



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

SCIENCE & TECHNOLOGY NEWS FROM THE REPUBLIC OF KOREA, JANUARY 2012

Contact

Daniel Cavegn
Science and Technology Counsellor
Embassy of Switzerland in Seoul, Republic of Korea
Tel: +82 2 739 9511(ext. 722)
Email: daniel.cavegn@eda.admin.ch
Web: <http://www.eda.admin.ch/seoul>

A. Policies

Korea to attract more foreign educational institutions

(Korea.net of 19.01.2012)

The Korean government is initiating an inter-ministerial effort to attract more foreign educational institutions to Korea's free economic zones.

In order to attract more foreign educational institutions, the government firstly plans to ease related regulations and provide more incentives. To that end, the Ministry of Knowledge Economy is seeking ways to amend the Special Act on Designation and Management of Free Economic Zones to allow the schools to send their earnings back to their countries and use their home countries' accounting standards. In addition, the review processing time for getting the establishment permission will be shortened from the current six months to four, and the Ministry of Education, Science and Technology will publish a manual for foreign schools to facilitate the process. Government subsidies to foreign institutions are also expected to be expanded from the current level.

Secondly, relevant ministries, local governments, and free economic zone authorities will cooperate with each other to create a more comprehensive strategy for attracting institutions that capitalize on each region's unique strengths.

Thirdly, the government will make efforts to attract outstanding research institutes to form academia-industry-research clusters where foreign educational institutions can engage in collaboration activities. Opportunities for participation in R&D projects will be expanded for foreign institutions as well.

Lastly, an evaluation system will be introduced in connection with the current evaluation system for domestic higher education institutions to ensure the quality of education. Under the evaluation system, foreign institutions will also be required to disclose evaluation results.

The government expects foreign higher educational institutions to boost Korea's educational competitiveness, and the primary and secondary level schools to complement the country's public education system.

Samsung to invest, hire record amounts in 2012

(Joongang Daily of 18.01.2012)

Samsung Group, Korea's largest business conglomerate, announced that it will invest 47.8 trillion won (\$41.7 billion) this year despite economic uncertainties at home and abroad. The amount is a record in the group's 73-year history and an increase of 12 percent from last year, which was the previous record.

Samsung's investment represents one-third of the 151 trillion won investment Korea's top-30 companies have planned for this year. Samsung, which has over 80 affiliates in areas such as electronics, engineering, finance, textiles and hospitality, did not break down the investment by affiliates.

Samsung Electronics, the group's flagship company, is the world's No. 1 maker of memory chips like DRAM (dynamic random-access memory) and NAND flash chips, but is only the world's ninth manufacturer of nonmemory chips, or system-on-chips. The company has been attempting to beef up the latter business for the past several months. System-on-chips (also called logic chips) control entire computing systems, whereas memory chips store or read data. System-on-chips are more profitable than conventional memory chips and less vulnerable to price fluctuations.

Analysts believe Samsung has also set aside hefty sums for organic light-emitting diode displays. OLED panels are thinner, lighter and clearer than liquid-crystal display (LCD) panels. Because of their high prices, they were generally used in the past for small devices like smartphones and tablet computers.

Meanwhile, Samsung Electronics, the world's largest maker of LCD panels, also announced that it will start the mass production of 46-inch transparent LCD panels this month, which would be the industry's first. Last month, the company began the mass production of 22-inch transparent LCD panels. With this, Samsung is also the only one in the global technology industry with the capacity to mass produce two different sizes of these panels.

Seoul opens first carbon capture research center

(Yonhap News of 10.01.2012)

South Korea on Tuesday opened its first research center dedicated to the development of new technologies to capture and process carbon dioxide in an effort to transform its battle against global warming into a potentially lucrative business.

The new Carbon Capture and Sequestration (CCS) Research Center will spend up to 173 billion won (US\$150 million) in the next nine years to develop new technologies to capture, transport and store carbon dioxide, a main cause of climate change, according to the Ministry of Education, Science and Technology.

Ground Broken for 2nd Antarctic Research Base

(KBS World of 17.01.2012)

South Korea held a groundbreaking ceremony for its second Antarctic research base on Tuesday. A delegation led by Second Vice Minister of Land, Transport and Maritime Affairs Ju Sung-ho attended a ceremony on Tuesday to break ground for the Jang Bo-go base at Terra Nova Bay in the Antarctic.

Construction of the Jang Bo-go base, named after the ninth-century Korean admiral, comes 24 years after the country's first Antarctic research station, the King Sejong base, was completed in 1988.

While the King Sejong base is located on the northernmost King George Island of the south pole, the Jang Bo-go base is being constructed on the mainland. More conveniently located, the new base is expected to serve as a bridgehead for South Korea to advance in the polar region.

Once construction of the Jang Bo-go base is completed in March 2014 as scheduled, South Korea will become the world's ninth country to have two or more research stations in the Antarctic, following the U.S., Britain and China.

Vice Minister Joo expressed his hope for the new research base during a speech at the ceremony. He said while South Korea faced limits in research due to geographical factors of its first base, the Jang Bo-go base will serve as an impetus for the country to carry out more active studies on submarine geology and marine natural resources in the Antarctic.

The government delegation asked for support from countries such as the U.S. and Italy that operate similar research bases in the region in the construction of the new base and strengthening of international networks after the station is completed.

The delegation also met the crew of South Korea's Araon icebreaker, which is currently anchored at Terra Nova Bay, to compliment them for their hard work in rescuing a Russian fishing boat.

Terra Nova Bay was selected as the final site for the Jang Bo-go base in March 2010, after rigorous screening by the South Korean government that began in 2006.

B. News**Asia's First Leukemia Drug Invented by Korean Company**

(KBS World of 05.01.2012)

The Korea Food and Drug Administration has approved a leukemia drug invented by Korea's Il-yang Pharmaceutical Company.

The drug named "Supect" is Asia's first approved leukemia drug. Il-yang says Supect is effective, reasonably priced and ready to penetrate the Asian market and advance to the global pharmaceutical market.

The pharmaceutical company says the five-billion-dollar global leukemia drug market has been dominated by multinational pharmaceuticals. It says since Asia accounts for 60 percent of the market, Supect is expected to set a new standard in the region in a short period of time, backed by its relatively low prices.

Over 300 Koreans develop leukemia every year, incurring 100 billion won in health insurance costs. Until now, the domestic market of leukemia medication was dominated by multinational firms.

New Stem Cell Medication Given Green Light

(Chosun Ilbo of 20.01.2012)

The world's first stem-cell treatment was authorized for sale in Korea last year and two more treatments using the new technology have now also received the green light.

The Korea Food and Drug Administration on Thursday said it approved Cartistem developed by Medipost for the treatment of damaged cartilage and Cupistem, an anal fistula drug by Anterogen.

Cartistem uses stem cells from other people to regenerate knee cartilage damaged by overuse or old age. But Cupistem uses patients' own stem cells from fatty tissue to treat anal fistula in Crohn's disease, which is a type of inflammatory bowel disease that can affect any part of the gastrointestinal tract from mouth to anus.

The companies say both drugs are ready for sale immediately.

In July last year, the world's first stem-cell treatment Hearticellgram-AMI was developed by Korean biotechnology firm FCB-Pharmicell to treat the acute myocardial infarction. The drug went on sale in September and was prescribed 100 times last year.

While countries around the world are racing to gain a firm share of the burgeoning market for stem-cell treatments, 13 other stem-cell treatments for ailments like senility and damaged vertebrae are undergoing clinical trials in Korea.

Korean professor chosen for HHMI early career scientist

(The Korea Herald of 25.01.2012)

Oh Dong-chan, pharmacy professor of Seoul National University, has been chosen as one of the early career scientists of the Howard Hughes Medical Institute, an internationally renowned research foundation, SNU said. Oh is expected to receive \$715,000 for the next five years in funding for his research on microbes in relation to drug use, according to the school.

"The research on discovering new antibiotic compounds based on microbes is promising ... on discovering antibiotics from natural sources. It can contribute to overcoming tolerance to existing antibiotics," said Oh.

Oh received his Ph.D in natural product chemistry at the University of California, San Diego and worked in the Department of Chemistry and Chemical Biology at Harvard Medical School. Oh has served as professor of pharmacy at SNU since 2009 and focused on discovering new antibiotic compounds by studying microbes.

The early career scientist award was established last year by the HHMI to support promising young American scientists, but has also awarded 28 international scientists to encourage biomedical research on the international stage.

New Treatment for Hunter's Syndrome Approved

(Medipana News of 12.01.2012)

Green Cross and Samsung Seoul Hospital jointly developed a treatment, 'Hunteraze' for hunter's syndrome and got KFDA approval as the second treatment for the disease.

Hunter's syndrome is a rare disease similar to mucopolysaccharidoses which brings about short stature, activity decline, low intelligence, and death before the age of 15 in the worst case. One out of 10~150,000 boys born has a chance to have hunter's syndrome, and there are approximately 70 patients in the nation who rely on 30 billion won worth of drugs imported.

Treatment for hunter's syndrome is one of the most expensive drugs in the world, and there was only one kind of it. As the treatment market formed a monopoly, patients had to embrace a potentiality of stockpile shortage in case of supplying problem.

'Hunteraze', the highly hailed KFDA-approved treatment was initially suggested for study by prof. Jin Dong-kyu of Samsung Seoul hospital, pediatrics who conducted animal test and clinical trials, and co-developed by Green Cross, a successful distributor.

S. Korean Research Team Finds Effective Pancreatic Cancer Treatment

(KBS World of 16.01.2011)

A domestic research team has found that a combination of anticancer chemotherapy and high dose radiation therapy could be very effective to treat pancreatic cancer patients.

The team at Severance Hospital in Seoul on Monday said it conducted chemotherapy along with tomotherapy on 39 inoperable pancreatic cancer patients and their survival time increased by an average of 21 months, compared to the ordinary average of six months.

The team said the size of tumors was reduced in most of the patients, and tumors shrank by roughly half their original size in about 50 percent of the patients.

The team noted the patients in its research showed the longest survival time so far.

Nat'l Cancer Center to Develop New Medicine

(KBS World of 01.02.2012)

The National Cancer Center will be developing new medicine for cancer hand in hand with multinational pharmaceutical companies.

The center's new medicine development team concluded a deal with Sanofi-Aventis Korea, agreeing to transfer substances and jointly develop potential substances for new treatment.

The center's team will be conducting pre-clinical examinations on potential substances for the new medicine, while Sanofi-Aventis Korea will be testing the effectiveness of the treatment.

The National Cancer Center says amid limited resources for developing new medicine, it decided to work together with a multinational firm to raise its global competitiveness.

The team aims to transfer the technology of four potential substances that have completed preliminary clinical trials for new medicine over the next five years by investing 240-billion won.