The Life Innovation Policy of Japan and Activities of MEXT

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The 2nd S&T Basic Plan (FY2001-FY2005)
- The Government decided 4 strategic areas including Life Sciences

The 3rd S&T Basic Plan (FY2006-FY2010)
- The Government decided “4 priority fields to be promoted” including Life Sciences

New Growth Strategy (June 2010, Cabinet Decision)
- The Government decided 7 strategic areas including Life Innovation (innovation in the medical and nursing care sectors)

The 4th S&T Basic Plan (FY2011-FY2015)
- The Government regards Life Innovation as the priority agenda which should be addressed.
The New Growth Strategy: Blueprint for Revitalizing Japan

June 18, 2010
Cabinet Decision

Targets

2020
◆ Achieve nominal & real growth in excess of 3% and 2%.
◆ Return consumer prices to positive increase in FY2011.
◆ Lower the unemployment rate to 3% - 4% at an early time.

2010
◇ Sluggish growth (real growth rate at 1% in the past decade; potential growth rate at 1%)
◇ Trapped in deflation (consumer price increase rate at 0% in the past 20 years)
◇ Unemployment rate at 5%

7 Strategic Areas & 21 National Strategic Projects

Green Innovation
Science-and-technology IT oriented nation
Employment & human resources Financial sector

Life Science Innovation
Tourism-oriented nation & local revitalization

Area
Demand Creation
Job Creation
Environment (Green Innovation)
¥ 50 trillion
1.4 million jobs

Health (Life Science Innovation)
¥ 50 trillion
2.84 million jobs

Asia
¥ 12 trillion
0.19 million jobs

Tourism
¥ 11 trillion
0.56 million jobs

Creation of New Demand and Jobs (Third Approach)
The 4th S&T Basic Plan (FY 2011-2015)

- The Forth Science and Technology Basic Plan (FY 2011-2015)
  (approved by the Cabinet, August 2011)
  - “Realization of Sustainable Growth and Societal Development into the Future”:
    - Reconstruction and revival from the disaster
    - Promoting Green and Life Innovation
    - System reforms directed at promoting STI

- The Basic Plan specifies several areas below as Strategic Prioritized issues in life sciences field
  - Development of revolutionary disease prevention methods
  - Development of new early diagnoses methods
  - Realization of safe and highly effective medial treatment
  - Improvement of Quality of life (QOL) for the sick, elderly, and disabled
To keep our society healthy and to sustain our economy continuously growth
-- acceleration of R&Ds for unmet medical needs and

**Regenerative Medicine**

**ACTION**: Establish trans-ministerial consistent support system (Regenerative Medicine Highway) 4.7 billion yen

- **Consistently support** the research of stem-cells such as iPS cells from basic to clinical research by the cooperation with relevant ministries concerned.
- **Promote systems biology** (unite of life sciences and mathematical principle calculation science) that is the current of research in the world, and **generate a technical system** that contributes the achievement of regenerative medicine by the network.

**Cancer Medicine**

**ACTION**: Promote world leading innovative cancer researches to the medicine. 3.6 billion yen

- **Promote world leading innovative cancer researches** and change researches aim at the clinical application.

**Neural and Mental Diseases Medicine**

**ACTION**: Overcome neural and mental diseases by brain science research. 1.8 billion yen

- **Achieve early diagnosis and treatment** by clarify the mechanism.

**Immuneological and Allergy Diseases Medicine**

**ACTION**: Establish safety and effectiveness of pollenosis vaccine. 0.3 billion yen

- **Put research progress pollenosis vaccine into practical use** by establishing safety and effectiveness.
Promotion of Life Innovation: 122 billion Yen

Focusing on the activities to create life innovation which aims to
- overcome incurable diseases
  and
- realizing a society with healthy bodies and minds
through effective use of our leading research fields and unique methodologies.
【A realization project of the regenerative medicine】
-promote the iPS/ES cell researches strategically by the “All Japan” system to survive successfully international competition.

【Strategic Research program for Brain Science】
-strategically promote brain science and research that aims at passing and returning the benefits of research results to society as a whole.

【Research Project for Innovative Cancer Medicine Development】
-promote the development of advanced cancer medicine by fostering results of basic and clinical researches on cancer into the innovative seeds for translational and clinical cancer researches.

【Platform for Medical and Pharmaceutical Research】
-enhance supporting platform for medical and pharmaceutical research for innovative drug development.
-construct an interdisciplinary research center (experimental and theoretical approaches) for innovative drug development.

【Accelerated Networking Program for Translational Research】
-construct supporting centers for translational research, which lead hopeful outcomes of fundamental researches to bedside.
Life Science Project in Japan(2)

Reconstruction and revival from the disaster

【Tohoku Medical-Megabank Plan】
- conduct genome-cohort studies in afflicted areas to secure medical experts and realize personalized-medicine for local residents, that results in recovery and rehabilitation of damaged local medical system.

System maintenance to support the whole life science research

【National Bio Resources Project】
- establish the highest quality bio-resources and its supply system at a world-class level to promote life science researches

【Integrated Life Science Database Project】
- improve the convenience of Database in Life Science and construct base for supporting world top-level researches
The Project for Realization of Regenerative Medicine

(1) Kyoto Univ.
Prof. Yamanaka
- Basic research of iPS cells
- Evaluation technology of iPS cell

(1) Keio Univ.
Prof. Okano
- Focus on central nerve system
- Development of Treatment for spinal cord injury

RIKEN
Sasai
- Operational technology of iPS Cell
- Development of Treatment for visual impairments

(1) Tokyo Univ.
Prof. Nakauchi
- Focus on Blood cells like platelet and red blood cell

MEXT iPS Cell Research Network

(2) Stem Cell Bank for Research

(3) Development Area of operational technology of Stem Cells

(4) Development Area of Stem Cells Treatment

Realization of Regenerative Medicine

MEXT Strategic Working Group for Stem cell Research and Regenerative medicine

Executive steering committee with Program Director and Officer

Evaluation committee