



# NTU, Fulbright Plant Friendship Tree

Love & Hope in the Time of Pandemic

New Cancer Treatments Unraveled  
Innovative Program in Food Science  
ESG Leads NTU, MIT Partnership



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Left to Right: Director of NTU Experimental Farm, Dr. Min-Hsiung Pan; Vice President of Tree garden, Mr. Ryan Huang; Fulbright Taiwan Executive Director, Dr. Randall L. Nadeau; NTU Executive Vice President, Dr. Chiapei Chou; NTU Vice President for International Affairs, Dr. Hsiao-Wei Yuan; Dean of NTU College of Bioresources and Agriculture, Dr. Hsu-Sheng Lur; AIT Economic Officer, Mr. Patrick Boland.

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# Secretary-General Gen-Shuh Wang: Behind-the-Scene Strategist

“The primary mission of the Office of the Secretariat is to facilitate communications between different administrative units and departments of the University to ensure operational and administrative efficiency,” asserts Secretary-General Gen-Shuh Wang, Professor of NTU Public Health and former Vice President for General Affairs. Ever since its inception, the Secretariat has served as a strategic advisor and counsel for the Office of the President. It not only manages ongoing projects of the University but also helps the President to identify key information to facilitate sound decision-making.

NTU is an enormous organization with over 2,000 faculty members. As such, building relationships between administrative departments and facilitating collaborations is crucial. Most often, administrative departments see things from a relatively limited perspective, and they are not cognizant of the work of other departments. Since the organizational structure of NTU allows most decisions to be authorized and executed at the department level, the Secretariat must oversee the promising ideas raised by each entity and ensure they align with the values and long-term objectives of the President and the University.

“We shoulder the responsibility of bringing together multiple stakeholders and perspectives,



Secretary-General Gen-Shuh Wang

assessing the impact that decisions will have on the University, and assisting the President in navigating through complex topics,” affirms Wang. While convening university affairs and administrative meetings, the Secretariat researches and analyzes various possible solutions and then proactively interweaves everyone’s ideas and key concerns. Moreover, the Secretariat strives to incorporate minority views in seeking win-win solutions that are acceptable to all

and assist the President in making fair and effective decisions.

Advancing along the path of internationalization, NTU will face ever greater challenges from its global counterparts. With the unwavering support of the Secretariat, NTU will endeavor to carry out its mission of promoting internalization and strengthening domestic development— working in hand with members of the NTU community to realize the University’s full potential.

# 2021 NTU Art Festival

## – Art Unboxing

The 2021 NTU Art Festival showcased the theme “Art Unboxing,” featuring a series of outdoor performances, lectures, exhibitions, and handicraft projects. Art professionals in a variety of fields of art were invited to share their stories and stir the audience to new ways to appreciate art. The interactive experience also brought art into everyday campus life by unveiling diverse possibilities of “life imitating art.”

The Art Festival opened on April 16 with two exhibitions, “Cloud Gate Salon” and “Books on Contemporary Dance.” Focusing on “performance art,” the artistic director of the world-acclaimed Cloud Gate Dance Theater, Mr. Tsung Lung Cheng, presented a stirring talk on, “Cloud Gate Unboxing: Our Body as a Vessel.” Cloud Gate dancers later performed in “NTU x Cloud Gate, Shall We Dance?” on May 1. Mr. Tsung Lung Cheng also choreographed the show to suit the venue, the square fronting NTU Library. During the show,

the Cloud Gate dancers magically disappeared in front of the NTU Library, creating a beautiful and harmonious effect. To encourage student participation and interest in dance, 15 members of the NTU Pop Dance Club passed an audition to receive training. They seized the opportunity to perform the classic “Lunar Halo” with the professional Cloud Gate dancers, fully immersing themselves in the experience. Nearly a thousand people filled the square to catch the show. Besides enjoying the dance performance up close, they were invited to dance with the performers—to show their stuff, making their best moves and feeling the excitement of dancing with the stars.

The Art Festival also invited presentations on “New Media-Audiovisual Art” and “Popular Art,” including a collaboration between Lecturer Lien-Chang Wang, Taipei National University of the Arts and the band ECHO, offering a lecture and live performance

“Audiovisual Art Unboxing: Algorithm 42” on May 4. Exhibition producer Hsinyi Hu, a member of the team of curators of 2020 Nuit Blanche, gave a talk on “Nuit Blanche Unpacking: Narrative of Nuit Blanche.” The Festival climaxed on May 7-8, with three events held in collaboration with the National Palace Museum – a lecture on “National Palace Museum Unboxing: Treasure Hunt on Campus,” the “Winding Stream Party” outdoor fair, as well as a DIY workshop. Some precious cultural relics were displayed on campus, offering an unprecedented opportunity to see the past through the present.

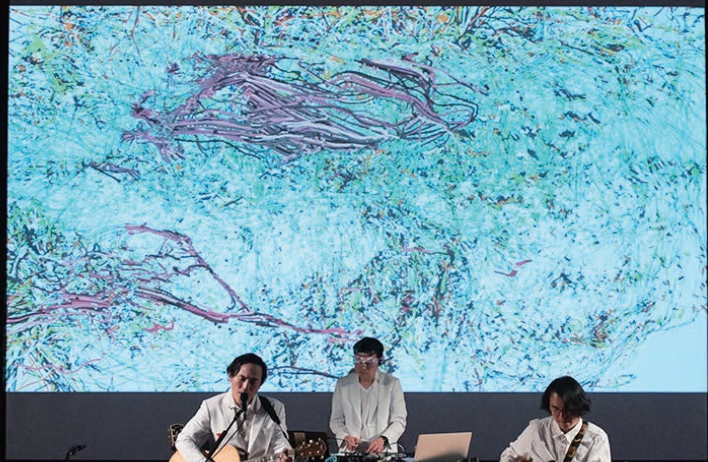
The 2021 NTU Art Festival spotlighted several fields of art to show the diversity of art and bridge the gap between art and daily life, delivering the message that “As long as you want, you can unbox art anywhere and everywhere.”

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1. Audiovisual art unboxing collaborative live performance and lecture by Lecturer Lien-Chang Wang (center), Taipei National University of the Arts, and the band ECHO.
2. Nuit Blanche lecture by exhibition producer Hsinyi Hu, member of the 2020 Nuit Blanche team of curators.
3. Hashtag composition game hosted next to the “Winding Stream Party” device.
4. Hashtag composition game hosted next to the “Winding Stream Party” device.
5. President Dr. Chung-Ming Kuan (2<sup>nd</sup> from right) and Charles Chen, Chief Human Resources Officer at Delta Group (5<sup>th</sup> from left) invited to dance with members of the audience.



Group photo of special guests, Cloud Gate dancers, and NTU Pop Dance Club dancers after the show.



# NTU Partners with MIT in Addressing ESG and Sustainability Issues in Dedicated Seminar

With the earth's natural resources rapidly being depleted, green technology has become the trend in recent years. ESG and sustainability are no longer just a slogan but a genuine concern and provide criteria to guide business strategies and organizational survival. To explore these issues in depth, NTU's Industrial Liaison Organization (NTUILO) held a seminar on May 11. Scholars from both NTU and MIT presented their respective research results and insights for discussion. The seminar addressed the challenge of achieving environmental sustainability and developing green technology in a variety of perspectives, followed by a Q&A session on how to realize the goals of sustainability.

In his opening statement, Prof. Pai-Chi Li, VP of NTU's R&D Office and the Director of NTUILO remarked, "In order to provide high-quality and advanced services, NTUILO proactively seeks opportunities for cooperation with leaders from all fields. This seminar is a rare opportunity to work with MIT professors, particularly during this time when they cannot be physically present." Grace Chang, CEO of NTUILO, affirmed that, "Sustainability has become the common mission of

humankind, and NTU does not want to be left behind. As an academic institution, we have invited experts in related fields, such as financial management, materials technology, and forestry, to share their findings with our guests."

The first half of the seminar included 3 online sessions featuring speakers from MIT, Professor John Fernández, Professor Yossi Sheffi, and Professor Elsa Olivetti. Each speaker proposed solutions to current environmental challenges, such as carbon sequestration and reducing product footprint by recycling. The second half of the seminar, held at the NTUH International Convention Center, featured presentations by 3 NTU professors. Professor Pai-Ta Shih, Professor Chia-Wen Wu, and Associate Professor Chia-Pin Yu shared their insights on how to build an eco-friendly supply chain, achieve sustainable development by using nanoporous materials, and experience the scientifically-proven physical and mental benefits of spending time in nature.

Last but not least, the three MIT professors held a lively discussion in the Q&A session with all the participants, addressing such issues as how

to promote sustainable products to consumers, experiences of successful and failed initiatives, etc. The seminar ended on a high note with enthusiastic exchanges, marking an important milestone for NTUILO's dedication to raising NTU's industry-university collaboration to an international level.



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1. NTU speakers and invitees.
2. Lecture by Associate Professor Chia-Pin YU, NTU's School of Forestry and Conservation.
3. Opening speech by Prof. Pai-Chi Li, Vice President for Research and Development.

# Deeping the Roots of Friendship: Fulbright Tree Planting at NTU

On March 12, 2021, National Taiwan University and the Fulbright Taiwan Foundation for Scholarly Exchange jointly held the NTU-Fulbright Tree Planting Initiative Ceremony at the Experimental Farm on the NTU campus. The event, which coincided with Arbor Day in Taiwan, served not only as a commemoration of their longstanding partnership but also as an important reminder to take environmental action.

This tree planting dates back to April 21, 2016 when a tree was planted on Capitol Hill in Washington D.C. to honor Senator J. William Fulbright, the founder of the Fulbright Program. Since then, Fulbright Taiwan has extended this tradition to many educational institutions in Taiwan, hoping to enhance the environment.

NTU Executive Vice President Dr. Chiapei Chou and Fulbright Taiwan's Executive Director Dr. Randall L. Nadeau presided over the event. Over forty guests graced this unique ceremony, including current Fulbright scholars, NTU grant recipients, and representatives from the American Institute in Taiwan (AIT) and Fulbright Taiwan.

Vice President Chou began her opening remarks by highlighting the strong bond between NTU and Fulbright Taiwan. To date, over 200 scholars have visited NTU through the Fulbright Program, and over 100 grants and scholarships have been awarded to scholars and students. Chou expressed her gratitude and appreciation to Dr. Kuo-Tan Li, NTU Associate Professor of the Department of Horticulture and Landscape Architecture, and Mr. Nelson Li, NTU alumnus and President of Tregarden, for arranging the event and generously donating the Chinese Fringetree that was planted for the event.



The Fulbright Tree Planting Initiative Plaque donated by Fulbright Taiwan.

In his speech, Dr. Nadeau stated that over 200 Fulbrighters are currently in Taiwan and many are considering advancing their academic careers in the country—a positive trend that he looks forward to promoting and excelling through new academic programs.

The significance of planting trees not only celebrates the spirit of fostering international growth and understanding between students around the world but also symbolizes the deepening of the friendship between NTU and Fulbright Taiwan.



Left to Right: Director of NTU Experimental Farm, Dr. Min-Hsiung Pan; Vice President of Tree garden, Mr. Ryan Huang; Fulbright Taiwan Executive Director, Dr. Randall L. Nadeau; NTU Executive Vice President, Dr. Chiapei Chou; NTU Vice President for International Affairs, Dr. Hsiao-Wei Yuan; Dean of NTU College of Bioresources and Agriculture, Dr. Hsu-Sheng Lur; AIT Economic Officer, Mr. Patrick Boland.

# Facing COVID-19 and Beyond: NTU Leads the Fight Against the Pandemic

On April 8, 2021, NTU's College of Medicine and the Research Center for Epidemic Prevention Science, Ministry of Science and Technology held a semi-virtual international conference, "Facing COVID-19 and Beyond." Experts in related fields from the world over were invited to share their insights.

Former Vice President of Taiwan Chien-Jen Chen, Professor Hiroshi Yotsuyanagi (University of Tokyo,) and Deputy Director Yi-Chun Lo, Taiwan Center for Disease Control, adopted an epidemiological approach in reviewing how COVID-19 has evolved and examined the measures being taken, nearly two decades after the SARS outbreak of 2003. Professor Yong Poovorawan (Chulalongkorn University) and Paul Anatharajan Tambyah (National University of Singapore) made the case that, on measure, the pandemic had had more positive effects on society than negative ones. In Thailand,

for instance, the incidence of traffic accidents, viral respiratory disease, and gastrointestinal disease is declining, although the psychological stress in society and the number of suicides and attempted suicides are on the rise.

Adopting social science methodology, Professor Nicolò Pecora (Catholic University of the Sacred Heart) analyzed the impact of COVID-19 using Omori's Law, showing the similar effects of natural disasters and the pandemic, such as economic recession. Addeba Kamurulzaman (Universiti Malaya) made a strong case for including prisoners and foreign workers in the public health system.

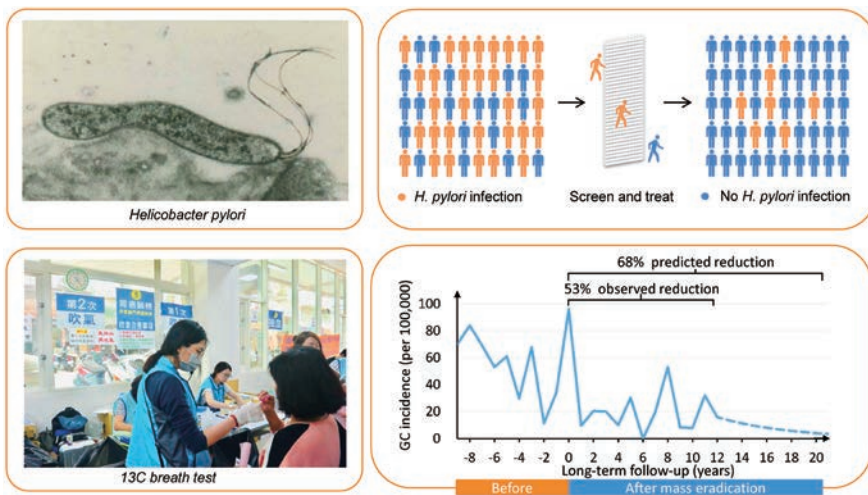
Professor Shin-Ru Shih (Chang Gung University) introduced the Clinical Diagnosis Kits developed in Taiwan at the beginning of the outbreak and addressed the effects of the virus' antigen, stability, and genetic diversity. Professor Sui-Yuan Chang

(National Taiwan University, College of Medicine) introduced the development of the antibody ACE-Fc Fusion protein in cooperation with Academia Sinica. Professor Siou-Huei Ye's research on Furin inhibitor was also presented as a possible way to alleviate patients' COVID-19 disease condition by blocking the virus from entering cells to replicate.

The Round Table Conference was hosted by Professor Pan-Chyr Yang of the French Academy of Sciences . He convened scholars from various fields and countries around the world to offer their insights on pandemic prevention. In conclusion, Director Yen-Hsuan Ni of National Taiwan University's College of Medicine and Director James Chih-Hsin Yang of National Taiwan University's Cancer Center both expressed the fervent hope that more such scholarly exchanges would be held at home and abroad.







Upper left: *Helicobacter pylori*. Bottom left: breath test. Upper right: bacteria treatment efficacy. Bottom right: cancer prevention efficacy.

# Can Killing a Stomach Bacterium Prevent Cancer?

Gastric cancer is the third most common cause of death worldwide, accounting for more than 800,000 deaths each year. What may come as a surprise is that most gastric cancer is the result of *Helicobacter pylori* infection. *Helicobacter pylori* is a bacterium that can survive in the stomach's acidic environment, leading to chronic stomach inflammation that increases the risk of stomach cancer. Eradicating *helicobacter pylori* bacteria can heal the inflammation and stop the progression of mucosal and genetic damage. However, this strategy has never been adopted on a policy level due to the lack of evidence concerning long-term benefits and risks.

In 2004, an NTU research team launched a stomach cancer prevention program on the northernmost islands of Taiwan, the Matsu Islands, where the prevalence rate of *H. pylori* infection and incidence rate of stomach cancer are high. Residents in four townships there were invited to receive an *H. pylori* breath test, and those who tested positive were treated with one to two courses of *antibiotics*.

After 6 rounds of the program, the prevalence rate of *H. pylori* infection was reduced from 64.2% to 15.7%, with a reinfection rate of less than 1% per person-year. The decline in *H. pylori* infection was accompanied by a 53% drop in the occurrence of stomach cancer. The trend shows that by 2023, fewer than 6 people per 100,000 will be diagnosed with stomach cancer in the study area. By 2025, the stomach cancer mortality rate will be cut by a significant 39%. These promising results were published in the prestigious journal, *Gut*, in February 2021.

Over the 15-year period, the research team has demonstrated that mass screening and eradication of *H. pylori* could effectively reduce the incidence of gastric cancer and make this cancer a rare affliction. Long-term follow-ups of the participants' condition revealed zero

increase in the incidence of other digestive tract cancers, such as esophageal and colorectal cancers, the sites most vulnerable to the dysbiosis associated with the antibiotic treatment.

The co-authors of the research article included Tsung-Hsien Chiang, Yi-Ru Chen, Han-Mo Chiu, Chia-Tung Shun, Ming-Shiang Wu, and Yi-Chia Lee of NTU's College of Medicine and Hospital; Wei-Jung Chang, Chang-Chuan Chan, and Hsiu-Hsi Chen of NTU's College of Public Health; Chun-Fu Shieh and Cheng-Ying Liu of Lienchiang County Government; Hung Chiang of Taipei Institute of Pathology; and David Y. Graham of Baylor College of Medicine, USA. The research was supported by the Minister of Science and Technology and the NTU Hospital.



Scan the QR code to read the full journal article.

# Listening under the Sea: NTU Uses Bioacoustics to Record Fish Chorusing

An international research team led by Prof. Chi-fang Chen, Postdoc Dr. Shashidhar Siddgangaiah, and Ph.D. candidate Wei-Chun Hu of NTU's Department of Engineering Sciences and Ocean Engineering has been examining how typhoons and flooding may cause fish to cease their normal chorusing patterns during seasonal changes in the Eastern Taiwan Strait. The team published their findings in *Ecological Indicators* on Feb 23, which also appeared in the highlight section of *Nature Climate Change* April issue.

Ocean researchers have long analyzed the temporal trends and spatial patterns of marine sounds to learn more about the abundance, distribution, and behavior of fish and other marine species. Such research is conducted to augment the present insufficient data on species-specific temporal and seasonal changes. To obtain accurate species-specific behavior estimates, Chen's team began a five-year fish vocalization

recording project in 2014 — the longest recording project on fish vocalization ever conducted.

The greatest challenge the researchers faced was to extract accurate data from large passive acoustic datasets that included other biological sounds and sound sources. To address this issue, Chen's team introduced an efficient ecoacoustical index to automatically extract fish vocalization from large recordings, greatly facilitating the reading process.

Findings revealed a periodic fish chorusing pattern influenced by abiotic parameters, such as temperature, tide, and moon phase, with peaks in summer and almost complete silence for two months during winter. This groundbreaking discovery indicates how extreme weather events (e.g., typhoons, storms with sediment resuspension) may be correlated with the cessation of fish chorusing.

In the research, the team also raised concerns over how the

government's initiative to build offshore wind farms could increase the presence of anthropogenic factors at sea and undermine the well-being of marine species. To monitor such possible adverse effects, Chen's team has deployed passive acoustic devices near windfarm areas in Miaoli and Changhua.

The chorusing pattern examined in this long-term study provides important baseline data for examining the impact of anthropogenic factors, climate change, and climate-driven episodic events on fish phenology while demonstrating how ambient conditions can significantly alter the phenology of vocalizing marine species.



Scan the QR code to read the journal article in *Nature Climate change*.



Scan the QR code to read the journal article in *Ecological Indicators*.

Aerial view of Turbines #28 and #21 in the Miaoli windfarm. The turbines were installed in 2016, and Prof. Chen's lab has monitored the noise levels in the area throughout the construction, installation, and operation phases. (Photograph taken by Dr. Shashidhar on January 14, 2021).

# Breakthrough in Renal Fibrosis and Chronic Kidney Disease Treatment

A new research finding on the critical role played by thioredoxin domain containing 5 (TXNDC5) in renal fibrosis was published in *Journal of Clinical Investigation* this past March by the research team led by Dr. Kai-Chien Yang, Associate Professor of NTU's Department and Graduate Institute of Pharmacology. This finding may offer hope for patients with renal fibrosis and chronic kidney disease (CKD).

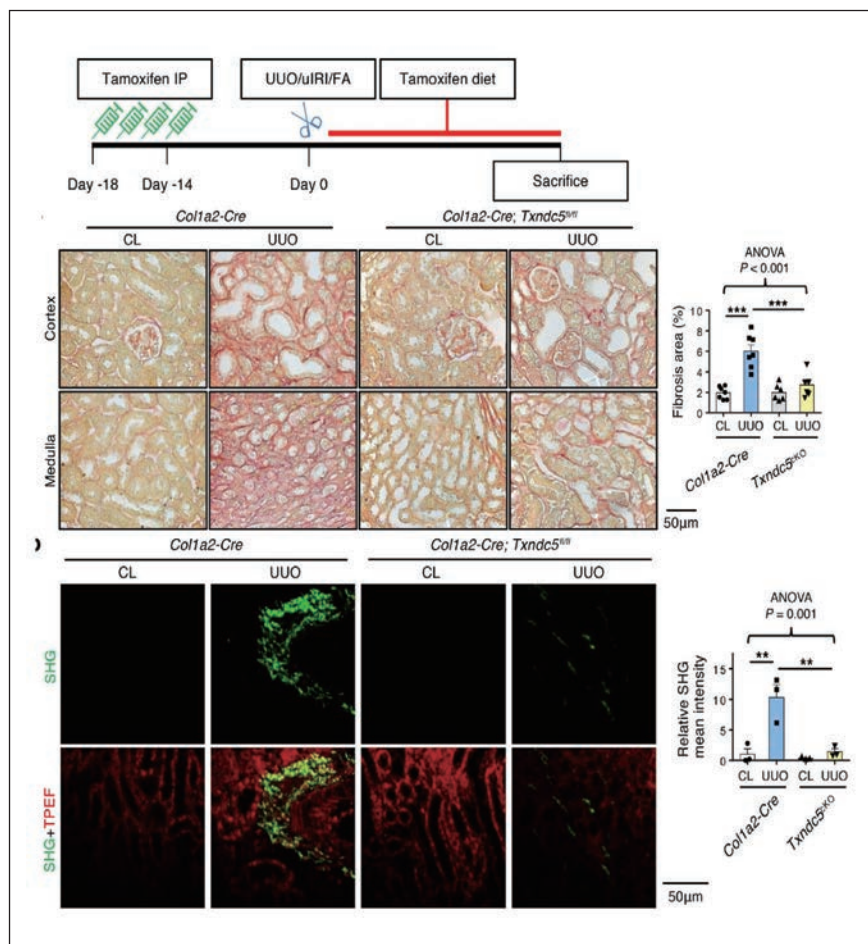
Renal fibrosis appears frequently in patients with CKD. Renal fibrosis is a serious medical condition in CKD patients, which can cause gradual decrease in renal function and result in the development of end-stage renal disease requiring dialysis and kidney transplant. Consequently, there is a serious need to identify novel therapeutic approaches to the treatment or prevention of renal fibrosis.

In 2018 and 2020, Dr. Yang and his team discovered that TXNDC5, a fibroblast-enriched endoplasmic reticulum (ER) protein, accelerates cardiac and pulmonary fibrosis. This year, Yen-Ting Chen, a Ph.D. student of Dr. Yang, found that TXNDC5 promotes renal fibrogenesis by

enhancing the folding and stability of type I TGF $\beta$  receptor, followed by augmenting profibrotic TGF $\beta$  1 signaling.

TXNDC5 was found to be highly upregulated in the kidneys of CKD patients. The team also demonstrated in animal studies that the elimination of TXNDC5 from collagen-producing fibroblasts not only attenuates renal fibrogenesis but also lessens the existing condition.

Looking ahead, Dr. Yang and his team will strive to develop effective ways of targeting TXNDC5 as a new therapeutic strategy for cardiac, pulmonary, and renal fibrosis. At present, the team is conducting research on the role of TXNDC in cirrhosis of the liver to examine whether the same strategy shows promise for mitigating liver fibrogenesis. The long-term objective is to develop medicine that ameliorates organ fibrosis and will benefit patients suffering from fibrotic diseases.



Scan the QR code to read the journal article.

Illustration of the role of TXNDC5 in renal fibrogenesis.



Dr. Hsing-Chen Tsai and her research team

# Grab and Smash: Building Stronger Fighter Immune Cells to Combat Cancer

Cell-based immunotherapy (CBI) is a type of therapy that involves taking immune cells from a patient, growing and expanding these cells in the laboratory, then infusing the cells back into the patient. Promising as it is, CBI has not been adopted clinically at a larger scale due to inconsistent cancer-killing capacity. A research team led by Dr. Hsing-Chen Tsai of the Graduate Institute of Toxicology at NTU, however, has developed a new therapeutic strategy to enhance CBI efficacy by combining DNA demethylating agents with  $\gamma\delta$  T cells for the treatment of lung cancer. The study was published in *Nature Communications* in April 2021.

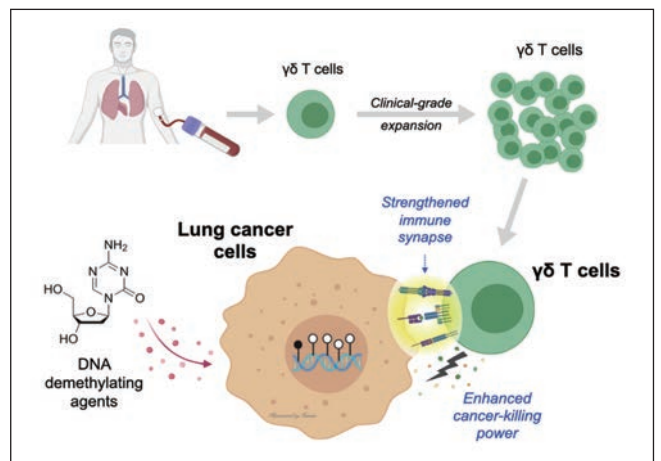
$\gamma\delta$  T cells are a special kind of immune cells that fight cancer. Unlike regular fighter T cells (cytotoxic CD8+ T cells),  $\gamma\delta$  T cells respond rapidly and do not require MHC-assisted antigen presentation for cancer recognition.

The NTU team discovered that DNA demethylating agents are a safe leukemia medication which can cause cytoskeleton reorganization in lung cancer cells and facilitate an immune synapse. As a result,  $\gamma\delta$  T cells can target and destroy lung cancer cells efficiently by releasing cancer-killing substances via a strengthened immune synapse.

Since  $\gamma\delta$  T cells can recognize cancer cells without the presence of specific MHC molecules, it is possible to utilize  $\gamma\delta$  T cells from allogeneic donors to treat cancer.

Dr. Hsing-Chen Tsai is thankful for the support of Rueyhung R. Weng, Hsuan-Hsuan Lu, Chien-Ting Lin,

Chia-Chi Fan, Rong-Shan Lin, Tai-Chung Huang, Shu-Yung Lin, Yi-Jhen Huang, Yi-Hsiu Juan, Yi-Chieh Wu, Zheng-Ci Hung, Chi Liu, Xuan-Hui Lin, Wan-Chen Hsieh, Tzu-Yuan Chiu, Jung-Chi Liao, Yen-Ling Chiu, Shih-Yu Chen, and Chong-Jen Yu. The research was funded by the National Health Research Institutes, National Taiwan University Hospital, and Ministry of Science and Technology.



DNA demethylating agents can increase the expression of adhesion molecules on lung cancer cells, thereby strengthening the immune synapse to enhance the killing of lung cancer by  $\gamma\delta$  T cells.



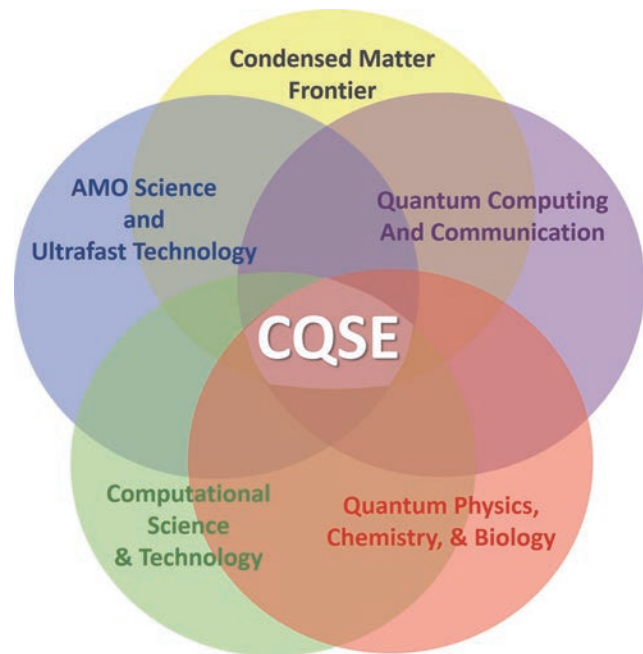
Scan the QR code to read the journal article.

# NTU Probes the Forefront of Quantum Science and Technology with CQSE

Quantum science and technology demonstrate the close tie between fundamental physics and society. Any achievement in quantum science is essential to the development of advanced technologies and tools. Instruments made possible by quantum science exist in all fields nowadays, from astronomy, chemistry, physics, biology to medicine, enabling experiments with revolutionary insights and opening up room for further exploration.

Founded in 2009, NTU's Center for Quantum Science and Engineering (CQSE) is the first quantum science research center in Taiwan. Members of CQSE hail from several NTU natural science and engineering programs, the Institute of Atomic and Molecular Sciences (IAMS) and the Research Center for Applied Sciences (RCAS) of Academia Sinica.

CQSE has built a strong team of scientists with diverse areas of expertise to explore challenging and cutting-edge topics in quantum science and technology. It is aimed at nurturing next-generation leading experts in quantum science and engineering, sponsoring interdisciplinary programs and activities, and publishing papers in premier SCI journals that lead to new inventions. CQSE research can be classified into five broad inter-related categories, as shown in its logo.



Frontier and Interdisciplinary Research Scope of CQSE.

## Pic: Frontier and Interdisciplinary Research Scope of CQSE

Two of the current CQSE research highlights include:

- **Attosecond Ultrafast Science and Technology:** The attosecond ( $10^{-18}$  sec) laser is the newest frontier in ultrafast science and technology in 21<sup>st</sup> century. It allows direct probe of the time-resolved electronic dynamics and spectroscopy. Explorations with novel attosecond pulses have revealed many ultrafast phenomena in atomic and molecular physics, chemical physics, and biology. Our study is aimed at uncovering the origins of novel strong-field phenomena and facilitating the optimal generation of ultrafast attosecond and zeptosecond ( $10^{-21}$  sec) laser pulses.
- **Quantum Computing and Quantum Communication (QC&QC):** A quantum computer could be much more powerful than any existing supercomputer for solving certain specific tasks, such as decoding the current cryptographic systems. Quantum key distribution (QKD) offers secure communication based on quantum physics principles. CQSE members are coordinating their efforts to realize QC&QC technologies from hardware and software aspects. The IBM Q Hub, for example, has been built with generous support from MOST by the CQSE team.

# NTU Looks into Cultural Competence in Global Health

To enhance student understanding of cultural competence in global health, Assistant Professor Po-Han Lee of the College of Public Health's Global Health Program (GHP) offers a course on "Cultural Competence in Global Health: Perspectives and Practices." Since the GHP admits only international students, the courses are all taught in English. This course illustrates the importance of cultural competence with respect to global health issues, presenting examples from local indigenous communities to showcase Taiwan's cultural diversity. A crucial element of cultural safety, cultural competence encompasses the concepts of cultural awareness and cultural sensitivity. Cultural safety involves formulating a strategic plan to modify the way healthcare is delivered to indigenous peoples. Cultural safety has been adopted as a new approach to healthcare and community healing by healthcare providers working in indigenous communities and intercultural exchanges. It is aimed at uncovering and understanding the conditions faced by indigenous peoples as a result of their post-contact history.

Special attention is paid to the impact of colonialism on indigenous health and well-being. Built on the concept of cultural safety, this course explores several crucial indigenous health issues, including indigenous health inequalities, cultural safety and social determinants of indigenous health, indigenous ethno-medicine, indigenous mental health, indigenous eco-health, indigenous health promotion, and indigenous long-term care.

Besides listening to lectures, the students also went on field trips to government institutions, indigenous hospitals, and indigenous communities in Hualien. They were encouraged to be interactive and communicate with people of local cultures, as well as exchange their thoughts and impressions with community health workers. In the process, they learned more about critical issues in the Indigenous Health Act during these visits. They also gained in-depth understanding of the relationship between cultural safety and indigenous health from a global health perspective.

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The field trips organized for this semester included the following:

## 1. Paterungan Tribe (Fu-Sing)

The Paterungan Tribe (Fu-Sing) recently became a smoke-free indigenous community as the result of a tribal committee decision. The tribal leader and elders are aware of the harm smoking can cause and are now encouraging community members to quit smoking. Citing the teachings of the True Jesus Church' bible, they are requesting their tribespeople to refrain from causing harm to their bodies. Gradually, the smokers in the tribe are giving

up smoking, one after the other. The tribe is now Taiwan's first and only smoke-free community.

## 2. Welcome Ceremony at Kakita'an, Tafalong Pangcah Community

"Kakita'an" is a traditional tribal center house, well maintained by the Tafalong Pangcah community. The structure houses many wood crafts and artworks representing the myths and tales of the Amis/Pangcah people. Listening to the local elders' narratives on the oppression of different ruling regimes, the students learned about the difficulty of preserving

indigenous culture and traditions and the importance of cultural safety in a community.

## 3. Photography Exhibition of the Kavalan Name Rectification Movement

Bauki Angaw, a photographer, held a photography exhibition at Xinshe Race Terrace, an important site for the Paterungan Tribe. The exhibition celebrated the success of the Kavalan 'rectification of names' movement during the past 18 years, in hopes of transmitting this particular memory to future generations. Bauki Angaw informed the students about the



culture of the Paterungan Tribe to help them better understand the Kavalan people.

#### 4. A'tomo Community Cultural Health Center

The A'tomo Community Cultural Health Center is a long-term care station that serves the Amis/Pangcah community. To encourage the elders to partake in group activities, the Center organizes courses that incorporate traditional rattan weaving, singing, and dancing. In addition to helping the elders flex and condition their muscles, these activities also address culture inheritance.

#### 5. Dancing with Amis/Pangcah Elders

The students participated in traditional singing and dancing during their field trip to the A'tomo Community Cultural Health Center. Before that, tribal health workers had explained the meaning of the songs to them. They were then invited to sing and dance with the elders. A great moment came when two Latin American students were invited by the elders to perform typical dances of their cultures. It was a wonderful example of intercultural exchange, one that embodied the essence of the course.

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1. Visit to the Paterungan Tribe (Fu-Sing) in Hualien County, the only smoke-free community in Taiwan.
2. Visit to the Kakita'an of the Tafalong Pangcah Community in Hualien.
3. Visit to the A'tomo Community Cultural Health Center, Hualien County.
4. Dancing with Amis/Pangcah elders at the A'tomo Community Cultural Health Center, Hualien County.

# Innovation, Diversity, and Internationality All-in-GIP TRIAD

The International Joint Degree Master's Program in Agro-Biomedical Science in Food and Health (GIP-TRIAD) was jointly established in 2017 by National Taiwan University, University of Tsukuba, and University of Bordeaux, to educate global talents, promote research, and address the “unsatisfied needs” of society. The program focuses on such fundamental challenges as food production and security, public health, health maintenance, disease prevention, and treatment.

On March 2, 2021, GIP-TRIAD inaugurated its office and multi-function learning space in the Basic Medical Science Building, offering GIP members a space to debate, innovate, and host remote lectures. The virtual inauguration ceremony, hosted by GIP graduates, celebrated the growth and development of the program and featured honorable guests, such as Executive Vice President Shan-Chwen Chang,

Dean of College of Medicine, Yen-Hsuan Ni, Dean of College of Public Health Shou-Hsia Cheng, and Deputy Vice President for Academic Affairs and Director of GIP-TRIAD Tsai-Kun Li.

Over the years, Bureau Français de Taipei has invested heavily in academic exchanges between Taiwan and France academic. To date, 12 GIP students have received the Joseph Fourier Master Scholarship. On April 20, the organization hosted an event titled “One Health 2021,” inviting GIP professors, scholarship grantees, and industry leaders to exchange views on cutting-edge research and cultural differences.

GIP offers courses in English on biomedicine, AI, and molecular biology applications. Unlike conventional lecture classes, the GIP courses are designed to motivate discussion and brainstorming in class. For example, Prof. Jean-Marc Egly, a member of the French Academy of

Sciences and an NTU Yushan Scholar, leads class discussions aimed at helping students understand the crucial role that genes play in pharmaceutical intervention.

Despite the pandemic, GIP continues its regular courses and lectures with the help of remote learning tools. Under the guidance of leading experts, students take advantage of the flexibility and hands-on experience that the program facilitates to become bold, creative researchers with a mission to make the world a better place.

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A group photo taken at the inauguration ceremony with Dean of College of Medicine, Yen-Hsuan Ni ; Dean of College of Public Health. Shou-Hsia Cheng; Deputy Vice President for Academic Affairs and Director of GIP-TRIAD, Tsai-Kun Li; Associate Dean of College of Bioresources and Agriculture; Professor Je-Ruei Liu; Prof. Jean-Marc Egly; Attaché for Scientific and Academic Collaborations, Dr. Jérôme Bove; and GIP students.







A meet-up for Chinese students at the First Administration Building, organized by Overseas Students Advising Division, Office of Student Affairs. Lunwang Wu (5<sup>th</sup> from left in the first row) (Photo courtesy of Lunwang Wu)

# Love, Family, and Friends in the Time of COVID-19

The COVID-19 pandemic has seriously impacted the lives of NTU's international students. Many have been unable to return to their home countries for over a year. How have they been coping?

Jingying Lau, a senior from Malaysia, hasn't seen her parents for over a year since returning to Taiwan in February 2020. A brother of hers attends college in Chiayi. They both keep in close touch with their parents via social networks, but Jingying is concerned that her parents withhold any bad news and only share good news with her and her brother. Even though they see each other by video conferencing every two weeks, she worries constantly about the pandemic back home and the safety and well-being of her parents. She had originally planned to invite her parents to attend her commencement ceremony at NTU and travel around Taiwan together. But, Covid-19 has disrupted those plans. She hopes to stay in Taiwan in order to work after graduation and that her parents will have the opportunity to attend her brother's commencement and travel around Taiwan together then.

Lunwang Wu, a second year graduate student of the Graduate Institute of Civil Engineering, asserts that he got to know his professors and peers better this past year, thanks to the pandemic. As President of

NTU's Mainland Chinese Student Association, he also got to know other students from Mainland China better. He fondly recalls lining up to get a bento dinner and red envelope with lucky money handed to him in-person by NTU President Chung-Min Kuan on the Chinese New Year's Eve and then traveling around the island with his friends in Taiwan.

Powing Chan, a student from Hong Kong, facetimes with her boyfriend back in Hong Kong almost every day. She looks forward to their daily interaction over social media, the highlight of her day. Having already spent an entire year apart, she can't wait for the pandemic to end, so she can reunite with her family and boyfriend in Hong Kong.



Jingying Lau's parents seeing her and her brother off at the airport. (Photo courtesy of Jingying Lau)

# NTU Men's Basketball Team Triumphs in UBA

After 21 years of anticipation, National Taiwan University Men's Basketball Team claimed third place in the lower bracket, thus advancing to the upper bracket in the 2021 University Basketball Association competition. This winning team, led by Head coach Lian-Xi Lin and coaches Zong-Ru Tsai and Chi-Huang Huang, includes not only players but staff members from over 40 diverse backgrounds, including experts in data, image analysis, and physical therapy.

Unlike professional student-athletes, NTU Men's Basketball Team members have general backgrounds. This means that the team members have to polish their skills and compete against professional athletes from other schools while keeping up their grades. Despite facing

challenges, such as team reorganization and injuries among team members, everyone on the team was determined to advance in the games. Setting their eye on the prize, the team members agreed to relocate their training site during summer vacation and compete in highly-intensive courses. After countless morning jogs and mountain climbs on weekends, the team advanced to the upper bracket this year.

The annual University Basketball Association competition, also known as UBA, is held at the end of each year. This leaves NTU's team only 3 months to prepare for the games after the start of the new school year. The preliminaries were held on December 6, 2020. In preparation for the finals in March, the team engaged in relentless intensive training, even

during the winter break. Facing National Cheng Kung University and Providence University, the team's winter training results reflected member's overall physical performance, stamina, and play techniques after substituting backup players to cover for the deputy captain Yi-Zhong Wang and the center Jian-Er Zhang who were lost to injury. In the end, the NTU Men's Basketball Team entered the semi-finals and took second place in the group with six wins and one defeat.

The final game on March 25 was a single-game elimination, which meant that only the top 4 teams would be eligible to play in the upper bracket next year. During the Top-16 game against National Chiao Tung University, the NTU team had a rough start and



Players celebrating with MVP Chang-Lin Xie after promotion to the upper bracket.



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5	

1. Captain Zhi-Quan Xu of the Department of Forestry and Resource Conservation shooting a layup.
2. The team's most consistent 3-point shooter this year—Tian-You Wu of the Graduate School of Finance.
3. Jie-Lin Lien of the Graduate Institute of Communication Engineering dribbles past a defender.
4. Wei-Hua Chen of the Department of Bio-Industry Communication and Development breaking through two defenders.
5. Group photo of NTU Men's Basketball Team after the game, including coaches, alumni, players, parents, physical therapists, data image analysts, and managers.

lagged by 13 points in the 3<sup>rd</sup> quarter. However, the changes in strategy by the coaches and in pace by the team leader Zhi-Quan Xu spurred the team to rally in the 4<sup>th</sup> quarter, resulting in a dramatic close victory.

For the quarter-finals, NTU Men's basketball Team played against the home team, National Taipei University of Business. The NTU team again trailed at the end of the first half. Then, Shooting Guard Chang-Lin Xie entered the court and scored five 3-pointers in the second half. NTU Men's Basketball Team sealed the win 49

to 46, turning a new page in team history. Although the team lost to Vanung University in the semi-finals, they secured 3<sup>rd</sup> place against National Taichung University of Science and Technology afterwards and closed the season with the desired result.

With the assistance of their dedicated coaching staff, data and image analysts, physical therapists, and the experience handed down by the veteran players, the team marked a major milestone in the history of NTU basketball by coordinated team play. Many hard-fought battles are

anticipated when NTU Men's Basketball Team begins to play the upper bracket next season. The team will strive with the same fierce passion and indomitable spirit—living up to the team motto, "Play hard, play smart," and showing the world how sports builds healthier communities and brings people together from all walks of life.



Scan the QR code to stay current with NTU Men's Basketball Team.

# NTU Men's Volleyball Team: Where Passion Thrives and Survives

He stands, poised and alert. The server drills the ball across the court. Ready, he leaps up, swinging his arm sharply. His palm strikes the ball squarely, smacking it downwards, just clearing the net. "Attaboy! Nice spike!" His teammates cheer, and he trots back to the line to await his next turn. This is a team drill for the 30 plus members-- of all ages and various backgrounds-- of the NTU Men's Volleyball Team, led by Coach Lin-Huan Hu, Associate Professor of the Athletic Department. Team managers and students from the Department and Graduate Institute of Physical Therapy also have important roles to play on the Team.

Every team member trains hard to up their game, bolster team chemistry, and master a diversity of tactics. You can spot these athletes sweating on the court on

Monday and Wednesday nights and working out on Thursday afternoons. Dedicated to the sport, the team members eagerly devote extra time to practice on weekends before competitions.

In addition to the University Volleyball League, the NTU Team has competed in the Yungshin Cup, the City Cup to ASICS Cup, to name just a few. Team members also assist in holding and refereeing NTU competitions, including College Cups, the Freshmen Cup, the NTU Cup, and the Men's Volleyball All Star Game. Their mission is to give more people the opportunity to appreciate the excitement of collegiate volleyball. Top overseas varsity teams also pay occasional visits and vice versa, to network and challenge the players to hone their skills.

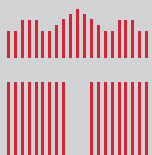
Transmitting skills and sharing experiences are central to the success of the Men's Volleyball Team. Established back in the 1960s, the Team has received awesome support from its alumni. Every year, former team members attend the homecoming event to share their stories. In this way, they hand down the history and spirit of the Team and present outstanding models for members to emulate. Team alumni are like the solid oak floor of the court, adding spring to the players' jumps for their daring shots in mid-air.

Due to the COVID-19, competitions home and abroad have been suspended. That said, soon it will be time for NTU Men's Volleyball Team to enter the court and drive the ball sharply over the net, between the defenders, and to the floor. Score!



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1. Group photo of NTU Men's Volleyball Team.
2. Group photo of NTU Men's Volleyball at open games.
3. Group photo of NTU Men's Volleyball Team and alumni after a friendly match.



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