

Press Conference President of JST

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Japan Science and Technology Agency



JST Initiatives towards Innovation Creation in Science and Technology

JST Initiatives towards Innovation Creation

I. FY 2012 Review of Activities

II. FY 2013 Prospects





FY 2012 Topics (1)

Innovation resulting from technology seeds

- IPS cells (Prof. Shinya Yamanaka, Kyoto Univ./CREST, Yamanaka iPS Cell Project)
 - Awarded the Nobel Prize in Physiology or Medicine 2012
 - Clinical study using retinal cell sheets produced from iPS cells will be launched by RIKEN
- Transparent Amorphous Oxide Semiconductor (TAOS) (Prof. Hideo Hosono, Tokyo Institute of Technology/ERATO-SORST)
 - IGZO is used by Sharp Corporation as one of their key technologies
- Genetic causes of lung cancer identified (Prof. Hiroyuki Mano, Jichi Medical Univ./CREST, Research Acceleration)
 - Anti-cancer drugs based on the discovery have been developed and approved for sale in Japan with exceptional swiftness

World's top-level research outcomes

The research outcome of Prof. Mitinori Saitou, Kyoto Univ. (ERATO/Saitou Totipotent Epigenome) and Associate Prof. Katsuhiko Hayashi, Kyoto Univ. (PRESTO/Epigenetic control and biological functions) "Making eggs from stem cells" was selected as one of the runners-up for "Breakthrough of the year 2012" by the journal Science.









FY 2012 Topics (2)

Supporting Nobel-Prize-level scientists

Masatake Haruta, Professor Emeritus, Tokyo Metropolitan University (CREST/Development of the foundation for nano-interface technology) was selected as one of the 2012 Thomson Reuters Citation Laureates that are considered as candidates likely to win the Nobel Prize.



Nine in fifteen Japanese who have been selected as Thomson Reuters Citation Laureates over the past ten years are researchers supported by Strategic Basic Research Programs.



Innovation Creation by start-up ventures

A high number of start-ups have been established through JST initiatives. 25 companies in the "Top 100 next-generation ventures in Japan" published by the journal Nikkei Business on Oct. 8, 2012 are related to JST programs.

FY 2012 Topics (3)

e-ASIA Joint Research Program inaugurated

The Joint Research Program with member countries of the East Asia Summit (e-ASIA JRP) has been inaugurated with the aim of resolving issues shared among these countries in areas such as natural disaster prevention and infectious diseases, through acceleration of exchanges and cooperation in science and technology. Current members consist of ten organizations from nine countries.

Operation of JDream transferred to private sector

A contract has been made with G-Search Limited to transfer document database services JST has provided so far. JDream III, the successor of JDream II and other database services, will soon be provided for the public by G-Search.

2nd Japan High School Science Championship

47 representative teams with 359 students selected from each of 47 prefectures tried to solve tasks requiring scientific knowledge and its application competence. This year, Okazaki high school in Aichi prefecture was the winner.











"Top Innovation" from "Top Science"

- Establishment of the JST Strategic Program Package
- Enhancement of the function of Program Directors (PDs) and Program Officers (POs)
- Inter-ministry collaborative initiatives
- Promotion of international exchanges and cooperation

Contributing to reconstruction and revitalization after the Great East Japan Earthquake

- Establishment of the JST Center for Revitalization Promotion
- Implementation of programs for Revitalization Promotion

Basic Policy

Strategic management with seamless approaches in linking JST programs together within each priority field (Key for Innovation Creation: Linking)

- Accelerating Innovation Creation that can actually serve to return research outcomes to society and industry
- Strengthening inter-ministry cooperation among related institutions as well as collaboration with domestic and overseas research hubs

Strategic Initiatives

Priority Fields

Green Innovation, Life Innovation, Nanotechnology and Materials, Information and Communication Technology, and Science and Technology for Society and Social Infrastructure

Strategic Program Package

Identifying specific technology areas to be intensely focused on starting from basic research through development for commercialization



Strengthening JST-PD-PO-PI system to reflect JST policy

Enhancing the function of PDs

PDs for Research in Strategic Basic Research Programs

- To apply to program management the policy of Innovation Creation founded on outstanding basic research

- To optimize research areas and allocation of funds by developing the formation of research areas

PDs for Development in R&D Programs Focused on Technology Transfer - To enhance seamless approaches in program management by virtue of collaboration with PDs for Research

Developing human resources for JST-POs

Human resource development at JST to improve the effectiveness of the PD-PO system by means of cooperation between academia-PO and JST-PO



Winning as a team: Coordination between related institutions and organizations to meet the needs of society

Cooperation among funding agencies

Discussion, management of common issues, and collaboration on specific programs have been carried out with the National Institute of Information and Communications Technology (NICT), the National Institute of Biomedical Innovation (NIBIO), and the New Energy and Industrial Technology Development Organization (NEDO).

Inter-ministry collaboration

- O Bioscience databases have been integrated as an infrastructure for life science research in collaboration with four ministries (MEXT, MHLW, MAFF and METI).
- O Results from energy-related joint meetings between MEXT and METI have been applied to the policy on R&D etc. in Strategic Basic Research Programs.
- O Seamless R&D from the pre-clinical to clinical stage in the Project for Realization of Regenerative Medicine has been done in partnership with MHLW.



International joint research and exchanges

- Launch of joint research partnership with China, Canada and the EU
- Encouragement of international interaction through a total of 303 joint research projects with 51 countries and regions
- Foundation and promotion of the e-ASIA Joint Research Program

International arrangements etc.

- International collaboration by using a multinational cooperation scheme (Belmont Forum etc.)
- Memorandum of Understanding (MoU) to facilitate research cooperation entered into with the National Institute of Health (NIH) of the United States



Left: Dr. Nakamura, President of JST Right: Dr. Collins, Director of NIH



- To provide "one-stop service" for various revitalization programs conducted by JST
- To offer support that can meet specific local needs
- To collaborate with local governments, Tohoku Economic Federation and other industry organizations, trade associations, universities, foundations, etc.



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II. FY 2013 Prospects



FY 2013 JST Initiatives



Accelerating socio-economic value creation through evolution of Innovation Ecosystem

- Qualitative and quantitative advancement of basic research
- Systematization of the whole sequence of the problem-solving process
- Enhancement of innovative research with participation of researchers in the humanities and social sciences
- Organization of industry-academia-government-collaborative research hubs and their network
- Enlargement of global Innovation Ecosystem

Driving science and technology innovation

- Facilitation of practical use of big data, which is a pressing issue in Japan
- Support for developing next-generation scientists and mathematicians
- Creation of a social environment to help acceptance of new values by virtue of science communication