Giving back to society through outstanding research findings

Linking research institutions with the world of industry

Industry/academic collaboration drives market effect of around 686 billion yen!

To enable the outstanding research findings created at universi-ties and public research institutions to be incorporated into objects useful in our daily lives, cooperation with corporations is essential. Actually, no matter how remarkable some research out-comes may be, in many cases they often never reach the wider world, for a range of reasons. In order to solve this problem, JST offers support for development contracting, commissioned development, and more, as a builder of bridges between research institutions and the world of industry. JST is also involved in business promoting the establishment of venture corpora-tions. **The market effect of all this effort is around 686 billion yen, with at least 296 venture corporations established as a result of JST's business efforts**, representing a significant economic impact.

Some examples of developed outcomes of industry/academic collaborative research

*Names of research institutions, corporations and support programs are as of the time of support implementation

A.D.

Since 1958

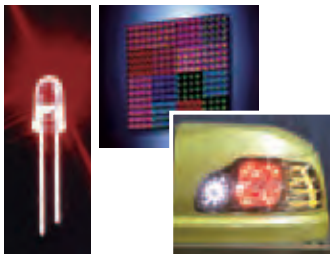
1959 — Manufacture of synthetic quartz crystals

1959▶Contract development

University of Yamanashi & Epson Toyocom

Crystal oscillators (radio, televisions, clocks, computers, mobile phones) etc.

1972 — High luminance red LEDs



1972▶Contract development

Tohoku University & Stanley Electric

Display devices, such as large and small screen displays

1977 — Manufacturing technology for magnetic material amorphous metals

1977▶Contract development

Tohoku University & Hitachi Metals (& others)

Electrical transform-ers on telephone poles, magnetic components for electronic devices

1980 — Development of natural interferon-β pharmaceuticals

1980▶Contract development

Toray

Interferon drugs (medication to treat brain tumors, malignant melanomas, hepatitis B, etc.)

1981 — Manufacturing technology for high-quality graphite

1981▶ERATO/Licensed

1988▶Contract development

ERATO Ogata Fine Polymer Project/ Matsushita Electri-cal Components

Developing high added-value graphite material from molecules such as polyamides. Used in heat diffusion devices for electronics etc.

1986 — Manufacturing technology of gallium nitride (GaN) blue light emitting diode

1986▶Contract development

Nagoya University & Toyoda Gosei

Received the Nobel Prize in Physics (Isamu Akasaki, Hiro-shi Amano) Display devices, such as large and small screen displays

A.D.

1990

Manufacturing technology of oxide superconductor material

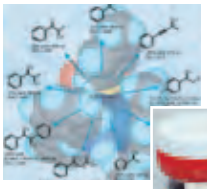
1990▶Contract development

The University of Tokyo (& others) & Sumitomo Electrical Industries

Superconductive ca-ble, superconduc-tive motors etc.

1991

Manufacturing optically-active alcohol vari ants



1991▶ERATO

1998▶Contracted/licensed

Kanto Kagaku & Takasago Internationals

Practical application of re-search findings that re-ceived the 2001 Nobel Prize for Chemistry (Ryoji Noyori). Can be used as raw materials for medical/agrochemical in-termediates etc.

1993

Manufacturing technology of polymers with phospholipid polar group

1993▶Contract development

The University of Tokyo, Tokyo Medical and Dental University, Nof

Used in contact lens-es, cosmetics, medi-cal materials, etc.

1998

Creating environmental technology by developing original optical materials

1998▶Regional consolidation

Kanagawa Academy of Science and Technology & others

The ability to break down photocatalysts is utilized in air clean-ing devices, construc-tion materials, etc.

2000

Manufacturing technology for ^{18}O-labeled water (as a PET diagnostic agent)

2000▶Contract development

Tokyo Institute of Technology & Taiyo Nippon Sanso

Contributing to early detection and treat-ment of cancer as a material for use in PET examinations

2003

Retinoic acid nanoparticles

2003▶Pre-venture

Nanoegg

Effective results antici-pated not only for cos-metic uses, but also medical uses.

2004

Artificial hip joint with long-term reliability

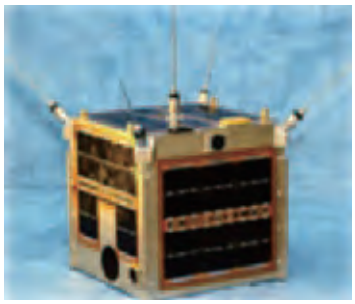
2004▶Contract development

Chubu University & Japan Medical Materials

Improving quality of life for patients with rheumatism or hip joint problems

2006

Leading the next generation space business of ultra compact satellites with low-cost and short-term development



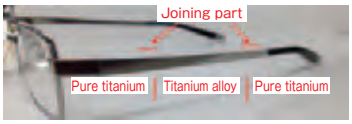
2006▶University-generated venture

Axelspace Corpora-tion

Leading the next generation space business of ultra com-pact satellites with low-cost and short-term development

2010

High-quality and high-efficiency process technology of titanium alloy with high-brightness laser adaptive control



2010▶A-STEP Seeds Development Type

Osaka University & CHARMANT

Commercialization of high performance eyeglass frame with unprecedented precise design and an unique structure combining different materials.