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Science, Technology and Education News from Taiwan

Number 04 — April 2015

In the medical field, a new test was developed to detect Alzheimer, in 5 hours, by blood analysis. A huge progress was made for retinal transplantation, which could one day lead to a solution for people with incurable eye disease. Against skin cancer, a team managed to find a way to detect melanoma 6 months earlier than usual.

In Education, a university is promoting chemistry via a truck turned into a laboratory, driving from a high school to another in the country. Students in Taiwan are gathering funds to create elementary schools and child-care centers in Central America as a way to fight against poverty and criminality.

In the technological field, Acer and MediaTek are promoting the Internet of Things. An ultrafast rechargeable aluminum-ion battery cell has been produced by ITRI; the advantages of aluminum over lithium are numerous.

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Science

Taiwan develops new test to detect Alzheimer's disease

(Central News Agency, 02 04 2015)

NTNU associate professor Chieh Jen-jie, who is a memebr of the research team.

Taiwanese scientists have developed a new blood test that can detect Alzheimer's disease early, according to National Taiwan Normal University (NTNU) and National Taiwan University Hospital (NTUH).

The test, based on immunomagnetic reduction, can detect early signs of Alzheimer's and even mild cognitive impairment, with an 85 percent accuracy. The test, which can be completed in five hours, is faster and safer than spinal fluid tests, according to the scientists.

The results were achieved by a research team led by Horng Herng-er, a professor at the Institute of Electro-optical Science and Technology at NTNU, in collaboration with another team led by NTUH neurologist Chiu Ming-chang. Chiu said early diagnosis of Alzheimer's is very important for its treatment. Compared with spinal fluid tests, which are invasive, blood tests are more likely to be accepted by patients and are also more convenient, he said.

http://focustaiwan.tw/news/ast/201504020018.aspx

New endemic snake species discovered in Taiwan

(Taiwan Today, 13 04 2015)

NTNU professor Lin Si-min (left) and researcher You Chung-wei proudly show off photos of endemic Taiwan snake species P. atayal. (CNA)

A National Taiwan Normal University team announced April 10 the discovery of Pareas atayal, the first endemic snake species identified in Taiwan since 1931.

The mollusk-eating reptile is found in Xueshan—the second highest mountain in Taiwan at 3,886 meters above sea level—and named after the indigenous Atayal tribe inhabiting the region. The findings were published online in Sweden-based animal systematics journal Zoological Scripta.

Lin Si-min, team leader and a professor with NTNU Department of Life Science, said previously only the Pareas formosanus was recognized as a valid pareatid species endemic to Taiwan. “The new species, however, is characterized by its yellow iris, elongated lower jaw and weakly keeled dorsal scales.

“While the former favors slugs for food, the latter has a particular fondness for snails, resulting in the evolution of an asymmetric tooth arrangement optimized for extracting meat from right-handed shells.”

The nonvenomous species was first identified by NTNU graduate and Lin protege You Chung-wei in 2006. After years of research and exhaustive DNA comparisons, P. atayal was finally confirmed as a distinct clade. “You’s discovery was truly remarkable,” Lin said, “as the last endemic snake species—Amphiesma miyajimae and Achalinus niger—were reported by Japanese scholar Moichiro Maki 84 years ago.”

Lin expects the breakthrough to spur interest in Taiwan’s biodiversity and encourage more young researchers to dedicate themselves to this largely unexplored field.

http://www.taiwantoday.tw/ct.asp?xItem=229226&CtNode=436

Taiwanese team makes breakthrough in retinal cell transplantation

(Central News Agency, 14 04 2015)

A Taiwanese research team has developed a new technique for retinal cell transplantation that could one day result in more effective treatments for an incurable eye disease that can lead to blindness, the team's leader said.

Chiou Shih-hwa, the director of the Division of Basic Research under Taipei Veterans General Hospital's Department of Medical Research and Education, said the method, which is currently being tested in pigs, could

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offer a new approach to dealing with age-related macular degeneration (AMD). The disease affects more than 200,000 people in Taiwan and is the top cause of blindness among people aged 50 and above in the West.

Drug treatments involving injections into the eye have been used for years to stem the advance of the disease, Chiou said, but they have their limitations. Scientists are now trying a newer approach -- retinal cell transplantation -- which is aimed at regenerating photoreceptor cells in the macula, a part of the retina that is critical for sharp vision, and the retinal pigmented epithelium (RPE), a layer of cells that protects and nourishes photoreceptor cells.

Chiou said a team in the United States has begun the second round of human clinical trials in transplanting embryonic stem cells in patients to deal with AMD, but the team's method of injecting the cells into the retina has led to uneven results. Chiou's team has devised a way to generate induced pluripotent stem cells -- cells can give rise to any other cell type in the body -- from human blood and then arrange them on a customized stent no thicker than a human hair that is inserted under the retina.

The stent serves as a monolayer RPE, ensuring that the cells are delivered as uniformly as possible and enabling them to cover a wider area in the retina to improve the chances of success, Chiou said. "It's like trying to repair a road. With injections, you can only fill in potholes and the thickness may not be uniform. By inserting this layer, we are laying down a smooth road that may give better results," Chiou said.

Another potential advantage of the new technology, according to Chiou, is that it can be customized to the patient's retina. The stents have already been successfully inserted into the eyes of pigs, with the animals' eye functions remaining normal and the cells remaining alive, Chiou said, and the next step will be to test the method in animals for efficacy. Should those trials go smoothly, the team would then apply to use the process in clinical trials on humans, Chiou said, hoping that such trials could begin in two to three years.

http://focustaiwan.tw/news/ast/201504140012.aspx

Graduates discover a future with maggots

(Taipei Times, 17 04 2015)

A team of recent National Kaohsiung University of Applied Sciences graduates who started a business farming maggots as an alternative chicken feed and organic fertilizer have won an award from the Ministry of Education as well as sponsorship. The team late last month earned the ministry's startup capital award, sharing NT$5.2 million (US$166,000) with 11 other groups of young entrepreneurs.

Yang Yung-hsin, left, and Huang Yan-ping pose with pots of maggots bred for chicken feed in Kaohsiung on March 24.

Initiated by Huang Yan-ping and Yang Yung-hsin, partners in business and in life, the team stood out from the crowd with their business model — growing and feeding maggots to broiler chickens. Huang said the idea of using maggots as animal feed came from necessity, as the poultry and fish farming industries have been affected by the increasing cost of fish meal due to reduced fish catches and by the ineffectiveness of other substitutes.

"A maggot is highly nutritious and potentially marketable, so it is a plausible alternative to fish meal," Huang said. The team settled on maggots for their high content of animal protein, high reproducibility and high growth rate, Huang said, adding that maggot meal could be mass-produced at half the cost of fish meal. "Maggot meal is rich in protein and a variety of amino acids, and can boost the immune system of farmed animals, which have shown improved stamina and activity after switching to the new formula," Huang said.

After six months of business, the team came up with a tried-and-true business model — working with broiler farms in a symbiotic relationship. They recycle chicken manure by using it as maggot feed before feeding the maggots to chickens.

In addition to selling maggot meal and organic eggs produced by layer hens fed with maggots, the team has put forward other products, including an organic worm manure fertilizer, Huang said. Maggots are usually associated with disease, death and crime scenes, but they can generate value if grown properly, Huang said. "Everything has its worth if it can find its niche," Huang said.

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Yang said she was afraid of maggots at first, but she has grown used to them and even finds them adorable. The team has generated enough revenue to retain employees, and they would like to expand their business and contribute to the Taiwanese agriculture, Yang said.

http://www.taipeitimes.com/News/taiwan/archives/2015/04/15/2003615988

NTU team develop new skin cancer detection technology

(Taipei Times, 17 04 2015)

A research team at National Taiwan University (NTU) said it has developed a non-invasive technology that can help detect melanoma, the most deadly type of skin cancer, by up to six months earlier than usual. The team hopes its high-speed and high-resolution optical coherence tomography scanner can receive medical certification by as early as 2017 so that it can be put into clinical use as soon as possible.

Diagnosing cancer relies primarily on observing tissues and cells, and that is where the scanner can be useful and time-saving, National Taiwan University pathologist Shun Chia-tung. If combined with an endoscope, the technology can also help detect diseases such as colon cancer at an early stage, Shun said at a press conference in Taipei.

The NTU research team is headed by Huang Sheng-lung, a professor with the university's Department of Electrical Engineering, who said the technology provides quick access to dynamic images of body tissues and blood cells, helping doctors make early diagnoses without a biopsy. The scanner is non-invasive and has a resolution of 0.01mm and a nearly 90 percent detection rate, Huang said.

It also takes much less time than a regular biopsy, for which patients usually need to wait up to a day for the test results, Huang said. The research, which has gone on for more than a decade, has been tested in clinical trials at teaching hospitals around the nation. Exclusive rights have been sold to a start-up company for nearly NT$30 million (US$962,371).

http://www.taipeitimes.com/News/taiwan/archives/2015/04/22/2003616524

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Education

Tang Prize ties up with US group on biology education

(Taiwan Today, 02 04 2015)

Taiwan's Tang Prize Foundation (TPF) signed a cooperative agreement with U.S.-based Experimental Biology March 31, reaffirming TPF's commitment to creating learning opportunities worldwide. Under the 10-year pact, both sides will jointly promote education in biology. Related initiatives include establishing the Tang Prize Lecture at which TP biopharmaceutical science award winners will share their latest research results.

The agreement was concluded by TPF Chief Executive Office Chern Jenn-chuan and EB Management Committee Chairman Shawn Boynes in Boston. Also attending the ceremony was Taiwan physiologist Shu Chien, winner of the U.S. National Medal of Science in 2011, as well as Martin Frank from the American Physiological Society on behalf of EB's Executive Officers Advisory Committee. In addition, U.S. immunologist James P. Allison delivered the inaugural TPL speech "Immune Checkpoint Blockade in Cancer Therapy: New Insights and Opportunities."

"As a young and internationally minded organization, we are confident this tie-up will help establish a platform propelling local researchers onto the international stage and facilitating more global interactions," Chern said. "This initiative also exemplifies the spirit of the Tang Prize, which seeks to benefit humanity by tackling new challenges and finding solutions."

The biennial Tang Prize, hailed as Asia's Nobel Prize, was established by Taiwan entrepreneur Samuel Yin in December 2012 and selected its five first-up winners in September 2014. Its name is inspired by the Tang dynasty (618-907), a period marking the peak of international exchanges in ancient Chinese civilization.

In addition, Chern said the prize, comprising biopharmaceutical science, rule of law, Sinology and sustainable development, reflects the mature development of Taiwan and its desire to contribute further to the international community.

Echoing Chern's remarks, Chien said although Western countries have spearheaded scientific research efforts for years, it is now time for the East and West to work together for the greater good. "I am confident the prize, as well as the many projects it conducts with foreign counterparts, will pave the way toward a better future."

http://www.taiwantoday.tw/ct.asp?xItem=228985&CtNode=436

TES students achieve outstanding results in the SE Asia Mathematics Competition

(China Post, 06 04 2015)

Students of the Taipei European School (TES) who attended the 2015 South East Asia Mathematics Competition (SEAMC) taking place in Hong Kong recently had outstanding performance in the contest, according to a TES press release.

Some 40 international schools from across the region were in attendance, all of whom have been working hard all year to prepare for this prestigious event. Each school brought along two teams and each team had three students, TES stated. TES achieved third place in the overall team competition, third place in the team round, third place in the "passback" round, came first in the activity team round and an individual champion award was won by Alex Lee among of the 240 students. These are by far the best results TES has had and is a testimony to the high levels of passion and dedication of our students, said TES.

About SEAMC

Steve Warry, an enthusiastic teacher from Alice Smith School, Kuala Lumpur, had a belief that mathematics could be a "spectator sport." In pursuit of this, he organized the South East Asian Mathematics Competition (SEAMC) for March 2001. Tragically, he passed away a week prior to the competition, but the event went ahead and Steve's dream became a reality, according to TES.

SEAMC has evolved into an annual 2-day event organized by local volunteer teachers on a rotational basis throughout the region. Hundreds of international school students, aged 15 or younger, and their teachers come together for a long weekend (usually at the end of February) each year to share their enthusiasm for mathematics

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and problem solving. Each school enters two teams of three students and the Warry Cup is awarded to the overall winning team each year.

Every SEAMC event has five common rounds and then the host country adds more bespoke rounds according to facilities and resources available. The five common rounds are: Two individual multi-choice papers, a team question paper, a carousel of practical team activities and an "energizer" round. While there exists a healthy competitive spirit, emphasis is on providing opportunities to build friendships with peers from other schools. This is emphasized through the buddy team rounds, said TES.

http://www.chinapost.com.tw/taiwan/national/national-news/2015/04/05/432884/TES-students.htm

TRCC launches in UK, French universities

(Taiwan Today, 09 04 2015)

A Taiwan Resource Center for Chinese Studies was launched April 7 at Oxford University, paving the way for expanded academic cooperation between Taiwan and the U.K., according to Taipei City-based National Central Library.

Deputy ROC Representative to the U.K. Hsu Fen-chuan (second left) joins NCL Director-General Tseng Shu-hsien (second right) and Oxford University Assistant Librarian Catriona Cannon (center) at the TRCC inauguration April 7 in southern England. (Courtesy of NCL)

Jointly unveiled by NCL Director-General Tseng Shu-hsien and Catriona Cannon, assistant librarian of Oxford Bodleian Libraries, the facility is the 14th of its kind worldwide and the second in the U.K. following the first set up in 2012 at the School of Oriental and African Studies, University of London.

"The establishment of the center represents a landmark development in government efforts promoting Chinese studies from Taiwan's perspective in Europe," Tseng said. "Oxford is a leading institution in Chinese studies, and has maintained a great relationship with Taiwan's academia through its successful Taiwan Studies Program," Tseng said. "This tie-up will further enhance the visibility of Taiwan's academic research and publications in the Western world."

Under the partnership, NCL will provide access to its electronic resources and digital archives, as well as provide the center with audio and video recordings, digital materials and hard copy publications. A memorandum was also concluded by NCL with Oxford on joint cataloguing of Chinese ancient books. Under the pact, NCL's database is to include Oxford's Chinese collection, bringing the total number of items on offer to 640,000 from 63 partner institutions worldwide.

Four days before, the first TRCC in France was inaugurated at Jean Moulin University Lyon 3, the first institution to offer Taiwan language courses in Europe. The NCL also concluded a joint cataloguing pact April 2 with the Lyon Public Library, the largest such facility in the country. The NCL said it will continue promoting Chinese studies worldwide, and plans on launching four more TRCCs in other countries by the end of the year.

http://www.taiwantoday.tw/ct.asp?xItem=229103&CtNode=436

TKU truck lab takes chemistry to Taiwan

(Taiwan Today, 17 04 2015)

TKU mobile lab members (from left) Lin You-lin, Chen Yi-shu, Li Fang-jing and Kao Hsien-chang are unlocking the mysteries of chemistry for youth audiences around Taiwan. (UDN)

A mobile lab from New Taipei City-based Tamkang University is readying to host its 200th chemistry roadshow for high school students in June.

Converted from a 3.5-ton truck, the lab is decked out with the latest equipment and experimental gadgetry. Since it first hit the road in 2011, the facility has visited over 185 schools, clocking up 40,000 kilometers around Taiwan and the outlying islands. "The project started as a joint initiative between several local tertiary institutions and Taipei City-based Chinese Chemical Society to celebrate the International Year of Chemistry 2011," team leader Kao Hsien-chang of TKU's Department of Chemistry said.

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"With government funding of NT$1.5 million [US$48,200] and support from TKU's College of Science, a group of volunteers from the chemistry department built the lab with the goal of disseminating basic knowledge of chemistry far and wide." Experiments staged for the youth are in essence magic performances shaped by science, Kao said, adding that by transforming textbook facts through interesting, lively presentations, the lab is helping impart fundamental knowledge of chemicals to young and enquiring minds.

"For instance, substances like propylene that triggered last year's Kaohsiung gas explosions and copper chlorophyll in the recent oil scandal are not evil by nature," Kao said. "Both are closely related to everyday life and can be put to use in very positive ways. "If we can get students interested in this discipline with our lab, then fostering a new generation of scientists dedicated to the study of chemistry should be as easy as 1-2-3."

After 8 1/2 laps around Taiwan in four years, the team now boasts a repertoire of 16 presentations. "We are looking forward to building on this number going forward and further spreading the chemistry gospel island-wide," Kao said.

http://www.taiwantoday.tw/ct.asp?xItem=229451&CtNode=436

Students hope to establish Central American schools

(Taipei Times, 28 04 2015)

A team of foreign and local students at National Chengchi University is raising funds for its "IMPACT" project aimed at establishing schools in Central America to improve early education for children living in urban slums. Through an online crowdfunding campaign, the team has raised more than US$25,000 to reach its initial target of setting up a school in El Salvador, said Juan Diego Prudot, a 28-year-old IMBA student from Honduras, who is a cofounder of IMPACT.

The fundraising campaign is continuing, as the team hopes to raise another US$15,000 to achieve its goal of establishing another school in Honduras, said 28-year-old IMBA student Andres Escobar of El Salvador, another cofounder. "We want to make it a worldwide project. We need at least two countries," Escobar said.

The pair has contacts with nongovernmental organizations and local people in their home countries who can support the project, they said. Escobar took a field trip to El Salvador in January and visited urban slums there to learn more about the needs of the people living there. The neighborhoods have no early childhood schools and sometimes parents have to take their children to work, because there are no facilities providing day care for children, Escobar said.

The IMPACT project was initiated in November last year by Escobar, Prudot and two other classmates — Chen An-nung of Taiwan and Taylor Scobbie from Canada — when they worked together in an annual student competition to create a social business concept. The core idea of the project is to build sustainable early learning schools for children in urban slums, he said.

The schools would cater for children up to six years old. Those aged three and below would receive day care in a safe environment while their parents are at work, he said. The schools would provide formal education for children aged four to six, he added. "This is the most important part in a child's development," he said, adding that a positive influence during those years would follow them for the rest of their lives. They would be more likely to stay in schools, stay out of gangs and get better jobs, he said.

Prudot said early education can be fundamental to changing the lives of individuals, their families, their communities and even their nations. "That's what we want to do with IMPACT," he said.

The team's online crowdfunding campaign is part of an annual student competition organized by the Hult Prize Foundation, which aims to identify and launch the most compelling social business ideas. Winners receive US$1 million in seed capital, as well as mentorship and advice from the international business community. The team from National Chengchi University is among about 30 teams from around the world that are entering the final round of the competition.

http://www.taipeitimes.com/News/taiwan/archives/2015/04/28/2003616996

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Technology

Taiwan second-biggest winner at Moscow invention fair

(Central News Agency, 06 04 2015)

Taiwan's medal haul at an invention fair in Moscow that ended on the 5th of April was second only to that of the host nation, the secretary-general of the Taipei-based Chinese Innovation and Invention Society said.

Wu Chih-yao, who led Taiwan's delegation to the annual International Salon of Inventions and Innovation Technologies "Archimedes," said Taiwanese inventors submitted 108 works and won 41 gold, 31 silver and 12 bronze medals and five special prizes.

Taiwan ranked second behind Russia among the 17 participating countries at the show, which had a total of 700 inventions on display during its four-day run from April 2 to 5, Wu said. Among Taiwan's gold-winning inventions was a contactless smart elevator control system developed by the Department of Electrical Engineering at Chung Hua University. The system enables passengers to control a hospital elevator, for example, with gestures to reduce the likelihood that they catch an infection by touching buttons on the control panel.

Taiwan also ranked second to Russia last year among 18 countries that took part in the world's biggest invention fair, winning 44 gold, 47 silver and 17 bronze medals and eight special prizes.

http://focustaiwan.tw/news/ast/201504060007.aspx

Acer teams up with startup incubator on Internet of Things initiative

(Central News Agency, 08 04 2015)

Taiwanese PC maker Acer Inc. teamed up with local startup incubator AppWorks Ventures to promote development of and applications powered by the Internet of Things (IoT) technology. The partnership marks the first step taken by Acer in its "Blue Sky" initiative that focuses on IoT - an emerging technology that connects an array of devices to each other and the Internet -- in which Acer has invited six innovation teams fostered by AppWorks to present their products and services to Acer executives.

The showcase will be held on a quarterly basis by a variety of Taiwanese developers, while Acer will decide whether it will work with the teams and offer them marketing and distribution resources, according to Acer.

Robert Wang, general manager of Acer's Build Your Own Cloud (BYOC) and tablet business group, told a media briefing that Acer is initially interested in working with two of AppWorks'developer teams -- LongGood and Sentri. Wang said the two teams are expected to integrate their applications with Acer's open cloud platform to expand the scale of Acer's BYOC alliance.

Also, Acer plans to introduce solutions from chipmakers such as MediaTek Inc. and Intel Corp. and contract electronics makers like Quanta Computer Inc. and Wistron Corp. to allow the developer teams to produce their products more quickly using advanced components, Wang said.

LongGood uses motion sensing and cloud computing technology to develop a non-contact rehabilitation system that can detect body movement and physiological information through remote sensors, and to provide various rehabilitation games to encourage patients to engage in physical therapy. Sentri provides complete home monitoring and automation solutions on one display, which delivers personalized alerts along with a live video feed straight to the user's phone.

http://focustaiwan.tw/news/ast/201504080019.aspx

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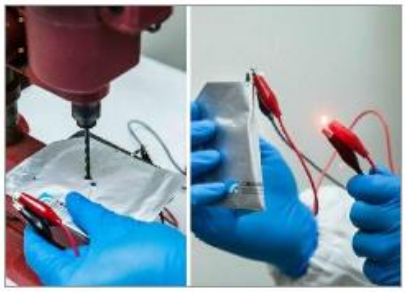
ITRI leads ultrafast rechargeable cell development

(Taiwan Today, 10 04 2015)



The ultrafast rechargeable aluminum-ion battery cell developed by the ITRI-Stanford team exhibits high flexibility and stability despite structural stresses. (Courtesy of ITRI)

An ultrafast rechargeable aluminum-ion battery cell has been produced by Taiwan's Industrial Technology Research Institute in conjunction with Stanford University in the U.S.

Compact, flexible and stable, the experimental cell is seen as an ideal energy source for applications ranging from personal electronics to grid storage. The development was published April 6 on the website of prestigious science journal Nature.

ITRI researcher Lin Meng-chang said the cell combines an aluminum metal anode, a 3-D graphitic-foam cathode and a nonflammable ionic liquid electrolyte. "By solving problems with discharge voltage and recharge cycles arising from the aluminum-based composition, we achieved what was previously thought impossible in building our high-capability cell."

Capable of charging for a minute at 7,500-plus cycles without capacity decay, the cell potentially offers massive cost advantages as aluminum is cheaper than lithium. In addition, it provides enhanced safety as aluminum is more resistant than lithium to overheating and catching fire.

Another major feature is its stability under duress. Tests show that the cell can continue powering a light-emitting diode, or LED, lamp while enduring structural stresses like bending and drilling. Taiwan scholars such as Hwang Bing-joe of National Taiwan University of Science and Technology and Wang Di-yan from Academia Sinica also assisted the ITRI-Stanford team in R&D efforts. The cell technology has been patented in Taiwan and the U.S. and is expected to be commercialized in two to three years, according to the ITRI.

http://www.taiwantoday.tw/ct.asp?xItem=229177&CtNode=436

MediaTek launches new platform for Internet of Things developers

(Central News Agency, 13 04 2015)

Taiwanese chip designer MediaTek Inc. has launched a new development platform to help developers commercialize their products or services using the Internet of Things (IoT) technology. The *MediaTek LinkIt Assist* 2502 platform is designed for advanced developers looking for a professional environment in which they can design and prototype the software and hardware for consumer-ready wearables and IoT devices.

The new module-based approach makes it easier to get access to MediaTek chipset technology and simplifies final hardware design for developers, the Hsinchu-based company said. "Professional developers face many challenges in the lifecycle of device creation, but one such challenge shouldn't be getting that product to a commercial-ready prototype," said Marc Naddell, vice president of MediaTek Labs. "MediaTek LinkIt Assist 2502, combined with our MediaTek Labs Partner Connect program, allows a developer's dream to be a consumer's reality," Naddell said in a statement on April 10.

MediaTek Labs was launched in September 2014 to provide developers and service providers with software development kits, hardware development kits and documentation, as well as technical and business support. Tech research firm IDC defines the IoT as a network of networks of uniquely identifiable endpoints (or "things") that communicate without human interaction using Internet Protocol connectivity -- be it 'locally' or globally.

According to IDC's forecasts, the IoT industry in the Asia-Pacific region will continue its strong growth, with the number of connected "things" expected to increase from 3.1 billion units this year to 8.6 billion units by 2020. Over this same period, the total Asia-Pacific IoT market size, excluding Japan, will increase from US$250 billion to US$583 billion, IDC estimated.

http://focustaiwan.tw/news/ast/201504130004.aspx

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Acer foundation to hold forums to promote IoT

(China Post, 13 04 2015)

Stan Shih, founder of Taiwan's personal computer maker Acer, said that a foundation he plans to establish with European companies held a forum in Berlin on April 16 and another one in Taipei on June 1 to promote the development of the Internet of Things (IoT).

The Stans Foundation will form the Wangdao Alliance with high technology companies in Taiwan and Europe to collaborate on IoT development, starting with the ExA Summit, Shih said. “Wangdao”, a philosophy advocated by Confucianism, refers to using the most righteous and kind way to do thing well. He said he hopes that through the ExA Summit, a Wangdao platform that aims to facilitate collaboration among IoT enterprises will be established.

The collaboration between IoT vendors in Europe and Asia is expected to expand to the world, giving Berlin status as Europe's Silicon Valley, and Taipei as Asia's Silicon Valley, Shih said. In a bid to build a prosperous ecosystem for the IoT, the ExA Summit in Berlin brought together 100 European and Taiwanese representatives from IoT-related industries, capital venture firms, and the academic and government sectors to identify and discuss common interests, and catalyze potential synergies, according to Shih.

About 30 Taiwanese representatives attended the Berlin summit, while the Taipei event is expected to gather 70 local representatives. In addition to the Stans Foundation, Acer, Taiwan Semiconductor Manufacturing Co. (TSMC), MediaTek, Chunghwa Telecom and National Chiao Tung University will take part in and sponsor related events. The Ministry of Economic Affairs will also help organize some of the activities.

The Stans Foundation also provided financial sponsorship for six new Taiwanese IoT teams to attend the Berlin summit, as part of an effort to explore opportunities for Taiwan's young people in the developing IoT sector, Shih said. Participants in the Berlin event will exchange views on three core issues related to IoT development — talent, funding and production — through keynote speeches, discussions and briefings, Shih said.

http://www.chinapost.com.tw/taiwan/business/2015/04/14/433560/Acer-foundation.htm

Taiwanese inventions rake in medals at Geneva fair

(Central News Agency, 18 04 2015)

Almost all of Taiwan's 55 entries medaled at the 2015 International Exhibition of Inventions in Geneva, Switzerland, a testament to the quality of Taiwan’s inventions, the head of Taiwan's delegation said.

In an award ceremony that day, Taiwanese inventors won 53 medals, including 26 gold, 16 silver and 11 bronze, as well as seven special awards, which was the highest percentage of wins Taiwan has ever attained at the fair, said Chen Tsung-tai, chief of the Taiwan Invention Association.

Among the gold medal winners was a transparent, semi sphere-shaped box with three holes that allows users to insert their hands into the box and polish their nails in a confined and safe space. Ting Yung-chiang, assistant professor at Far East University’s Department of Cosmetic Applications and Management who led the invention project, said his research lab is located next to a nail polishing classroom and the odor leaking out from the classroom would worry him every time he passed by. “The students may not be paying attention to it, but I am concerned” said Ting, whose invention is equipped with a high efficiency nano filter that can filter out toxic gases emitted from nail polishing.

Another gold medal winner was a water-saving urinal developed by a team led by Chang Chia-pao, associate professor of National Chin-Yi University of Technology’s Department of Industrial Engineering and Management. The urinal is cleaned with atomized water, which reduces around 75 percent of the water needed to clean a traditional urinal. Chang said the invention is still “rough” and it would take around a year to commercialize the product.

Meanwhile, Kou Chia-han, a student from Kainan High School of Commerce and Industry, has invented a gold medal-winning interactive device that allows plants to detect the approach of humans. Using the phenomena of electrical conductivity, the device automatically activates alarms or audio tones when a person comes within four meters of a plant.

The annual fair, which is considered the world's largest marketplace for inventions, opened April 15 until April 19. The inventions of more than 700 companies, schools and individual inventors from over 45 countries were on display this year. Taiwan has taken part in the event on a regular basis and often comes away with dozens of medals. Last year, it won 37 gold, 39 silver, and 16 bronze medals, as well as six special awards.

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http://focustaiwan.tw/news/ast/201504180013.aspx

Asustek VivoWatch said to run home-made operating system

(Central News Agency, 21 04 2015)

Taiwan's Asustek Computer Inc. is ditching Google Inc.'s Android Wear operating system, as the company's new fitness-focused smartwatch runs on its home-developed OS, according to a source with knowledge of the matter. Using Asutek's own operating system on the VivoWatch, which was previewed at the Milan Design Week show April 14-19, will help achieve longer battery life than running on the Android Wear that allows only limited software customization, the source told CNA on condition of anonymity because the matter is private.

The source declined to confirm whether Asustek is working with Microsoft Corp. on its own operating system for the VivoWatch. Unlike Asustek's Android Wear-powered ZenWatch, which has a battery life of up to two days, the VivoWatch features a more compelling battery life of 10 days, according to media reports.

The VivoWatch also comes with heartrate monitoring, sleep tracking and IP67 certification guaranteeing water and dust resistance, the reports said. While details about the VivoWatch were not officially disclosed at the Milan Design Week, the smartwatch is expected to hit stores in Taiwan next month, according to industry observers.

Earlier reports in February indicated that the VivoWatch could be the first smartwatch to run on Microsoft's Health platform, which was launched in October last year with features to analyze personal activities and suggest workouts, nutritional plans and sleep schedules. The speculation comes at a time when Asustek has an existing line of Windows-powered products under the family name of "Vivo," including VivoBook laptops and VivoTab tablets.

In January this year, Asustek Chairman Jonney Shih hinted that the company's next smartwatch might come with a battery life of up to seven days thanks to the adoption of simplified chipset and mobile operating system designs. The Taiwanese firm is planning a second generation ZenWatch for the third quarter of 2015, with the upgraded device expected to offer a new level of independence from smartphones by allowing voice calls without being tethered to a handset.

http://focustaiwan.tw/news/ast/201504210020.aspx

Asustek ZenWatch to get finance app designed for wearables

(Central News Agency, 21 04 2015)

Taiwan's Asustek Computer Inc. teamed up with Mega Securities Co. to launch a financial services app designed for wearable devices.

The app is a joint development by Mitake Information Corp. and Mega Securities, the brokerage arm of state-run Mega Financial Holding Co. It is touted by the companies as Taiwan's first financial services app designed specifically for wearables, with optimization for Asustek's ZenWatch smartwatch.

The app requires smartphones running on the Android 4.3 operating system or later versions to synchronize data with the Android Wear-powered ZenWatch, including stock trading prices, index prices and up-to-date share-dealing news.

Users can also set up the ZenWatch to send vibration alerts when the trading volume of their preferred stocks exceeds a certain amount, according to Asustek. S.Y. Shian, Asustek's corporate vice president and general manager of the firm's notebook business unit, told a news briefing that the financial services app optimized for smartwatches will help achieve the government's "Finance 3.0" initiative, which aims to promote mobile and digital financial services.

http://focustaiwan.tw/news/ast/201504210018.aspx

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Acer launches 34-inch curved gaming monitor

(Central News Agency, 21 04 2015)

PC maker Acer Inc. unveiled the XR341CKA, a 34-inch gaming monitor with a curved display panel and thin bezels that the manufacturer says is designed to offer users an "unparalleled immersive experience."

The product's in-plane switching (IPS) display panel features a 21:9 UltraWide aspect ratio and QHD resolution of 3440x1440 pixels with a 178-degree viewing capability. The display is able to cover 100 percent of the sRGB color gamut, enhanced by Acer's proprietary color-tuning technology, and Nvidia's G-Sync chip.

In addition, ergonomics are enhanced by its adjustable stand that can alter the height of the display panel by 13 cm vertically. The angle of the display can also be adjusted from minus 5 to plus 35 degrees.

Audio performance is enhanced by two 7-watt speakers and DTS sound processing technology. In addition to DisplayPort and HDMI, the monitor comes with a USB 3.0 port for speedy charging of smartphones.

http://focustaiwan.tw/news/ast/201504240028.aspx

Taiwan firms win gold at Edison Awards

(Taiwan Today, 27 04 2015)

Uneo Executive Vice President Johnson Hou (left) and JFCE Chairman Chiu Ping-feng show off their Edison Awards at a presentation ceremony April 23 in New York. (UDN)

A pair of Taiwan firms' recently bagged gold at the prestigious U.S.-based Edison Awards, highlighting the nation's growing international reputation as a hub for Asia-Pacific innovation.

New Taipei City-based Uneo Inc. claimed top honors in the material science technology section for the multisized e-skin sensing material used in hair-thin pressure sensors. Originally developed by Hsinchu County-based Industrial Technology Research Institute, the material measures real-time pressure change between 3 grams and 3,000 kilograms.

According to the awards, the material boasts 10 times longer lifetime and sensitivity, enabling the development of consumer devices with new modes of user-machine interaction in a cloud environment.

Uneo Vice President Johnson Hou said the sensor is employed in a broad range of consumer electronics produced by global heavyweights such as Adobe Systems Inc., Dell Inc. and Lenovo Group Ltd.

"We are expanding partnership to tap the fields of big data, cloud computing and the Internet of Things," he said, adding that new applications on the horizon include automobiles, medical devices, sports and wearable devices.

This is not the first time for the material to win an international accolade. In 2010 it picked up a prize at The Wall Street Journal 2010 Technology Innovation Awards.

Changhua County-based Jun Fu Clean Energy Co. Ltd. finished at the head of the field in the power generation energy and sustainability section for its road-based electricity generating system. Using generator plates embedded in road surfaces, the system transforms kinetic energy created by cars passing over the plates into electricity. The power can be stored in batteries and used to illuminate street lights.

The system also earned gold earlier in the month at the Moscow International Salon of Inventions and Innovation Technologies. Inspired by the accomplishments of namesake inventor Thomas Edison, the awards recognize excellence in new product and service development, as well as marketing, human-centered design and innovation.

http://www.taiwantoday.tw/ct.asp?xItem=229720&CtNode=436

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Taiwan releases draft smart Internet white paper

(Taiwan Today, 29 04 2015)

A draft smart Internet white paper was released April 28 by the Cabinet, paving the way for a new era of open data and a superfast network by 2020 in Taiwan.

A total of 390 megahertz bandwidth will be made available for the nation's mobile network by 2017. This is expected to be accessed by 15 million-plus Internet users, with considerable business opportunities stemming from unlimited access to 30,000 entries of government data across the areas of e-commerce, finance and health care.

"By implementing policies outlined in the white paper, Taiwan will be at the forefront of smart Internet applications worldwide," Premier Mao Chi-kuo said. "The government plans to capitalize on the changes to promote advances in its decision-making procedures and public-private sector communication."

The premier made the remarks at the closing of a nationwide workshop on cyber practices and smart Internet in Taipei City. Following three months of intensive discussions, the cross-sector think tank is responsible for making invaluable contributions to the content of the white paper.

Under the guidelines of educated policymaking, public-private sector collaboration and putting the people first, the draft envisions the creation of an inclusive, intelligent and interconnected local network environment in five years.

"Leveraging the advantages of big data, crowdsourcing and open data, we are quickly coming to grips with the new realities of the ever-changing Internet landscape," Mao said, citing the government's launch of Internet-enabled platforms spanning the areas of agriculture, economy, education, health care, labor and national development.

"Open data is a new technique and open attitude," the premier said. "Providing real-time responses to online developments and opinions is the key to cooperating with netizens and delivering win-win outcomes." Under the multipronged Internet development framework, Mao said the government will assume the role of a learner, listener and doer, bringing about lasting transformation to Taiwan's economy, politics and society.

http://www.taiwantoday.tw/ct.asp?xItem=229817&CtNode=436