Our Vision

*Eat well, live well.* Sustaining people, living things and the Earth.

The Ajinomoto Group is a world leader in manufacturing food products and producing amino acids. Our perspective is global, and our commitment is to people and society. Beginning with our initial market entry in 1909 with Ajinomoto®, the world’s first umami seasoning, monosodium glutamate (MSG), we have provided innovative food products and solutions to the world. Umami is based on the amino acid glutamic acid. Amino acids form the foundation of our R&D efforts and have led to our development and growth of cutting-edge bioscience and fine chemical technology. These products and technologies have in turn formed the core of our areas of expertise, operation, and distinctive amino science, and have led to new materials and products with high added value and the creation of new business models.

In our R&D domains of Consumer Foods and AminoScience, we are engaged in our distinctive specialty of creating value-added products not found elsewhere. In addition, we are committed to providing solutions and meeting the challenges of Global sustainability, Food resources, and Healthy living that are facing societies around the world.

Our investment in R&D is substantial and forms the foundation for developing value-added products. In FY 2015, JPY32.6 billion (consolidated results; 2.7% of sales) was spent on R&D. Our century of experience has made it clear that R&D forms the basis for the business growth of the Ajinomoto Group.
Overview
Building the future through innovation and leading growth with R&D

The R&D contingent – 1,700 strong

The number of R&D workers in the Ajinomoto Group, which was approximately 100 in 1956, has increased to more than 1,700 with the growth of the business. As an enterprise focusing on food, the scale and size of our R&D team is unparalleled and provides the driving force for the continued growth of the Ajinomoto Group. All of the R&D personnel are leading experts and specialists in food products, fermentation and biotechnology, biology, chemistry, engineering, or other key disciplines, and approximately 10% hold doctorates.

Technology and IP that provide products and services to people worldwide

We currently hold over 4,000 patents in Japan and overseas. The Ajinomoto Group is committed to broadening its proprietary knowledge base and to improving its strategic intellectual property portfolio. Our underlying goal in maximizing our IP value is to help provide better products and services.

R&D Expenditures by Business Segment

*As of March 31, 2018*
Global R&D network

In the Ajinomoto Group, several dozen R&D bases in fourteen countries perform lateral technological collaboration to achieve highly specialized solutions for global markets. These bases include Group companies dedicated to R&D in Russia and China, and a strategic base for open innovation in North America. Key bases are also located in Thailand, Malaysia, Indonesia, Brazil, the U.S., France, and China to support the development of production technologies and products optimized for specific regions.

An R&D system with a total Group perspective linked to the customer

Ajinomoto Group R&D encompasses the Institute of Food Sciences and Technologies, and the Research Institute for Bioscience Products and Fine Chemicals of Ajinomoto Co., Inc. in Japan. These institutes are also closely tied to the R&D bases of other Group companies in Japan and around the globe. Our R&D focus ranges from the next generation of fundamental technologies to the optimization of current products to meet the needs and preferences of specific regions. Our perspective is the perspective of the entire Group.

The R&D Planning Dept. of Ajinomoto Co., Inc. plays a central role in coordinating and managing the Group R&D in terms of research theme setting, evaluation, and resource allocation, developing R&D global human resources and networks, and supporting business operations management during product market launches.

The R&D organization and its members, in coordination with business operations, are promoting the growth of the Open & Linked Innovation network and working with customers to create new value.
R&D Domains

Applying our superior seasoning technologies to bring delicious new value to the foods of the world

The Group is a world leader in food-sector R&D. Its scientific perspective and its development of new technologies and new ingredients provide new solutions around the world. Its wide-ranging product development includes flavor seasonings, menu-specific seasonings, soups and broths, frozen foods, and beverages for the home, businesses, and other venues. The R&D Group applies and integrates the innovative technologies and expertise of the Group, in active collaboration with other companies, institutions, and organizations.
1. World-leading seasoning technologies

Our eating habits involve a comprehensive judgment of the deliciousness of food based on the five senses: sight, sound, smell, touch, and taste. The world-leading seasoning technology of the Ajinomoto Group is based on two fundamental scientific strengths. One is its strength in elucidating all of the factors that comprise food satisfaction and center on taste, flavor, and texture. The other is its strength in integrating these findings with the needs and preferences of the customer by applying innovative, original materials, and blending technologies.

Taste analysis and control technology

We apply advanced technology to investigate the mechanisms involved in taste, to discover new materials, and to utilize these findings to expand our portfolio of enhancers or modifiers of umami, sweetness, and other tastes. We focus in particular on the development of kokumi, which exhibits a unique taste-modifying profile.

Flavor analysis and control technology

Flavor is perceived by stimulation of the sense of smell and is an important factor for taste satisfaction. We utilize GC-MS-Sniffing and other instrumentation to analyze the constituents of flavor, determine their relationship to taste satisfaction, and apply our findings to developing new flavor materials and to improving quality control.

Texture analysis and control technology

Texture is another important factor of deliciousness. We have commercialized a transglutaminase preparation that modifies foods to provide them with optimal physical properties by cross-linking protein molecules. This preparation is now widely used all over the world in applications such as seafood processing, meat processing, and noodle production. Moreover, we have also commercialized an α-glucosidase preparation that improves the texture of starch by changing its chain structure. This preparation helps improve the quality of foods by inhibiting the degradation of starch over time by controlling the deterioration of starch, and by modifying the physical properties of foods through the addition of elasticity and stickiness.
2. Contributing to a world of health through delicious food

The growth of overseas operations began just a few years after our founding, with the opening of our New York office in 1917. International growth continued throughout the following century, with new facilities in a growing number of countries, expansion into new fields beyond the boundaries of food and cuisine, and an increasing contribution to health and wellness in many parts of the world.

Offering the most delicious seasoning product in each country

Product development is performed at strategic locations around the world to provide seasonings and processed foods in harmony with local cultures, cuisines, and dining customs. Product development and application centers are located in Thailand, the Philippines, Indonesia, Malaysia, Vietnam, in Europe and North America, and in Brazil, Peru, and other parts of the world. These centers perform timely, strategic on-site development, with active Group support from Japan for product development, and for education and training.

Providing solutions for worldwide nutritional needs

Our materials and technologies are conceived and applied not only to enhance the deliciousness of foods but also to improve their nutritional value. In addition, we strive to help solve problems of malnutrition, both overnutrition in developed countries and undernutrition in developing countries. Research and development are in progress on innovative technologies to meet these needs.
Providing solutions for over-nutrition in advanced countries

Reduction of sugar intake by using new sweeteners

The world’s first successful commercial operations for the production of aspartame from two amino acids, aspartic acid and phenylalanine, were developed by the Ajinomoto Group. The intense sweetening effect of aspartame is known around the world, and its safety is recognized in more than 125 countries and regions. It is used in more than 5,000 products. Our share of the world market for aspartame is nearly 50%. A new sweetener, which we have named Advantame, has more recently been developed by the Ajinomoto Group and has been approved as a food additive in Japan, Europe, and America. Advantame is 20,000 to 40,000 times as sweet as sugar, and it brings increased value to a wide range of foods and beverages, including higher taste quality and lower production cost.

The intense sweetening effect can substantially reduce sugar and caloric intake, with no loss in sweetness. Blending technologies and recipes are currently being developed for a growing range of products optimized to take advantage of the sweetening effect and thus reduce the sugar content of processed foods.

The promise of kokumi for delicious low-fat cuisine

The focus of our latest receptor research is kokumi. "Koku" is a word used by chefs of Japanese cuisine to express the richness and body of a dish. We have identified the substances that evoke koku, and call the function "kokumi". This function is developed during maturation, fermentation, and prolonged simmering or stewing of food. In sensory terms, we know that kokumi compounds modify basic tastes, deepening and expanding their taste profiles. It is also now becoming clear that kokumi compounds improve the sensory perception of fats and oils. Kokumi thus holds promise as a new source of health-related value in food.

MSG helps low-salt diets

Low-salt diets are generally not tasty and thus are difficult to maintain and tend to induce stress. In joint research with Jumonji University, we have found that the stress of a low-salt diet can be reduced using the umami substance MSG (monosodium glutamate). The presentation of this finding at the 2015 Asian Congress of Nutrition showed that proper use of MSG can provide stress-free low-salt diets.
3. Pursuing superior customer value

In our continuing pursuit of value for the customer, we apply our inherent capabilities in analyzing customer satisfaction and in applications development, with careful consideration of the growing individualization and diversification of customer life-styles worldwide.

"Kitchen Value Chain" -
Product development from the customer's viewpoint

From the time a customer purchases a product until he/she discards it, there are various points of contact with the product, such as the store, kitchen, and table. The name "Kitchen Value Chain" was given to the connection between these contact points. For our food products to be considered as "delicious", "easy to use", and "ecological" to satisfy the customer, we assess the usability of packaging materials, ease in cooking, etc., from the perspectives of emotional engineering, observation engineering, and psychology at each of these contact points and use the obtained data for further product development.

Sensory evaluation

In order to provide food products that are enjoyable for the customer, it is essential to learn the customer's own preferences, select the right materials, and prepare the products appropriately. The perceptions and modes of enjoyment involved in the consumption of delicious foods may differ with the customer's country or region, age bracket, gender, and dietary experience, and are always influenced by circumstances. Our goal is to provide food products with the taste and quality that delight every customer, making them look forward to occasions when they can again enjoy those products. For this purpose, we constantly work to achieve higher levels of sensory evaluation, implementation, and technology.
4. Delivering taste backed by safety and trust

The Ajinomoto Group places the highest importance on the safety of food and peace of mind of its customers. We play a leading role in safety in the food industry, and work towards the development of various technologies and frameworks to maximize food safety. When procuring raw materials, we not only establish standards, but also clearly identify the place of origin, distribution route, etc., of the ingredients. During manufacturing, quality standards are set for each process, and compliance is strictly enforced. Measures to prevent contamination by allergens and foreign materials are carried out by establishing the appropriate methods for the manufacture of each food product. Furthermore, we have introduced the most advanced analysis technology for the management of raw materials, processes, and products in an effort to increase safety. These ideas and technologies have been incorporated into the Group's foundation. We will continue to focus on understanding changes in the environment and the demands of the consumer, and then further improve our technology to contribute to the safety of food and the peace of mind of our customers.
R&D Domains

Cutting-edge bioscience and fine chemical technology to lead new achievements in the utilization of amino acids

The Ajinomoto Group has engaged for many decades in R&D on amino acids and their utilization in a growing range of operations. We have also established and developed the discipline known as AminoScience.

In fields ranging from new biomaterials, animal and plant nutrition, and chemical products, to pharmaceuticals, advanced medicine, and wellness/nutrition, the R&D efforts of the Ajinomoto Group provide global market-leading solutions.

Our goal is to create new value. To this end, we are actively establishing and expanding the Open & Linked Innovation global network together with companies and R&D institutions from Japan and around the world.
1. Leading the world in amino acid production
The Ajinomoto Group commands a large share of the amino acid market in the food, feed and pharmaceutical industries, and in other sectors. The basic sources of our competitive strength in amino acid operations are our world-leading technology for amino acid production and our capability to provide a stable supply. The Ajinomoto Group produces nearly 20 amino acids at 27 locations in Japan and other countries and regions and has built a global production system through strategic plant locations around the world, the selection of optimum materials and microbes, and the development of advanced processes.

<table>
<thead>
<tr>
<th>Developing next-generation fermentation production technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most of the MSG and other amino and nucleic acid fermentation materials and products are produced by fermentation using materials derived from agricultural products. The advanced technologies used by the Ajinomoto Group include technologies for the effective and ecologically conscious utilization of many different materials, technologies for the discovery and utilization of microbes that convert the materials into amino and nucleic acids with high efficiency, fermentation technology for maximum utilization of the microbes’ capabilities, and technology for efficient refining while maximizing the effective utilization of byproducts and ensuring the purity of the end products. R&amp;D is in progress to further extend and refine these world-leading biotechnologies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research into basic technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>To further improve the efficiencies of fermentative production processes, the Group is using advanced molecular biology and systems biology, and performing comprehensive analysis of the biological interactions, metabolic pathways, and other characteristics leading to amino acids and related products from a wide range of materials. Our goal is to optimize the total system. At the same time, the Group is conducting research into new basic technologies for finding and using new microbes and enzymes, and is investigating new materials for the next generation of fermentation technologies.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process development</th>
</tr>
</thead>
<tbody>
<tr>
<td>The production of amino acids should be in harmony with agricultural practices and conditions specific to different parts of the world, whether the starting material is sugar cane, corn, cassava tubers, or other major crops. To this end, we have developed technologies designed for the efficient use of these materials in fermentation processes. It is important to respond flexibly to changes in the agricultural environment stemming from economic growth in developing countries, rising biofuel usage, trends in grain prices, and other factors. Consequently, we are producing diverse materials and developing a high level of technology for their utilization. R&amp;D is also in progress for developing next-generation process technologies for the production of amino acids from non-edible biomass such as microalgae.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resource-Saving fermentation technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a global manufacturer of amino acids, the Ajinomoto Group has a social responsibility to continue developing technologies that reduce the impact on the environment. These include:</td>
</tr>
</tbody>
</table>

1. Technologies that significantly reduce the amount of raw materials by maximizing the microbe’s productivity for fermentation.
2. The development of new technologies that increase the efficiency of the overall fermentation processes, thereby reducing the amount of energy and auxiliary materials (e.g. acids, alkalis) consumed and water discharged during production.
3. Selective in-house processing of raw materials for fermentation such as those extracted from sugar cane and tapioca, combined with the use of gas fuels obtained from biomass byproducts generated during processing.

---
2. Developing new materials and applications to innovate everyday life

In exploring the world of the taste-related, nutritional, physiological, and pharmacological functions of amino acids, we are discovering new materials and applications and creating new products and operations through our innovative technologies. These developments are based on a wealth of data on amino acids, nucleic acids, and their derivatives.

---

Growth in functional bio-based products

The basic strengths in AminoScience of the Ajinomoto Group are in possessing both advanced fermentative and synthesis technologies regarding the production methods for amino acids and related substances. Merging these strengths opens the way for the development of new hybrid production processes for peptides and other fine chemical products. We are developing new specialty bio-based products by merging our unique technologies and capability to create new value that addresses diverse customer needs with effective solutions.

---

Animal and plant nutrition

The Ajinomoto Group launched its animal nutrition business in 1965, and has since built an international production and supply network as the world's leading manufacturer of feed grade amino acids. The Group produces feed grade Lysine, Threonine, Tryptophan and Valine. These amino acids must be obtained from feed because animals' bodies cannot synthesize sufficient amounts of these amino acids. Adding amino acids to feed improves feed efficiency, reduces feed costs, and promotes healthy animal growth. We also promote research on the effectiveness of applying amino and nucleic acids and the byproducts obtained during the fermentation of amino and nucleic acids to agricultural crops. The aim of this research is to develop sustainable products and operations. By doing so, we will help circulate resources both in agriculture and in society. Findings from this R&D effort have been applied to obtaining fertilizers that are high in added value. These fertilizers are increasingly used in Japan and overseas.
Chemical products

Personal Care

Amino acids are essential for skin hydration and comprise more than half of the skin’s Natural Moisturizing Factor (NMF). We were inspired in the 1970s by the excellent compatibility of amino acids with the human body and by their biodegradability, and have been exploring the potential of amino acids and their derivatives for personal care use ever since. Today, our well-respected amino-acid-based personal care ingredients are used by more than 3,000 cosmetics manufacturers in some fifty countries around the world.

Electronic materials

We have long been providing functional chemicals, such as epoxy resin hardeners and dispersing agents generated using amino acids, as raw materials and intermediates. We have also launched an electronic materials business based on our functional chemicals and resin formulation technology. Our current primary electronic material is a high-performance insulating film named Ajinomoto Build-up Film (ABF) for high-density printed circuit boards for mounting semiconductors. An outstanding property of ABF is its copper plating capability: the surface of cured ABF can be plated and copper plating can be used to form a fine line conductive pattern. ABF also shows excellent electrical insulating reliability, high thermal properties, and good mechanical properties. ABF is used in many products such as personal computers and smart phones, and the number of applications is expanding.
3. Contributing to advanced pharmaceuticals and medicines, and to healthcare, using cutting-edge bioscience and fine chemical technology

The Ajinomoto Group has unparalleled expertise in research on amino acid metabolism and functional analysis, allowing it to provide unique solutions in the areas of pharmaceuticals, medical care, and healthcare.

Advanced pharmaceuticals

The Group has been the leading producer of amino acids for pharmaceuticals since becoming the world’s first producer of crystalline amino acids used as pharmaceutical production materials in 1956. Today the Group also focuses on biopharmaceutical manufacturing technologies.

Developing biopharmaceutical technologies

The Ajinomoto Group has been developing unique hybrid processes combining fermentation and chemical synthesis technologies and applying them to the development of pharmaceutical intermediates derived from amino and nucleic acids. These activities evolved into a bulk pharmaceutical intermediate supply business, later expanding into our very-own, unique biopharmaceutical manufacturing technologies and business. The Ajinomoto Group now provides the AJIPHASE® service business for contract manufacturing of oligonucleotides and peptides, and CORYNEX® for contract development and manufacturing of proteins, and AJICAP™ for contract development and manufacturing of antibody drug conjugates (ADCs).
**Advanced medicine**

*AminolIndex*®

*AminolIndex Technology* is the name of a screening technology for measuring the level of blood amino acids as an indicator of the state of health and possible disorders. This technology is the result of integrating high-level technologies for amino acid analysis and our cumulative findings from extensive research on amino acid metabolism. It embodies a new method of statistical analysis developed by the Ajinomoto Group to obtain a profile of amino acids in the blood, and this profile provides an indicator for screening for diseases and disorders. *AminolIndex Technology* applies statistical analysis of the differences between amino acid profiles of healthy individuals and those with a disorder. The development of *AminolIndex*® *Cancer Screening (AICS®)* was completed several years ago, and business development began in April 2011 and is ongoing. The *AminolIndex*® *Metabolic Screening (AIMS®)* for disorders closely related to lifestyle is at the advanced stage of development.

**Culture media for antibody production and iPS cells**

The Ajinomoto Group applied its process technology for the production of high-purity amino acids to develop its serum-free ASF Medium. The applications of ASF medium have grown since its market launch in 1987 for animal cell culture and it is now widely used in Japan and overseas for the production of antibodies and other biopharmaceuticals and as a research reagent. In 2013, Ajinomoto Genexine Co., Ltd. was established in the Republic of Korea and a new plant was constructed there to produce this medium for pharmaceuticals and therapeutics used in biopharmaceutical production. In another key advance, Ajinomoto Co., Inc. has developed a new medium for regenerative medicine, and launched StemFit® AK02N for basic research in October 2015 in Japan.
Wellness and nutrition

Nutrition for the elderly and sports nutrition are important areas of research and development in the Ajinomoto Group, in recognition of the imminent social needs posed by an increasingly aging society in Japan and elsewhere, the rising cost of medical care, and the goal of maintaining health and preventing disease.

A key part of providing solutions in this area is directed towards understanding the safety and functionality of the Group’s health-related amino acids and other materials, and to providing information on these findings together with the solutions. This understanding is based on the Group’s advanced physiological, pharmacological, and nutritional research, amino acids production, fermentation technologies, and food processing technologies, together with understanding the nutritional and disease-related conditions of individuals.

We recently discovered that the amino acid glycine helps improve sleep quality. We also determined that leucine-rich essential amino acids can increase muscle protein synthesis and contributes to longer healthy life expectancy in the elderly. Furthermore, we have shown the "body-fat-burning" effect of the plant-derived material capsinoids, which are components of a non-pungent variety of pepper.

Health and nutrition are key values for products made from health-related materials. Enhancing the palatability is another key value, and the addition of materials for this purpose is crucial to their use. In this respect, in particular, our priority is improvement based on the voice of the customer.

Nutrition for the elderly

Our focus is on the nutritional functions of proteins and amino acids and their essential role in maintaining body structures and functions, together with investigations into the diets and food preferences of the elderly. Our goal is to find ways for the elderly to continue to lead healthy lives and savor the taste of everyday food. The combination of advanced food-processing technologies, scientific knowledge, and pharmaceutical technologies allows the Ajinomoto Group to provide a diverse range of foods that promote health, including products such as a high-density liquid diet recognized for its functionality, taste, and convenience. Work in progress aimed at the elderly sector of society includes the development of food materials and products that will help the elderly maintain their health and independence.

Sports nutrition

The increase in international sporting events is focusing interest on the physiological effects of amino acids, and particularly branched-chain amino acids (BCAAs), on muscles. As a pioneer in research on the physiological effects of amino acids and on sports nutrition, we provide Amino Vital® GOLD and other product families that help maintain the health and condition of both professional and recreational athletes. We are committed to continuing product development based on advanced technologies and expertise in foods and amino acids, and backed by sports science, to contribute to the health and enjoyment of all who participate in sports and exercise.
Global Network
The globe-spanning R&D network of the Ajinomoto Group

The Ajinomoto R&D network links together all the R&D centers of Ajinomoto Co., Inc., and the other group companies of the Ajinomoto Group.

Core R&D centers in Ajinomoto Co., Inc.

Institute of Food Sciences and Technologies
Developing the science of delicious food products

Research Institute for Bioscience Products & Fine Chemicals
World-leading advanced bioscience and fine-chemical technologies

R&D Planning Dept.
The R&D Planning Dept. of Ajinomoto Co., Inc., is responsible for determining the priorities of the various R&D fields and of new R&D projects, determining how to manage these projects, and developing and training global human resources. The R&D Planning Dept. coordinates and manages the overall Ajinomoto Group R&D, advances the Open & Linked Innovation initiative, and supports business operations during market entry of new products.

The Intellectual Property Dept.
The Intellectual Property Dept. of Ajinomoto Co., Inc., exercises control over the intellectual property of the entire Ajinomoto Group. The department acquires and protects intellectual property such as patent and trademark rights. Furthermore, in coordination with the R&D department and other business units, the Intellectual Property Dept. plans, reviews, and negotiates contracts on joint research to develop intellectual property.
Core overseas R&D centers of the Ajinomoto Group

ZAO "Ajinomoto-Genetika Research Institute" (Moscow, Russia)
R&D on fermentative microbes for amino acids, nucleotides, and other products.

SHANGHAI AJINOMOTO FOOD RESEARCH AND DEVELOPMENT CENTER CO., LTD. (Shanghai, China)
Support of global food R&D by separation, evaluation, and analysis of components contributing to food taste and texture and related application technologies in collaboration with the Ajinomoto Group.

Strategic organization for open innovation

NARIC - North American Research & Innovation Center
Coordinates and supports Open & Linked Innovation activities at institutions, companies, other organizations, and the Ajinomoto Group in the U.S., Europe, and around the world.

The Ajinomoto Group’s Globally-expanding R&D Network

Russia
ZAO “AJINOMOTO-GENETIKA Research Institute”

North America
Ajinomoto Health & Nutrition North America, Inc.
Ajinomoto Foods North America Inc.
Ajinomoto Althea, Inc.
(Ajinomoto Bio-Pharma Services, U.S.)

Europe
AJINOMOTO FOODS EUROPE S.A.S.
AJINOMOTO ANIMAL Nutrition Europe
S.A. Ajinomoto Omnichem N.V.
(Ajinomoto Bio-Pharma Services, Belgium)
Ajinomoto Poland Sp. z o.o.

Japan
Ajinomoto Co., Inc.
Ajinomoto Frozen Foods Co., Inc.
Ajinomoto Fine-Techno Co., Inc.
Knorr Foods Co., Ltd.
Ajinomoto General Foods, Inc.
AJINOMOTO BAKERY CO., LTD.
Ajinomoto Packaging Inc.
AJINOMOTO HEALTHY SUPPLY CORPORATION INC.

Southeast Asia
Ajinomoto Co., (Thailand) Ltd.
PT Ajinomoto Indonesia
AJINOMOTO PHILIPPINES CORPORATION
Ajinomoto (Malaysia) Berhad
Ajinomoto Vietnam Co., Ltd.
Wan Thai Foods Industry Co., Ltd.

China
SHANGHAI AJINOMOTO FOOD RESEARCH AND DEVELOPMENT CENTER CO., LTD.
Ajinomoto (China) Co., Ltd.
Amoy Food Ltd.
Shanghai Amoy Foods Co., Ltd.

South America
Ajinomoto do Brasil Ind. e Com. de Alimentos Ltda.
Ajinomoto del Peru S.A.

Food
Bioscience Products & Fine chemicals
Pharmaceuticals & Health
Institute of Food Sciences and Technologies

Developing the science of delicious food products

Building total food science, contributing to the well-being of people around the world through tasty and healthy foods

Our Mission

Our aspiration in the Institute of Food Sciences and Technologies remains as it has been throughout the century since the beginnings of the Ajinomoto Group. This aspiration is to contribute to the joy of eating and the enjoyment of good health. The focus of our research is food, since this is essential to life. Our R&D is directed to providing value to customers that is in harmony with their changing lifestyles, by understanding our customers' needs, and applying our distinctive technological strengths. Our foremost goal is to contribute to our message of Eat Well, Live Well around the world. Our broad range of R&D functions relate closely to all the food, health, and nutrition operations of the entire Ajinomoto Group. We provide the center for R&D for bases around the world in the Group, and as a leader in food science and technology, we work in close collaboration with the Group companies in Japan and overseas. Our perspective is both scientific and global, and we continue to provide distinctive new technologies for food, health, and nutrition, and help in their worldwide implementation.

Location

Institute of Food Sciences and Technologies
1-1 Suzuki-cho, Kawasaki-ku, Kawasaki City, Kanagawa Prefecture 210-8681 Japan
Work in progress

Development of materials and technologies that create new value-added tasty and healthy foods to help consumers maintain good health

We are engaged in the development of distinctive new materials and technologies for food products. This can be achieved by applying advanced technologies for analyzing the factors controlling the taste and texture of food and identifying the constituents of desirable food products. Our aim is to explore and improve existing materials and obtain new materials for enhancing the taste, flavor, and texture of food. This research extends to testing and verifying these materials as it relates to their application in customer products and in production processes, thus ensuring the delivery of new value-added products to the customer.

Our research into materials for supplements and other health-related products includes verifying their nutritional effectiveness and developing technologies for their processing in the production of food products. Safety is ensured by using the latest separation and analysis technologies to detect trace components in the resulting food products.

Development of value-added products and applications, with customer satisfaction as our No. 1 priority

A major focus of our research and development is to use the materials and technologies we develop to provide effective products and solutions for the needs and challenges of customers around the world.

Our work extends from initial research and development, to the industrialization of products ranging from seasoning for use by individual consumers and industrial operations, to health materials and amino acid-based health products. We have therefore constructed the Kitchen Value Chain product evaluation system to ensure customer satisfaction for all products manufactured by the Ajinomoto Group.

In the same spirit, we are engaged in the development of package design technologies for maintaining the stability of delicious food products, providing easy-to-open packaging, and increasing the overall ease of use of our products by the customer, all while maintaining a light environmental footprint.

For restaurants, convenience stores, processed food producers, and other businesses, we develop seasonings and enzyme preparations that increase food quality. In this work, we apply the Ajinomoto Group strengths in distinctive new materials and production processes, related expertise, and application technology. To support our customers in overcoming technological challenges, we provide solutions that envision their actual site conditions. This also extends to the development of complete order-made products, and other means for achieving optimum solutions in cooperation with the customer.
Global configuration

Creation of value in food around the world based on a global perspective

The Institute of Food Sciences and Technologies is linked to advanced scientific research and information bases in Europe and the U.S. to further heighten the level of our research and development. The Group companies located overseas introduce and market a variety of products that utilize the materials and technologies developed by the Ajinomoto Group. The capabilities of these group companies are strengthened so they can quickly deliver products in full conformance with the needs and preferences of the target countries and markets. To this end, we provide support for their development programs and training activities, and we provide technological support in process development for new plant construction in developing countries.
Research Institute for Bioscience Products & Fine Chemicals

World-leading cutting-edge bioscience and fine chemical technologies

Creating new value for the customer through cutting-edge bioscience and fine chemical technologies

Our Mission

Our basic role is the ongoing creation of new value (value centered around the customer) to make our message of Eat Well, Live Well a reality for our customers worldwide, utilizing the cutting-edge bioscience and fine chemical technologies that are the basic strengths of the Ajinomoto Group. Our advanced bioscience and fine chemical technologies allow us to provide basic support for the AminoScience and other business domains of the Group. Our basic role begins and ends with research on the production of amino acids, amino acid derivatives, nucleotides, and related substances, and their effective utilization. We are also exploring new materials, conducting research and development, investigating new scale-up production methods, and finding new applications for current materials and processes. Our role also includes the application of the resulting materials and technologies to an expanding range of business domains.

Location

Research Institute for Bioscience Products & Fine Chemicals
1-1 Suzuki-cho, Kawasaki-ku, Kawasaki City, Kanagawa Prefecture 210-8681 Japan
Distinctive, world-leading technologies, directed to meeting customer needs

We are engaged in creating high-value materials and retail products. These include food-additive MSG, nucleotides and amino acids for pharmaceuticals and animal feeds, seasonings, sweeteners, pharmaceuticals (bulk drugs, intermediates, and formulations), advanced medical materials (oligonucleotides, peptides, proteins, cell media), cosmetics, and electronic materials. Our focus is to provide solutions for next-generation markets.

Our strength in finding solutions for customers’ needs and helping them attain their objectives is based on a combination of capabilities. These capabilities include the use of biotechnology, our understanding of microbes and enzymes, and our knowledge of fine chemicals for producing functionally valuable compounds from raw materials. In addition, we have expertise in functional assessment technology for evaluating the nutritional, physiological, and other functions, and development of the methods for their utilization. Together, these capabilities form the base for the advanced development and stringent evaluation of high-quality materials generated using optimized production processes.

Domestic organizations and the global networks covering business and technological axes

Organizational structure in Japan

The organizational structure in Japan has two axes. One axis represents the Materials Development and Application Laboratories, which primarily serve the business domain with "one-stop" research, development, industrialization, and technical support. The other represents the Process Development Laboratories, which are focused on technological functions and intense investigation into breeding new microbial strains, developing fermentation, isolation and purification processes, and advancing protein chemistry, industrialization, engineering, and other core technologies. These developments are conducted in conjunction with the expansion of peripheral technologies. We are engaged in linking our core technologies to customer needs, and working with the customer to create products and services with newly added value.

Global collaboration network

The global competitive strength of the Ajinomoto Group is supported by its collaborative network that spans many parts of the world. The Group R&D company ZAO "Ajinomoto-Genetika Research Institute" (Russia) is a key part of this collaboration and is focused on advancing the investigation of breeding the microbes that produce amino acids. The Research Institute for Bioscience Products and Fine Chemicals is the central base for collaboration with production technology development centers around the globe. This institute develops production processes for utilizing these microbes, in collaboration with the fermentation plants of the Group located in many countries.

We also work in close collaboration with Ajinomoto OmniChem (Ajinomoto Bio-Pharma Services, Belgium), Ajinomoto Althea, Inc. (Ajinomoto Bio-Pharma Services, U.S.), which is responsible for the commissioned production of pharmaceuticals and other materials, Ajinomoto Fine-Techno Co., Inc., which is responsible for the production of electronic materials and other chemical-related products, and other Ajinomoto Group companies located in Japan and overseas. Working together, we provide unique value to customers around the world.
Open & Linked Innovation

The Ajinomoto Group initiative for Open & Linked Innovation combines knowledge and expertise from around the globe to deliver an exciting world of new value.

Creating new value, together. Blazing new paths to the future.

Open & Linked Innovation describes our process for growth and the creation of new value through partnership and innovation. It is an approach of fundamental importance to the Ajinomoto Group in both spirit and value, and we welcome like-minded newcomers to join our team of enterprises, research institutions, and other organizations from Japan and around the world. Through this collaborative approach, we bring researchers together with different backgrounds, disciplines, perspectives, techniques, and expertise. As a result, we are empowered to blaze new paths to future possibilities and to make contributions to society on a global scale.

Our Strengths

The Ajinomoto Group is a leader in the field of foods and amino acids. Now as in the century since its founding, the focus of the Group is on cutting-edge bioscience and fine chemical technologies based on amino acids research.

Food

The Ajinomoto Group uses its globally unparalleled seasoning technology to conduct groundbreaking research on umami and other tastes, as well as all components of deliciousness, which include flavor, texture, and the external environment. This intrinsically requires an effective response to the needs and preferences of consumers in different regions and countries. For this purpose, we combine the results of our findings to create our own distinctive new materials, production processes and applications to provide solutions to food-related problems around the globe.

In seasonings, soups and broths, mayonnaise, frozen foods, coffee, and many other categories, our food and food-material products provide value and enjoyment for consumers and industrial operations around the world. We apply the distinctive expertise of the Ajinomoto Group to the development of seasonings, enzyme preparations for increased food quality, and other products and materials to aid business customers in the convenience-store, boxed-lunch/delicatessen, restaurant, and other sectors of the food-service industry, as well as producers of processed foods and other food products.

Amino science

AminoScience originated in the Ajinomoto Group and has led to a high level of research focused on developing technologies for the functional study, production, analysis, and blending of amino acids, nucleotides, and their derivatives. This has led to high-performance biomaterials, animal nutrition products, cosmetics, electronics materials, and many other materials and products that respond to customer needs. Amino science has also led to global healthcare solutions in our biopharmaceuticals, media for regenerative medicine, AminolIndex Technology, and other healthcare operations.

With our core knowledge of cutting-edge bioscience and fine chemical technologies, we are working to develop more new products and materials with higher added value that respond to customer and social needs, and the creation of new business operations and models.
Research grants

**AIAP - AJINOMOTO Co. INNOVATION ALLIANCE PROGRAM**

The Ajinomoto Co. Innovation Alliance Program (AIAP) of the Ajinomoto Group provides grants for achievements from around the world in technology and research that contribute to the health of people and their societies. AIAP is promoting Open & Linked Innovation in a wide range of fields to create new added value.

Global strategic base

**NARIC - North American Research & Innovation Center**

NARIC is a strategic base for the Ajinomoto Group global research and development. It coordinates and supports the activities of institutions, companies, other organizations, and the Ajinomoto Group in the Open & Linked Innovation program in the U.S., Europe, and around the world.

Client Innovation Center (CIC)

The aim of the CIC is to continuously generate feasible research projects by deepening discussions with business partners for co-creation of new value and new businesses that will help resolve social issues. It features a Technology Space that introduces 37 representative technologies in 14 categories from the Ajinomoto Group’s business domains of Food Products and AminoScience, and a Digital Ideation Space that incorporates leading-edge ICT.

Eat Well, Live Well.