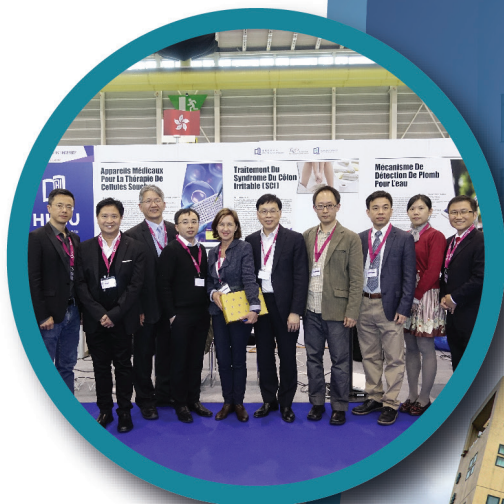




香港浸會大學
HONG KONG BAPTIST UNIVERSITY



HKBU ANNUAL REPORT — 2017-18 — KNOWLEDGE TRANSFER OFFICE



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Unified Gymnastics For All (GFA) Programme for Students With and Without Intellectual Disabilities in HK

Prof Cheung Siu-yin from HKBU's Department of Physical Education has contributed greatly to the development and implementation of Unified Gymnastics For All (GFA), a sports-education programme aimed at students with and without intellectual disabilities. Unified GFA provides a platform for students to learn basic gymnastic movements and an opportunity for coaches to lead inclusive activities. It also fosters social inclusion in the community. This get-

together project — a collaboration between HKBU, Special Olympics Hong Kong and local schools — represents an exemplar of how social inclusion can be promoted through physical activities. To recognise the outstanding impacts of the project, Prof Cheung was awarded the Knowledge Transfer Award 2018. For details, please see *Annex 1*. Video: <https://youtu.be/OeqGJ5ey0IM>



Highlight Video

HKBU-Jockey Club Chinese Medicine Disease Prevention and Health Management Centre

In the face of the aging population and the continual increase of the number of patients with chronic diseases, the School of Chinese Medicine has recently launched the “Jockey Club ‘Embrace Health’ Chinese Medicine Programme” and established the HKBU-Jockey Club Chinese Medicine Disease Prevention and Health Management Centre with the financial support (HK\$95.18 million) of the Hong Kong Jockey Club Charities Trust. It is the first health service organisation in Hong Kong that places emphasis on the two long-held concepts of traditional Chinese medicine (CM): “prevention before disease” and “body constitution”. It aims to serve the community by providing comprehensive CM services and devising strategies to preventing the onset, progression and relapse of diseases.



The Centre comprises four service platforms. The first platform, “Health Education”, is to promote to the general public the concept and knowledge of disease prevention and health management through a series of manuals, micro-movies, videos, lectures, workshops, a website and a mobile phone application. The second platform, “Health Assessment”, provides comprehensive process which collects, examines and analyses user data through the CM physical examination system. The examination result can differentiate the body constitution as the basis for further healthcare measures. The third platform, “Preventive Healthcare”, serves different and appropriate preventive interventions through the CM Healthcare Advisors to minimise the possibility of complications. The fourth platform, “Cloud Management”, has set up a website and a mobile application both named “Embrace Health”. This facilitates the user in monitoring his/her health status and the work of the CM Healthcare Advisor in managing the user's health data, and in making adjustments when required.

Through the concerted functions of the four platforms abovementioned, the Centre optimises the application of preventive elements in CM theories and proactively help users avoid developing diseases before they occur.

Career and Life Adventure Planning Programme for Youth (CLAP)

Prof Victor Wong Cheong-wing from HKBU's Department of Social Work has received a funding of HK\$62.21 million from the Hong Kong Jockey Club Charities Trust to carry out a five-year community-based Career and Life Adventure Planning (CLAP) programme. CLAP is the first cross-sectoral platform wherein a school-based team and a community-based team are assigned to help students and non-engaged youth (e.g., school dropouts and hidden youths) aged 15–21, respectively. As the leader of the community-based team, Prof Wong is also responsible for conducting evidence-based research, building the service model, developing a best practice manual and managing the award scheme. His work has helped recognise the accomplishments of young people in overcoming career



difficulties and life challenges. With the help of five district service teams and 1,800 social workers, Prof Wong has helped thousands of non-engaged youth pursue their personal interests.

Prof Wong and his team from HKBU's Department of Social Work have so far followed up 4,800 cases. They aim to handle 9,400 cases in five years.

CV360

Research by Prof Wong has shown that the internet and its associated technologies have changed the career landscape in the present society. Traditional career pathways may no longer suit young people. Taking up a gainful employment whilst using the remaining time to accomplish dreams and interests may sound like a better option. Nonetheless, career support and assistance are still important and can help young people overcome their challenges.

Prof Wong believes that a new form of assessment should be developed. He and his team have developed a new form of curriculum vitae called CV360. It was built on one of

CLAP's core concepts — “Expanded Notion of Work” (ENOW). ENOW acknowledges the values of both paid and unpaid work experiences, and their contributions to personal strength and competence, namely “Values, Attitudes, Skills and Knowledge” (VASK). By highlighting these values, CV360 helps young people align their talents and career objectives with those of employers. CV360 also encourages young people to have diverse development in addition to academic attainment. The website of CV360 is <https://cv360.org>. For details, please see [Annex 2](#).



Sustaining Local Craftsmanship in New Genre: Porcelain Photos in HK

Mr Kalen Lee Wing-ki from HKBU's Academy of Visual Arts has revitalised and repurposed the dying local craftsmanship of porcelain photos through art practice and innovation. Through collaboration with Po Leung Kuk Museum and Tung Wah Groups of Hospitals Record and Heritage Office, Mr Lee has organised a series of master workshops, cultural walks, public exhibitions and seminars. His work not only opened up a public discursive

space for cultural conservation and local craftsmanship, but also resulted in the recognition of porcelain photos as an intangible cultural heritage by the Hong Kong government. In recognition of his contributions, Mr Lee was nominated for the Knowledge Transfer Award 2018 and received the Faculty Performance Award (Young Researcher) 2018. For details, please see [Annex 3](#).

Narrative Therapy to Help Young Drug Users and Perpetrators of Sexual Behaviour



Dr Angela Tsun On-kee from HKBU's Department of Social Work has developed a narrative therapy targeting young drug users and perpetrators of sexual behaviour.

Her research showed that through narration of one's own experiences, people become better at countering their personal problems. The findings are important as they open up new approaches to psychological counselling and treatment.

To lighten social stigmas against young drug users and perpetrators of sexual behaviour, Dr Tsun has published books containing stories of these people's own experiences. Her work is now widely recognised by social workers and has opened up a space for young people to discuss their problems. Non-governmental



organisations, such as Caritas and the Boys' and Girls' Clubs Association of Hong Kong, have now implemented narrative therapy into their programmes. For details, please see [Annex 4](#).

Knowledge Transfer Awards Trophy Design Competition

To foster hands-on innovation, student creativity and knowledge transfer in campus, the Knowledge Transfer Office has organised the Knowledge Transfer Awards Trophy Design Competition. HKBU students were invited to submit their 3D-printable designs for both the Knowledge Transfer Award and the Innovationem Award. The



competition was well received and the winner is Ms Eileen Lau Yuen-man, a third year student from the Department of Marketing.

Knowledge Transfer Awards 2018 Winners

Innovationem Award:

Project Title: Lanthanide Toolbox – Visualisation of Life Science with New Markers

First Inventor: Prof Gary Wong Ka-leung, Professor and Head, Department of Chemistry

“Lanthanide Toolbox” can detect genetic disorder and cancers by using organelle specific imaging. The toolbox plays a vital role in diagnostic and life science industries as it can drastically improve people's lives. The patents are exclusively licensed to a global chemicals supplier.



Knowledge Transfer Award:

Project Title: Unified Gymnastics For All Program for Students With and Without Intellectual Disabilities in HK

Principal Investigator: Prof Cheung Siu-yin, Professor, Department of Physical Education

The project has enhanced public awareness of individual difference and social inclusion, fostering the long-term social capital of HK. It is an excellent example of high-quality research creating outstanding impact beyond academia.



China (Dongguan) International Science and Technology Cooperation Week 2017

HKBU showcased eight exemplar projects in China (Dongguan) International Science and Technology Cooperation Week 2017, an event organised by the PRC Ministry of Science and Technology and Guangdong Provincial Government. The event received wide media coverage in Mainland China, and HKBU got the chance to present her best scientific research and technological achievements to the world.





46th International Exhibition of Inventions, Geneva

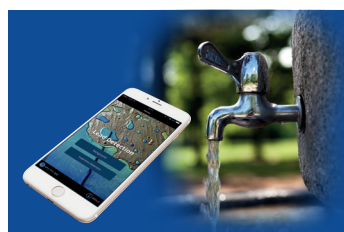
HKBU is the only institution in Hong Kong that has been awarded gold medals for all the projects it submitted in the last three consecutive years.

The International Exhibition of Inventions of Geneva is the world's annual exhibition under the patronage of the Swiss Federal Government, the State, the City of Geneva and the World Intellectual Property Organization (WIPO). The event is known to be one of the most important exhibitions of inventions, given that it attracts at least 1,000 inventions and products with more than 770 exhibitors from 40 countries every year. In the press release dated 15 April 2018, over 31,000 visitors and around 650 journalists participated in the event. This year, there were 822 exhibitors (50 more than in 2017) and over a thousand inventions on display.

In 2016, a delegation from HKBU attended the event for the first time and won the Grand Prix (the top prize), two gold medals and two special awards. In 2017, HKBU swept nine top prizes including two Grand Prizes, four gold medals (two with distinction) and three special awards. This year, HKBU submitted four entries and won top prizes, including three Gold Medals with Congratulations of Jury, one Gold Medal, and an award of excellence from Romania at the event. The winning projects were:

**Extending his hearty congratulations to the winning teams
Prof Roland Chin,
HKBU President said**

"These award-winning inventions are the pride of not just HKBU but the whole of Hong Kong. Our achievements and creativity won accolades from international experts because the research conducted at HKBU has high social impact and offers amazing solutions to real-world problems."



"Lead Detecting Device for Water"

by

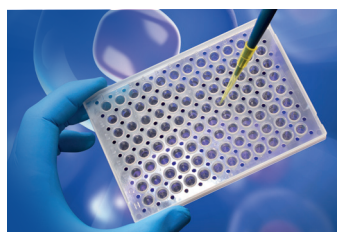
Dr Ren Kangning, Assistant Professor, and Dr Edmond Ma Dik-lung, Associate Professor from the Department of Chemistry was awarded a Gold Medal



"Lip-password: Double Security System for Identity Authentication"

by

Prof Cheung Yiu-ming from the Department of Computer Science was awarded a Gold Medal with Congratulations of Jury



"Medical Devices for Stem Cell Therapy"

by

Prof Ken Yung from the Department of Biology and Dr Jeffery Huang from the Department of Physics was awarded a Gold Medal with Congratulations of Jury



"Treatment for Irritable Bowel Syndrome (IBS) Diseases"

by

Prof Bian Zhaoxiang from the School of Chinese Medicine was awarded a Gold Medal with Congratulations of Jury

For details of the four projects, please see [Annex 5](#).

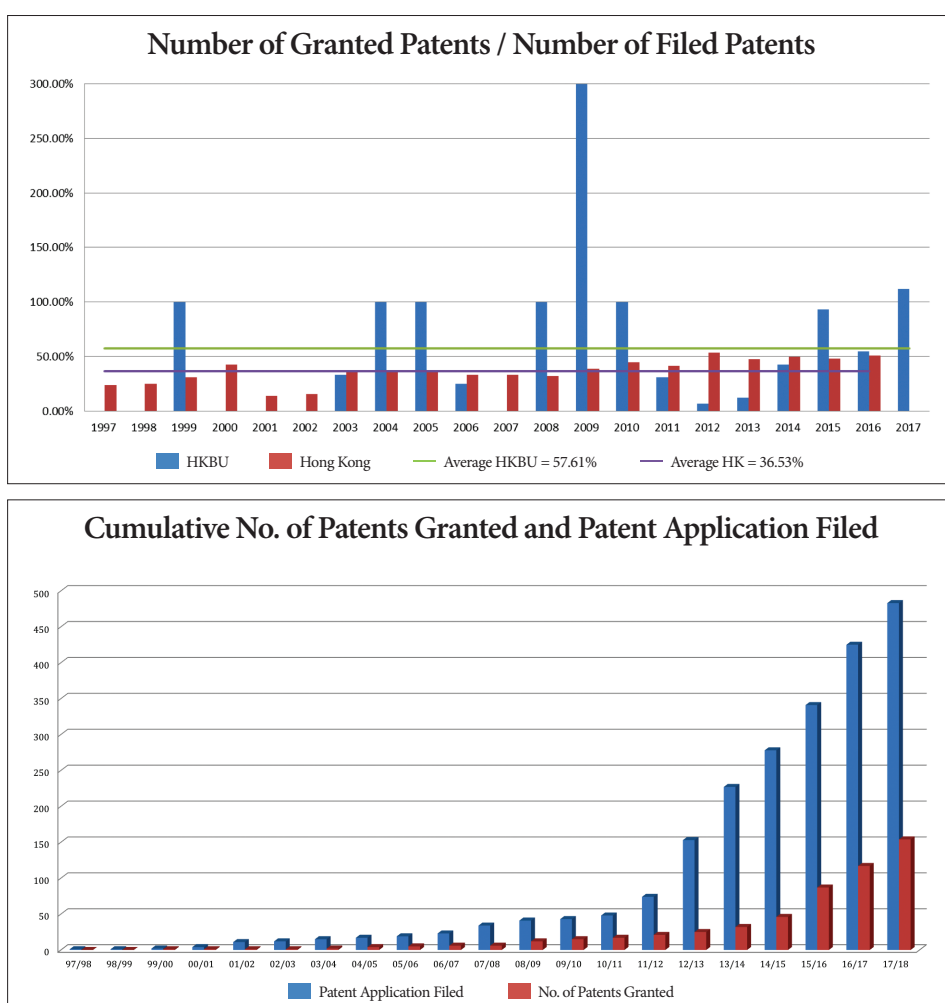
Matching Proof-of-Concept Fund (MPCF)

Matching Proof-of-Concept Fund (MPCF) was launched in 2013–14 and had been operating for more than five years which aimed at bridging the gap between the IP rights of HKBU and the commercialisation of technologies in start-up companies or the industry. MPCF focuses on the technological areas that are of key economic benefits to society and in line with the key research strengths at HKBU. The table below shows the list of MPCF projects in the reporting period (for details, please see *Annexes 6A-6D*).

Project Title	Principal Investigator/ Department or School	Project Start Date	Project Status	Target Completion Date
Development of a Microfluidic-based Luminescent Switch-on Probe for the Detection of VEGF ₁₆₅	Dr Edmond Ma Dik-lung, Department of Chemistry	1 August 2017	Delay in Progress	31 Jan 2019
Establishing the Administration Route of Spexin Cyclic Analogues for Obesity	Prof Bian Zhaoxiang, School of Chinese Medicine	1 August 2017	Ongoing	31 July 2018
Bulk Production of Miliusa Plants in Preparation for Preclinical Study of Antitumor Drugs	Dr Zhang Hongjie, School of Chinese Medicine	1 August 2017	Ongoing	31 July 2018
A Mobile-based Eye Gaze Tracking System for Identity Authentication	Prof Cheung Yiu-ming, Department of Computer Science	1 August 2017	Ongoing	31 July 2018

Intellectual Properties (IP) — A Record High of Patent Grant Rate

Successful and impactful technology transfers need an effective IP protection. HKBU continues to attain an above-average patent grant rate (i.e. the total number of granted patents per filed patents) as a Hong Kong entity, according to the World Intellectual Property Organization (WIPO). HKBU has achieved a sustainable growth in the number of patents filed along the years. It is our strategy to focus on patent portfolio of core new technologies with high commercial values.



Online Submission of Invention Disclosure for Patent Protection

In order to develop a best practice intellectual properties registration process and better managing the technology outcomes of HKBU, an online “Intellectual Property Management System” was successfully launched on 29 March 2018 where HKBU inventors can submit their invention disclosures via the online system.



Technology Transfer — An Increase in A Number of Successful Deals in IP Licenses

HKBU R&D Licensing Limited (HKBURDL), a HKBU wholly-owned company has successfully licensed a total of 41 patents and two trademarks to 12 companies wherein nine of them are HKBU Technology Start-up Support Scheme for Universities companies. Among these IP licensees, a number of them are successful. For details of two successful cases, please see *Annexes 7A-7B*.

Intellectual Properties Seminars

To cultivate the technology transfer culture and skills for staff members and students at HKBU, KTO has invited IP experts to share their professional experiences in the following seminars:



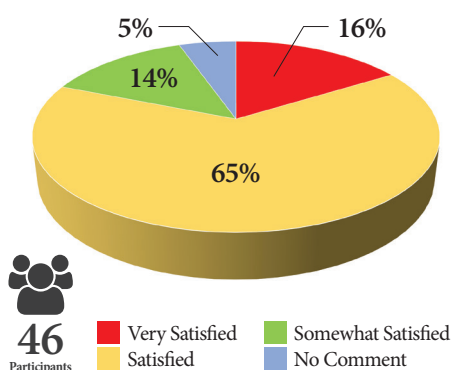
- **23 March 2018**
“Intellectual Property Seminar — Patent for Biotechnology and Information and Communications Technology (ICT)”; Mr Robert Jackson (the left) & Mr Philip Lyren (the right), US patent attorneys.



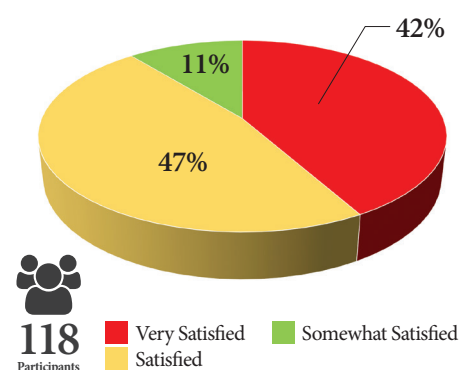
- **24 April 2018**
“Intellectual Property in Academia: Why care? Understanding Trademark and Copyright in Education”; Ms May Chan, Trademark Solicitor (third from the right), Mr Ryan Ng, Senior Solicitor from Intellectual Property Department of HKSAR (in the middle), Prof Alice Lee, Associate Dean of Faculty of Law from The University of Hong Kong (second from the right) and Ms Lyndsey Dixon, Editorial Director from a Publishing House (third from the left).

There was a total number of more than 160 audiences joined the two seminars. The events were great success as most of the audiences found that the content was very informative, and the examples of some cases law were useful and interesting.

Overall Satisfaction with the Patent Seminar on 23 March 2018



Overall Satisfaction with the Copyright Seminar on 24 April 2018



Connecting Aspired Students to Silicon Valley Culture

Berkeley Method of Entrepreneurship (BMoE) Bootcamp

12 HKBU students participated in the BMoE Bootcamp organised by the Sutardja Center for Entrepreneurship & Technology (SCET) of University of California, Berkeley (UC Berkeley) from 14–18 August 2017. During the Bootcamp, students attended sessions comprising lectures and interactive game-based exercises; received one-on-one mentoring from SCET faculty and industry experts; and learned in a collaborative environment. Through this intensive and immersive learning experience, students were able to develop a global outlook and intercultural competencies, as well as enhanced their life skills necessary for entrepreneurship and self-development. Video: <https://youtu.be/ojPIs7CzalM>



Highlight Video

Startup Semester Programme at UC Berkeley

To nurture our future young entrepreneurs, seven HKBU students, namely Ting Jiat-yin from Faculty of Science (the back left), Yip Kin-hei from Faculty of Social Sciences (the back middle), Liu Yi-hsuan from School of Business (the back right), Giovanni Santini from Faculty of Arts (the front left), Li Jieni from Faculty of Social Sciences (second from the front left), Hu Xinlin from Academy of Visual Arts (third from the front left), Tsang Hoi-ting from School of Communication (the front right), were selected and sponsored to join the Fall Startup Semester Programme at UC Berkeley in August 2018. Through this exclusive entrepreneurship programme, students have the opportunity to study a wide range of subjects across data science, product design, lean transfer and technology firm leadership. Students can learn from seasoned entrepreneurs who built start-ups in nearby Silicon Valley, as well as expand their global network.



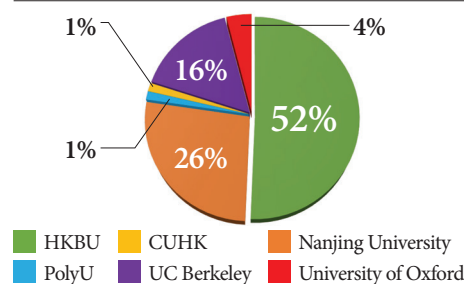
Online & Offline Entrepreneurship Training Opportunities



HKBU Entrepreneurship Bootcamp 2018

KTO BEST organised the second HKBU Entrepreneurship Bootcamp from 18–21 May on campus. 80 like-minded participants joined this holistic entrepreneurship training programme. They formed teams and turned their creative ideas into reality through a comprehensive array of activities — including interactive discussions, lectures, practical workshops and game sessions. Over 10 esteemed industry speakers from Hong Kong and overseas were invited to share their insights and experience on topics covering entrepreneurship, including mindset training, design thinking, sales pitching and storytelling. Eight outstanding HKBU students from the Bootcamp will be attending the BMoE Bootcamp on UC Berkeley campus in August 2018 where they will have the chance to further sharpen their skills and interact with investors, serial entrepreneurs and participants from the Silicon Valley and around the world. Video: <https://youtu.be/OxRPWkEwyko>

HKBU Bootcamp Participants



Highlight Video

BEST1001 - Berkeley Method of Entrepreneurship in Hong Kong

The MOOC-styled online training module is open to all students through HKBU Moodle. The training focuses on the development of entrepreneurial and innovative mindsets. Students are required to complete the module before attending any off-line entrepreneurship activities. For details, please see [Annex 8](#).

Data X Master Class by UC Berkeley

KTO BEST organised two sessions of Data X Master Classes with UC Berkeley consultants from 25–26 Jan 2018 and from 23–25 May 2018. The Class covered topics including artificial intelligence, big data and blockchain applications. A total of 60 executives and technical leaders from various industries have successfully completed the Class. This Master Class received high praises as it covered data strategy, theory and implementation, including code samples in Python and related libraries. Participants gained a better understanding of the technologies and concepts, which could help them solve specific problems in their organisations.



Distinguished Lecture Series and Experiential Learning Opportunities

To better equip students with entrepreneurial knowledge and skills, KTO BEST launched four entrepreneurial sharing sessions and lectures during 2017–18. A total of 526 staff, students and guests attended the events. Most of them found the lectures useful and insightful. Positive feedback was collected. For details, please see [Annex 9](#).

KTO BEST also organised a broad range of internal and external activities to flourish budding entrepreneurs. For details, please see [Annex 9](#).



BEST Community

“BEST Community” was successfully established on 18 May 2018. HKBU strives to establish a community for gathering entrepreneurship stakeholders, alumni and industry partners, and to foster creativity, entrepreneurship and innovation. It included our long-term global partner SCET of UC Berkeley, as well as working partners from both academia and industries in Hong Kong and the rest of the world. BEST Community is honoured to have Mr Steven Lam, Co-founder of GoGoVan, as its Industry Chair and Prof Roland Chin, President and Vice-Chancellor of HKBU, as its University Chair.



Launching Ceremony of BEST Community (from left to right)

Mr Brian Chan

Corporate Communications and PR Manager, GoGoVan

Mr Andrew Yao

Deputy Chairman, HKBU Council & Court Member

Prof Ikhlaz Sidhu

Founding Director & Chief Scientist, Sutardja Center for Entrepreneurship and Technology, University of California, Berkeley

Dr David Chung

Under Secretary for Innovation and Technology Bureau, HKSAR Government

Prof Roland Chin

President and Vice Chancellor, HKBU

Mr Stephen Liang

Assistant Executive Director of Hong Kong Trade Development Council

Ms Rosanna Choi

Treasurer, HKBU Council & Court Member

Mr Bernard Wu

Deputy Chairman, Poseidon Hill Capital Limited



Junior World Entrepreneurship Forum (JWEF) Hong Kong 2017

JWEF is a global initiative that emerged from the World Entrepreneurship Forum in France wherein young, passionate entrepreneurs and university students are brought together to share their visions and insights on various entrepreneurship-related topics. 12 HKBU students and alumni from various disciplines attended the event to discuss topics including FinTech, technology start-up, social innovation, branding and marketing, disruptive business and family legacy. Six panel

discussions were held and over 20 outstanding entrepreneurs from various industries were invited to share their thoughts and experience with the audience. Video: <https://youtu.be/CGJWiwMABVw>



Highlight Video

HKBU Technology Spin-off Companies

With the funding support from Technology Start-up Support Scheme for Universities (TSSSU), a total of 14 applications were received in October 2017 for the fifth round of application. Four start-up companies were awarded the funding, totalling HK\$4 million. Among four HKBU spin-off companies, three have been admitted to the Hong Kong Science Park Incubation Programme. These companies also got great achievements and awards on the global stage. For details, please see *Annex 10*.

KTO BEST has offered several opportunities and training for TSSSU companies to expose their products to the market, as well as to enhance their pitch presentation skills. Examples include Entrepreneur Day Exhibition and HKBU Entrepreneurship Bootcamp.



Other Outstanding Achievements of HKBU Students

HKBU is dedicated to cultivating innovation and creativity among the campus. Students are encouraged to enter external competition and gain exposure. Many of them have accomplished outstanding achievements in various competitions. Examples include:

Name of Winner	Competition / Programme	Achievement
Xu Zheng , second year student of Advertising and Branding Chen Yao , first year student of China Studies Mu Yuguang , second year student of Computer Science Wu Haoyang , first year student of Animation and Media Arts	SOW Asia Media Campaign	Champion
James See , second year student of Computer Science	Innovation and Technology Scholarship Award Scheme 2018	A Scholarship of HK\$150,000
Chris Lam , Higher Diploma student of Commercial Design (Jewellery Design and Visual Merchandising), School of Continuing Education	19 th Hong Kong Jewellery Design Competition	First Runner-up (Student Group)
Henry Wong , fourth year student of International Journalism, School of Communication	National Geographic Wheelock Youth Photo Competition 2017	First Place
Lu Jun , PhD student of School of Chinese Medicine	15 th "Challenge Cup" National College Students' Extracurricular Academic Science and Technology Works Contest	First Prize
Tan Yuehan, Jiang Dingyuan, Zheng Wanxue and Yang Yiran , fourth year students of Academy of Film Media Arts, School of Communication	5 th "24 Frames Creative Media Festival"	Best Animated Feature Award

HKBU KNOWLEDGE TRANSFER AWARDS



Innovationem Award



Knowledge Transfer
Award



香港浸會大學
HONG KONG BAPTIST UNIVERSITY



HKBU

ANNUAL REPORT ANNEXES

— 2017-18 —

KNOWLEDGE TRANSFER OFFICE



TITLE OF CASE STUDY

Unified Gymnastics For All (GFA) Programme for Students With and Without Intellectual Disabilities in HK**1. Summary of the impact**

Prof Cheung Siu-yin from HKBU's Department of Physical Education has found that gymnastics could reap benefits for students with intellectual disabilities (ID). Through the Unified Gymnastics For All (GFA) programme, they got together a group of Hong Kong students with and without ID to practice basic gymnastics movements. The programme provided not only a platform for students to learn about individual differences, but also an opportunity for coaches to lead inclusive activities. This project — a collaboration between HKBU, Special Olympics Hong Kong and local schools — is an exemplar of how to foster social inclusion through the marriage of sports and education.

2. Underpinning research

In one study, Prof Cheung showed that physical activities could have psychological, social and emotional benefits on children with ID [3.1]. For special-school teachers who might not have time and resources to teach self-control in children during regular class time, the provision of physical activities after school represents an attractive, alternative approach. Moreover, such programme could foster partnerships between various agencies and schools, as well as promote social inclusion in the community.

In another study, Prof Cheung compared the physical fitness of Hong Kong youth with and without ID [3.2]. They found that youth with ID had lower scores in six- and nine-minute runs, and that performances varied with age and gender. However, there were few differences in physical fitness between Hong Kong youth with and without ID. Both groups were relatively unfit compared to those from other developed countries [3.3-3.5].

In 2015, Prof Cheung was commissioned to conduct a consultancy study on sports for people with ID by the Home Affairs Bureau of Hong Kong in response to the 2015 Policy Address. She showed that sport participation not only have physical, psychological and social benefits, but also improves the qualities of life for people with ID. The Hong Kong government should devise sports programme for people with disabilities and make it a prioritised policy objective: for example, by providing

more barrier-free sports facilities, organising more international sports activities, and recruiting better coaches for people with ID [3.6].

3. Reference to the research

Publications

1. Choi, P. H., & Cheung, S.Y. (2016). Effects of an 8-week structured physical activity programme on psychosocial behaviors of children with intellectual disabilities. *Adapted Physical Activity Quarterly*, 33, 1–14. doi:10.1123/APAQ.2014-0213
2. Chow, B., Frey G. C., Cheung, S. Y., & Louie, L. (2005). An examination of health-related physical fitness levels in Hong Kong youth with intellectual disability. *Journal of Exercise Science and Fitness*, 3(1), 9–16.
3. Cheung, S. Y. (2005). Development of generic skills in gymnastics 從體操發展共通能力. The Gymnastics Association of Hong Kong, China. 中國香港體操總會.
4. Chow, B. C., Cheung, S. Y., Louie, L., & Ma, R. (2003). Physical fitness promotion scheme for students with mild mental retardation. Dr Stephen Hui Research Centre for Physical Recreation and Wellness. 周碧珠, 張小燕, 雷雄德, 馬靄儀 (2003). 智障兒童體適能教材, 香港浸會大學許士芬博士體康研究中心.
5. Cheung, S. Y. (2002). Early childhood gymnastics award scheme 「幼兒普及體操獎勵計劃」. Hong Kong Amateur Gymnastic Association 香港業餘體操協會.

Research Grant

6. Cheung, S. Y. (2016). Deputy Team Leader. The Home Affairs Bureau, SAR Government of Hong Kong. "A Consultancy Study on Sport for People with Disabilities in Hong Kong".

4. Details of the impact**4.1 To provide a platform for students to take part in gymnastics regardless of individual differences**

Every youngster deserves a happy and healthy life. However, students with intellectual disabilities (ID) have limitations in different kinds of sports. This hinders their mental development and deteriorates their physical health. The Unified GFA programme provided a platform for students with and without ID to practice basic gymnastics movements together. It enabled participants to understand individual differences and promoted social inclusion. Two Unified GFA Fun Days were held at HKBU Shek Mun

Campus in early 2017, where primary 4–6 students from mainstream schools participated in gymnastics routines with students from special schools and HKBU leaders [5.1].

Students' fulfilment and interest in sports were enhanced through the Unified GFA programme. Parents were encouraged to take part in volunteer services with their children and learn how to be more accepting and to reduce stigma and discrimination. The organised activities not only allowed students with ID to enjoy sports, but also allowed students with and without ID to discover more about their similarities and differences [5.2].

4.2 To provide training opportunity for coaches to lead inclusive activities

The Unified GFA programme provided a rare opportunity for coaches to teach students from both mainstream and special schools. It also gave them a chance to lead inclusive activities. The teaching method was customised to fit each students' personalities and capabilities. Students from the HKBU Sport and Recreation Leadership programme served as exercise leaders on Unified GFA Fun Days. They choreographed the gymnastic movements with music and helped students with and without ID perform gymnastic routines. Three certified gymnastics coaches oversaw the Fun Days and provided supervision to students. It is hoped that all participants would greatly foster social inclusion in the community.

4.3 To promote social inclusion in the community

The Unified GFA programme is a collaboration project between HKBU, Special Olympics Hong Kong (HKSO) and four local primary schools. The four schools are: Choi Jun School, PLK Fong Wong Kam Chuen Primary School, Sha Tin Public School, and the Education University of Hong Kong Jockey Club Primary School [5.3–5.6]. Its aim is to promote social inclusion in the community through the offering of gymnastics activities. Education can help children establish correct values and learn how to get along with others. Through efforts like these, it is hoped that an inclusive community among students could be built [5.7].

The programme provided an opportunity for coaches and carers to train students with ID and, in turn, better understand the needs of different students. It also enhanced public awareness of individual differences and social inclusion, thus fostering the

long-term social capital of Hong Kong [5.8].

The project was presented at the GFM Colloquium (25–29 April 2018, Ottawa, Canada) organised by the Fédération Internationale de Gymnastique [5.9–5.10]. The project has brought significant health benefits to young students and demonstrated how high-quality research could generate impact beyond academia. To recognise the outstanding impacts of the project, Prof Cheung was awarded the Knowledge Transfer Award 2018.

5. Sources to corroborate the impact

1. Video clip of the training, performance and award presentation of the Fun Days in January and February 2017: <https://goo.gl/LhdXLs>
2. Letter of testimony from Dr Allison Wong, National Director of Special Olympics Hong Kong
3. Letter of testimony from Ms Cheng Lok-tung, the Education University of Hong Kong Jockey Club Primary School
4. Letter of testimony from Ms Heidi Leung Yin, Choi Jun School
5. Letter of testimony from Ms Tong Lok-ki, Shatin Public School
6. Letter of testimony from Ms Shum Wing-sze, PLK Fong Wong Kam Chuen Primary School
7. Positive feedback from the Special Olympics Hong Kong posted on their Facebook page
8. Survey results of the participating students, coaches and teachers
9. Programme of the Fédération Internationale de Gymnastique GFA Colloquium (25–29 April 2018, Ottawa, Canada)
10. Email correspondence between Prof Cheung Siu-yin and Ms Margaret Sikkens Ahlquist, President of the Fédération Internationale de Gymnastique GFA Committee

CV360

A traditional chronological CV is designed to show one's previous working experiences and academic qualifications. However, young people especially those who are lack of formal qualifications may find it difficult to provide the required information. Without an impressive CV, young people may have a lower chance of being screened for a job interview.

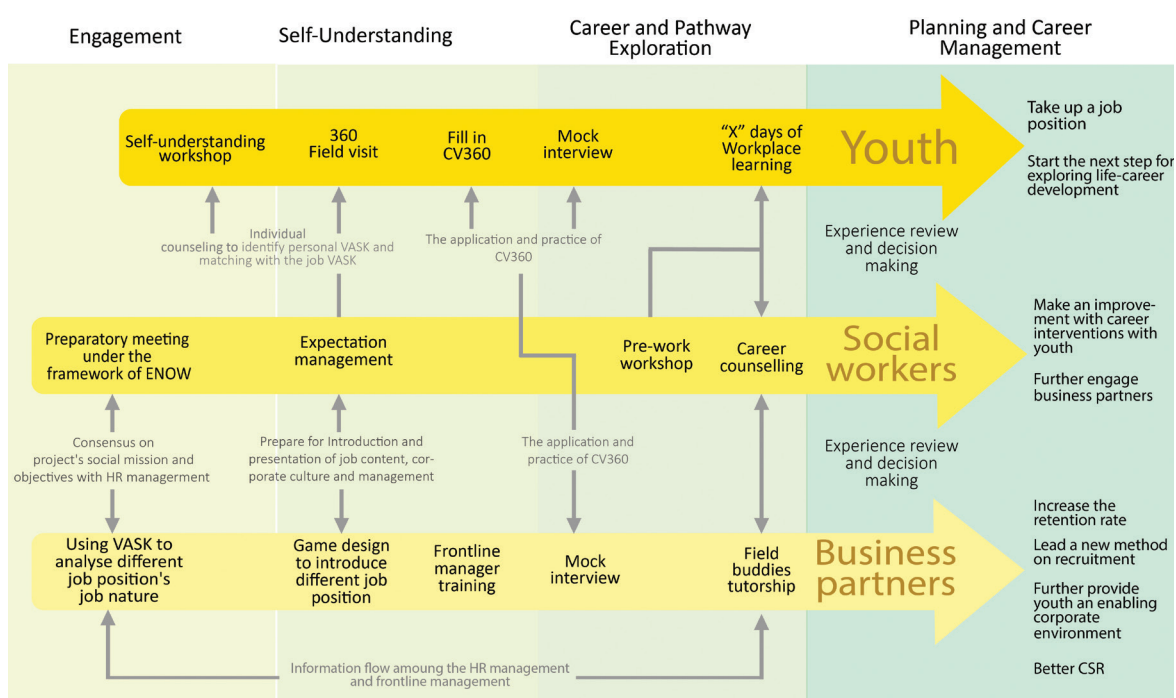
In view of this, the Community-based Team (CBT) of CLAP has designed “CLAP x Business Partner”, a One-stop Workplace Learning Programme. It aims to facilitate the recruitment and job-matching process under the cross-sectional cooperation between Social Work and business partners. The programme developed an evidence-based intervention model with practical research in mixed method to support our business partners and youth. The team designed a new form of resume called CV360. It is built on one of CLAP's core concepts: “Expanded Notion of Work” (ENOW). ENOW acknowledges the value of both “paid” and “unpaid” work experiences contributing to one's personal strength and competence development, namely “Values, Attitudes, Skills and Knowledge” (VASK).

“CLAP x Business Partner” – One-stop Workplace Learning Programme

Using CV360 for delivering workplace learning and promoting value and skill-based talent matching

VASK: values, attitudes, skills and knowledge

ENOW: Expanded Notion of Work (including both paid and unpaid work experience)



The team cooperated with McDonald's and Pricerite, two famous Hong Kong catering and retail companies to launch the “CLAP x McDonald's” and “CLAP x Pricerite” programmes. CBT worked closely with the business partners and youth throughout the pre- and post-recruitment process and provided professional advice and counselling to the Human Resource personnel and participated youth. The results were well received.

Both business partners agreed that CV360 helped HR managers discover the values and attitudes of youth, and they were impressed by the positive working attitudes shown by the youth. The HR managers corroborated that these one-stop workplace learning experience programmes provided a conceptual and practice framework for HR personnel to evaluate the fitness of the applicants with the job they applied. They are more capable of assigning tasks based on individual's strengths and values after the programme. It helped achieve more efficient operation for their companies.

On the other hand, the programme received positive feedbacks from the youngsters as well. They are inspired by the experiences gained from the programme, especially in their life-career development. The programme helped them to have a better self-understanding and build up their self-confidence. They are more self-demanding on their work now and strive to provide professional services to their customers.

Annex 3

TITLE OF CASE STUDY

Sustaining Local Craftsmanship in New Genre: Porcelain Photos in Hong Kong**1. Summary of the impact**

Mr Kalen Lee Wing-ki from HKBU's Academy of Visual Arts has revitalised and repurposed the dying local craftsmanship of porcelain photos through art practice and innovation. In collaboration with Po Leung Kuk Museum and Tung Wah Groups of Hospitals Record and Heritage Office, Mr Lee organised a series of master-printing workshops, cultural walks, public exhibitions and seminars. His work not only opened up a public discursive space for cultural conservation and local craftsmanship, but also resulted in the registration of porcelain photos as an intangible cultural heritage by the Hong Kong government.

2. Underpinning research

Mass-produced items, such as smart phones and software applications, have become a vital constituent of today's culture and economy. The trend is particularly pronounced in photography wherein photo software and photo-shooting accessories (e.g., lenses) are common and popular everywhere. However, the choice of datafication methods can vary a lot depending on the type of display and storage medium [3.1]. Mr Lee suggests that people should consider whether there are alternative ways to make data tangible and explore how these stockpiled data configure our identities.

In Hong Kong, there are currently four master artisans of porcelain photos [3.2]. Through interviews, Mr Lee discovered that the art of making porcelain photos is not passed down through books but by verbal communication, from one generation to another. However, all four master artisans admit that their art would eventually be replaced by digital imaging technologies. Mr Lee also found that the most popular genres featured on porcelain photos are related to taboos, abjection and the unspeakable. In Hong Kong, most porcelain photos are tied to death and death rituals. The negative images associated with porcelain photos are limiting factors for sustaining the local craftsmanship. A new genre is needed, or else the art of making porcelain photos will eventually come to a dead end [3.3-3.4].

3. Reference to the research

Publications

1. 'Photographic Negative of Anonymity: Performativity, Betrayal, Materialism, Datafied Research' in *Datafied Research*, edited by Christian Ulrik Andersen & Geoff Cox, published by Digital Aesthetics Research Center, Aarhus University in collaboration with transmediale and School of Creative Media, City University of Hong Kong.
2. 'Review of Lee Fook Chee's Hong Kong: Photographs from the 1950s' in *Trans Asia Photography Review*, Vol. 7:1, Hampshire College in collaboration with Michigan Publishing, USA.

Research Grants

3. Through Our Eyes (ToE) programme (supported by the Robert H.N. Ho Family Foundation) to conduct a pilot research on porcelain photo in Hong Kong (HK\$50,000).
4. Principal Investigator, 'Identification of Porcelain Photo in the Chinese Context: Material Culture, Technical History and Creative Application' General Research Fund, Research Grant Council, Hong Kong. (2017 – 2020) (Project Duration: 30 months, HK\$524,600, ongoing).

4. Details of the impact**4.1 To revitalise the craftsmanship of porcelain photos in Hong Kong**

Porcelain photos, also known as monument photographs or vitrified photography on porcelain, is a photographic technique that emerged in the late 19th Century. They got adopted by Hong Kong in the mid-20th century and were once prominent on gravestone and hall of fame for the deceased. With the advent of digital imaging technology, however, many master artisans began to retire in the 1990s. Now porcelain photos are fast becoming a dying craftsmanship.

Mr Lee, in collaboration with the Conservancy Association Centre for Heritage (CACH), Hide and Seek Tour, Po Leung Kuk Museum and Tung Wah Groups of Hospitals Record & Heritage Office, have revitalised craftsmanship of porcelain photos through art practice and innovation. A series of field research, studio practice and educational activities were conducted to repurpose the craftsmanship for further creative applications. The results were published and shared with external partners for future use.

The project have attracted 1,000 audience members: over 300 attendees to a CACHe exhibition, 250 attendees to Tung Wah museum talk, 100 attendees to Po Leung Kuk museum talk and 100 attendees to cultural walks. Future events to promote the craftsmanship of porcelain photos are in the plan.

4.2 To document and transfer the knowledge of master printing through demonstration workshops

For the first time in Hong Kong, master artisans were invited to a series of workshops to explain the art of making porcelain photos. Given the tradition of apprenticeship and taboos associated with porcelain photo, the event represents a rare opportunity for the public to learn about this dying craftsmanship. The lessons given by these master artisans have been documented on photos, videos and voice interviews for future use [5.1].

4.3 To sustain the craftsmanship of porcelain photos through public awareness

Three cultural walks were held in the Hong Kong Cemetery and Po Leung Kuk Museum in 2017 [5.2]. A public seminar was also held in Tung Wah Groups of Hospital Record and Heritage Office in September 2017 [5.3]. These activities have raised public awareness and rejuvenated the images of porcelain photos [5.4].

Audience members were invited to attend a creative exhibition and watch video documentaries on porcelain photos through social media [5.3]. Previously, the know-how of porcelain photos was passed down exclusively by professionals. The involvement of general public has reinvigorated healthy online discussions on the dying craftsmanship among specialists, educators and programme members [5.5].

The findings from this project was shared among collaborators. For example, Po Leung Kuk Museum included the knowledge of porcelain photo identification and conservation in its newsletter (for general public) and among its conservators (for internal and professional uses). Two exhibitions were held in CACHe and HKBU in 2017 [5.6]. For the CACHe event, a museum venue (the former Old Western Public Dispensary) was chosen to cater for the local community, especially senior citizens in the neighbourhood. It was worth noting that the text written for the exhibition was printed on acumen paper, a deliberate act by Mr Lee to echo the theme of porcelain photos.

The project has helped preserve, promote and disseminate the art to the general public, as well as to create a sustainable public discursive space for cultural conservation. The negative images associated with death have long hindered the development of porcelain photos in Hong Kong. The project has helped breathe new life to porcelain photos. Mr Lee is in the process of registering porcelain photos as a local craftsmanship and an intangible cultural heritage for recognition by the Intangible Cultural Heritage Office of the Hong Kong government. Due to his contributions, Mr Lee was nominated for the Knowledge Transfer Award 2018 and awarded the Faculty Performance Award (Young Researcher) 2018.

5. Sources to corroborate the impact

1. Details of demonstration workshops by the master artisans on 8 July 2017.
2. Posters of three Cultural Walks held on 12 March, 6 May and 12 August 2017.
3. Poster of the public seminar held in Tung Wah Groups of Hospital Record and Heritage Office in September 2017.
4. Media coverage by Apple Daily, 墳場聽古仔學歷史，墓碑瓷相點樣嚟. <https://hk.lifestyle.appledaily.com/lifestyle/realtime/article/20170319/56441527>
5. Media coverage by RTHK, 團體舉行墳場導賞團讓市民了解歷史. http://www.881903.com/Page/ZH-TW/newsdetail.aspx?ItemId=957701&csid=261_341
6. Details of the mobile museum titled “Porcelain Photo in Hong Kong” at CACHe from 30 September to 21 October 2017.

Annex 4

TITLE OF CASE STUDY

Narrative Therapy to Help Young Drug Users and Perpetrators of Sexual Behaviour**1. Summary of the impact**

Dr Angela Tsun On-kee and her team from HKBU's Department of Social Work have developed a narrative therapy targeting young drug users and perpetrators of sexual behaviour. The process involves the user narrating his lived experiences and his rendition of hopes and dreams through consultation services. The team published recounts of these stories to lighten social stigmas against them. The work has gained widespread recognition in the field of social work. As a result, notable non-governmental organisations, such as Boys' and Girls' Clubs Association of Hong Kong (BGCA), have adopted narrative therapy in their programmes.

2. Underpinning research

Dr Tsun's research focuses on using narrative therapy to help young drug users and perpetrators of sexual behaviour. The process involves users reconstructing his lived experiences and his rendition of hopes and dreams through consultation services. Her approach allows the user to externalise his problems, thus alleviating the negatives impacts on life through narrative practice.

Previous research has examined the effectiveness of using narrative ideas in counselling. For example, the Hong Kong government, as well as medical and counselling professionals have addressed different interventions to assist users to re-engage with the society. However, professionals are concerned about the relapse after treatment. Dr Tsun found narrative therapy to be an effective means for helping users alleviate problems and the impact of past experiences [3.1]. The process allows users to voice out their past experiences and describe how behaviour took control of them. Through conversations, users find new meanings in life and the new identity they want to become [3.2]. Their sharing of stories can help society identify the real issues underlying the problems. It also enhances social awareness and provides assistance for future prevention. Users have indicated that social/family influences were one of the reasons that led them to sexual behaviour. The roots of particular crimes, such as sexual behaviour, may not be a personal problem only. They may be caused by other problems like the dissemination of wrong messages via the media, internet and/or families.

Story-telling gives people an opportunity to revisit past experiences. The research found that people could overcome their struggles by examining the social, cultural and historical forces through conversations [3.3]. Counsellors served as witnesses of their stories and resonated the user's stories.

People usually blame users and believe that they are key to the problem. However, Dr Tsun's research indicated that categorisation of the problem is the root of many social problems [3.3]. The society usually stigmatises criminals and internalises crimes [3.4], and the social pressure adds to the severity of these problems [3.5]. People neglect the reasons why users would commit particular crimes. Using narrative practice, users can express their struggles and concerns to others, which were previously unheard of. Such sharing allows the public to better understand causes underlying certain problems. It also helps enhance public awareness of the social issues and reduce their misunderstanding towards users.

3. Reference to the research

Publications

1. **Tsun, Angela O.K.** (2017). Narrative practice with young people who have been using drugs. *Journal of Applied Youth Studies*, v.1, n.4.
2. **Tsun, Angela O.K.** (2011). Overeating as a Serious Problem and Foods as Real Good Friends: Revising the Relationship with Food and Self in Narrative Conversations. *International Journal of Narrative Therapy & Community Work*, (2), 3.
3. **Tsun, Angela O.K. et al.**, (2005). Becoming a Narrative Therapist (《探索敘事治療實踐》), (pp.175–193). 心理出版社, Taiwan.
4. **Tsun, Angela O.K.** (2014). 《生命盼望與對抗性侵犯他人問題 – 敘事共行研究》 (*New hope and confront with the problem of sexual abuse: A research of narrative practice*). Caritas Community Support Project on Development of Sexual Health and Centre for Youth Research and Practice, Hong Kong Baptist University. Hong Kong.
5. **Tsun, Angela O.K.** (2004). Responding to child abuse: Confucianism, colonisation, post-structuralism. *International Journal of Narrative Therapy & Community Work*, 2004(1), 25

4. Details of the impact

4.1 To help users reflect and lead a new life

The research work has underpinned the effectiveness of narrative practice in helping young drug users and perpetrators of sexual behaviour. Users found narrative practice to have positive effects and enjoyed the different counselling experience. They were given opportunities to revise their relationship and problems through the telling of their own stories. By confronting the problems, users were able to alleviate the negative impacts and find new meaning in life. Ultimately, users were able to identify their preferred ways of lives and reclaim their preferred identity. The process also enabled them to realise their hopes and dreams [5.1].

The research team worked together with non-governmental organisations (NGOs) to publish a series of books aiming at: (1) helping users narrate their lived experiences and discover their preferred ways of lives; (2) allaying public misunderstandings towards users; (3) enhancing public awareness of the social issues, and (4) promoting narrative therapy in the field of social work. Participants of the co-researches contributed to the research by sharing the problem stories, the strategies they had tried to resist the problems and their effects, as well as the hopes and dreams that had helped them through hard times. This made them relieved and re-gain a direction to lead a life they preferred [5.2].

Dr Tsun worked with the **Caritas Community Support Project on Development of Sexual Health** (明愛朗天計劃) and used narrative practice to help perpetrators of sexual behaviour in the past eight years. Team Supervisor, Mr Francis Kong Po-cheung, testified that with the collaboration of Tsun, users were able to face their stories and tackle the root problems [5.3]. He also said that since 2008, about 700 people have sought help from the project against sexual behaviour [5.4].

4.2 To change public misconception toward users

Apart from public sharing sessions, a microfilm and pamphlet were produced and uploaded to the Caritas website to tell the stories of people who were perpetrators of sexual behaviour. The microfilm has been showcased in public seminars. Participants of the seminars agreed that the microfilm has enhanced their understanding about the thoughts of these persons, and also the roots of these sexual behaviour issues [5.5].

4.3 To provide a new counselling approach for use by practitioners

Dr Tsun organised over 100 “train the trainers” workshops on narrative therapy to the social workers in 31 NGOs in Hong Kong. The workshops encouraged social workers to adopt narrative therapy in their practice. Participating social workers were given opportunities to review the experience of users and think from their angle. From the survey result in the “Narrative Journey with Young Persons Who Are Taking Drugs workshop”, only 22% of the participating social workers responded that they knew how to conduct narrative therapy before the workshop. After the workshop, 77% of them agreed that the learnt skills were helpful in their daily work [5.6]. The workshops not only helped the social workers better understand narrative therapy, but also encouraged over 60% of the participants to join similar workshops in the future.

Narrative practice provided a new paradigm and alternative modality to social workers. It did not only focus on the problem itself but explored the roots of the problem with users [5.7]. Social workers agreed that such perspectives allowed users to explore the problems. Meanwhile, through learning the stories of users, they could provide alternative options to the users and help remove the negative social label against them [5.8]

Ms Lilian Law Suk-kwan, JP, Executive Director of BGCA, acknowledged the contribution of Dr Tsun’s work. She commented that through Dr Tsun’s narrative therapy training, social workers got a different counselling experience which helped them tackle the problems [5.9]. BGCA said that they would adopt Dr Tsun’s strategy and apply it in various districts so that more people could benefit [5.10].

5. Sources to corroborate the impact

For Sources 1, 2, 5, 7, 8, please refer to <https://goo.gl/2p4H7n>.

1. Feedback from a participant in 《生命盼望與對抗性侵犯他人問題 – 敘事共行研究》 in 2014
2. Feedback from the participants in 《生命盼望與對抗性侵犯他人問題 – 敘事共行研究》 in 2014
3. Letter of testimony from the Team Supervisor of Caritas Community Support Project on Development of Sexual Health
4. RTHK News (23 April 2018), “Officials reject fears over sex offender programme”.

5. Feedback from a participant of the public seminar 《性侵問題你我他，共敘對抗可以嗎？》 on 25 February 2017. Pamphlet and microfilm are available online at the website of the Caritas Community Support Project on Inviting Men Against Sexual Offence http://www.dshcaritas.hk/public/book_sub_page.aspx?%2fsagSWOgxhg%3d.
6. Survey results and summary after the “*Narrative Journey with Young Persons Who Are Taking Drugs workshop – Training workshop for the social workers*” on 26 March 2014
7. Feedback from a practitioner in 《從敘事實踐看青少年的「迷網」框外》 in 2016
8. Feedback from the practitioners in 《生命盼望與對抗性侵犯他人問題 – 敘事共行研究》 in 2014
9. Letter of testimony from Ms Lilian Law Suk-kwan, JP, Executive Director of BGCA. The letter acknowledges that Dr Angela Tsun’s project provided the social workers with a different counselling experience which helped them reflect the problems from different aspects.
10. Letter of testimony from the supervisor of BGCA. The letter acknowledges the contribution of Dr Tsun’s work in empowering the social workers and SEN parents by transferring narrative knowledge. It also confirms that BGCA will continue to adopt the narrative therapy training developed by Dr Tsun.



Lead Detecting Device for Water

A test kit developed by HKBU researchers can quickly determine if your drinking water has been contaminated with lead compounds. The test kit comprises test strips preloaded with reagents and DNA sensors, as well as a test strip reader. Lead detection is carried out by adding water sample onto a test strip, and then inserting the test strip into the test strip reader. The operation procedure is so simple that even an untrained person can use. The technology is expected to have wide applications in water quality control and environmental monitoring. A short video is available for viewing at <https://youtu.be/rdxgaZfuLKw>



Lip-password: Double Security System for Identity Authentication

You could one day use the motion of your lips to log into your smartphone, thanks to an invention developed by HKBU researchers. The so-called 'lip-password' system authenticates a person's identity by matching the password spoken out and analysing behavioural characteristics of the lip movement. The dual verification system doubles up on security, is resistant to mimicry, and can be used by anyone regardless of language or speech impairment. It can be applied in conjunction with existing biometrics to enhance current security systems, especially those used in financial institutions. A short video is available for viewing at <https://youtu.be/EWE71as0p7A>



Medical Devices for Stem Cell Therapy

The conventional methods for cultivating stem cells typically require the use of animals and biochemical growth factors. These methods are costly, and the stem cells produced are often cancerous. HKBU researchers have now developed a device for growing stem cells without the need of animals or biochemical factors. The device, called inorganic sculptured extracellular nanomatrices (iSECnMs), uses nanoscopic structures on its surfaces to stimulate cell growth. The material is biocompatible and low-cost, so the device is well suited for mass production. The technology could generate stem cells for use in regenerative therapy, as well as treatment for neurodegenerative, chronic and joint diseases. A short video is available for viewing at <https://youtu.be/Fyja7zZ9ppU>

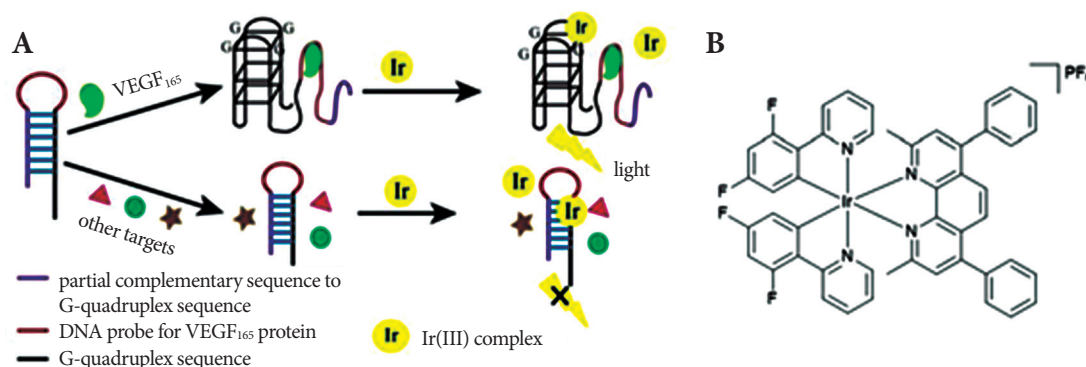


Treatment for Irritable Bowel Syndrome (IBS) Diseases

It is estimated that 10–15% of the world's population has irritable bowel syndrome (IBS), a gastrointestinal disorder that causes abdominal pain and troubles in bowel movement — and scientists may have found a cure for it. HKBU researcher Prof Bian Zhaoxiang, in collaboration with the Chinese University of Hong Kong, studied the efficacy of a modified traditional Chinese medicine formula in treating IBS. They showed that drugs made using the revised formula was effective in curing visceral pain, torso pain and diarrhoea. Patients showed symptom improvement after taking the medicine for eight consecutive weeks, with no recurrence of symptoms. The drug, which PuraPharm Corporation Limited has now exclusive license to, is currently undergoing clinical trials in Mainland China and Hong Kong. A short video is available for viewing at https://youtu.be/4_5TDLooOLY



Annex 6A

Development of a Microfluidic-based Luminescent Switch-on Probe for the Detection of VEGF₁₆₅**A microfluidic device for detecting cancer**

Vascular endothelial growth factor (VEGF) is an important regulator of angiogenesis — growth of blood vessels — and its dysfunction has been implicated in many diseases. In addition, VEGF₁₆₅ is known to stimulate the growth of solid tumours, so it is widely touted as a biomarker for cancer. Dr Edmond Ma Dik-lung and his team at HKBU's Department of Chemistry have now developed a microfluidic device for detecting VEGF₁₆₅, which has been implicated in several cancers. When blood samples enter the microfluidic device, VEGF₁₆₅ in the sample would bind to DNA duplex on the substrate to trigger the release of G-quadruplex motifs. These motifs would subsequently

be recognised by luminescent probes inside the device to generate a light signal. The researchers found that their device have several advantages over conventional technologies, including enhanced luminescence intensity, more stable signals, high background-to-noise ratio and long lifetime of luminescence. In addition, the cost of making such microfluidic device is lower than that of similar devices. The microfluidic device is so easy to use that even an untrained person could operate (and get results within 10 minutes). The technology represents a major advance in VEGF detection and is expected to find wide applications in medical prognosis and clinical studies.

Annex 6B

Establishing the Administration Route of Spexin Cyclic Analogues for Obesity**Long-lasting spexin could spell the end of obesity**

Spexin, a neuropeptide expressed both in the central and the peripheral nervous system, is an important regulator of feeding behaviour and gastrointestinal motility. It has been implicated in several metabolic diseases including type-II diabetes, non-alcoholic fatty liver disease and, most notably, obesity. It is thought that spexin administration may promote weight loss in humans, but the neuropeptide has had limited success due to its short half-life in serum (i.e., it leaves the body too quickly). Prof Bian Zhaoxiang

and co-workers at HKBU's School of Chinese medicine have now synthesized spexin cyclic analogues that have much longer half-lives in serum. An intravenous injection of these analogues in obese mice resulted in reduced food intake and weight loss with few side effects. The researchers are unsure whether intravenous injection is the best administration route but aim to find out through ongoing research work.

Annex 6C

Bulk Production of *Miliosia* Plants in Preparation for Preclinical Study of Antitumor Drugs

Anticancer drugs derived from nature

Many anticancer drugs have been developed in the past few decades, but most have narrow therapeutic indices and severe side effects. In addition, cancer cells may develop resistance to these drugs over time, so the search for newer, more natural and more effective treatment is imperative. Dr Zhang Hongjie and co-workers at HKBU's School of Chinese Medicine have now synthesized

derivatives from miliosanes, a class of cytotoxic agents found in the plant *Miliosia sinensis*. Results from animal study showed that the derivatives exhibit superior tumour inhibition activity and lower toxicity compared to paclitaxel, a first-line drug used in chemotherapy. The researchers are planning to test the efficacy of these new derivatives through preclinical studies.

Annex 6D

A Mobile-based Eye Gaze Tracking System for Identity Authentication

Eye tracking for identity authentication

An increasing number of mobile devices and platforms are using face recognition for identity authentication, but the technology is not 100% reliable or secure. HKBU researcher Prof Cheung Yiu-ming and his team have now developed an eye-tracking system that uses gaze direction to verify the identity of a person. The system, which comprises a web camera and a desktop computer,

achieves this by computing the gaze vector formed by the eye corner and iris centre. The researchers showed that the system is not only reliable and efficient, but also extremely secure as no physical contact is required during authentication. This technology is expected to find wide applications in smartphones, ATM machines and door-access control systems.

Annex 7A

New Life Medicine Technology Company Limited

New Life Medicine Technology Company Limited is a technology start-up founded by Prof Gary Wong Ka-leung from HKBU's Department of Chemistry. The Hong Kong-based company aims to develop frontier technologies for use in medical and healthcare applications. Staff members of the company are devoted to providing cost-effective diagnostic solutions for detecting human diseases, as well

as the best mode of treatment. Some of their proudest inventions include 'lanthanide toolbox' and 'prostate cancer early diagnosis kit', which are used in the early detection of genetic disorder and cancers, respectively. Similar diagnostics methods did not exist prior to these inventions, so the scientific breakthrough is expected to bring huge impact to public health and the local economy.

Annex 7B

Hong Kong Authentication Centre of *Dendrobii Officinalis Caulis* Limited

Hong Kong Authentication Centre of *Dendrobii Officinalis Caulis* Limited (HKACDOC) is a start-up founded by Dr Simon Han Quanbin from HKBU's School of Chinese Medicine. The company aims to facilitate the upgrading of traditional Chinese medicine industry with the support of innovative technologies. In Hong Kong, *Dendrobii Officinalis Caulis* and *Cordyceps* are some of the most popular and expensive traditional Chinese medicines. For a long time, the industry has had difficulty spotting fake and poor-quality *Dendrobii Officinalis Caulis* and *Cordyceps* products. This has led to a loss in consumer

confidence and a slowing of herbal market growth.

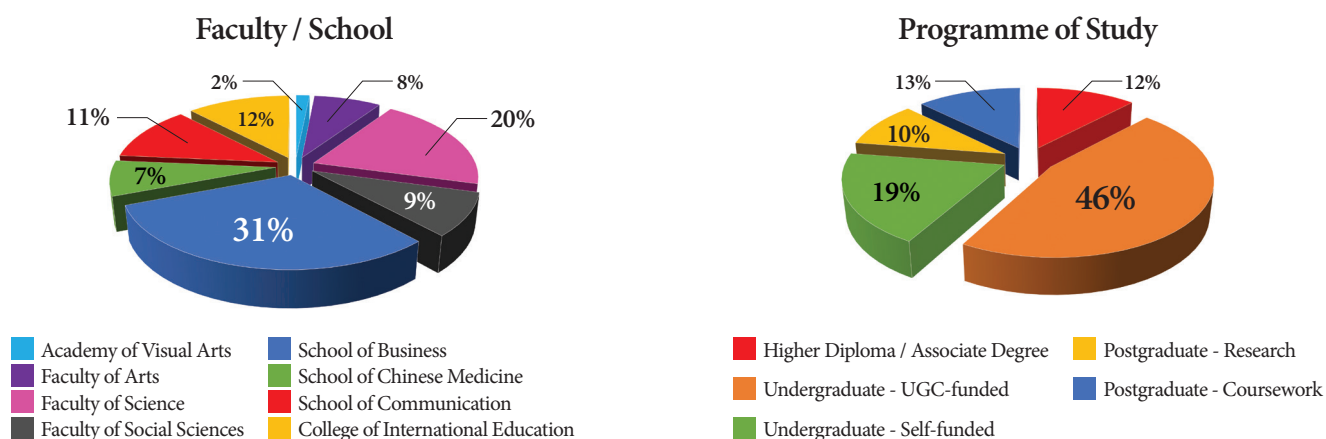
HKACDOC has now used high-performance gel permeation chromatography to identify the quality control markers in *Dendrobii Officinalis Caulis* and *Cordyceps*. The marker profile can be used as a fingerprint for authenticating future herbal products. The patented technique, now called Control Marker and its Use in Herbs Authentication, has unique advantages over conventional methods and could help boost consumer confidence in the long run.

Annex 8

Entrepreneurship Online Training Platform – BEST1001

As on 30 June 2018, the number of students who accessed BEST1001 through HKBU and SCE Moodle was 6,144 and 3,276, respectively. Among them, 177 students completed the training module through HKBU Moodle, and 35 students through SCE Moodle.

Below are the statistics of students who accessed BEST1001:



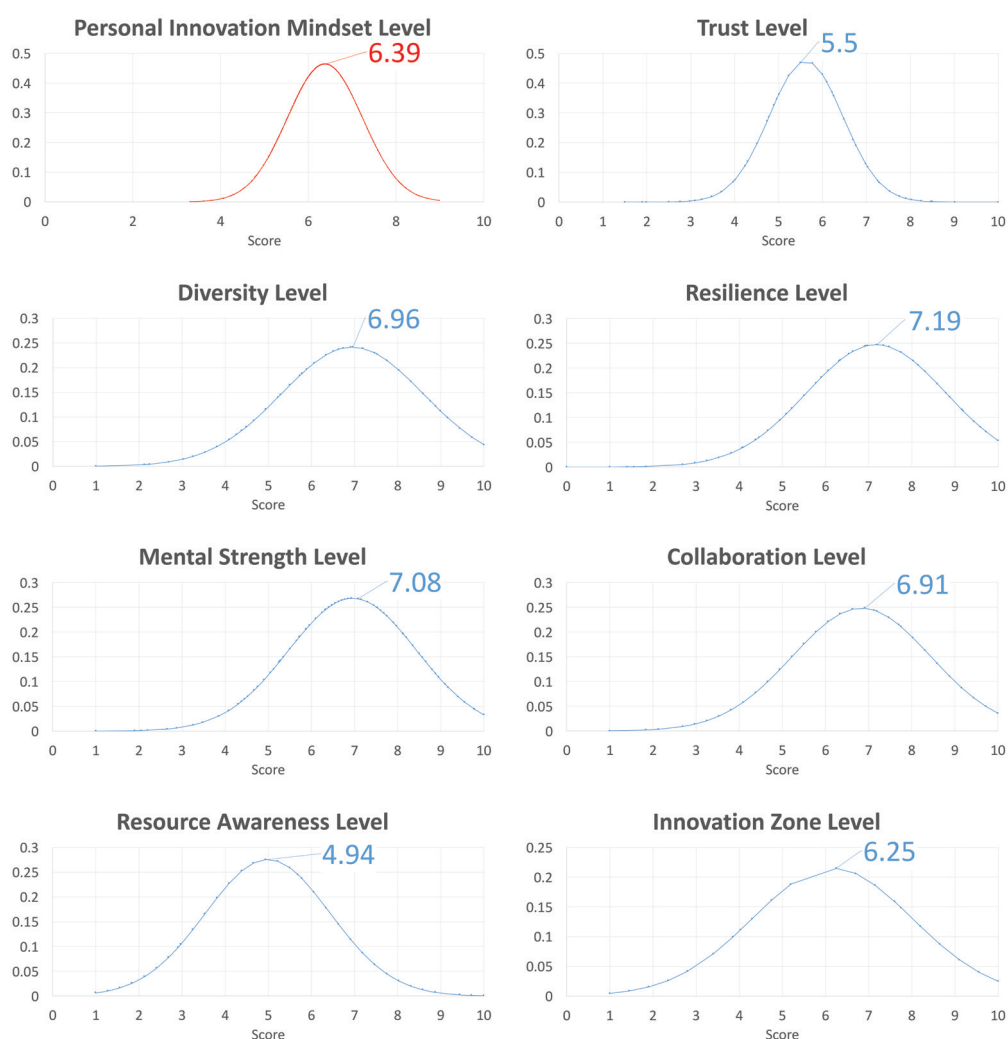
Berkeley Innovation Index (BII)

is an open research concept and a global collaboration project that offers simple yet powerful ways to measure innovation capability in a holistic sense.

In *BEST1001 Berkeley Method of Entrepreneurship in Hong Kong*, students are invited to complete the BII. By collecting the assessment results, we can understand their current capacity for innovation, to diagnose their innovation challenges, and to enable the development of an innovation mindset. We have also set booths on HKBU campus to collect BII from students.

As on 30 June 2018, a total of 759 sets of data have been collected, in which 718 sets of data were collected from students on main campus and 41 sets of data were collected from SCE. The graphs below show the overall results of HKBU students who have completed the BII:

Berkeley Innovation Index (759 Sets of Data)



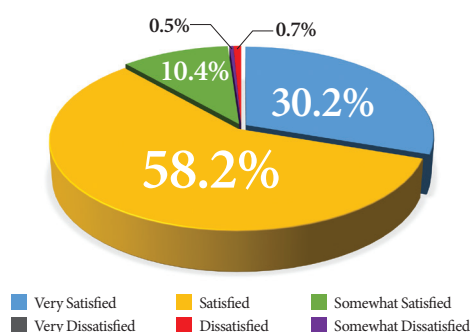
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25 September 2017

Topic: For the Greater Good

Speaker: **Mr Kenneth Lo**
Chairman of Crystal Group



26 September 2017

Topic: My Own Way to Success

Speaker: **DaiDai and SiuMui**



23 January 2018

Topic: "How to Achieve Data Analytics and Artificial Intelligence in X" - Learning from Experiences at UC Berkeley

Speaker: **Prof Ikhtlaq Sidhu**
Professor & Chief Scientist, UC Berkeley; Visiting Chair Professor at Department of Physics and Department of Computer Science, Faculty of Science, HKBU; Founding Director, Sutardja Center for Entrepreneurship & Technology, UC Berkeley



17 May 2018

Topic: Perfect Your Pitch

Speaker: **Mr Nathan Gold**, Demo Coach

Other Experiential Learning & Overseas Exposure Opportunities

KTO BEST has arranged and organised the following internal and external learning opportunities for young entrepreneurs:



13 September 2017

BEST Ambassador Programme - 10 HKBU students were selected to join the programme and help promote BEST's events and activities regularly on campus.



21 September - 1 October 2017

Cyberport University Partnership Programme (CUPP) 2017 — two HKBU students Mr Chow Tsz-shing and Miss Liu Yi-hsuan with project entitled 'World Class' won the unique chance to participate in the Entrepreneurship Boot Camp at Stanford Graduate School of Business where they visited worlds' leading technology companies and accelerators. After an intensive week at Stanford, the team presented their business idea in front of a panel of judges on the CUPP Demo Day on 14 November 2017.



20 - 22 October 2017

#startathon - four HKBU students were selected to join the #startathon organised by ideasinc of Nanyang Technological University in Singapore. The four students formed teams with university students from Singapore; attended masterclasses on topics such as "Internet of Things", "Mobile App Development", "Digital Fabrication" and "Business Modelling"; and also learnt to use the latest tools and equipment with technology practitioners to actualise their ideas.



2 - 4 February 2018

Startup Weekend @ HKBU - 19 HKBU students formed teams, brainstormed, validated business ideas with designers, developers, entrepreneurs, and experts from different domains and universities. Teams did not only have the chance to pitch their venture ideas and receive feedback from their peers but also gave presentations in front of a panel of local entrepreneurial leaders for valuable advice and comments.



19 - 23 March 2018

Entrepreneur Bazaar - five innovative HKBU students with different business products such as handmade bouquets, all-natural skincare products, accessories etc. participated in this Bazaar to have a taste of selling their products to the market and acquire the necessary knowledge to further develop their businesses.

OTHER EXPERIENTIAL LEARNING AND OVERSEAS EXPOSURE OPPORTUNITIES



17 - 18 May 2018

HKTDC Entrepreneur Day - four HKBU start-up TSSSU companies namely Gihon Biotech Limited, Hong Kong Authentication Centre of Dendrobii Officinalis Caulis Limited, New Life Medicine Technology Company Limited and Mat-A-Cell Limited participated in the event and shared their start-up ideas with audience during the 2-day exhibition.



18 - 21 May 2018

HKBU Entrepreneur Day at HKBU Entrepreneurship Bootcamp 2018 - to promote entrepreneurial culture on campus, an opening ceremony was held on the first day of the event with Dr David Chung, JP, Under Secretary for Innovation and Technology Bureau delivering a keynote speech and Mr Stephen Liang, Assistant Executive Director of HKTDC giving remarks at the ceremony.



6 - 15 June 2018

Tongji University-Bauhinia Valley Innovation Entrepreneur Workshop - six HKBU students were shortlisted to participate in this event held on Tongji University Bauhinia Valley Innovation Entrepreneur Campus (Shenzhen). The 10-day workshop welcomed university students from mainland China, Hong Kong and Macau who were interested in innovation and entrepreneurship-related topics to participate. During the workshop, participants had the chance to visit first-class innovative start-ups in mainland China; team up with outstanding students from different universities; learn about relevant policies of mainland China etc.

Achievements of HKBU Students and Spin-off Companies

Name of Team / Winner	Competition / Programme	Achievement
<u>World Class</u> Chow Tsz-shing , fourth year undergraduate student, Faculty of Social Sciences Liu Yi-hsuan , second year undergraduate student, School of Business	Cyberport University Partnership Programme (CUPP) 2017	Selected Team to Stanford Graduate School of Business
<u>V-skin</u> Pan Wenhui , PhD student, School of Chinese Medicine Xia Yixuan , PhD student, School of Chinese Medicine Ting Shuk-ching , third year undergraduate student, School of Chinese Medicine	“Challenge Cup” National Competition – Hong Kong Regional Final – Hong Kong University Student Innovation and Entrepreneurship Competition	Second Prize in the “Business Plan Projects”
<u>Fight Against Athlete’s Foot Disease Using Chinese Medicine</u> Li Wanfei , PhD student, School of Chinese Medicine Chik Wai-i , PhD student, School of Chinese Medicine Yip Man-hui , fourth year undergraduate student, School of Chinese Medicine	“Challenge Cup” National Competition – Hong Kong Regional Final – Hong Kong University Student Innovation and Entrepreneurship Competition	Third Prize in the Category of “Life Science Innovation Projects”
<u>Develop a Highly Water Soluble Nucleolin Aptamer Paclitaxel Conjugate with a Cathepsin Labile Linker for Tumour Specific Targeting in Breast Cancer</u> Lu Jun , PhD student, School of Chinese Medicine	15 th “Challenge Cup” National College Students’ Extracurricular Academic Science and Technology Works Contest	First Prize
<u>Home Taste</u> Kong Chak-ming , third year undergraduate student, School of Business Chung Ho-yin , fourth year undergraduate student, Faculty of Science Wei Wenzhou , fourth year undergraduate student, Faculty of Science Tsui Ka-ho , Alumnus	31 st World Genius Convention in Tokyo, Japan	Special Gold Medal and Special Award in Innovative Start-up Project
<u>e-Farming HK</u> Xu Zheng , second year undergraduate student, School of Communication	HKX Foundation FYP+ Supporting Scheme 2017-18	Top 50 Most Innovative Projects with HK\$20,000 Cash Award
<u>Statistical Analysis of Light Detection and Ranging (LIDAR) Using Data Mining Methods</u> Huang Jingyan , fourth year undergraduate student, Faculty of Science	HKX Foundation FYP+ Supporting Scheme 2017-18	Top 50 Most Innovative Projects with HK\$20,000 Cash Award

Name of Team / Winner	Competition / Programme	Achievement
<u>Development of a Novel Osteoclast-targeted Cathepsin K Inhibitor to Suppress Bone Resorption in Postmenopausal</u> Yang Sichang , fourth year undergraduate student, School of Chinese Medicine Teng Shuyan , third year undergraduate student, School of Chinese Medicine Chen Jieli , fourth year undergraduate student, School of Chinese Medicine Luo Jingyuan , fourth year undergraduate student, School of Chinese Medicine Yang Haocheng , fourth year undergraduate student, School of Chinese Medicine	HKX Foundation FYP+ Supporting Scheme 2017-18	Top 50 Most Innovative Projects with HK\$20,000 Cash Award
<u>生物醫療動畫製作公司創業計畫</u> Luo Jingyuan , fourth year undergraduate student, School of Chinese Medicine Liu Hesen , third year undergraduate student, School of Business Yang Haocheng , fourth year undergraduate student, School of Chinese Medicine Yang Liu , fourth year undergraduate student, Academy of Film Mo Xiaohan , fourth year undergraduate student, School of Chinese Medicine Ma Haofei , third year undergraduate student, School of Communication	HKX Foundation FYP+ Supporting Scheme 2017-18	Top 50 Most Innovative Projects with HK\$20,000 Cash Award
<u>Ceres</u> Martini Wong , third year undergraduate student, School of Business Kelvin So , fourth year undergraduate student, School of Business	Scholarship Award for Creative Green Business Plan	Scholarship Award Amounting to US\$1,500
Cathay Photonics Limited (HKBU Spin-off Company)	Elevator Pitch Competition (EPiC) 2017	Won the Champion Across the Globe and Claimed an Investment Prize Worth US\$160,000
Hong Kong Authentication Centre of Dendrobii Officinalis Caulis Limited (HKBU Spin-off Company)	The 7 th Hong Kong Federation of Innovative Technologies and Manufacturing Industries	Silver Award in Innovative Technology
Mat-A-Cell (HKBU Spin-off Company)	46 th International Exhibition of Inventions of Geneva	Gold Medal with Congratulations of Jury

UGC Required Performance Indicators

Performance Indicators	2015-16	2016-17	2017-18	2018-19 (Projection)
Number of patents filed in the year (with breakdown by country and type)	Country	Country	Country	Country*
	37 (US) ^{N1}	47 (US)	32 (US)	36 (US)
	14 (CN) ^{N1}	6 (CN)	1 (CN)	7 (CN)
	3 (PCT)	10 (PCT) ^{N1}	11 (PCT)	6 (PCT)
	6 (HK)	8 (HK)	7 (HK)	7 (HK)
	1 (EP)	4 (EP)	1 (EP)	3 (EP)
	2 (TW)	6 (TW)	6 (TW)	6 (TW)
		2 (JP)	1 (JP)	1 (JP)
		1 (KR)	2 (MO)	1 (MO)
	Type	Type	Type	Type*
	1 (A47)	8 (A47)	1 (A47)	2 (A47)
	39 (A61) ^{N1}	31 (A61)	35 (A61)	38 (A61)
	1 (A63)	1 (A63)	1 (B01)	1 (B01)
	3 (C02)	1 (B01)	1 (C05)	1 (C05)
	1 (C05)	1 (B82)	1 (C02)	1 (C02)
	3 (C07)	1 (C02)	5 (C07)	5 (C07)
	1 (C12)	10 (C07)	2 (C09)	3 (C09)
	3 (G01)	1 (C09)	4 (G06)	4 (G06)
	5 (G06)	2 (C12)	11 (H01)	12 (H01)
	6 (H01)	7 (G01)		
		4 (G06)		
		17 (H01) ^{N1}		
Number of patents granted in the year (with breakdown by country and type)	Country	Country	Country	Country*
	15 (US) ^{N1}	18 (US) ^{N1}	24 (US)	26 (US)
	22 (CN) ^{N1}	10 (CN)	6 (CN)	6 (CN)
	3 (EP) ^{N1}	1 (HK)	5 (HK)	5 (HK)
	1 (TW)	1 (TW)	1 (TW)	2 (TW)
			1 (JP)	1 (JP)
			1 (MO)	
	Type	Type	Type	Type*
	36 (A61) ^{N1}	25 (A61) ^{N1}	25 (A61)	28 (A61)
	1 (B82)	2 (B82)	1 (B82)	1 (B82)
	1 (C02)	1 (G01)	2 (C02)	3 (C02)
	3 (G06) ^{N1}	1 (G06)	1 (C07)	1 (G01)
		1 (H01)	3 (G01)	4 (G06)
			2 (G06)	2 (H01)
			2 (H01)	1 (A63)
			1 (A47)	
			1 (A63)	
Number of licenses granted (with breakdown by type)	16 (Royalty)	38 (Royalty)	43 (Royalty)	56 (Royalty)
Income (on cash basis) generated from intellectual property rights	HK\$5,609,403	HK\$8,818,504	HK\$4,708,521 ^{N2}	HK\$5,179,373
Expenditure involved in generating income from intellectual property rights	HK\$2,645,239	HK\$5,287,043	HK\$4,811,035	HK\$5,292,138
Number of economically active spin-off companies	3 ^{N3 & N4}	3 ^{N3 & N4}	3 ^{N3 & N4}	3 ^{N3 & N4}
Net income generated (or net loss arising) from spin-off companies	HK\$365,000 ^{N5}	HK\$245,600	(HK\$496,000) ^{N6}	HK\$305,300 ^{N7}
Number of collaborative researches, and income thereby generated	17 HK\$21,091,809	26 HK\$14,575,453	18 ^{N8} HK\$15,605,590 ^{N8}	20 HK\$17,166,149
Number of contract researches (other than those included in "collaborative researches" above), and income thereby generated	66 HK\$23,975,291	77 HK\$42,548,507	51 ^{N9} HK\$37,949,350 ^{N9}	56 HK\$41,744,285
Number of consultancies, and income thereby generated	224 HK\$22,264,857	194 HK\$18,891,329	146 ^{N10} HK\$14,554,464 ^{N10}	161 HK\$16,009,910

Performance Indicators	2015-16	2016-17	2017-18	2018-19 (Projection)
Number of student contact hours in short courses or e-learning programmes specially tailored to meet business or Continuing Professional Development (CPD) needs	61,126	69,611	42,253 ^{N11}	46,478
Number of equipment and facilities service agreements, and income thereby generated	233 ^{N12} HK\$7,589,008	209 ^{N12} HK\$6,672,609	205 ^{N12} HK\$6,814,595	226 HK\$7,496,054
Income received from CPD courses	HK\$3,133,580	HK\$2,698,865	HK\$3,173,540	HK\$3,490,894
Number of public lectures / symposiums / exhibitions and speeches to a community audience	565	583	554	609
Number of performances and exhibitions of creative works by staff or students	82	87	103 ^{N13}	113
Number of staff engaged as members of external advisory bodies including professional, industry, government, statutory or non-statutory bodies	124	108	108	119

N1: The data of 2015-16 and 2016-17 were amended due to late reporting of joint patent applications between HKBU and other institutions (lead parties).

N2: The decrease was due to decrease of business activity of Institute for the Advancement of Chinese Medicine Ltd.

N3: Company with some institutional ownership and using intellectual property from the institution.

N4: Breakdown of the spin-off companies.

Institute for the Advancement of Chinese Medicine Ltd. (IACM)

- Year of establishment: 1999.

- Size of employment: 3 (the General Manager, the Assistant Marketing Manager and the Product Development Officer), with other supporting staff contracted from HKBU.

- Nature of business: R&D of Chinese medicine products, testing and certification services, clinical trials, and publication of books until end of August 2017.

HKBU Science Consultancy Company Ltd.

- Year of establishment: 2011.

- Size of employment: All contracted out to HKBU for the experts and professionals required.

- Nature of business: Provision of consultancy projects on science disciplines.

HKBU R&D Licensing Ltd.

- Year of establishment: 2014.

- Size of employment: 1 (administrated by KTO).

- Nature of business: Intellectual properties commercialisation and trading.

N5: The net income was amended after being audited by the professional.

N6: The significant decrease was due to the product licenses and manufacturing of IACM have been licensed to the third party after 1 September 2017. The Company only received royalty income from intellectual properties licensing.

N7: The projection was calculated by taking an average of the net incomes in 2015-16 and 2016-17.

N8: Although there was a decrease in the number of collaborative research, the income received increased. This was because the funding amount per project was increased.

N9: There were less contract researches conducted by the staff from School of Chinese Medicine. Hence, the income generated decreased.

N10: Number of consultancies decreased due to a decrease in number of activities being undertaken by some key staff. Hence, the income generated decreased.

N11: The decrease was due to reformation of some courses and closing of some online education programmes.

N12: This number included data from Jockey Club Creative Arts Centre (JCCAC) and the Academic Community Hall.

N13: The increase was due to more exhibitions of creative works conducted by the staff or students of the Academy of Visual Arts (AVA).

* The projections in number of patents filed/granted in the year (with breakdown by country and type) are based on solely owned patents of HKBU or HKBU as a lead party in joint patents.

HKBU Specific Performance Indicators

Performance Indicators	2015-16	2016-17	2017-18
Number of placements / internships, and average length	2,400 (places) 1.63 (months)	2,268 (places) 1.7 (months)	2507 (places) ^{M1} 1.73 (months)
Books and other media for non-academic audiences	1,041	1,158	1,386 ^{M2}
Number of mentors by University and non-University staff	367	380	331 ^{M3}
Number of videos produced by HKBU available for open access	1,694 ^{M4}	1,836 ^{M4}	1,901 ^{M4}
Download count of postgraduate theses to addresses outside HKBU	6,187 ^{M5}	17,615 ^{M5}	39,081 ^{M5}
View count of BUtube outside HKBU	129,187	68,034	37,964 ^{M6}
Number of positive media impact related to knowledge transfer coverage, including print, on-line and electronic media	1,551	1,202	1,469 ^{M7}
Number of staff available for media contact	344	342	328
Number of appointments of external members to HKBU advisory boards, committees or panels	274	291	296
Number of other activities related to Knowledge Application outside HKBU	104	73	140 ^{M8}

M1: The increase was due to an increase of placement programmes conducted by several faculties.

M2: The increase was due to more articles being published by the Schools of Communication, Chinese Medicine and Faculty of Science.

M3: The decrease was due to reformation of mentorship programme by the Office of Student Affairs.

M4: This was an accumulated number.

M5: This was the number of full text downloads of postgraduate theses and dissertations provided by a third-party platform which housed the theses and dissertations.

M6: The decrease in view count was due to fewer new videos were uploaded from departments.

M7: The increase was due to an increase in the number of interviews and radio programmes conducted by staff; and an increase in the number of media sessions and press release conducted by the Communication and Public Relations Office.

M8: The increase was due to an increase of KT related activities and exhibitions conducted by the School of Chinese Medicine, Hong Kong Organic Resource Centre, Knowledge Transfer Office, Academy of Visual Arts and Department of Computer Science.

HKBU Specific Key Performance Indicators

Performance Indicators	2017-18
Number of granted patents/ Number of filed patents (Average HKBU)	57.61%
Total income from knowledge transfer via the provision of research and business services	HK\$71,282,944 ^{N1}
Total income from knowledge transfer as innovative activity	HK\$4,708,521 ^{N2}
Expenditure on public engagement activities	HK\$5,122,076 ^{N3}
Expenditure on CPD courses	HK\$3,071,511 ^{N4}
Average number of public lectures, symposia, exhibitions, speeches, books and other media for non-academic audiences produced per academic/teaching staff	2.47
Average number of performances and exhibitions of creative work per academic/teaching staff	0.13
Student attendance in public community service	745 ^{N5}
Student attendance in enrichment programmes	13,297 ^{N6}

N1: Total income (on cash basis) from knowledge transfer via the provision of research and business services refers to the total income generated from collaborative research, contract research, consultancies and CPD courses.

N2: Total income (on cash basis) from knowledge transfer as innovative activity refers to the total income generated from intellectual property as defined by UGC and from the start-ups and spin-off companies.

N3: Public engagement activities include public lectures, performance arts, exhibitions and others KT activities as defined by UGC.

N4: CPD (Continuing Professional Development) courses refer to a range of short and long training programmes, which are professional development/ upskilling/ workforce development related, for working people.

N5: Public community service refers to activities organised by faculty / department involving HKBU staff, students, or student societies, e.g. volunteer services and charity events.

N6: Enrichment programmes include knowledge transfer courses, entrepreneurship training workshops, seminars, competitions and mentoring programmes.

Awards 2018

46th International Exhibition of Inventions Geneva



“Lead Detecting Device for Water”

by
Dr Ren Kangning,
Assistant Professor,
and
Dr Edmond Ma,
Associate Professor
from the Department of
Chemistry was
awarded a
Gold Medal



“Lip-password: Double Security System for Identity Authentication”

by
Prof Cheung Yiu-ming
from the Department of
Computer Science
was awarded a
Gold Medal with
Congratulations of Jury



“Medical Devices for Stem Cell Therapy”

by
Prof Ken Yung
from the Department of
Biology and
Dr Jeffery Huang
from the Department of
Physics was awarded a
Gold Medal with
Congratulations of Jury



“Treatment for Irritable Bowel Syndrome (IBS) Diseases”

by
Prof Bian Zhaoxiang
from the School of
Chinese Medicine
was awarded a
Gold Medal with
Congratulations of Jury