



31 July 2009

## **Science, Technology and Education News from Taiwan Number 13 — July 2009**

### **Introduction**

A new film series on national TV featuring Taiwan's scientific accomplishments over the past half-century will be part of the government's efforts to attract students to enter the world of scientific study. The 13-part documentary, funded by the National Science Council, focuses on 26 major research projects. One part of the series is dedicated to FORMOSAT-2, an Earth observation satellite operated by Taiwan, a high-resolution photographic surveillance satellite with a daily revisit capability that produces high-resolution images that are especially useful in rescue and relief operations. A segment features Taiwanese medical researchers who successfully helped fight hepatitis B, which used to be known as "Taiwan's national disease." Another part introduces the achievements of a Taiwan Chelungpu-Fault drilling project that aims to obtain a physical sample of the fault where large displacements occurred during the devastating earthquake on 21 September 1999, to measure the physical properties and mechanical behavior of the rocks above and below the fault zone and to thoroughly document the state of stress that exists in these rocks following such a large slip event. Another segment includes a research team headed by National Chiao Tung University President Peter Wu that has developed a microchip that can help restore sight to the visually impaired. The microchips can replace retinal cells damaged by disease and have passed clinical trial in the United States. A DVD version with English subtitles will be produced later.

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### 1. TSMC announces newest technology

(The China Post, 03 07 2009)

Taiwan Semiconductor Manufacturing Co. (TSMC) announced its first functional 65-nanometer multi-time programmable non-volatile memory process technology. The technology incorporates process-qualified MTP IP blocks jointly developed with Virage Logic. "The new technology is the first 2.5 volt MTP process, breaking the heretofore 3.3 volt baseline barrier.

It eliminates the need for an external EEPROM currently in many systems applications, thereby reducing power, area and costs while increasing data security."

Full article:

<http://www.chinapost.com.tw/taiwan/t-business/2009/07/03/214768/TSMC-announces.htm>

### 2. Number of Taiwan winners of Erasmus scholarships rises

(Central News Agency, 04 07 2009)

Taiwan has seen a substantial year-on-year growth in the number of winners of the European Commission's Erasmus Mundus scholarship program, setting a record for the 2009-2010 academic years. According to the Taipei-based European Economic and Trade Office (EETO), two academics and 22 students from Taiwan have been awarded the scholarship this year, a 58 percent increase compared to the 14 students and no academics who were successful in 2008.

Full article:

[http://www.etaiwanews.com/etn/news\\_content.php?id=993986&lang=eng\\_news](http://www.etaiwanews.com/etn/news_content.php?id=993986&lang=eng_news)

### 3. First Pacific greenhouse gas measurement ship sails off

(Central News Agency, 05 07 2009)

An Evergreen Marine container ship, the first commercial marine vessel equipped to measure marine emissions, set sail on 4 July as part of an ambitious project to measure and monitor the distribution of greenhouse gases in the Pacific Ocean.

The mission, which will measure marine hydrocarbon and halocarbon emissions, is part of an international "Pacific Greenhouse Gases Measurement (PGGM) project" initiated in 2008 by Taiwanese scientists at National Central University with the cooperation of China Airlines, Evergreen Marine Corp., the National Science Council (NSC), the Environmental Protection Administration (EPA) and the University of Cambridge.

The project will combine data from Taiwan's FORMOSAT-3/COSMIC satellite, Evergreen container vessels and China Airlines aircraft to chart greenhouse gases in three dimensions and provide data supporting research on global warming and ozone layer depletion.

Full article

<http://www.cnanews.gov.tw/eng/cepread.php?id=200907040008>

### 4. Former Taiwan Provincial Gov't Complex to House Innovation R&D Park

(Taiwan Economic News, 07 07 2009)

Premier Liu Chao-shiuan recently approved a project to develop the huge land area housing the former Taiwan Provincial Government into a planned park for advanced technology research and development centers of potential industries.

The 200-hectare site, called Jhongsing Village in Nantou County, has remained idle since the provincial government was abolished and returned its governing power to the central government in 1998. The central government decides to invest around NT\$20 bio. to construct the park and projects the construction to generate revenue up to NT\$45.6 bio. and create 16,800 jobs. The government plans to lure around 200 organizations to operate in the park, totally putting around NT\$4.3 bio. into R&D every year. The park is estimated to boost local incomes and spending, creating consumer spending up to NT\$5.1 bio. An estimated 11,400 jobs will be created when the park becomes operational. The park is estimated to inspire industries to invest up to NT\$66 bio. in related businesses and bring in 11,300 inhabitants.

Full article:

[http://cens.com/cens/html/en/news/news\\_inner\\_28322.html](http://cens.com/cens/html/en/news/news_inner_28322.html)



## 5. Waste coffee grounds transformed into high-tech fiber

(Central News Agency, 07 07 2009)

Singtex Industrial Co., a leading Taiwanese producer of functional fabrics, has developed a new eco-friendly product using fibers from waste coffee grounds that dries quickly, controls odors, and offers UV protection. It took the company three years to develop the patented process to transform waste coffee grounds into the new trademarked fabric, called "S.Cafe." Chen explained that the company turns the coffee grounds into yarn, which is then used to produce many styles of knitted and woven fabrics, as well as soft shell fabrics.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907070011&pType1=JD&pType0=xJDLNHH&pTypeSel=0>

## 6. Professor develops genome chip technique to identify animal characteristics

(Liberty Times, 08 07 2009)

For poultry farmers, selecting the best breeds is no longer just a matter of guesswork and luck. Huang Mu-chiu, a professor at the Department of Zoology of National Chung Hsing University, is using genome chips to quickly compare genetic makeups, reducing reliance on experimentation to determine the quality of varieties. The technology proved to be beneficial to those in animal husbandry in abandoning inferior strains and promoting stronger ones, not only lowering their costs but also raising production value.

Full article:

<http://www.taiwantoday.tw/ct.asp?xItem=54397&ctNode=413>

## 7. Local researchers find new target for colorectal, cervical cancer

(Central News Agency, 08 07 2009)

Eps8, a cancer-causing adaptor protein that facilitates proliferation of colorectal and cervical cancer cells, could become a new target for treatment of the two types of cancer, a researcher at National Cheng Kung University in Tainan City said.

Eps8, which stands for "EGF receptor pathway substrate number 8," was first discovered in the 1990s but its role in cancer formation was unknown at the time, according to Leu Tzeng-horng, head of the southern Taiwan university's Institute of Pharmacology.

In 2007, a research team headed by Leu linked Eps8 to colorectal cancer, and it confirmed a year later that it was also associated with cervical cancer.

Eps8 is an adaptor protein and a common substrate for both epidermal growth factor (EGF) receptor and the enzyme Src tyrosine kinase. Src not only can phosphorylate, or "activate" Eps8, but also influence its expression, Leu explained.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907080013&pType1=HH&pType0=xJDLNHH&pTypeSel=0>

## 8. TSMC Moves Ahead With Advanced Process Technology Programs

(Taiwan Economic News, 08 07 2009)

Taiwan Semiconductor Manufacturing Co. (TSMC) recently signed an agreement to join CEA-Leti of France's "IMAGINE" program to develop maskless lithography technology for IC manufacturing, and is said to have seen yield rate with 40-nanometer process double to 60%.

TSMC's vice president for R&D division, Jack Sun, pointed out that the company is always pushing for cost-efficient lithography technologies, with maskless lithography one of the potential solutions. By joining the IMAGINE program led by CEA-Leti, the world's No.1 silicon foundry supplier intends to federate the semiconductor industry around this technology and accelerate its development and introduction for IC manufacturing.

Full article:

[http://cens.com/cens/html/en/news/news\\_inner\\_28348.html](http://cens.com/cens/html/en/news/news_inner_28348.html)



### 9. Taiwan uses RFID technology to increase orchid productivity

(Central News Agency, 09 07 2009)

Radio frequency identification (RFID) technology has been introduced to local butterfly orchid production management in a move that is expected to raise productivity, agricultural researchers said. As competition in the global orchid market has become increasingly fierce, research fellows at the Taiwan Agriculture Research Institute said Taiwan needs to introduce new technology to sharpen its competitive edge in the sector.

Noting that RFID is a powerful emerging technology that enables companies to better keep track of their assets, tools and inventories, the researchers said introduction of the technology to the orchid business will help improve the accuracy rate of order delivery dates and quantities, thereby increasing customer satisfaction. If RFID technology is integrated with other automated production and management systems, local orchid productivity could also be raised significantly, according to the researchers.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907090027&pType1=ED&pType0=xEMST&pTypeSel=0>

<http://www.taipeitimes.com/News/taiwan/archives/2009/07/11/2003448381>

### 10. Local university to set up game console R&D Center

(Central News Agency, 10 07 2009)

A southern Taiwan university is to set up a game console research and development center under an incentive program begun by the Ministry of Economic Affairs (MOEA).

Sun Shuh-pin, a professor at the Biomedical Engineering department of I-Shou University in Kaohsiung County, said that Sony Computer Entertainment (SCE) will establish a cooperation center for digital content R&D on the university campus.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907100030&pType1=ED&pType0=xEMST&pTypeSel=0>

### 11. Taiwan has emerged as a big winner in the 2009 RoboCupJunior

(Taiwan News, 11 07 2009)

Taiwan has emerged as a big winner in the 2009 RoboCupJunior, an annual global robotics contest for young students. The Taiwanese delegation fielded nine teams in this year's competition, held in the Austrian city of Graz July 1-5 and captured four awards, including the championship for the 14-year-old age group," said Sung Teh-chen, a teacher who headed the Taiwanese delegation.

Full article:

[http://www.etaiwannews.com/etn/news\\_content.php?id=1000225&lang=eng\\_news&cate\\_img=49.jpg&cate\\_rss=news\\_Society\\_TAIWAN](http://www.etaiwannews.com/etn/news_content.php?id=1000225&lang=eng_news&cate_img=49.jpg&cate_rss=news_Society_TAIWAN)

### 12. Special cell helps diapers sing and life jackets shine

(Central News Agency, 13 07 2009)

A chlorophyll organic cell developed by a Taiwanese inventor, which may soon be commercialized at an affordable price, triggers music in diapers when they are wet and causes life jackets to shine when a user falls into the water. Professor Liao Chungpin at the Graduate Institute of Electro-Optic Material Science of National Formosa University in Yunlin County and a research team he leads presented on Monday the smart products using the cell they invented. Liao said diapers that can alert caregivers when they need to be changed and life vests that help locate victims of a ship accident are the first applications of the patented chlorophyll cell, which his team created last year.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907130032&pType1=ST&pType0=xEMST&pTypeSel=0>



### **13. Government to spend NT\$105.4 billion on science, technology in 2010**

(Central News Agency, 14 07 2009)

Government agencies, Academia Sinica and national defense-related establishments will spend a total of NT\$105.4 bio. on science and technology projects in fiscal year 2010, according to the National Science Council (NSC) under the Executive Yuan.

The council approved Tuesday 344 proposals for science and technological research projects to be carried out in 2010. The proposals, submitted by 25 administrative departments, carry a combined price tag amounting to NT\$88.88 bio.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907140030&pType1=ED&pType0=xEMST&pTypeSel=0>

### **14. Tsing Hua University announces unique OLED lighting technology**

(Taiwan Economic News, 16 07 2009)

The Department of Materials Science and Engineering of National Tsing Hua University announced a unique organic light emitting diode (OLED) lighting technology boasting the most natural color temperatures and renderings of the diode.

According to Prof. T.H. Chou of the department, his team's OLED lighting produces color temperatures ranging from 2,200 K to 8,000 K, compared with average 3,000-5,000K range achieved by other organizations. Also, his team's technology delivers color rendering up to 90, compared to sunlight's 100. Most of all, the light from the lighting technology is moderate, making it suitable to human eyes. The school's OLED technology can simulate sunrise and sunset illuminations thanks to some unique technology.

Full article:

[http://cens.com//cens/html/en/news/news\\_inner\\_28462.html](http://cens.com//cens/html/en/news/news_inner_28462.html)  
<http://www.taiwantoday.tw/ct.asp?xItem=54852&ctNode=413>

### **15. Russian engineering institution sets up branch in Taiwan**

(Central News Agency, 16 07 2009)

Bilateral engineering and technical cooperation between Taiwan and Russia will be further strengthened with the establishment of a Taipei branch of a Russian engineering institution, the Ministry of Foreign Affairs (MOFA) said.

"Over the years, Taiwan and Russia have enjoyed very frequent exchanges in the field of technology, and the establishment of the institution branch will further strengthen our cooperation in applied technologies," according to Ali Yang, deputy director-general of the MOFA's Department of West Asian Affairs.

The strong scientific and engineering cooperation is evident in the 80-plus projects currently in progress between Taiwan's National Science Council (NSC) and Russian universities.

According to Yang, a ceremony was held June 27 to mark the establishment of the International Engineering Academy branch in Taipei.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907160012&pType1=ST&pType0=xEMST&pTypeSel=0>

### **16. Taiwan's biodiversity accounts for 2.5% of global species**

(Central News Agency, 16 07 2009)

Taiwan is rich in its diversity of biological species, boasting more than 50,000 endemic species, or 2.5 percent of the world's total, the Council of Agriculture (COA) said. Commissioned by the COA and the National Science Council, the Biodiversity Research Center under Academia Sinica -- Taiwan's foremost academic institution -- recently completed a full species list that documents 50,164 indigenous species in eight domains, 55 divisions, 126 classes, 610 orders and 2,900 families, the statement said.

The list, published in book form, also documents 1,056 alien and naturalized species in eight domains, 14 classes, 82 orders, 171 families and 644 genera.



According to officials from the COA's Forestry Bureau, more than 160 local biologists have spent seven years compiling the book, the first official publication of a full list of species recorded in Taiwan.

"Taiwan's biodiversity is amazing," said a Forestry Bureau official. "The country's land area accounts for only 0.025 % of the world's total, but the number of its indigenous species makes up 2.5 % of the number of known species around the globe." With a land area of 36,000 km<sup>2</sup>, Taiwan boasts an even greater number of species per km<sup>2</sup> than New Zealand, which is also famous for its biodiversity -- 1.4 compared to New Zealand's 0.2 -- the official said.

The number of marine species in the waters surrounding Taiwan is 400 times the world's average, representing 10 % of the world's species, the official said.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907160027&pType1=JD&pType0=xJDLNHH&pTypeSel=0>

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907290025&pType1=JD&pType0=xJDLNHH&pTypeSel=0>

### **17. Research sheds light on human brain development**

(Taipei Times, 16 07 2009)

New research has shed some light on the development of the human brain, scientists said.

While the mechanism by which human brain size is determined is still relatively unknown, a study of gene abnormality in primary microcephaly (MCPH) patients has revealed how cell organelle centrioles may affect the thickness of the cerebral cortex, said Tang, a Research Fellow at Academia Sinica's Institute of Biomedical Sciences.

Full article:

<http://www.taipeitimes.com/News/taiwan/archives/2009/07/16/2003448781>

### **18. Taiwan's researchers discover new immunity-regulating molecule**

(Central News Agency, 17 07 2009)

A group of Taiwanese researchers have discovered a new molecule which contributes to immune tolerance.

The molecule, Deltex1, can switch on or off T cells which identify, attack and destroy infectious agents, Lai Ming-zong, a researcher at Academia Sinica, told a news conference.

Previous studies have focused mainly on how T cells are activated, but knowledge was insufficient on the molecular process underlying T cell energy, a state in which the body becomes unresponsive to antigens, according to Lai, who is the research group's team leader. By conducting tests on mice, Lai's team found that Deltex1 inhibited T cell activation. It is upregulated when the T cells are not responding to antigens. Upregulation is the process by which a cell increases the quantity of a cellular component.

Full article:

[http://english.cna.com.tw/ReadNews/Eng\\_TopNews.aspx?ID=200907170025](http://english.cna.com.tw/ReadNews/Eng_TopNews.aspx?ID=200907170025)

### **19. Taiwan students win two golds, two silvers at Biology Olympiad**

(Central News Agency, 18 07 2009)

Taiwan students won two gold and two silver medals at the International Biology Olympiad 2009 which concluded here. Lee Yi-chun from National Changhua Senior High School and Kuo Yu-chi from Taipei Municipal Jianguo High School each won gold, while Wu Po-fan from Taipei Municipal Chenggong High School and Chang Jui-che from National Taichung First Senior High School each took silver. Among the 221 students from 56 countries who took part in the contest, 23 won gold medals, 46 won silvers and 66 took bronzes.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907180019&pType1=JD&pType0=xJDLNHH&pTypeSel=0>



## 20. Taiwan unveils flu control chemical

(The Press Association, 22 07 2009)

A Taiwanese government-funded research team has unveiled a chemical compound that it says can kill swine flu and bird flu viruses in the environment to help prevent their spread.

The National Taiwan University team said the compound - which it has named "VirusBom" - can be made into a hand wash, a spraying agent or integrated into fabrics like facial masks to effectively kill a variety of viruses.

CK Lee, a professor of engineering science who leads the NTU team, described the chemical as "a simple, organic compound" developed through "synthetic methodology" in the lab. He refused to give details, saying the team is applying for patents in Taiwan and the US.

Lee said "VirusBom" differed from ordinary antiseptics on the market because it specifically targets the swine and bird flu viruses while other products do not.

"This particular compound prevents the virus (from) entering your body to interact with your immune system," he said. "All types of viruses, the swine flu, bird flu and intestinal diseases collapse" after being exposed to the compound, he said.

Full article:

<http://www.google.com/hostednews/ukpress/article/ALeqM5gZIYVwrmw3ZYpjw77yg6GTcnWMxg>

Related article:

<http://www.taiwantoday.tw/ct.asp?xItem=55554&ctNode=413>

<http://www.taipeitimes.com/News/taiwan/archives/2009/07/22/2003449277>

## 21. ITRI Works With SPIRIT Aerosystems to Develop Aerospace Carbon Fiber

(Taiwan Economic News, 22 07 2009)

Taiwan's government-funded Industrial Technology and Research Institute (ITRI), has recently signed a cooperation contract with SPIRIT Aerosystems Inc., the largest supplier of aircraft parts in the U.S., to develop next-generation aerospace carbon-fiber materials, in a bid to assist Taiwan in exploring the global supply chain of such materials.

The firm will take advantage of ITRI's excellent R&D capability and Taiwanese companies' cutting-edge mass production technologies to vastly apply next-generation carbon-fiber materials in aircrafts and related products in the future.

Full article:

[http://cens.com/cens/html/en/news/news\\_inner\\_28534.html](http://cens.com/cens/html/en/news/news_inner_28534.html)

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907170026&pType1=ED&pType0=xEMST&pTypeSel=0>

## 22. Taiwanese researchers develop cell therapy for immunodeficiency

(Central News Agency, 23 07 2009)

A Taiwanese research team has developed a new method for treating immunodeficiency by using drugs and vitamins to change the structure of abnormal or unhealthy white blood cells, academic sources said.

Shieh Chi-Chang, a Harvard-educated pediatrician at National Cheng Kung University (NCKU) Hospital who heads the project, said the new therapy could one day be used to treat various immune cell-related diseases such as chronic granulomatous disease (CGD).

The research has won recognition from the prestigious U.S.-based journal Free Radical Biology and Medicine, which will publish the team's research paper detailing the new therapy, Shieh said, adding that his team has acquired the Taiwan patent rights to the new therapy.

Of all the research around the world in the field, Shieh went on, only the NCKU team has succeeded in developing the therapy in white blood cells.

Nevertheless, he acknowledged that the treatment regimen is still only at the animal testing stage and that human clinical trials have not begun.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907230010&pType1=HH&pType0=xJDLNHH&pTypeSel=0>



### **23. Bee pollination technique contributes to crop cultivation**

(Central News Agency, 24 07 2009)

An environmentally friendly crop pollination technique developed by a Council of Agriculture (COA) research team in Miaoli County using honey bees promises to contribute to natural and healthy crop cultivation, one of the researchers said.

The technique involves specially designed cardboard portable and temporary hives that are used to transport bees to areas of crops enclosed by netting. A box containing pollen gathered by the farmer is then placed at the entrance to the temporary hive, through which the insects must pass as they leave, coating them in pollen.

This innovation means that they pollinate the crops much more intensively and effectively than would otherwise be possible. Both the temporary hive and the pollination box have been awarded patent rights by the government as a system proven to increase crop production.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907240015&pType1=ST&pType0=xEMST&pTypeSel=0>

### **24. Academic wins prestigious technology prize**

(China Post, 25 07 2009)

Academic Alfred Y. Cho has recently won a prestigious prize from Russia for the application of nanotechnology, Academia Sinica, Taiwan's leading research institute, said.

Cho, along with Professor Leonid Keldysh of Russia, has been awarded the Rusnano prize for nanotechnology discoveries and innovations that have been applied to production. The prize will be presented to Cho and Keldysh at an award ceremony at the 2nd Nanotechnology International Forum slated to be held in Moscow on October 6.

The prize Cho won was specifically awarded for Cho and his partner's innovation, which is known as: "semiconductor superstructures and technology of molecular beam epitaxy," the institute said.

Full article:

<http://www.chinapost.com.tw/taiwan/foreign--community/2009/07/25/217688/Academic-wins.htm>

### **25. NSC astronomy exhibition to open in August**

(Central News Agency, 27 07 2009)

The National Science Council's annual scientific season will open next month with an unprecedented astronomic exhibition to celebrate the 400th anniversary of Galileo's first observation of space and the International Year of Astronomy (IYA) 2009.

NSC Deputy Minister Chang Wen-chang said that astronomy is the perfect subject for educating the public about science, as was evident last week when the world focused on the solar eclipse.

Sun Wei-hsin, director of National Taiwan University's Institute of Astrophysics and curator of the exhibition titled "400 Years of Heaven Gazing," will introduce astronomy, show how it is related to history, literature, religion, and science and technology, and explain how it has affected human beings in exploring the universe.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907270031&pType1=ST&pType0=xEMST&pTypeSel=0>

### **26. Government to invest US\$ 732 million in biotechnology**

(Central News Agency, 28 07 2009)

The National Development Fund under the Executive Yuan has allotted NT\$ 24 bio., with NT\$ 6 billion for next year, to invest in the biotechnology industry in coming years, executive secretary Hsiao Kuo-hui said. In addition to the planned budget, the Cabinet expects to attract non-governmental investment worth up to NT\$ 36 bio., Hsiao said.

The meeting also drafted regulations regarding governmental investment in biotechnology, such as allowing no more than NT\$3 billion to be invested in a single corporation, and to invest in no more than three venture capital companies under a single business group.

Full article:





<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907280029&pType1=ED&pType0=xEMST&pTypeSel=0>

## 27. Taiwanese researchers succeed in breeding Oriental sweetlips

(Central News Agency, 29 07 2009)

A Taiwanese research team has succeeded in breeding Oriental sweetlips, the first time scientists anywhere in the world have been able to fully observe the tropical coral reef fish through its embryonic development.

The team, headed by Leu Ming-yih, an associate research fellow at the National Museum of Marine Biology and Aquarium's Fish Reproduction and Larviculture Laboratory, collected three subadult Oriental sweetlips from the wild for breeding five years ago.

The key to the project, Leu explained, is that the research team was able to observe and document the growth of the fries from the time they were embryos, providing a wealth of new knowledge on the species' development.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907290014&pType1=JD&pType0=xJDLNHH&pTypeSel=0>

Related article:

<http://www.taipeitimes.com/News/taiwan/archives/2009/07/31/2003449968>

## 28. Taiwan researchers help identify sites of breast cancer genes

(Central News Agency, 30 07 2009)

An international research consortium, which includes a Taiwan team, has identified genomic sites that may harbor breast cancer genes -- findings that will contribute to breast cancer prevention and treatment.

"Under the umbrella of the Breast Cancer Association Consortium (BCAC), more than 100 scholars from the United States, Europe and Asia took part in the research that led to the discovery of multiple genomic sites that may harbor breast cancer genes on chromosomes 2, 3 and 17," according to a press statement released by Academia Sinica -- Taiwan's foremost research institute.

"The findings are a major milestone in cancer research," the statement said, adding that they will be published in three prestigious scientific journals -- Nature Genetics, the Journal of the National Cancer Institute and Human Molecular Genetics.

Full article:

[http://english.cna.com.tw/ReadNews/Eng\\_TopNews.aspx?ID=200907300018](http://english.cna.com.tw/ReadNews/Eng_TopNews.aspx?ID=200907300018)

Related article:

<http://www.taipeitimes.com/News/taiwan/archives/2009/07/31/2003449987>

## 29. 7 Taiwan universities among top 500 for scientific paper performance

(Central News Agency, 30 07 2009)

7 Taiwan universities were listed among the top 500 in the world this year in terms of performance ranking for scientific papers, according to the ranking of Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT).

The local schools are National Taiwan University (102nd), National Cheng Kung University (307th), National Tsing Hua University (347th), National Chiao Tung University (456th), Chang Gung University (479th), National Central University (483rd) and National Yang Ming University (493rd). If faculty numbers are factored in, the Taiwan universities would place even higher because of their relatively smaller size, the HEEACT ranking showed, noting that National Taiwan University (NTU) would place 67th and the other six would be among the top 100.

Full article:

<http://english.cna.com.tw/ReadNews/Detail.aspx?pSearchDate=&pNewsID=200907300020&pType1=JD&pType0=xJDLNHH&pTypeSel=0>



### **30. Two Major Drug Makers in Taiwan Report Good News**

(Central News Agency, 31 07 2009)

Two major drug manufacturers in Taiwan recently reported good news related to new products.

United Biomedical Inc. Asia (UBI Asia) recently announced that its newly developed vaccine for Alzheimer`s Disease has been allowed by the Department of Health (DOH) in Taiwan to do first-phase human clinical tests.

TaiMed Biologics Inc., another drug maker in Taiwan, has been developing the Ibalizumab (TMB-355), a CD4-specific monoclonal antibody to inhibit HIV-1 infection.

TaiMed CEO James Chang said that the TMB-355 has completed the Phase-2b clinical test in the United States with 80 patients, and the remaining Phase-2 tests with 20 patients would be completed in Taiwan by the end of the first quarter of 2010. Chang claimed that most drug cocktails used to treat HIV-1 infection have many side-effects. The injected TMB-355 has won ample attention from major pharmaceutical makers for its minimal side-effects, he added.

Full article:

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