heavy metal analysis | Prenatal examination | Electrophoresis





#### Special immunological tests

The antigen-antibody reaction in the specimens of blood or body fluid is used to carry out a variety of special immunological tests, including tests for autoimmune diseases, latent tuberculosis and allergy panels.

Latent tuberculosis test | Auto-antibody test | Korean allergy panel test

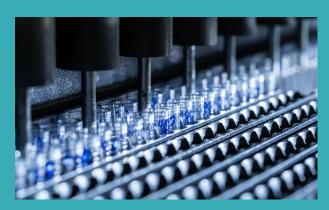




#### Flow cytometry

Anti-Aquaporin 4 IgG Antibody (NMO Ab) test which is used for the lymphocyte subset test, anti-platelet antibody test, PNH test, and the diagnosis and follow-up observation of neuromyelitis optica, is carried out at EONE Laboratories through flow cytometry.

Lymphocyte subset test | PNH test | Anti-platelet antibody test | Aquaporin-4 Antibody test



#### **Nuclear medicine tests**

EONE Laboratories were the first institution in Korea to conduct nuclear medicine tests, and have been offering a wide range of tests in the category, including diagnostic tests for the endocrine system, using antigen-antibody reactions marked by isotopes. With a dedicated personnel for radiation safety and highly trained staff, EONE Laboratories ensure thorough management of the tests' quality.

Hormone test | Tumor markers | Special tests for thyroid diseases

#### A molecular diagnostic system that meets the standards for NGS (next-generation genome sequencing) ensures accurate test results with a quick turnaround time.

By developing genetic panel tests based on next-generation genome sequencing, EONE Laboratories are able to offer early diagnosis of diseases that are difficult to treat, thereby contributing to more tailored oncological treatments with greater efficacy.

EONE Laboratories have been a leader in the field of clinical testing and is also approved as an institution to carry out NGS panel tests that will play a key role in precision medicine in the future. EONE Laboratories are equipped to conduct tests on all three areas of solid tumors, blood tumors and genetic diseases. Combined with some of the most highly skilled personnel and the latest automated systems, EONE offers quick and precise results. The clinical data that the Laboratories have accumulated over the years are also used to develop new testing methods.



#### Molecular diagnostic tests

With specialized facilities, most cutting-edge analysis equipment and highly skilled specialists, the molecular diagnostic testing lab at EONE Laboratories carry out tests on various infectious diseases, genetic diseases and tumors. Accurate results of the tests are offered to clients with a quick turnaround.

PCR | Real-Time PCR | Sequencing | Next-Generation Sequencing





#### **Real-Time PCR**

A number of real-time PCR equipment at EONE Laboratories allow for prompt reporting of the test results. The entire testing process, from the extraction of the nucleic acid to its amplification and analysis, is automated through an equipment that boasts one of the largest capacities in the field. Accurate results of tests for HBV, HCV, and HIV are made promptly available.





#### **Genome sequencing**

With a number of equipment for Sanger Sequencing and NGS, EONE is able to offer genome sequencing on a targeted site as well as massscale genome sequencing.



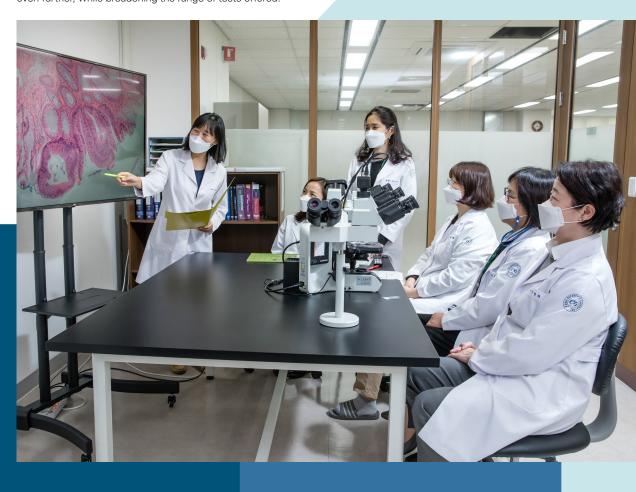
#### **Negative pressure room**

The large negative pressure room ensures the safety of the tester during the processing of a large amount of specimens and prevent cross-contamination.

# The Pathology Department on the frontlines of identifying the true nature of diseases and possible cures.

Pathologists with expertise in their respective fields working in the Pathology Department of EONE Laboratories offer accurate diagnosis and present the correct course for treatment.

Highly specialized pathologists, internationally certified cytotechnologists who and pathology technologists working in EONE's Pathology Department ensure more accurate analysis and interpretation. A dedicated hotline for the Department has also been set up to meet the needs of hospitals, too. The Department has been awarded a KSP Grade A certification for five consecutive years, and is now working on shortening the turnaround time even further, while broadening the range of tests offered.



A process for accurate diagnosis

A standardized

tandardized workflow system t Continued quality managemen

Expertise in immunology and molecular pathology





#### Cytopathology

Cells or body fluids from sites suspected of having grown cancer cells are harvested to have the nucleus and the cytoplasm stained, to detect whether there are cancer cells. The production of slides is automated for higher accuracy in the test results.

Conventional pap | Liquid-based cytology | Non-Gy cytology



#### Histopathology

Specimens harvested from the tissue of a variety of organs are observed by the naked eye to verify lesions. They are then made into slides for the pathologist to observe under a microscope before a final diagnosis is given. Such tests are essential in establishing the direction of treatment and the patient's prognosis.

H&E stain | Special stain



#### Immunopathology tests

Antigen-antibody reaction is used to analyze the expression of proteins in cells, detect the detailed type of tumor, identify the origin site of a tumor that has metastasized, determine the direction of treatment and estimate the prognosis.

Immunohistochemistry

#### Molecular pathology tests

These tests directly observe and analyze the nucleic acids such as DNA or RNA. EONE Laboratories offer a shortened turnaround for the tests and an analysis of inter-phase cells.

HER2 FISH | ALK FISH

# ccupational Environme

# Occupational and Environmental Medicine Center for the prevention and diagnosis of occupational hazards.

The Occupational and Environmental Medicine Center at EONE Laboratories is a specialized health diagnosis institution with the aim of promoting the overall health of workers by preventing and detecting early on the hazards or illnesses triggered by an exposure to certain risk factors in one's work environment.

The Center offers recommendations for an improved work environment, carries out overall health-related tasks requested by the client, offers special health check-ups for the diagnosis and prevention of occupational hazards, and also analyzes samples for biological exposure indices. Through early detection of occupational hazards, the Center encourages appropriate management and treatment to protect and maintain the health of workers.



#### Tests for biological exposure indices

Using powerful analysis equipment such as HSS-GC-MS, HPLC, and ICP-MS, the Center conducts tests on the biological exposure indices of workers who are exposed to risk factors.





#### Special health diagnosis for workers

The Center also offers special health diagnosis, health check-ups before assignment to certain posts, and health check-ups on an as-needed basis for workers, in accordance with the Industrial Safety and Health Act. Also offered by the Center are services for the prevention, diagnosis and management of occupational hazards on the assessment of the correlation between certain symptoms and work tasks, and assessment on the fitness for certain work tasks.





#### Organic compound analysis

Using High Performance Liquid Chromatography and gas chromatography, only the substance in question is separated and detected. In the case of highly volatile organic compounds, headspace is applied to reduce the pre-processing time. A mass spectrometer is also used for more accurate testing.



#### Inorganic compound analysis

Using the latest inductively coupled plasma mass-spectometry, EONE Laboratories detect and analyze a wide range of heavy metals designated as indices for biological exposure for the risks they pose to the human body, including lead, cadmium and mercury.





# Reinforced fostering of talent in addition to the upgrading of systems

At EONE Laboratories, we believe that behind the establishment of highly efficient and accurate systems and continuous research to cure diseases are people, and that investment into fostering specialized talent within the organization equates to greater competitiveness.



#### **Regular seminars**

EONE Laboratories hold regular seminars catering to each job grade or task to strengthen the expertise of the personnel so they can offer the best services to clients in a fast-changing environment.



#### Presentation at academic conferences

The medical doctors and research personnel at EONE Laboratories continue to carry out research and present them at major academic conferences and gatherings.



#### Installation of promotional booths at academic conferences

EONE Laboratories actively participate in seminars and academic conferences at both home and abroad, and share the latest news and trends in the medical community.



#### Visiting services

Upon the client's request, EONE Laboratories also offer "tailored visiting services" to provide information on tests.



#### Workshops for new recruits

Induction sessions for new recruits ensure that they share the same values and approach, are best positioned to further build up their competencies and quickly adjust to their new work environment.



#### Lab tours

EONE Laboratories take great pride in having one of the best lab environments in Korea. Upon request, tours of EONE's labs and related facilities can be arranged.

# Service & Support

# Services tailored to each client to grow together

EONE Laboratories seek to become a partner in the client's success. Always tuning into what the client has to say, we at EONE help identify the services best fit for each client's needs.

Specially trained clinical pathologists at EONE's Customer Call Center offer consultation to clients. In particular, the Computer Telephony Integration, or CTI, system, has greatly improved the quality of customer services offered. Phone consultations with medical doctors in a given field can also be arranged for more expert opinions. One-on-one online consultation is also available through the Laboratories' website.

By offering both online and offline channels for consultation, EONE Laboratories work towards making things most convenient as possible for the client.

#### **EONE-WIKI**

EONE-WIKI represents the commitment of EONE Laboratories' customer center to providing the widest range of information as possible to help clients.



#### Everywhere

Accessible anywhere from across Korea

#### One step

One-step connection

#### Network

Real-time network

#### Experience

High customer satisfaction



#### Systematic customer services based on a dedicated CTI program

**Customer call is** received

The call is forwarded to a customer representative in real time through the CTI program

**Technical consultation** with a specialized clinical pathologist

Follow-up to the consultation and monitoring of the situation

Post-consultation training of customer representatives for improved competency

#### Materials tailored to each client are offered

#### Materials tailored to the medical department concerned

Materials are produced and prepared to fit the needs of the medical department

#### **Infectious diseases**

Materials containing clinical information are produced

#### **National health insurance coverag**

Briefing materials are produced in a timely manner

#### Materials tailored to each specific client

the needs of each specific client are prepared

#### A bio-technological corporation specializing in molecular diagnostics

#### **EONE Life Science Institute**

EONE Life Science Institute and develop new molecular diagnostic methods that can help with genome sequencing and the preemptive diagnosis of various illnesses, including cancer.

EONE Life Science Institute was established to sequence genomes related to human diseases, analyze viruses or bacteria that cause illness and diagnose diseases including various cancers early on, using diagnostic technologies in molecular genetics.

The Institute develops diagnostic kits for the simultaneous diagnosis of sexually transmitted microorganisms, HPV and mutations in cancer-causing genes.

Consultations and inquiries:

032-210-2292 | rnd@eonelab.co.kr

www.eonels.com



#### Metabolite Research Institute

The Institute develops bio-markers, GLP tests, pharmacokinetic analysis methods and metabolite analysis methods through research on inborn errors of metabolism. The goal is to offer accurate data with a faster turnaround in the field of specialized clinical analysis and research.

Defects in amino acid metabolism | Defects in organic acid metabolism Defects in fatty acid metabolism



#### Support for research and clinical studies



#### **Molecular Diagnosis Research Center**



#### Manufacturing of medical devices

Product approval as an in vitro diagnosis medical device (KFDA, No. 17-985); Certification for GMP and medical manufacturing (No. 5936)



Please call any of more than forty EONE sales offices located across the country or the Customer Support Team at the head office to request medical laboratory tests.

Representatives will promptly make a visit to discussion test ontions.



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