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**Science, Technology and Education News from Taiwan
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International cooperation in research: Co-invention is particularly strong in Chinese Taipei, Belgium and Switzerland, where over 40% of the patents filed in the mid-2000s resulted from collaboration with at least one inventor from abroad, according to the Industry Scoreboard 2009. Taiwan's cooperative patented inventions with other countries account for 52 % of its total, far higher than the 43 % in Switzerland, 30 % in Singapore and 4.8 % in South Korea, the Council of Economic Planning and Development said.

The Association of Indian Universities and the Foundation for International Cooperation in Higher Education of Taiwan (FICHET) signed an agreement to enhance cooperation in the field of education. The two sides agreed to initiate strategies to achieve collaboration on research projects, exchanges of teachers, cooperation in the field of technology and mutual recognition of higher education academic degrees and certificates. Currently, some 400 PhD candidates from India are currently studying in Taiwan, mainly in the IT sector. FICHET has forged similar pacts with institutes in Austria, Japan, and the USA.

Highlights of major news from the scientific world in Taiwan in March 2010:

Clinical trials for artificial retinal implant – researcher uncovers new bacteria species - new fuel-testing device – bone genetic research results – inauguration of stem cell center at National Taiwan University – collaboration on ocean energy development – Taiwan/Japan institutions join forces on cancer treatment – ITRI develops super-slim motor for e-bikes - improvement in bird tracking system – fucoidan from brown algae helps control cancer – institute develops high-fiber meals – chip detects slew of harmful allergens

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1. Taiwan fungus has great medical values

(Central News Agency, 02 03 2010)

A fungus widely used in folk medicine in Taiwan - *Taiwanofungus camphoratus* - has been proven to contain an anti-inflammatory compound whether it grows in the wild or is cultivated. The relevant study was recently published in the *Journal of Agricultural and Food Chemistry*. Though *T. camphoratus* contains some 100 components, the team was able to prove that the fungus, which can only be found in the wild growing on the inner bark of a local camphor tree called *Cinnamomum kanehirai*, has anti-inflammatory properties through its bioactive compound antrocamphin A. The study also found that the same amount of antrocamphin A can be derived from *T. camphoratus* after being cultivated for nine months. In the team's study, a lipopolysaccharides (LPS)-challenged acute inflammatory mouse was used to evaluate the anti-inflammatory activity of the special fungus. Pro-inflammatory molecule release in the liver of the mouse was suppressed by antrocamphin A, demonstrating its anti-inflammatory activity.

Full article:

http://www.etaiwannews.com/etn/news_content.php?id=1192433&lang=eng_news&cate_img=49.jpg&cate_rss=news_Society_TAIWAN

2. Taiwan to conduct clinical trials for artificial retinal implant

(Central News Agency, 02 03 2010)

The National Chiao Tung University and the China Medical University Hospital in Taichung City hospital will jointly conduct human clinical trials of artificial retinal implants, the first of its kind in Asia. Patients to be involved in the clinical trials in Taiwan will be visually-impaired people whose conditions are not congenital, including those who suffer from degenerative eye conditions such as retinitis pigmentosa, retinal detachment, or those suffering from age-related macular degeneration. The procedure involves surgically implanting a special microchip behind the retina, at the back of the eyeball, to restore partial sight to the visually impaired. The chip studded with a varying number of electrodes is part of retinal prostheses that link with the brain and nervous system and may help restore some vision by electrically stimulating nerve cells that normally carry visual input from the retina to the brain.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?ID=201003020025&Type=aLIV

3. Biotech park project revised

(Economic Daily News, 02 03 2010)

Plans for setting up a National Biotechnology Development Park in Taipei City's Nangang District have been revised to include the establishment of a super incubation center within the park's borders. The head of Academia Sinica, Taiwan's top research institute, stated that in line with the government's project to spur the domestic biotech sector, the Department of Health, National Science Council and Ministry of Economic Affairs would set up research, experiment and support facilities inside the park. NSC will establish an animal testing center, while MOEA will set up a pre-clinical trial biotech drug research and development service center, and DOH's Taiwan Food and Drug Administration will inaugurate a legal information center, which together will play a "super incubation role."

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95314&ctNode=445>

4. 3D movie technology yields innovative therapy

(Liberty Times, 03 03 2010)

The blockbuster film "Avatar" has unleashed a wave of 3D modeling applications, including forward-looking medical uses in Taiwan. National Central University, Taipei Veterans' General Hospital and Cathay General Hospital have teamed up to apply the technology to medical rehabilitation, helping stroke victims and those with head injuries, elderly patients with dementia, and patients with agoraphobia, as well as preventing falls in the elderly. 3D modeling of therapy can be tailored to the individual needs of each patient, adjusting the duration, order, and strength of stimuli. Sound and visual effects can be changed so that patients are not obliged to work through the



same boring routine, enjoying instead a personalized rehabilitation program. In elderly patients, the technique has been expanded to produce a means of preventing falls. Using the fall detector developed by the hospital in cooperation with National Central University, sensors are placed on a person's four limbs and trunk to send back information on balance and issue a timely warning to the user if things are out of balance. The device can be used to help patients practice balance exercises as well, and will summon help if a patient does topple.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95318&CtNode=419>

5. Taiwan has highest percentage of cross-border patents: report

(Central News Agency, 03 03 2010)

Taiwan is playing a major role in the research and development of world technology. According to a technology industry report, Taiwan's cooperative patented inventions with other countries account for 52.2 % of its total, far higher than the 43.9 % in Switzerland, 30.4 % in Singapore, and 4.8 % in South Korea, said Hu Chung-ying, vice chairman of the Council for Economic Planning and Development. The Organization of Economic Cooperation and Development Science, Technology and Industry Scoreboard 2009 shows that Taiwan has worked more closely with other countries, the United States in particular with which it produced 30 % of its total number of cooperative projects, he said. The CEPD noted that the government has in recent years continued to encourage multinational enterprises to set up R&D centers in Taiwan to help upgrade the nation's competitive edge. 43 multinational enterprises had set up R&D centers in Taiwan as of the end of January 2010, according to the CEPD.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aECO&ID=201003030036

6. Researcher uncovers new bacteria species

(China Times, 04 03 2010)

A researcher at Ming Chuan University recently discovered a new species of bacteria in fermented cummingcordia (pobuzih), a traditional fermented food in Taiwan, which has been recognized by the international microbiology community. Chen Yi-sheng, an associate professor in the Department of Biotechnology, isolated the new species of lactic acid bacteria after five years of research into the local delicacy used in soups, scrambled eggs and various other dishes. The results of Chen's study and his discovery of the novel species of the genus *Lactobacillus*, *Lactobacillus pobuzihi* sp. nov., were recently published in the "International Journal of Systematic and Evolutionary Microbiology." In his research into fermented cummingcordia that he purchased from traditional markets and food plants, Chen discovered variations ranging from between 100,000 and 8.2 million in the lactic acid bacteria count per gram among pobuzih samples that had been processed using different methods and fermented for different periods of time. This steered him in a direction that ultimately led to the discovery of the new species.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95405&ctNode=445>

7. New beauty product made from Taiwan's orchids

(Liberty Times, 05 03 2010)

Taiwan's *Phalaenopsis aphrodite* orchids are an international miracle. Produced primarily from Taiwanese butterfly orchids and using techniques in advance of other nations, these beautiful orchids are primarily being sold abroad as potted plants. Last year, a research team at the Agricultural Research Institute's Floriculture Research Center, under the Council of Agriculture, discovered that these plants have a kind of substance that acts to suppress the activity of tyrosinase, a chemical substance that catalyzes the production of melanin. This means that this species of orchid has a substance that acts as a natural skin whitener. A research team extracted the compound from 50-odd strains of the orchids. They discovered that white orchids contain more of the substance, and its effects are stronger. At the end of last year, a noted brand was tapped to produce a "Orchid White Mask" using it.

Full article:

<http://www.taiwanheadlines.gov.tw/ct.asp?xItem=181666&CtNode=9>



8. NSC shows off nanotechnology

(Liberty Times, 05 03 2010)

The National Science Council is exhibiting a diverse array of items and applications produced under the Taiwan National Science and Technology Program for Nanoscience and Nanotechnology. On display is a strip of light-guide film that can not only create a brighter environment, but also save energy. Meanwhile, a water resistant film stuck onto a cell phone can ensure that the phone will keep working even if dropped in water. On another front, a procedure under development will enable physicians to test patients for tuberculosis and receive the results in just half an hour. A nano-level sensing chip produced by the Academia Sinica's Institute of Atomic and Molecular Sciences takes advantage of the various types of fungus and the different natures of the spectral structures of each. Dr. Wang Huai-hsien of the Institute of Atomic and Molecular Sciences pointed to the influenza A (H1N1) flu virus as an example in which this chip could be used. At present, Wang said, genetic testing requires at least six hours to be completed. However, use of this nano chip could reduce the time needed to carry out tests to just 30 minutes. Wang said contact has already been made with the Centers for Disease Control to explore the possibility of adopting the chip as a new means in carrying out testing. Another product is do-it-yourself adhesive light-guide film, developed by the Industrial Technology Research Institute. The light-guide film has been created by taking advantage of the nature of nano micro-structure guide lights. The light-guide film evenly distributes light sources throughout an area. If the film is applied on the outside of a window, when light passes through, the film undergoes reflection and refraction many times, enabling illumination to be evenly balanced in the interior. In addition, affixing the film to the outside of a window helps prevent pollution and dirt from collecting there. Su Tsong-tsan, co-director of the project, said the light-guide film has been nicknamed the "sunlight invitation window."

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95486&ctNode=445>

9. Conservationists celebrate success of salmon program

(Taipei Times, 07 03 2010)

Much to the delight of local preservationists, efforts to establish a second natural breeding ground for the endangered Formosan landlocked salmon have met success, Shei-Pa National Park Administration said. The discovery indicates that captive-bred rare salmon can naturally breed after being released into the wild, Wuling Formosan Landlocked Salmon Conservation Center said, adding that the center has spent about 17 years to achieve this goal.

Full article:

<http://www.taipeitimes.com/News/taiwan/archives/2010/03/07/2003467399>

10. Technician develops economic fuel-testing device

(Liberty Times, 10 03 2010)

The Chiayi City Environmental Protection Bureau has created a new device to extract fuel products from vehicles so the fuel can be tested for legality. The device has attracted attention from the Environmental Protection Administration, and its use will be promoted throughout the island. The new fuel extracting device has a cost of only NT\$2.5, making it both practical and cost friendly.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95769&ctNode=445>

11. Taiwan students win iF concept award

(Liberty Times, 10 03 2010)

Two local university students have received international recognition for their design of a new type of drain cover that prevents heels from getting caught, thus eliminating a potentially embarrassing hazard for female pedestrians in high-heeled footwear. National Taiwan University of Science and Technology students Yeh Hsin and Chen Yen-ting were recently honored with a 2010 iF concept award for their drain cover design that features a grill slanted at 30 degrees as well as narrower slots. Yeh and Chen's design also won accolades for having the added benefit of



reducing the amount of trash and other debris that can fall through the drain cover slots, thereby helping to prevent blockage of drainage systems.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95770&ctNode=445>

Related News:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?ID=201003090024&Type=aEDU

12. Students invent solar-powered seeder

(Liberty Times, 10 03 2010)

Three students from National Chung Cheng University's Institute of Information Engineering in Chiayi County have developed a solar-powered automatic seeding system. With their "green thumb" vehicle, seeds can be planted and sprout in places without any sources of water or fertilizer. The cart tests the environment and can adjust water sources and fertilizer dosages as well. The three students used an inlay system to develop an automatic agricultural seeding system that generates its energy through solar power. The vehicle requires only regular restocking of its resources to allow users to utilize it as a base. A wireless remote control allows the cart to survey, plant seeds, irrigate and apply fertilizer even if there is no nearby source of water or energy.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95766&ctNode=445>

13. Taiwan, India sign education agreement

(Central News Agency, 10 03 2010)

Taiwan signed an agreement with India to enhance cooperation in the field of education, laying the foundation for them to accept each other's academic degrees and certificates. The two sides agreed to initiate strategies to achieve collaboration on research projects, exchanges of teachers and school administration personnel, cooperation in the field of technology, and mutual recognition of higher education academic degrees and certificates. The agreement will also help Taiwan universities to recruit more top Indian students, MOE officials said. The agreement was inked by Chang Chia-yi, chairman of the Foundation for International Cooperation in Higher Education of Taiwan (FICHET), and Beena Shah, secretary general of the Delhi-based Association of Indian Universities (AIU).

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aALL&ID=201003100030

14. Tamkang bone research featured internationally

(Liberty Times, 11 03 2010)

Bone genetic research by Chen Yau-hung of Tamkang University's Department of Chemistry biochemistry program was featured on the cover of the prestigious international journal "Bone." Chen's paper argues that zebrafish NF-YB gene is an important influence on bone development. Chen, 40, earned his doctorate at National Taiwan University's Institute of Fisheries Science, and has been using zebrafish to research anti-cancer drugs, medical research and beauty products. Five years ago, he came to Tamkang University to teach in the Chemistry Department, where he began to study the NF-YB gene in zebrafish and its effect on bone development. Based on his studies, if the NF-YB gene is first broken, the next generation of young will have smaller heads. Chen hopes next to research the connection between human genes and head characteristics.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=95867&ctNode=445>

15. National Taiwan University Hospital inaugurates stem cell center

(Central News Agency, 12 03 2010)

A stem cell therapy center, The Tai Cheng Stem Cell Therapy Center, built with donations from local business tycoon Terry Gou was inaugurated at the National Taiwan University Hospital on 12 March. The center is only the



first part of a NT \$ 15 billion project financed with donations by Gou, and a 249-bed oncology center will also be built at the hospital's Gongguan branch within three years as part of the project. The center, which has 14 stem cell transplant wards manned by 16 medical crew, will begin to admit patients mid-March. It has built up a databank containing information on the 1,200 stem cell transplant cases the hospital has undertaken over the last 26 years.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aEDU&ID=201003120026

16. Local experts collaborate on ocean energy development

(Central News Agency, 12 03 2010)

Three local institutes signed a memorandum of understanding to jointly set up a facility -- the first of its kind in Taiwan -- for field experiments on ocean power generation as part of efforts to explore alternative energy sources. National Taiwan Ocean University (NTOU), the Industrial Technology Research Institute (ITRI) and Taiwan's state-run shipbuilding company, CSBC Corporation, Taiwan, inked the MOU in Keelung to mark the initiation of the project. Chen Chien-nien, head of the NTOU's College of Engineering, said that while developing green energy has become a mainstream concept, researchers around the world began set their sight on ocean energy that derives from solar radiation and gravitation between celestial bodies such as the sun, the moon and the earth, as one of the most preferable sources of clean energy.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aALL&ID=201003120027

17. Taiwan's fuel saver inventor eyes Chinese market

(Central News Agency, 12 03 2010)

It has taken Taiwanese inventor Sullivan Wang 10 years and cost him nearly NT\$100 million to develop his device, which helps vehicles save fuel. Wang, who used to be a refrigerator design engineer in the early 1980s, started his initial research on the fuel saver in 1994. With guidance from a local scientific expert, Wang devoted himself to developing the fuel saver, which uses nano technology, in 1997. The fuel-saver, a 10-centimeter metal tube attached with a piece of nano-filled rubber inside, can help reduce carbon emissions of a diesel passenger car by 40%. Wrapped around a vehicle's fuel pipe, the device creates far- infrared rays, which can help minify fuel's molecules, enhance complete combustion, and thus cut down fuel consumption and reduce carbon emissions. Within nine years, Wang got a patent for the device in Taiwan and China, and passed a fuel-saving test on cars in China as well as a smoke-reducing test in Singapore.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?ID=201003120006&Type=aECO

18. Taiwanese scholar inducted into World Academy of Ceramics

(Central News Agency, 16 03 2010)

A ceramics professor from National Cheng Kung University (NCKU) has been selected for membership of the prestigious World Academy of Ceramics (WAC) in Italy, which aims to promote progress in the field of ceramics. Jow-Lay Huang, an expert in functional and structural ceramics, is among the 14 ceramics specialists to be inducted into the academy this year. Huang is the first and only academic from Taiwan to be named as a WAC academician. Huang is a distinguished professor at the NCKU's Department of Materials Science and Engineering and also serves as president of the Taiwan Association for Coatings and Thin Film Technology.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aLIV&ID=201003160028



19. Taiwan's 'Super Card' wows model U.N. delegates

(Central News Agency, 16 03 2010)

Taiwanese students organizing an annual activity simulating United Nations meetings have capitalized on Taiwan's technological strength to introduce a multifunctional card to the event for the first time, impressing the 1,800 participating foreign students. The card serves as an ID card for each student and as a ticket to the many activities they will attend on the sidelines of the meetings.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aSOC&ID=201003160022

20. Taiwan's ITRI Develops Super-Slim Rim Motor for E-bikes

(Taiwan Economic News, 17 03 2010)

Featuring substantial weight and thickness reductions, the Industrial Technology Research Institute (ITRI) recently announced its successful development of a super-slim rim motor that can be used on ordinary and folding electric bicycles. Lighter by 50% and 30% thinner, ITRI said that the newly developed rim motor is highly regarded by many e-bicycle makers in Taiwan. The rim motor model adopts the innovative axial flux motor technique, making it own a thinness of only one inch and weighs only two kg, but generating a two- to three-folds torque that generated by the same unit weight of traditional counterparts.

Full article:

http://cens.com/cens/html/en/news/news_inner_31629.html

21. EV propulsion system R&D alliance set up

(Economic Daily News, 19 03 2010)

With electric cars growing in popularity worldwide, three domestic companies and the government-backed Automotive Research and Testing Center (ARTC) established Taiwan's first "electric vehicle advanced propulsion system research and development alliance." The three firms forming the new grouping are Fukuta Electric & Machinery Co. Ltd., a leading local electric vehicle motor technology developer; Rich Electric Co. Ltd., a manufacturer of AC motor speed control inverters; and Kuo Yuan Enterprise Co. Ltd., a developer of transmission systems. The ARTC will provide system control and smart technology integration, testing and certification to the consortium. The grouping is expected to invest some NT\$500 million in research and development. The alliance plans to pool capital and establish an international electric vehicle propulsion system company within the next three years to break into the global automobile market. The new company will also seek to forge partnerships with major overseas firms on the development of advanced technologies. Huang Lung-chou, president of ARTC Electric, noted that Taiwan-based Yulon Motor Co. Ltd.'s newly developed electric vehicle is set to undergo trial testing later this year and then hit the market in 2011.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=96359&ctNode=445>

22. Taiwan, Japan institutions join forces on cancer treatment

(Central News Agency, 22 03 2010)

The National Tsing Hua University and Taipei Veterans General Hospital and Japan's Kyoto University struck a pact to collaborate on boron neutron capture therapy (BNCT) technology for the treatment of cancer. The collaborative work on the cutting-edge technology will be carried out at the Tsing Hua Open-pool Reactor (THOR). Taipei Veterans General Hospital and Tsing Hua University have agreed to work on a joint research project on clinical treatment for head and neck cancers. THOR is one of the most important nuclear research facilities in Taiwan. The center began to use THOR in nuclear medicine 12 years ago and has added BNCT treatment and peripheral facilities over the last three years. Taiwan's Tsing Hua University is one of only eight in the world that have BNCT facilities, while Kyoto University's BNCT techniques in the treatment of head and neck cancers are world renowned. "The use of BNCT in THOR will incorporate Taipei Veterans Hospital's experience and expertise in cancer treatment and Kyoto University's well-developed techniques in BNCT clinical treatment," sources said.



Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aALL&ID=201003220023

http://www.etaiwannews.com/etn/news_content.php?id=1209271&lang=eng_news&cate_img=83.jpg&cate_rss=news_Politics_TAIWAN

23. Local scientists improve bird tracking system

(United Daily News, 16 03 2010)

National Central University and Kenting National Park Headquarters have developed the world's first automatic identification and tracking system for birds of prey that filters out atmospheric signals. When the project is completed at the end of next year, bird watchers will be able to obtain online real-time radar images of the migration of birds of prey as well as forecasts of their migration routes up to seven and a half hours in advance. The three-year project launched by NCU, the park administration and Chang Jung Christian University aims to provide more accurate information for bird watching in Kenting. Existing weather radar image technology has been utilized to develop the bird tracking system. NCU's Institute of Space Science said that weather radar has long been used internationally for the tracking of birds of prey. However, the problem had been that scientists could not effectively exclude cloud and rain data from the images. The new system solves this problem by filtering out atmospheric signals to give clearer data on the migrating birds.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=96693&ctNode=445>

24. Fucoidan from brown algae helps control cancer: researcher

(Central News Agency,, 25 03 2010)

A substance derived from brown algae has been found to be an anti-tumor agent capable of reducing inflammation and controlling the proliferation of cancerous cells, a researcher with the Fisheries Research Institute (FRI) said. In addition to its anti-tumor and anti-inflammation properties, the fucoidan extracted from brown algae has been found in tests to be an active component that can promote collagen synthesis in 24 hours, making it a great candidate for use in collagen masks or wound dressings, Huang said.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aALL&ID=201003250038

25. Taiwan designs make big splash at red dot

(United Daily News, 26 03 2010)

Taiwan came away with the second highest number of prizes 23 March at the 2010 red dot design award, one of the three major international design awards. Garnering 67 awards, Taiwan followed only Germany, the host country, in an unprecedented RDD showing for the island.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=96888&ctNode=445>

26. Institute develops high-fiber meals

(Liberty Times, 26.03.2010)

The Food Industry Research and Development Institute recently announced that it has developed a method to blend dietary fiber into rice and meats, thereby increasing the amount of dietary fiber in these foods. The institute has passed along the technology to local food companies.

Further, the institute's national cell bank has information on 590,000 sets of cells, such as cord blood stem cells or genetic cells. The institute used to play an important role in food safety-related practices, as well as the CAS and HACCP inspection certification systems, and it was the first government-commissioned food inspection agency.



Full article:

<http://www.taiwanheadlines.gov.tw/ct.asp?xItem=183925&CtNode=9>

27. Academia Sinica scholar receives Humboldt Research Award

(Central News Agency,, 26 03 2010)

An Academia Sinica academician has been awarded a Humboldt Research Award by the Alexander von Humboldt Foundation in recognition of his accomplishments in research and teaching. Wu Maw-kuen, a distinguished research fellow and director of Academia Sinica's Institute of Physics, received the award at an annual symposium 21 March 21 in Bamberg, Germany. Wu specializes in superconductivity and magnetism. He is also a member of the U.S. National Academy of Science and the Academy of Sciences for the Developing World.

Full article:

http://focustaiwan.tw/ShowNews/WebNews_Detail.aspx?Type=aALL&ID=201003260009

28. ITRI plans industrial innovation and R&D zone

(The China Post, 28.03.2010)

The Industrial Technology Research Institute (ITRI) decided to set up a central Taiwan industrial innovation and R&D special zone in the Chung Hsing New Village High-level Research Park to forge an R&D-oriented industrial research cluster. According to the initial plan, ITRI will base the future development of central Taiwan and the orientation and function of the high-level research park on investing in R&D technology related to life in central Taiwan. The ITRI will work with organizations and schools in the central part of the country to build an R&D platform that will provide added creative value for central Taiwan's industries. In terms of the development of smart machinery technology development, the ITRI will also work with institutional organizations, machine tool manufacturers and others to forge a new generation machine tool industry alliance. The ITRI also plans to develop medium- and high-end embedded motion controllers to break the monopoly held by big international vendors. It anticipates the market for controller functions will be among the biggest among smart machinery over the next 5-8 years.

Full article:

<http://www.chinapost.com.tw/taiwan-business/2010/03/28/250150/ITRI-plans.htm>

29. Nat'l Biotech Development Park to Have Super Incubation Center

(China Economic News,, 26 03 2010)

The National Biotechnology Development Park to be set up in Taipei will contain a super incubation center. It is expected to contain research, experimental and support facilities set up by the Department of Health (DOH), National Science Council (NSC) and Ministry of Economic Affairs (MOEA). NSC will establish an animal testing center, while the MOEA will set up a pre-clinical trial biotech drug R&D service center, and the DOH's Taiwan Food and Drug Administration will inaugurate a legal information center, altogether playing a "super incubation role," in the park. Academia Sinica will stay on budget to set up a transplant medicine and an incubation center in the park, while slashing all other research projects deemed less urgent.

Full article:

http://cens.com/cens/html/en/news/news_inner_31759.html

30. Small DNA chip detects slew of harmful allergens

(Taipei Times, 31 03 2010)

The Environmental Protection Administration (EPA) unveiled the world's first DNA chip capable of detecting 21 types of harmful and allergenic bacteria within three to five days. Measuring 8mm by 7mm, the electrical hybridization chip is smaller than a NT\$1 coin. The chip contains 21 probes, each containing the DNA elements of the 21 bacteria considered dangerous to humans. Developed by the EPA and National Cheng Gung University, the chip can detect harmful air-borne bacteria, such as aspergillus flavus, aspergillus versicolor and chaetomium globosum, which are known to cause allergic reactions such as coughing, sneezing and runny noses. The chip has 98 % accuracy, costs NT\$ 100 and can be reused. Starting in May, 30 elementary schools and kindergartens in Taiwan will be tested for mold pollution using the device.

Full article:

<http://www.taipeitimes.com/News/taiwan/archives/2010/03/31/2003469380>