

Contribution to medicine

Performance

GRI203-2

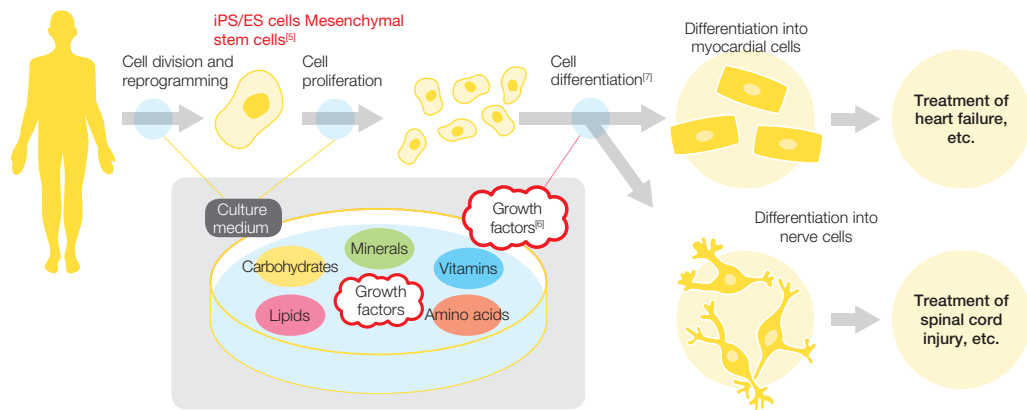
► Sustainability Data
Book 2018 P31-32

Making Regenerative Medicine^[1] a Reality

Commercial cell culture medium for regenerative medicine^[2]

Regenerative medicine is one of the most active fields of research worldwide as a radical treatment that may solve the problems associated with organ transplantation. The Ajinomoto Group is a supplier of pharmaceutical-grade amino acids, a key ingredient in cell culture media. In 2014, the Group successfully developed *StemFit*® AK03, an iPS^[3]/ES^[4] cell culture medium that is free of animal-derived ingredients, which was introduced to the market in 2016 as *StemFit*® AK03N. With Ajinomoto Kohjin Bio Co., Ltd., a joint venture established with Kohjin Bio Co., Ltd. in 2018 for the contract manufacturing of clinical culture media used in regenerative medicine, the Group will continue to play an active role in regenerative medicine and drug development through the manufacturing and supply of cell culture media.

Role of cell culture medium in regenerative medicine



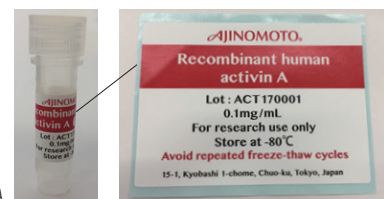
- [1] Medical treatment of dysfunctional, non-functional or defective tissues where artificially reproduced functional cells or tissues are transplanted to regenerate the tissues and their functions.
- [2] A nutrient solution that contains a balanced mixture of amino acids, carbohydrates, lipids, vitamins, minerals and growth factors required for cell growth.
- [3] Pluripotent stem cells generated from human body cells by adding a number of factors to reprogram them into pluripotency (ability to differentiate into different tissues and organ cells) and almost infinite proliferative capacity.
- [4] Pluripotent stem cells derived from the inner cell mass of a human blastocyst that is capable of differentiating into various tissue and organ cells that make up the body.
- [5] A type of stem cells discovered in 1970 that exist in the body and have the capacity for self-proliferation and multipotency. Mesenchymal stem cells differentiate into mesenchymal cells such as bone, cardiac and other cells.
- [6] Proteins that promote the proliferation and differentiation of specific cells in human and animal bodies.
- [7] The conversion of iPS/ES cells into cells of different tissues and organs that make up the body.

► Press release

TOPIC

Supplier of the Japan's first growth factors for clinical research to laboratories

In October 2018, Ajinomoto Co., Inc. obtained a confirmation letter from the Pharmaceuticals and Medical Devices Agency (PMDA), the Japanese drug regulatory and review agency under the Ministry of Health, Labour and Welfare, stating that its *Recombinant human activin A*, a growth factor indispensable in the cell differentiation process in regenerative medicine, does not contain any raw materials to which the Standards for Biological Ingredients are applicable. Following this confirmation, the Company started supplying this growth factor, the first in Japan for clinical research use, to research institutions.



Recombinant human activin A

Contribution to Health and Nutritional Issues

Performance

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▶ Sustainability
 Data Book 2018
 P33-34

▶ Information about
AminoIndex™
 (Japanese)

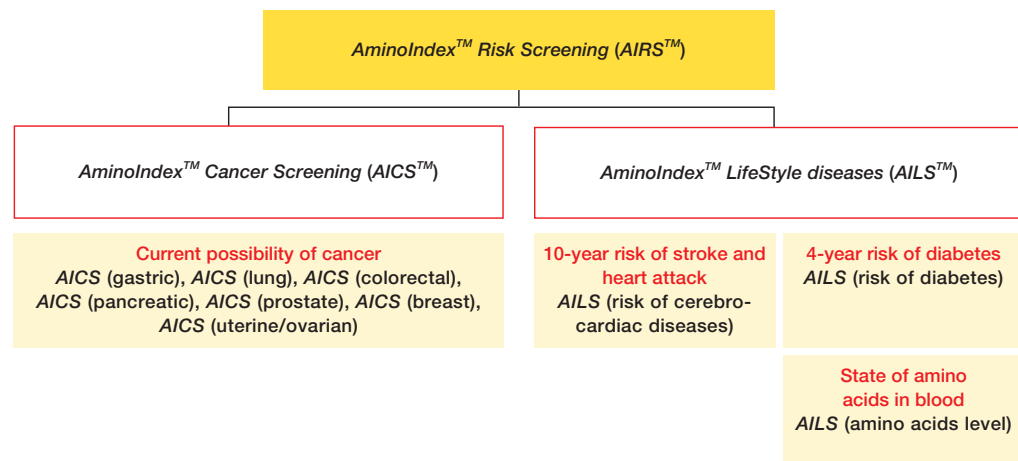
▶ Press release

“AminoIndex Technology”

Ajinomoto Co., Inc. developed “AminoIndex Technology,” a tool to assess the state of health and disease risks by statistically analyzing the changes in the balance of amino acid concentrations in blood brought on by diseases. In 2011, the Company launched *AminoIndex™ Cancer Screening (AICS™)* as a commercial application of this technology. This was followed by *AminoIndex™ LifeStyle diseases (AILS™)*, which assesses the risk of developing diabetes within four years, and the two were combined in 2017 into *AminoIndex™ Risk Screening (AIRS™)*. In April 2019, *AILS™* was expanded to include the assessment of the stroke and heart-attack risks within 10 years. This means that a single blood test can now assess the risk of developing the three major diseases: cancer, stroke and heart attack.

The Ajinomoto Group will continue researching and developing tests that can help the prevention and early diagnosis of different diseases to support customers in their pursuit of long, healthy lives.

Key features of *AminoIndex™ Risk Screening (AIRS™)*



TOPIC

MEXT Ministerial Commendation for Science and Technology in Development Category^[1]

Ajinomoto Co., Inc. was awarded the Prize for Science and Technology (Development Category) in the Commendation for Science and Technology by the Ministry of Education, Culture, Sports, Science and Technology of Japan for 2019 in recognition of its achievement in the development of a new method of disease risk testing using the plasma amino acid profile (“AminoIndex Technology”).

[1] Prizes awarded to individuals who have made an outstanding achievement in scientific or technological research and development, with the aim of motivating those working in the field of science and technology and thereby raising the standard of science and technology in Japan. The Prize for Science and Technology (Development Category) is awarded to individuals who have undertaken a groundbreaking research, development or invention that contributes to the development of Japanese society, economy or people’s lives and has been applied to practical use.