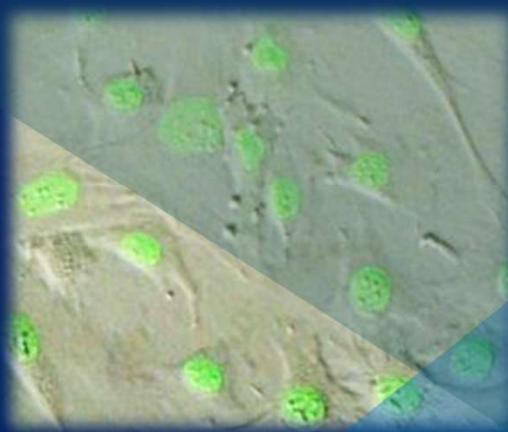
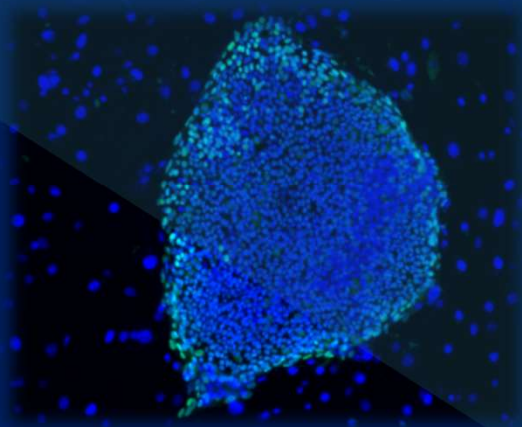




Adjusted Cell Experiment Laboratory
ACEL, Inc.



【Greeting】

First of all, in order to make ourselves useful for customers, we must be mature.

Furthermore, if we want to contribute to the society, we will not be able to do it unless we ourselves develop appropriately our character.

Based on such a belief, every employee of ACEL will make a unstinted effort to grow up on a daily basis.

We aim for ACEL to be the company that is useful to our customers and can contribute to the society.

Also, no matter how good our personality is, we will not able to contribute unless we have knowledge, action, and judgment, etc. as professionals to realize such a company.

In the rapidly-evolving biotechnology industry, acquiring specialized knowledge is indispensable.

We will always keep our antenna up throughout the company to realize that we are a group of professionals.

And we will continue to maintain modest and sincere learning attitudes.

Through the bio industry, we will contribute to the society.

President Masashi Sato

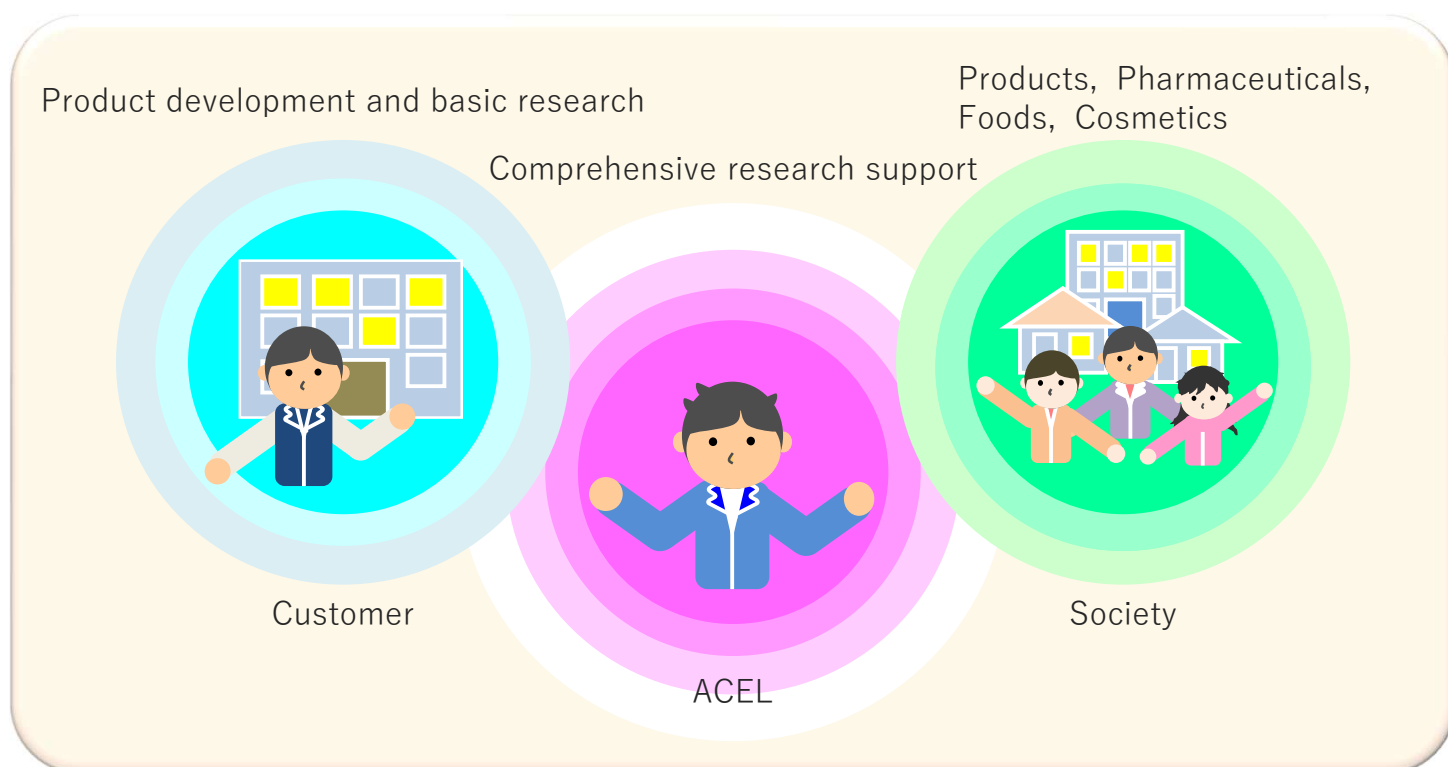


We provide comprehensive support for cell-based research!



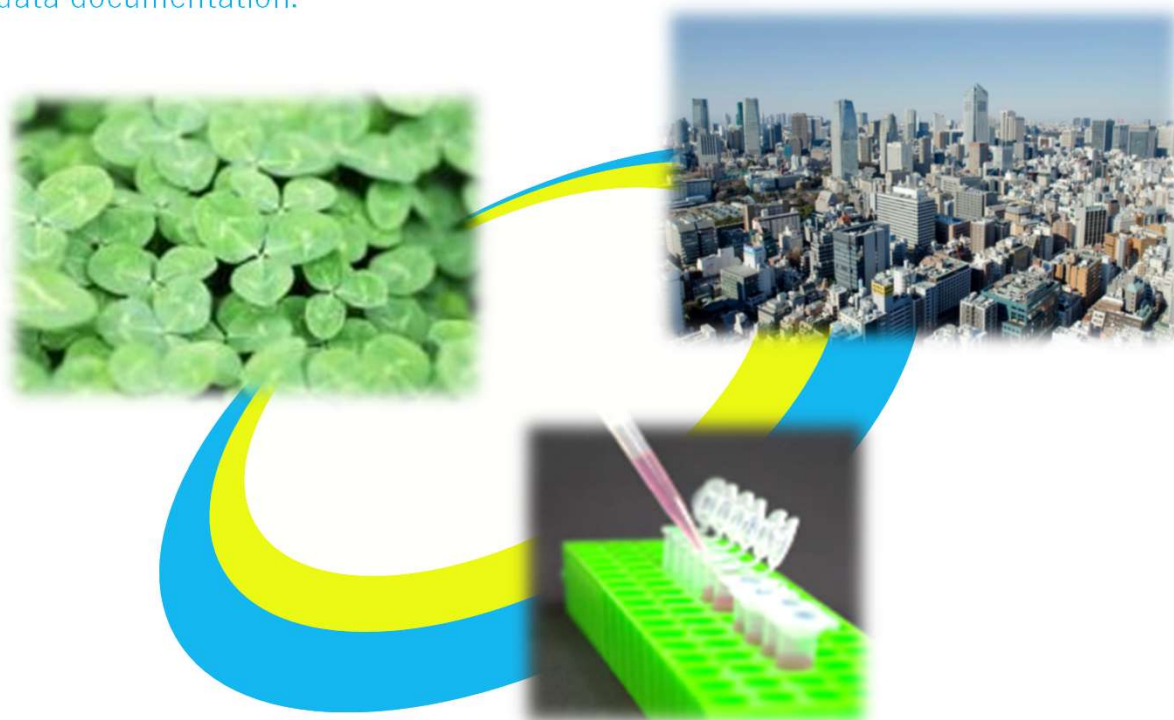
ACEL is Adjusted Cell Experiment Laboratory.

In the field of bio-research centered on cell culture technology, we hope to indirectly contribute to society by providing cell laboratories that meet the research needs of our customers for product development.



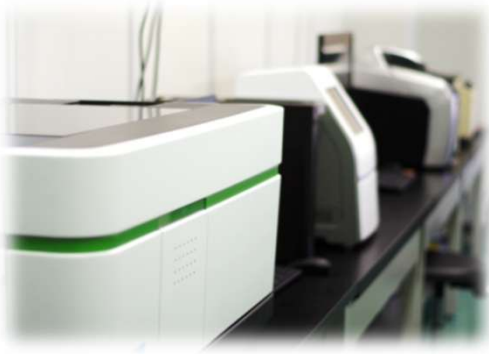
We provide low-cost contract research using animal cells, which requires cost and technology.

We provide comprehensive support for research from planning to method development and data documentation.



Why CRO of Cell-based Assays?

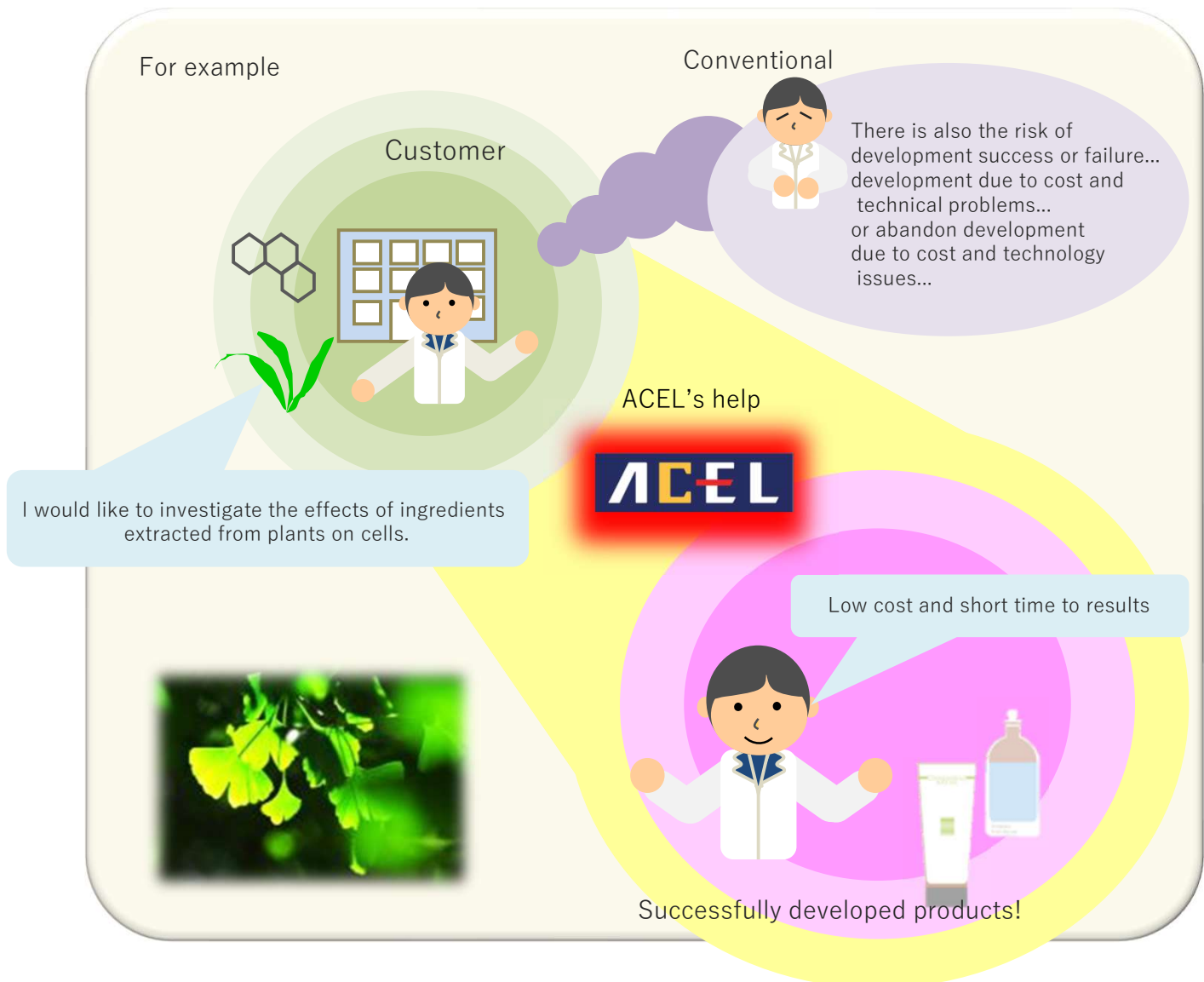
Issues that arise when initiating a Cell-based Assays.



Cost	Equipment and maintenance costs: tens of millions of yen Personnel expenses: millions of yen (per year)
Technique	Need know-how to carry out research, including skills, knowledge, and experience.
Time	Need time to get equipment and technology in place

A lot of budget and time must be spent on research and development with no small amount of risk.

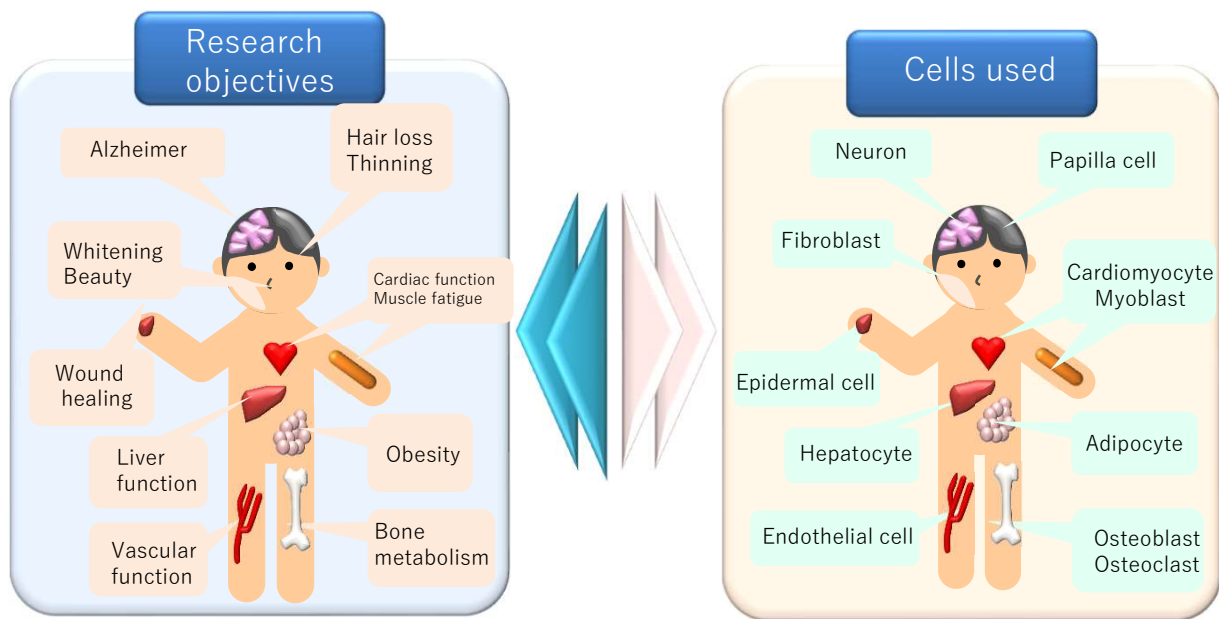
Our contracted service enables us to obtain test results at low cost and in a short period of time, leading to speedy research and development and reduced development costs.



We recommend this type of research for your consideration.

- Those who want to test the efficacy of developed products or materials on cells
- Those who cannot conduct sufficient experiments during busy seasons
- Those who want to conduct preliminary studies for budding research
- Those who want to enter the biotechnology field
- Those who want to conduct alternative experiments to animal experiments
- Those who want to confirm reproducibility of their research or papers

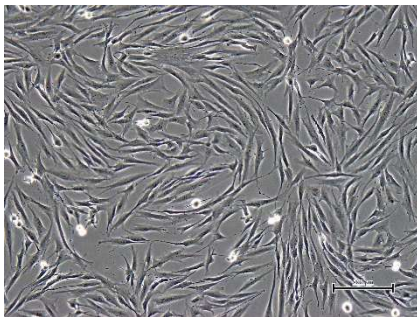
What can Cell-based Assays tell us ?



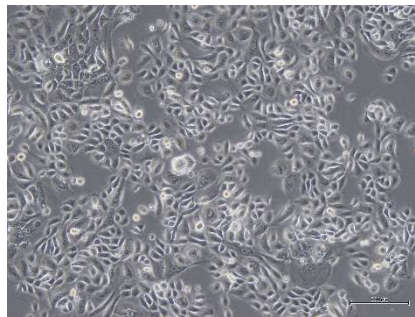
Differentiated cells in each organ and tissue have their own specific functions.

The efficacy of drugs also differs depending on the cell type.

Therefore, many basic findings can be obtained by using different cell types according to the purpose of research.



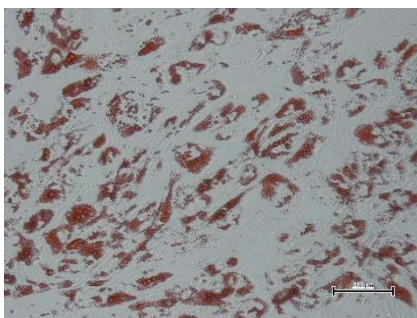
Human fibroblast (NHDF)
(Collagen production promotion test, etc.)



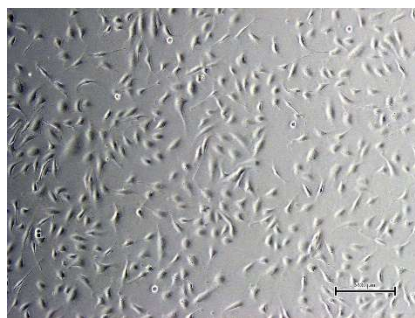
Human epidermal keratinocytes (NHEK)
(Atopic dermatitis improvement test, etc.)



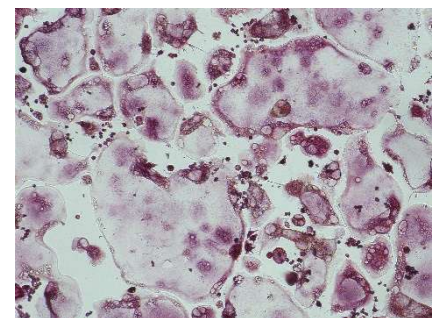
Human melanocytes (NHEM)
(Melanin production inhibition test, etc.)



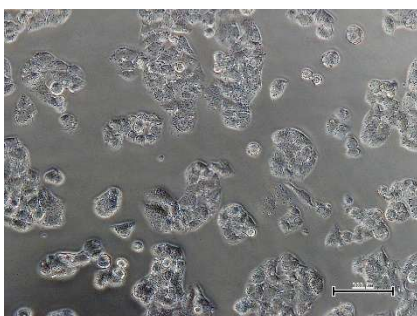
Human subcutaneous adipocytes
(Adipogenesis inhibition test, etc.)



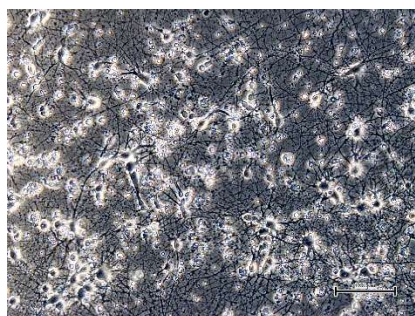
Human umbilical vein endothelial cells (HUVEC)
(Vascular function improvement test, etc.)



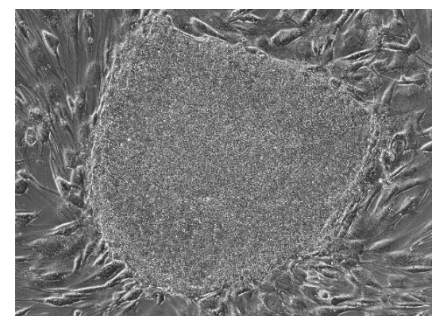
Rat osteoclasts
(Anti-osteoporosis test, etc.)



Human hepatocellular carcinoma-derived cells
(Lipid metabolism inhibition test, etc.)



Rat cerebellum-derived neurons
(Neural function promotion test, etc.)



Human iPS cells (hiPSC)
(Evaluation of differentiation induction methods, etc.)

Test Examples (Cosmetics, Functional Food Development, etc.)



We provide evaluation tests to promote and supplement the development of new materials for customers who are considering new materials as ingredients for cosmetics and functional foods.

- Evaluation of the skin and whitening effects.
- Collagen/hyaluronic acid production promotion test
- Ceramide production promotion test
- Melanin production suppression test
- Evaluation of the effect on hair growth and hair nurturing.
- Hair papilla cell activation test
- Evaluation of anti-obesity effect
- Adipogenesis inhibition test
- Lipolysis promotion test
- To protect bones and joints
- Osteoblast promotion and osteoclast inhibition test
- Chondrocyte activation test
- Evaluation of anti-inflammatory effect.
- Evaluation of the anti-inflammatory effect.

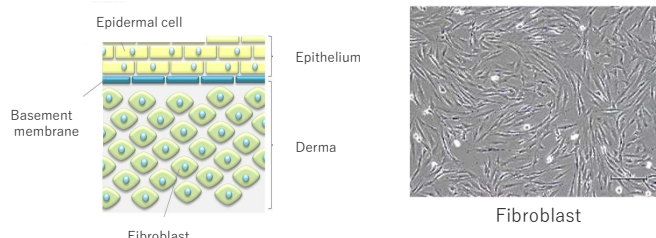
We can also provide other tests that meet your needs.

Fibroblast function promotion test

【 Purpose of the test 】

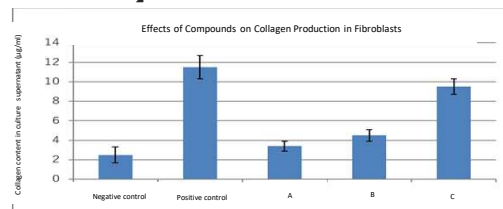
Using human fibroblasts, we will test whether cellular functions such as type I collagen and hyaluronic acid production are promoted by the test substance.

The purpose of this study is to verify and explore new functional substances that bring skin elasticity and moisture.



In the skin, fibroblasts are mainly found in the dermis and produce type I collagen, which gives elasticity to the skin, and hyaluronic acid, which moisturizes the skin.

【Example of test results】



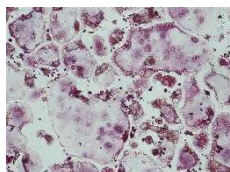
【Basic test】

Cells used: Human fibroblasts
Measurements: Cell activation test, type I collagen, Hyaluronic acid, etc.
Positive control: Vitamin C, High serum concentration
Preliminary study: Cytotoxicity test

Bone cell function improvement test

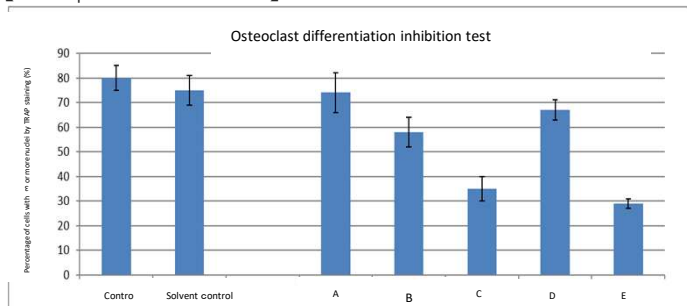
【 Purpose of the test 】

Using osteoblasts, we test the effects of test substances on promoting osteoblast differentiation and inhibiting osteoclast differentiation. The objective is to verify functional substances that support bone health and to search for new substances.



Osteoclasts differentiated from rat bone marrow cells (TRAP stained image). Differentiated osteoclasts are multinucleated cells.

【Example of test results】



Test substances B, C, and E have osteoclast differentiation effects.

【Basic test】

Cells used: mouse osteoblasts, rat bone marrow cells, etc.
Measurements: Cell activation test, ALP activity assay, Osteocalcin assay, Alizarin red staining, TRAP staining, etc.
Preliminary studies: Cytotoxicity test main study

Inflammation suppression test

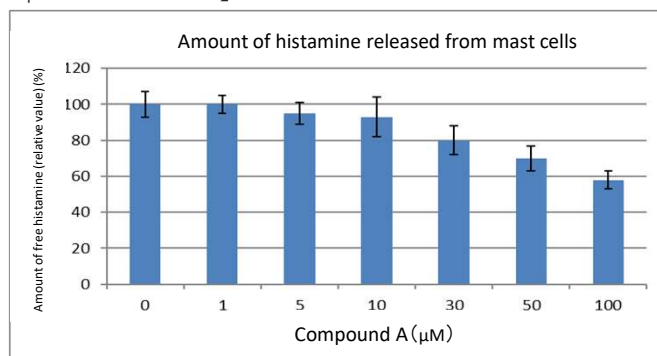
【 Purpose of the test 】

When allergens (antigens) such as pollen or food enter the body, mast cells recognize them and secrete histamine, an inflammatory substance, through allergic reaction (degranulation reaction). Suppressing excessive allergic reactions can alleviate inflammatory symptoms.

In this study, we will conduct inflammation suppression test using rat adipocytes.

The purpose of this study is to verify and search for new substances for the purpose of inflammation suppression.

【Example of test results】

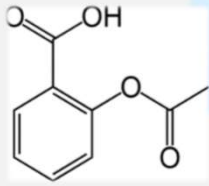


Inhibition of histamine release by compound A is observed.

【Basic test】

Cells used: Rat mast cells (RBL-2H3)
Measurements: Free histamine measurement, β -hexokinase activity measurement, etc.
Preliminary studies: Study of degranulation agent, Cytotoxicity study

Test Examples (Drug Discovery and Regenerative Medicine Research)



We provide evaluation tests to promote and supplement the development of materials for drug discovery and regenerative medicine.

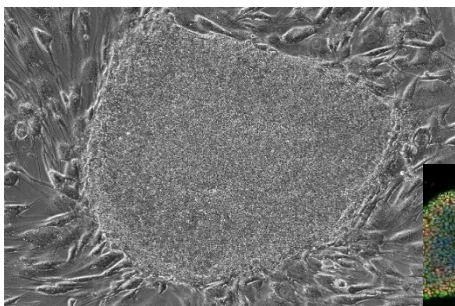
- Screening of drugs for drug discovery High-content screening studies
- iPS cell-based studies iPS undifferentiated maintenance studies iPS differentiation inducibility studies
- Use of iPS-derived disease model cells Various iPS-derived disease model cell studies
- Studies using various stem cells Mesenchymal stem cell studies, neural stem cell studies Adipose stem cell studies, etc.
- Cellular accumulation and subcellular localization of target proteins Bioimaging studies
- Observation of cellular changes over time Time-lapse culture studies

We can also provide other tests that meet your needs.

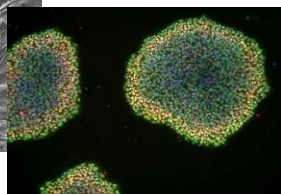
Various tests using iPS cells

【 Purpose of the test 】

iPS cells are pluripotent stem cells with the ability to differentiate into various cells throughout the body and to proliferate indefinitely. They are expected to be applied in many fields, including regenerative medicine, elucidation of pathological conditions, and development of new drugs. We are available for evaluation experiments of iPS cell culture conditions developed by our customers, as well as evaluation and comparison experiments of differentiation induction methods of iPS cells for regenerative medicine and drug discovery screening.



Fibroblast-derived iPS cells
(in the presence of feeders)



Feeder-free iPS cells
(Oct4, Nanog
immunostaining)

【Basic test】

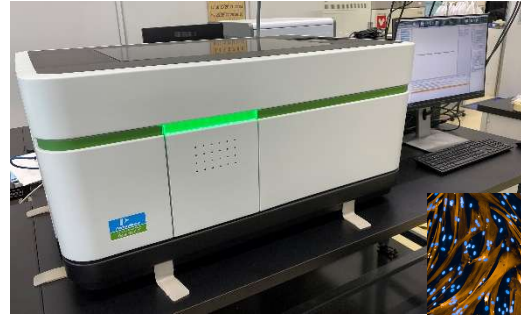
Cells used: Human iPS cells, various differentiated cells derived from human iPS cells
Measurement items: Cell proliferation activity, undifferentiated marker gene expression analysis, Differentiation marker gene expression analysis, differentiation induction ability evaluation, Various tests using undifferentiated iPS cells, Various tests using iPS cell derived differentiated cells, etc.

High content analysis

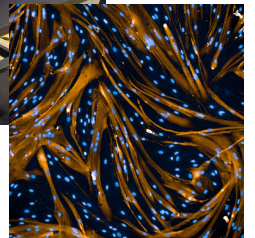
【 Purpose of the test 】

High content analysis (HCA) is an analytical method that combines the advantages of fluorescence microscopy, flow cytometry, and high-throughput screening analysis, and can be used consistently from cell imaging to quantitative analysis of image data and presentation of analysis results. Using various types of cells, we screen compounds, antibody drugs, nucleic acid drugs, etc. in drug discovery.

We also offer services to search for new materials for cosmetics and functional foods.



PerkinElmer (Revvity) Operetta CLS



Normal human myotubular cells
(MHC staining)

【Basic test】

Cells used: Various types of cells
Measurement items: Gene expression analysis, Localization analysis, Cell cycle analysis, Neurite analysis, Foci analysis, Spheroid analysis, Protein interaction analysis, etc.

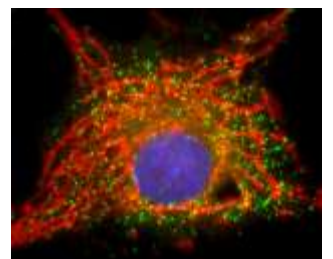
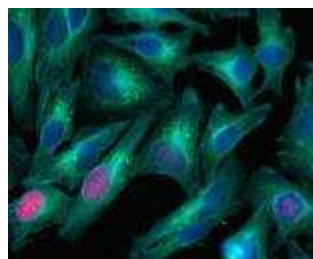
Bioimaging test

【 Purpose of the test 】

Advances in bio-imaging technology have made it possible to visually observe cellular functions related to various biological phenomena. Various test items are available, ranging from subcellular localization and qualitative quantitative measurement of target factors to evaluation of cell differentiation, cellular activation, and cytotoxicity. With the introduction of a culture system for microscopy, real-time ecological observation on a microscope and observation of cellular changes over time are also available. If you need visually persuasive data to supplement or reinforce your data, or as sales promotion materials, please consider our services.



KEYENCE All-in-One Fluorescence
Microscope BZ-X700



Images by Life Technologies Corporation

Test Examples (Other, Basic Research, etc.)



We provide in-depth testing using gene expression analysis and biochemical assays to further promote and supplement your research. We also evaluate substrates for use in the medical and cell engineering fields.

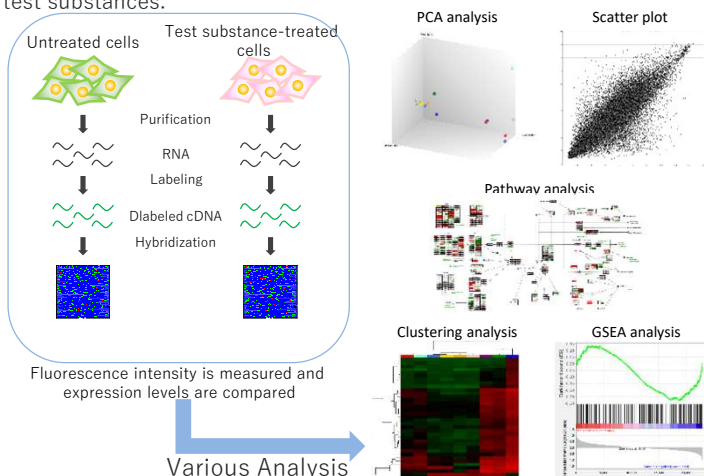
- Comprehensive gene expression DNA microarray analysis
- Expression analysis of target genes Real-time PCR analysis
- Basic biological studies using nerve/cancer cells Imaging analysis using HCA
- Measurement of target protein or enzyme activity ELISA analysis, Bio-Plex Multiplex analysis
- Analysis of cell populations such as immune cells Flow cytometry analysis
- Affinity evaluation between substrate and cells

We can also provide other tests that meet your needs.

Comprehensive gene expression analysis

【Purpose of the test】

RNA is collected from cells cultured under desired cell types and conditions, and DNA microarray analysis and next-generation sequencing analysis are used to comprehensively identify genes whose expression levels are specifically altered under specific conditions. This service can be used for searching for novel pharmacological effects of test substances.



In addition to comparing expression levels, we can also perform complex analyses on your behalf, such as classification of sample effects and association with phenotypes and pathways.

【Basic test】

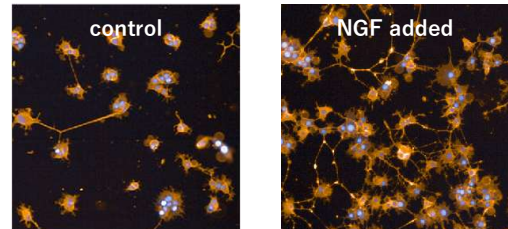
Cells used: Various types of cells
Measurements: Comparison of expression levels by microarray (or next generation sequencer) GO analysis, pathway analysis, GSEA analysis, clustering analysis
Preliminary study: Cytotoxicity study main study

Neuronal function promotion test

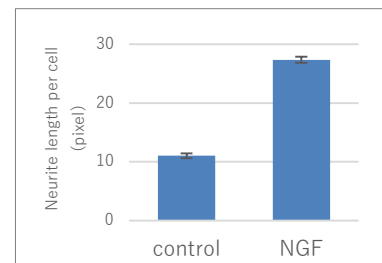
【Purpose of the test】

Neuronal cells are used to test the neurite outgrowth-promoting activity of test substances and their protective effects against amyloid- β and oxidative stress. The objective is to validate and search for new ameliorating agents for neurodegenerative diseases.

Neuronal-like cell PC-12



【Example of test results】



【Basic test】

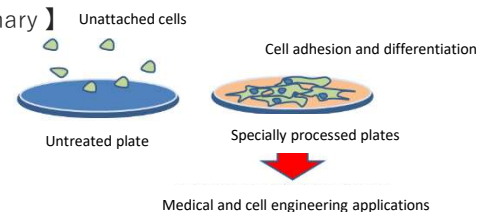
Cells used: PC-12, SH-SY5Y etc.
Measurements: Cell activation test, Neurite outgrowth activity, Hydrogen peroxide, Amyloid beta toxicity avoidance test
Preliminary study: Cytotoxicity test

Substrate evaluation test

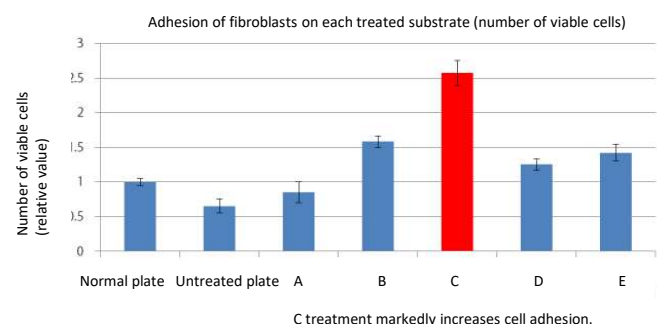
【Purpose of the test】

We evaluate the affinity (cell adhesion and differentiation) between cells and developed or specially processed base materials. The objective is to evaluate base materials that are expected to be used and applied in the medical and cell engineering fields in the future

【Test summary】



【Example of test results】

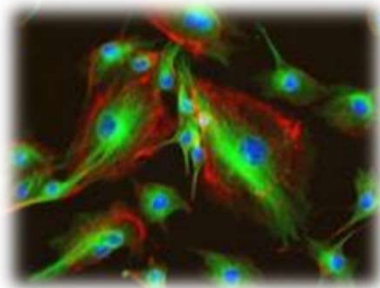


【Basic test】

Cells used: Various types of cells
Measurements: Live cell counting Microscopic observation Various assays

List of Tests

Test system	Test case	Cells used	Measurement item
Beauty			
Cell-based Assays	Melanin production inhibition test	Mouse B16 cells, human melanocytes	Melanin production
	Fibroblast activation Test	Normal human dermal fibroblasts	Live cell count, type I collagen, hyaluronic acid production
	Epidermal cell test	Normal human epidermal cells	Live cell count
	Skin UV Protection Test	Normal human epidermal cells, normal human fibroblasts	Live cell count
	Skin moisturizing and barrier function promotion test	Normal human epidermal cells	Expression analysis of profilaggrin and ceramide synthesis genes
	Skin and eye dryness protection test	Human immortalized corneal epithelial cells, normal human epidermal cells	Live cell counting, tight junction observation
	Hair papilla cell activation test	Normal human papilla cells	Measurement of viable cell count, FGF-7 and VEGF production
	Cell migration test	Normal human epidermal cells, normal human fibroblasts	Cell migration assay
Biochemical test	Collagenase inhibition test	-	Collagenase activity assay
	Tyrosinase activity inhibition test	-	Tyrosinase activity assay
Health			
Immune system	Immune function modulation test	Human monocyte lineage cells THP-1 etc.	Gene expression analysis of cytokines after LPS stimulation
	Histamine release inhibition test	Rat mast cell RBL-2H3	Measurement of free histamine, beta-hexokinase activity
	Cytokine production assay	Human peripheral blood mononuclear cells, macrophage cells, etc.	Measurement of various cytokine production
	Blood function improvement test	Human myeloid leukemia cells HL-60	NBT staining, esterase staining
	Enteritis Suppression Test	Human intestinal epithelial cells Caco-2	Measurement of IL-8 production
	Pulmonary Function Improvement Test	Human lung adenocarcinoma-derived cells A549	Inflammatory cytokine measurement
	NADPH oxidase activity assay	Normal human umbilical vein vascular endothelial cells HUVEC, HL-60	NADPH oxidase activity assay
Anti-obesity system	Fat differentiation inhibition test	Mouse Adipocytes 3T3-L1	Intracellular triglyceride determination
	Lipolysis Accelerated Test	Mouse adipocytes 3T3-L1, human adipocytes	Determination of the amount of free glycerol
	Fat function improvement test	Mouse adipocytes 3T3-L1, human white adipocytes, etc.	UCP1 gene expression analysis mitochondrial quantity measurement
	Mitochondrial activation test	Skeletal muscle cells, adipocytes, etc.	Mitochondrial quantity measurement, mitochondrial activity measurement
	Sugar uptake test	Skeletal muscle cells, adipocytes, etc.	Measurement of sugar uptake
Circulatory system	Angiogenesis promotion and suppression test	Normal static vascular endothelial cells HUVEC	Angiogenesis quantification
	Anti-arteriosclerosis test	Human aortic smooth muscle cells AoSMC etc.	Determination of infiltrated cells
Skeletal system	Bone metabolism test	Osteoblasts, osteoclasts	Determination of ALP activity, alizarin red staining, TRAP activity
	Functional improvement test of chondrocytes	Rabbit chondrocytes etc.	Measurement of hyaluronic acid production, measurement of acidic mucopolysaccharides
Hepatic system	Liver function improvement test	Liver cancer-derived cells HepG2 etc.	CYP gene expression analysis, albumin measurement
Nervous system	Neuronal function promotion test	Rat PC-12, various neurons, neural stem cells, etc.	Neuritoid extension activity, amyloid β toxicity avoidance measures
	NGF production promotion test	T98G cells, human rat astrocytes, etc.	NGF gene expression analysis, NFG protein production measurement
Muscular system	Muscle building tests	Mouse myoblasts C2C12, L6 cells, human myoblasts	Myosin heavy chain staining, multinucleation quantification
	Energy production acceleration Test	Mouse myoblasts C2C12, L6 cells, human myoblasts	Measurement of ATP production
Regenerative medicine			
iPS Cell Testing	iPS cell culture evaluation	Human iPS cells	iPS cell proliferation evaluation
	iPS cell differentiation induction test	Human iPS cells	Evaluation of differentiated cells
	iPS cell undifferentiated confirmation test	Human iPS cells	iPS cell proliferation evaluation
	iPS cell adhesion evaluation test	Human iPS cells	Evaluation of iPS cell proliferation and differentiation on substrates
Regenerative medicine			
Alternatives to animal experiments	Three-dimensional models	Three-dimensional model of human skin	Measurement of the number of living cells, measurement of melanin production, etc.
Special analysis and others	Individual gene expression analysis	Various types of cells	Gene expression analysis by real-time PCR method
	Comprehensive gene expression analysis	Various types of cells	Comprehensive gene expression analysis by DNA microarray method
	Substrate evaluation Test	Various types of cells	Viable cell count measurement, various assays
	Apoptosis induction test	Various types of cells	Caspase, Annexin V, PI, Hoechst 33342 staining
	Cell activation and toxicity tests	Various types of cells	Viable cell count measurement
	Bioimaging	Various types of cells	Cell staining, time-lapse photography, etc.
	High-content screening	Various types of cells	High-content screening of various assays

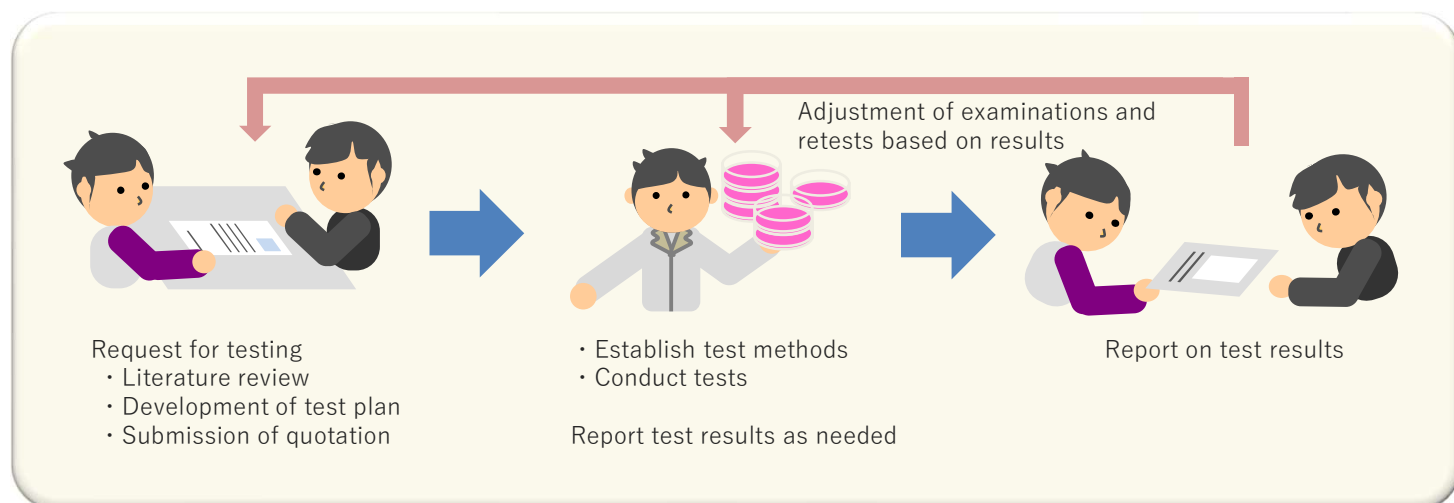


The above mentioned tests are just one example. We will endeavor to produce the desired test results by planning tailor-made tests and establishing experimental methods to meet your needs.

Please feel free to contact us.

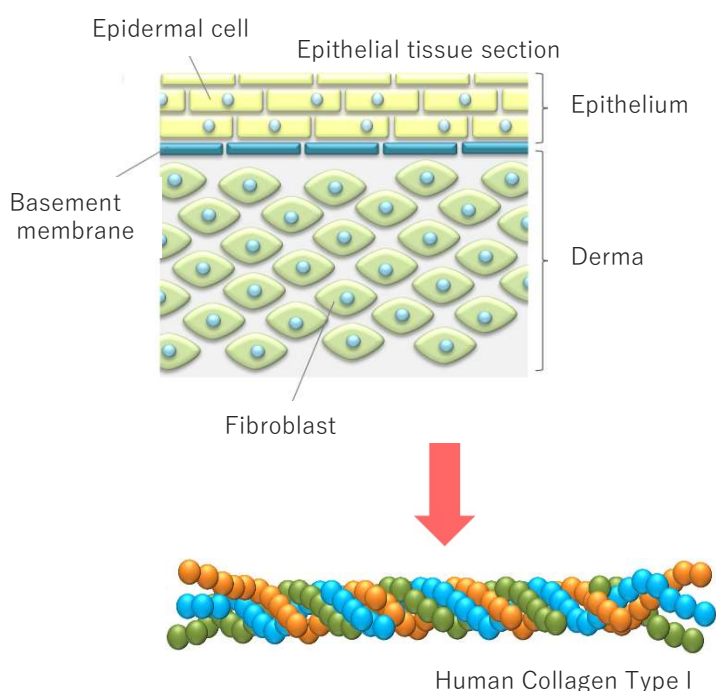
Flow of Contracted Services

After receiving a request from a client, we hold in-depth discussions and draw up a test plan. We will report the test results as needed and reflect them in the next test to obtain better data.



Human Collagen Type I ELISA Kit

We sell ELISA kits for easy quantitative measurement of Human Collagen Type I.



Type I collagen is present in all connective tissues and is abundant in the dermis, tendons, and bones.

In the dermis, collagen is distributed in a mesh-like pattern and functions as a scaffold for fibroblasts, providing elasticity to the skin.

This kit can be used to measure collagen concentrations in any sample, including culture supernatants, cultured cells, and tissues.



EC1-E105

Name of product	packing	Item No.	List price
Human Collagen Type I ELISA kit (without pepsin)	1 kit	EC1-E105	¥ 93,000
Human Collagen Type I ELISA kit (with pepsin)	1 kit	EC1-E205	¥ 98,000
Related products			
Pepsin for Human Collagen Type I ELISA kit	500 mg	EC1-E110	¥ 12,000

About Us

ACEL, Inc.

Location SIC-2

2611 (reception)
2612
2613
2614
2615



ACEL, Inc.

5-4-30 Nishihashimoto,
Midori-ku, Sagamihara,
Kanagawa, 252-0131
Japan

TEL: +81-42-770-9482

FAX: +81-42-770-9483

E-mail: info@a-cel.co.jp

URL: <https://www.a-cel.co.jp>

President Masashi Sato

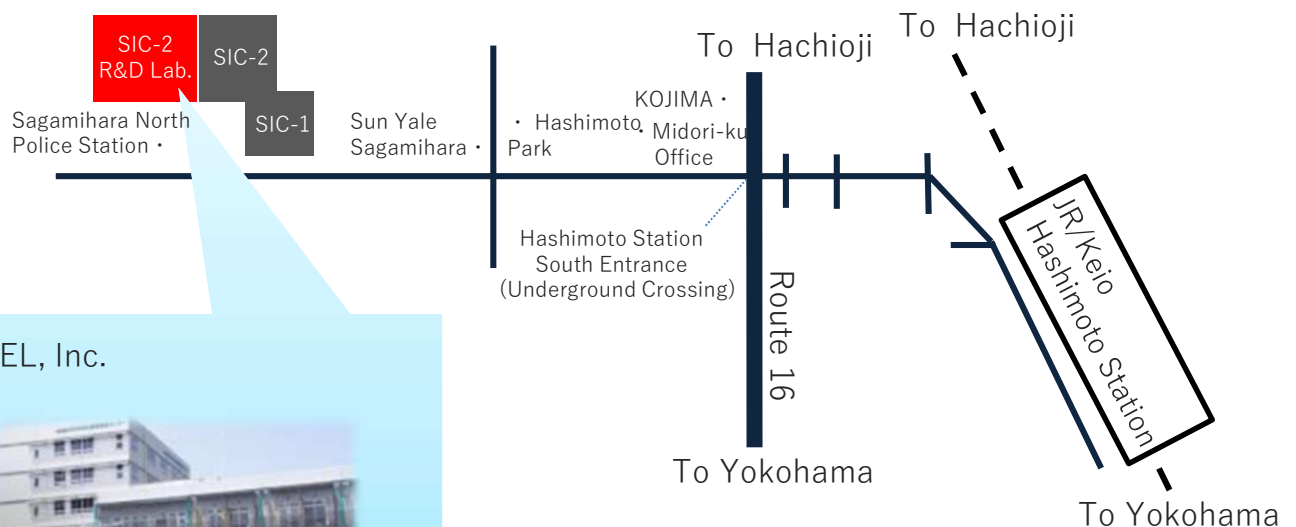
Capital stock 10 million yen (as of May 2025)

Our Business

- CRO of Cell-based Assays
- Manufacture and sale of research reagents

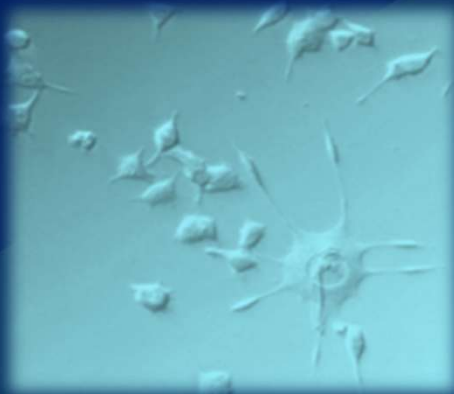
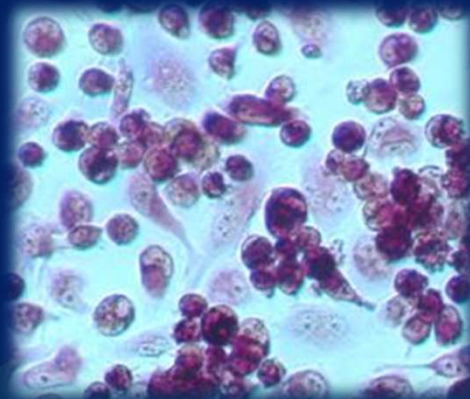
Access

12 min. walk from JR Hashimoto station or Keio Line Hashimoto station south exit.



ACEL, Inc.





ACEL, Inc.

SIC-2 2611, 5-4-30 Nishihashimoto,
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Adjusted Cell Experiment Laboratory