

CRITTERS

*all
Critters
Great & Small*

WINTER
2018/2019

**BVM Programme
to be publicly funded**

**Safeguarding
Hong Kong
from
African
Swine Fever**



香港城市大學
City University of Hong Kong



Cornell University

**Jockey Club
College of Veterinary Medicine
and Life Sciences**

in collaboration with Cornell University



DEAN'S MESSAGE

院長的話

The college is continuing to grow with ongoing recruitment and new facilities – the new laboratory animal facility, while a central university asset was designed by our faculty in BMS, in particular Dr Eddie MA. It increases our laboratory animal research capacity tenfold and will enable our biomedical research to prosper.

Our Interdisciplinary PhD programme with Cornell has seen its first student, Dr Feng GAO graduate and go straight into an Associate Professor position in Guangzhou in China. This shows the strength of our relationship with our North American partners and it can do to our efforts here in Hong Kong. The BVM programme has seen the admission of the second class in September 2018, all 17 of them as bright and eager as the first cohort. Welcome to all.

We say goodbye and wish them good luck in their future career to the second cohort of graduates from our Biomedical Science degree – soon to join the ranks of Medical laboratory technologists that staff laboratories around Hong Kong.

Also graduating was the first cohort of the relaunched advanced diploma in veterinary nursing, run through CityU's SCOPE (School of Continuing and Professional Education). They are looking forward to a rewarding and prosperous career in veterinary clinics around the city. Two of them are articulating into further education in the UK, good luck and safe travels.

CityU Peace Avenue Veterinary Clinic is soon to take up new quarters at the new site at Sham Shui Po, Trinity Towers. The new clinic site is almost twice the current size and will provide for enhanced facilities and service provisions – looking forward to the opening. The Veterinary Diagnostic laboratory has commenced full service and more than 95% of local veterinary clinics have already signed up – better and more timely diagnosis improves the way veterinary medicine can be practiced and save lives.

Teaching laboratories on campus are being readied for completion – an Anatomy lab and pathobiology teaching lab are being finalized; new faculty and staff recruits are also joining us in the next couple of months.

Early in the new year, in fact just after Chinese New Year, we are welcoming the next accreditation team visit, this time jointly run by AVBC and RCVS – we have just submitted the required Self-evaluation report it'll be interesting how we'll fare.

It's been a long hard year, but a lot of successes, not to mention public funding assurances and a major donation from the HKJC, thanks to everybody.

Best wishes of the season!

Professor Michael P. Reichel
Dean

賽馬會動物醫學及生命科學院繼續蓬勃發展，我們不斷招聘人才及成立新設施，當中包括由馬智謙博士設計，屬於中央的實驗動物設施，這些工作令城大動物實驗室動物研究的實力大增，進一步推動我們的生物醫學研究。

高峰博士成為我們跟康奈爾大學聯營的跨學科博士學位首位畢業生後，即於中國廣州獲得助理教授教席，彰顯我們跟北美夥伴的合作成果。而獸醫學學士課程於 2018 錄取第二屆學生，這 17 位新生跟上屆的學長一樣躊躇滿志。歡迎加入！

生物醫學理學士第二屆學生已經畢業，祝願他們前程似錦，會加入香港各家醫學實驗室，成為醫學實驗技術人員。

香港城市大學專業進修學院重新推出動物護理學高等文憑課程，第一屆學生亦剛畢業，準備在香港的獸醫診所大展拳腳。其中兩位畢業生則準備遠赴英國深造，祝願他們早日學成歸來。

城大太平道寵物診所即將遷往深水埗丰匯新址，新診所面積是現有診所的兩倍，提供先進設施及專業服務，令人熱切期待。城大動物醫療檢驗中心也已正式啟用，超過 95% 本地獸醫診所已要求檢驗服務。這些更完善快捷的檢驗不單提升動物醫療水平，也能拯救更多動物生命。

位於校園的多個教學實驗室竣工在即，包括解剖學實驗室和病理生物學教學實驗室。新聘的教職員亦將在未來幾個月陸續上任。

澳新獸醫管理局理事會及皇家獸醫外科學院將於農曆新年後，共同到城大進行另一次認證考察。我們剛向團隊提交自我評估報告，這次認證結果令人拭目以待。

雖然過去一年工作繁重，但我們的成果豐碩，尤其多得香港賽馬會的重要捐款及公眾慷慨解囊，我們感激不盡。

祝大家新年進步！

院長
禮哲教授



CityU veterinarians
safeguard Hong Kong from
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CityU veterinarians safeguard Hong Kong from *African Swine Fever*

The African Swine Fever has been gradually sweeping across Mainland China since its first discovery in August 2018. According to the Ministry of Agriculture and Rural Development, as of 4 December, 21 Chinese provinces and cities have reported an outbreak. Some countries in the region have taken measures to prevent infectious pork products from flowing in, fearing that the epidemic, currently not preventable or curable by any vaccine or drug, will affect their local husbandry.

Hong Kong imports around 4,000 live pigs from China every day. Our 43 local pig farms will find themselves at stake if African Swine Fever spreads to Southern China. John Lau, who owns 4 pig farms in Hong Kong, worries that despite having reinforced cleaning and disinfection procedures at his farms early on, his 8,000 pigs would still fall victim to the epidemic. “It is difficult for the government to introduce measures that will guarantee to preventing the spread of African Swine Fever. It feels like we can do little but wait for disaster to strike. The local pig industry needs the expertise of professional veterinarians to upgrade its standard in biosecurity and farm management.”

Though African swine fever does not affect human health, it is a viral disease among pigs. Professor Dirk Pfeiffer, Chair Professor of One Health, and Associate Dean (Research) at CVMLS, CityU said, “Within 7 to 10 days of contracting African swine fever, pigs get severely sick, developing high body temperatures and skin hemorrhages. Mortality rate is high- more than half of the infected pigs are expected to die. To make matters worse, the virus survives relatively well in any environment, up to several weeks in pig faeces and for weeks or even

months in frozen or uncooked pork meat, becoming a source of infection risk.”

As a veterinary epidemiologist whose research deals with animal disease control around the globe, Professor Pfeiffer said disease epidemics in animals are often underestimated. “A relatively small number of pigs may die from the disease or are killed once they show symptoms. But what’s alarming is that many seemingly healthy pigs are likely to be sent to the slaughterhouse, when in fact they may already be infected; they have just not shown any symptoms yet. So while the claims may be that 10000 pigs have died from the disease, for example, the reality is likely that at least 20000 to 30000 pigs are actually infected, and this will continue to maintain the cycle of infection to other pigs,” he said.

Therefore, veterinarians and the pig farming industry need to strengthen their collaboration to monitor the outbreak of African swine fever. A research project “Improving Pig Health and Production in Hong Kong”, led by Professor Pfeiffer has recently been awarded HK\$15 million by AFCD’s Sustainable Agricultural Development Fund. Professor Pfeiffer’s team will visit 43 local pig farms to record the number of pigs, mortality rate, and types of infectious diseases on each farm. They will also provide free veterinary services and disease prevention measures.

“We need to closely monitor the situation of live pigs and pork products imported from the Mainland. It is our priority to protect our local domestic and wild pig population and safeguard Hong Kong at all costs,” he said.



African Swine Fever

As its name implies, African swine fever originated in Africa where it circulates amongst warthog and other wild pig populations in Sub-Saharan Africa. The recent outbreak in Europe, that has given rise to the current global spread, started in Georgia in 2007. The disease has gradually spread to Russia and other eastern European countries before finally reaching China. Since the Chinese government announced the first outbreak in Liaoning Province in August 2018, the epidemic has gradually swept the country.

非洲豬瘟

非洲豬瘟顧名思義源於非洲，由居於撒哈拉沙漠以南非洲地區的疣豬和野豬傳播。2007年，格魯吉亞出現非洲豬瘟，成為歐洲首個爆發國家，正是最近非洲豬瘟蔓延全球的源頭，此後逐漸傳經俄羅斯及其他東歐國家傳至中國。今年8月，中國官方通布非洲豬瘟在遼寧省首次爆發，疫情迅速擴散。



非洲豬瘟席捲全國 城大獸醫為香港把關

2018年8月，中國內地發現第一宗非洲豬瘟，疫情漸漸席捲全國。農業農村部宣布截至12月4日，全國共有21省區市發現疫情。由於非洲豬瘟並無疫苗或藥物防治，一旦疫情傳入會打擊當地畜牧業，故亞洲區一些國家已加強檢驗旅客攜帶入口的豬肉食品。

香港每天從中國進口約4,000隻活豬，萬一非洲豬瘟蔓延至中國南部，現有43個本地豬場便危在旦夕。香港豬農劉漢傑早已提升四個豬場的清潔消毒設施，仍然擔憂自己養的8,000隻豬無法倖免疫情，他說：「政府難以制訂預防非洲豬瘟傳播的政策，我們猶如坐以待斃。若有專業獸醫提供協助，可以提升本地養豬業的生物保安和農場管理水平。」

雖然非洲豬瘟不會傳染人類，但會在豬隻之間極速傳播。城大動物醫學及生命科學院副院長（研究）兼健康一體化講座教授Dirk Pfeiffer教授指：「豬隻一旦感染非洲豬瘟，會在七至十天內發高燒、皮膚出血，病情嚴重，而且死亡率很高，超過一半感染豬隻死亡。更棘手的是，這種病毒十分頑強，可在豬糞之中生存數個星期，在急凍或生豬肉中更能寄居數月，成為傳播疾病的源頭。」

Pfeiffer教授是獸醫流行病學家，研究全球多國的動物疾病控制，他指動物傳染病疫情常受低估，「因染病死亡的豬隻只是相對少數，也有少數因出現病徵而被撲殺，但大部分準備送到屠房的豬隻可能已受感染，只是當時未出現明顯病徵。因此，雖然宣布一萬隻豬染病死亡，但實際數字可能是兩萬至三萬，這會令豬隻傳染情況延續下去。」

因此，獸醫與業界更應加緊合作，監察非洲豬瘟的疫情。Pfeiffer教授最近領導的「改善香港豬隻健康及生產」研究項目，獲漁護署農業持續發展基金撥款一千五百萬港元，主動走訪全港四十三個豬場，統計各個農場的豬隻數目、死亡率、感染的疾病，並提供免費獸醫服及制定預防疾病措施。

「我們要密切留意從中國內地進口的活豬和豬肉食品，首要任務是確保本地豬場和野豬不受非洲豬瘟感染，全力以赴為香港把關。」他說。





Professor Dirk Pfeiffer

Professor Dirk Pfeiffer is Chair Professor of One Health at the Jockey Club College of Veterinary Medicine and Life Sciences. Prior to joining CityU, he was Professor of Veterinary Epidemiology of the Royal Veterinary College in London, and also served as Chief Epidemiologist at UK Government's Animal and Plant Health Agency (APHA). He started his research on African swine fever in 2005 as one of the principal investigators of a Wellcome Trust Programme Grant. Since then, he has been involved in two large European Union-funded African swine fever research projects which included conducting transmission experiments at the laboratory of Pirbright Institute in England. The research paper he co-authored with 8 other scholars from the UK, France, Australia and China in 2017 warned of the imminent threat of the African swine fever to China.

Dirk Pfeiffer 教授

Dirk Pfeiffer 教授是城大動物醫學及生命科學院健康一體化講座教授，之前是倫敦皇家獸醫學院的獸醫流行病教授，亦曾任英國政府動植物衛生局首席流行病學家。他自 2005 年研究非洲豬瘟疫情，擔任威康信托基金會重要調查員之一，也曾參與兩個歐盟撥款資助的非洲豬瘟研究項目，包括在英國動物衛生國家實驗室進行傳播實驗。他於 2017 年與八位來自英國、法國、澳洲和中國的學者發表論文，警告非洲豬瘟將會傳入中國。





香港城市大學
City University of Hong Kong



A Day in the Life of an Emergency and Critical Care Specialist Vet...

It's about six in the morning...Dr Stephanie Johnnides grabs a cup of coffee - sometimes two - gobbles down some fruit and if she has time, makes some eggs and toast. She then peeks into a room to ensure that her baby is fine and rushes out the door. This somewhat exemplifies the start of a typical working day for her.

Dr Johnnides is an Emergency and Critical Care (ECC) specialist at the CityU PAVC in Mongkok and she wants to start her morning as early as possible so that she can sift through the case files and attend to her patients in the emergency and critical care department. "My goal is to get here at 7 am. I never know what the day holds for me so that's why it's important that I get here early. The golden rule of emergency and critical care is always to deal with the most life-threatening case first. That's how I prioritise," she explains.

"Basically, you are looking at whatever that comes in through the emergency department so you don't have a choice," she adds. "The patient's first treatment might determine the successful outcome of the case. So when a patient comes in with a life-threatening injury or illness, the case may be picked up and stabilised by me or an emergency doctor or they may be sent to another specialist."

In addition to providing initial emergency treatment, the patient might require several days for treatment and recovery and it is during this crucial time in the intensive care unit (ICU) that an ECC specialist, like Dr Johnnides and her team, would closely monitor the patient - morning, noon and night.

She cites an example: Recently, a cat which plunged from a 23-storey building was rushed to the hospital. The patient was bleeding in the abdomen because its spleen was fractured in several locations. Thankfully, due to the successful initial stabilisation of the patient, the surgeon was able to remove the spleen, as well



Cases of cats falling off height is often described as "*high rise syndrome*" cases... commonly found in densely populated cities that have high rise buildings like Hong Kong.

the gallbladder. Four days later, another surgical procedure was done on the patient to fix a fracture. "So seeing the patient from the beginning to the end allows for successful outcomes," says Dr Johnnides.

Other common cases in Hong Kong she attends to at CityU PAVC include dogs and cats with acute abdominal pain.

As an ECC specialist, there is no real consultation with owners per se. She would only hold face-to-face consults if she has to explain to them, in detail, the risks involved or the possible complications their pets face. "I deal with very sick patients and that can be a bit of a roller coaster ride for any owner. It's a huge commitment emotionally and financially on their part."

And, because her job requires her to see patients

who are in a life or death situation, she tries to keep her professional wits about her. She admits, however, she would tear up if distressed owners break down in front of her. She feels it is okay to show sympathy and empathy sometimes. “We want to avoid compassion fatigue...which is very common in our industry. You see so much that sometimes you become a bit desensitised to it.”

Dr Johnnides’ area of expertise actually covers two separate entities - emergency and critical care. She explains: “There are doctors who just do emergency and their focus is stabilising patients in that crucial first 24 hours. They like the rush of things, the stress. Then, there are others who just focus more on the critical care aspect where they sit in the ICU and manage all of the specialist cases there. I like to do a little bit of both.”

Her commitment to patients often sees her skipping her lunch altogether or grabbing it on the run. “It’s a good diet plan,” she says laughingly. “If you are worried about your weight, this is the way to go.”

An ECC vet was what she had always aspired to become. However, getting there was no walk in the park. “The biggest obstacle is the huge amount of sacrifice that it takes to become a specialist. It takes a tremendous amount of dedication and sacrifice. You’re missing out on family and social gatherings, like weddings, because you don’t get time off when you are doing a residency or internship.”

She started out as a bone and tissue bank specialist, harvesting bone and tissue from humans. She also worked as an autopsy technician for the medical examiner in the state of Florida. Then she started

to think that although she was doing medicine - something she loved - she might regret it later if she didn’t apply to a vet school. So she applied to do veterinary medicine at Ross University in the Caribbean and she was successful. “I remember telling my family...I am leaving the country, see you later...and I left.”

Thus began her long and arduous journey to achieving her dream. After 12 years of slogging, internships and residencies, she proudly received her BSc, DVM, and is currently a Diplomat of the American College of Veterinary Emergency and Critical Care (DACVECC). This basically means she is a specialist in the field of Veterinary Emergency and Critical Care/Board Certified.

Asked what sort of personality would one need to become an ECC specialist? “You need to be an adrenaline junkie. You have to be a little bit obsessed with details and also have a bit of attention deficit so that you see things that other people don’t see.” What would she say if her daughter wanted to be an ECC specialist like her? She responds jocularly: “I would say she would have to have excellent grades in Science and be ready to give up a portion of her life. When most people are enjoying their social life, she won’t have one.”

Having said that, she has no regrets missing out on all that social life while burning the midnight oil all those years ago. “I feel a definite sense of accomplishment when I am able to provide patients with improved outcomes and it also makes me feel good when owners are happy. So knowing that I can improve patient outcomes is why I continue to do my job...I love what I do.”

Dr Johnnides’ biggest pet peeve in Hong Kong Stephanie 獸醫對香港寵物主人的忠告

“Seeing people walking their dogs in hot and humid weather. What’s worse is when they are muzzled so they can’t pant. Heat stroke is a very, very big thing here during summer especially for dogs that have smushed faces - like pugs and bulldogs (a.k.a brachycephalic dogs). Dogs don’t have any sweat glands so they rely on panting to cool themselves. So people should avoid walking their pets on really hot and humid days. Go for early or late evening walks.”

「我最不滿看見人們在炎熱潮濕的日子遛狗，有些狗還要戴口罩，連喘氣也難。香港夏天很易令人中暑，尤其像巴哥犬或鬥牛犬這類短臉狗更危險。狗沒有汗腺，只能靠喘氣來散熱，因此香港人遛狗時應避免炎熱潮濕的日子，最好在清晨或入夜才出門。」

急症及重症獸醫 的日常工作

清晨六時，Stephanie Johnnides 獸醫呷一口咖啡，有時要兩杯方休，再吃一點水果。如果時間充裕的話，她會再弄一份炒蛋多士。她踏出家門之前會確保睡房的嬰兒睡得安寧，才展開自己的一天工作。

身為旺角城大太平道寵物診所的急症及重症專家，Stephanie 獸醫總想盡早展開一天工作，仔細研究每個病例，照顧急症及重症室的毛孩兒。她解釋：「我的目標是早上七時到達診所，因為每天的工作量難以預料，愈早開始愈好。急症及重症室的個案生死攸關，這是我的首要任務。」

每個由急症部門交來的毛孩兒她都十分重視，「第一個療程足以左右毛孩兒的康復成果，當牠們因為嚴重受傷或患上重病來到，便由我和其他急症獸醫搶救和穩定病情，有時轉介到其他部門的專家。」

毛孩兒經過初步搶救，可能要花數天治療和康復，在這個關鍵時刻，Stephanie 獸醫團隊這班急症及重症專家便要不分晝夜看顧病者。

她舉了一個例子：診所最近接收了一隻從 23 樓墮下受傷的小貓，牠的脾臟多處碎裂，腹部流血，幸好獸醫初步為牠穩定病情，移除了脾臟和膽囊。四天後，小貓再接受另一項手術，修復骨折部位。Stephanie 獸醫說：「為了確保治療成功，我們由始至終都盡心盡力。」

貓兒高樓症候群

小貓從高處墮下的問題稱為「貓兒高樓症候群」，在香港這種人口密集又高樓林立的城市很常見。

她在城大太平道寵物診所也經常處理貓狗的急性腹痛。

急症及重症專家較少跟寵物主人直接接觸，但若手術涉及複雜情況及風險，Stephanie 獸醫會跟寵物主人面對面解

釋，她說：「這些動物危在旦夕，主人心情像坐過山車一樣，情緒上和經濟上的壓力很大。」

她在工作崗位上見盡動物生死，但經常保持專業態度，她承認有時看着哀傷的寵物主人崩潰，自己也會不禁落淚，但這種真情流露也無可厚非，「這個行業見盡生死，很多人變得冷漠，但我希望自己心懷慈悲。」

Stephanie 獸醫的專業涵蓋急症和重症兩個範疇，她解釋：「急症獸醫要在關鍵 24 小時內穩定動物病情，分秒必爭；重症獸醫則留守深切治療部，處理所有棘手病例。我兩個範疇都想涉獵。」

她為了醫病經常不吃午飯或匆匆醫肚，她笑得開懷：「我便當自己節食，這種生活挺適合減肥人士。」

她一早立志成為急症及重症獸醫，但這條路並不易走，「要做急症及重症專家要有極大決心，也要極多犧牲，像婚禮這種家庭和社交聚會都去不了，因為當你實習或駐院時，根本沒有下班的機會，這就是這條路的最大障礙。」

她最初是骨骼和組織庫專家，從人體收集骨骼及組織，也曾為美國佛羅里達州的法醫擔任屍檢技術員。雖然她喜歡自己從事的醫學，但她知道如果不去修讀獸醫，將來總有一天會後悔，後來她考入位於加勒比海的羅斯大學獸醫學院，「我記得自己只告訴家人：『我要出國，遲些見』，就這樣離開了。」

她踏上漫長艱鉅的夢想之旅，經過 12 年苦讀、實習和駐院，終於心滿意足地獲得理學士和獸醫博士學位，如今是美國獸醫急症及重症學院的文憑生，正式成為獸醫急症及重症科的認證專家。

問她甚麼性格的人適合做急症及重症專家，她答：「你要喜歡追求快感，沉迷細節，擅於分析，才會看到其他人忽略的事。」如果她的女兒也學她想當急症及重症專家呢？她幽默地答：「那麼她的理科科目要有優異成績，願意犧牲正常生活，眼白白看着人家享受社交聚會。」

说到底，她對因寒窗苦讀而犧牲社交的時光無怨無悔，「將毛孩兒治好給我極大的成功感，看着寵物主人開心也令我很快樂。見證動物康復就是我的工作動力，我十分享受。」





Breaking the tape:
Bachelor of Veterinary
Medicine programme to be
publicly funded





Thanks to the collaborative efforts and determination of the University's management and support from stakeholders, CityU embraced the amazing news in August 2018, that the University Grants Committee (UGC) had announced that it would recommend to the Government to accept the BVM programme as a publicly-funded programme starting from the 2019-2022 triennium. With a vision of developing veterinary medicine education in Hong Kong since 2008, the Jockey Club College of Veterinary Medicine and Life Sciences (JCC, then the School of Veterinary Medicine) of City University of Hong Kong (CityU) established an undergraduate Bachelor of Veterinary Medicine (BVM) programme in collaboration with Cornell University in 2016.

Professor Way Kuo, President of CityU, described the 10-year journey as a "marathon of veterinary medicine." "It has been my honour and privilege to lead CityU's 10 year-long veterinary marathon. We would not have accomplished what we did without the vision, team work and perseverance of the campus community and the staunch support of the Hong Kong society," he said.

Over the past decade, JCC has been developing veterinary medicine education in Hong Kong by bringing together leading veterinary scholars from around the world, launching the first BVM programme in Asia designed to meet strenuous international accreditation standards, setting up a veterinary diagnostic laboratory and veterinary clinic, as well as promoting the "One Health" concept.

Mr Carlson Tong, Chairman of the UGC, said, "The establishment of a veterinary college in Hong Kong to nurture talents in veterinary medicine is an investment that is conducive to people's health and long-term development of Hong Kong. If zoonotic diseases emerge in Hong Kong in the future, a local veterinary college can quickly provide appropriate facilities and manpower support and conduct related research work."

This ten-year marathon journey has not been an easy one and CityU is immensely grateful to all the support it has received from stakeholders during the challenging 10-year marathon journey. The support from the Hong Kong Jockey Club Charities Trust, in particular, was such a shot in the arm that CityU decided to rename Hong Kong's first and only veterinary college, the Jockey Club College of Veterinary Medicine and Life Sciences. Officiating guests at the naming ceremony held on 20 August, 2018 included The Honourable Mrs Carrie Lam Cheng Yuet-ngor, The Chief Executive of the Hong Kong Special Administrative Region; Dr Simon S O Ip, Chairman of The Hong Kong Jockey Club; Mr Winfried Engelbrecht-Bresges, GBS, JP, Chief Executive Officer of The Hong Kong Jockey Club; Mr Kevin Yeung Yun-hung, Secretary for Education; Mr Carlson Tong Ka-shing, Chairman of UGC; and Mr Lester Garson Huang, Chairman of the CityU Council.

Dr Ip said, "The Club, having its own extensive veterinary operations, sees the benefits the College will bring to the community as a whole, combining as it does veterinary medicine and biomedical sciences under the banner of One Health. As such it embodies the important insight that the health of human beings is intimately connected with the health of animals and with the environment, in which they co-exist."

The Jockey Club College of Veterinary Medicine and Life Sciences comprises the Department of Biomedical Sciences and the Department of Infectious Diseases and Public Health. Guided by One Health core principles, the College is helping CityU to pioneer excellence in veterinary education and research in Hong Kong, Asia and the world, spotlighting public health, food safety, animal welfare and aquatic animal health for the well-being of society.



Jockey Club College of Veterinary Medicine and Life Sciences

賽馬會動物醫學及生命科學院

in collaboration with Cornell University



獸醫學學士課程衝線在即 有望成政府資助本科生課程

賽馬會動物醫學及生命科學院（前稱動物醫學院）早於2008年構思發展香港的動物醫學教育，並於2016年與康奈爾大學合辦六年制獸醫學學士課程。歷經十年，教資會於2018年8月宣布將建議從2019到2022年的三年期開始，把城大六年制獸醫學學士課程納入政府資助的本科課程。

城大校長郭位教授形容這十年猶如「動物醫學馬拉松」，教資會的決定象徵城大獸醫學學士課程衝線在即，他說：「我很榮幸在過去十年領導城大，參與這個動物醫學馬拉松。倘若沒有大學社群的遠見、團隊合作和堅持不懈，以及香港社會的鼎力支持，便不可能獲得今天的成果。」

這十年來，賽馬會動物醫學及生命科學院網羅國際頂尖動物醫學權威、推出亞洲首個以達到嚴格國際認證標準為目標的獸醫學學士課程、成立動物醫療檢驗中心及動物診所，並積極推廣「健康一體化」的概念，令香港的動物醫學教育茁壯成長。

教資會主席唐家成說：「在香港建立一所獸醫學院培育動物醫學方面的人才，是一項有利於香港市民健康及長遠發展的投資。若未來本港出現人畜共患病時，本地的獸醫學院可迅速提供適當設施、人力支援和進行相關研究工作。」

雖然十年馬拉松的路途並不易走，但慶幸沿途不斷獲得各界支持，尤其香港賽馬會慈善信託基金的支持如強心針，故城大將這間香港首家及唯一的動物醫學院命名為「賽馬會動物醫學及生命科學院」，並於2018年8月20日舉行命名典禮，主禮嘉賓包括行政長官林鄭月娥女士、香港賽馬會主席葉錫安博士、行政總裁應家柏先生、教育局局長楊潤雄先生、教資會主席唐家成先生，以及城大校董會主席黃嘉純先生。

葉博士表示：「馬會因為有經營獸醫業務的經驗，所以體會到學院在健康一體化的概念下，將動物醫學及生物醫學互相結合，能為整個社會帶來好處。健康一體化體現了一個重要的概念，就是人類健康、動物健康、以至他們所共存的環境，是有着密切的關連。」

賽馬會動物醫學及生命科學院下轄兩個學系：生物醫學系和傳染病及公共衛生學系。學院矢志推動健康一體化，自成立以來，一直發揮自身優勢以實現城大願景，成為本地、亞洲以至全球的動物醫學及生命科學教研領域的領先中心，在公共衛生及動物健康、食物安全、動物福利及水產養殖等方面貢獻社會。

Experience of a lifetime at Cornell University for first batch of BVM undergrads...

首屆獸醫學學士課程本科生
分享康奈爾大學交流經驗



As a vet, not all the patients you treat are going to be cute and cuddly or warm and fuzzy. There will be times when you have to get down and dirty with the animals. Just ask the first batch of BVM undergrads who had spent five weeks at Cornell University as part of their required 12 weeks of extramural studies (EMS).

While on the Cornell farms, the students learnt how to restrain and shear sheep, harness horses and lead them to their stables. They also had to water and feed livestock. They milked cows using conventional milking equipment and at an equestrian centre - which is also a breeding facility - students observed how semen was collected from horses by artificial means. At other times, they were elbow-deep in muck - cleaning barns and mucking out stables.

Prior to their hands-on experience with the animals, the students were lectured on animal husbandry and safety as well as biosecurity. They also were given leadership training, which resembled local Outward Bound activities, such as zip lining, walking on high-wires and dangling in mid-air...all attached to safety harnesses, of course!!

Many of the students say their Cornell trip in the summer of 2018 was a lifetime experience, not easily forgotten.

作為獸醫，我們照顧的病者不一定可愛可親或溫暖熱情的，有時還要為動物弄得一身骯髒。第一屆獸醫學士課程本科生剛在康奈爾大學渡過5個星期，完成了必修12個星期校外課程的其中一部分，對此深有體會。

他們在康奈爾大學農場學會為綿羊剪毛、將馬趕回馬廄、餵飼牧場動物。他們以馬術中心的傳統設施擠牛奶。這個馬術中心亦是繁殖中心，學生見證職員以人工方式收集馬匹精液。學生為了清理穀倉和打掃馬廄，有時手肘還要深入糞堆中。

學生要先上課，學習畜牧業、安全和生物安全等知識，才能親身接觸動物，還要接受當地外展活動的領導才能訓練，包括鋼索飛行、高空走鋼索和空中懸掛等——當然，會做足安全措施！

很多學生說，2018年夏天的康奈爾大學之旅令他們畢生難忘。



Joey Lam

"I'm very grateful for the experiences we had in Cornell. During the first week, we were at a sheep barn to observe a dystocia case. The vet helped deliver the lambs by pulling them out and we helped by rubbing them dry to prevent hypothermia and stimulate breathing. The teaching assistants (TAs) there taught us to recognise signs of labour and birth difficulties and how long we should wait before calling in a vet for intervention.

We also learnt a lot about routine husbandry skills like feeding, vaccinating, drawing blood, milking, hoof trimming as well as taking faecal samples for counting parasites.

During the dairy cattle rotation week, there was a pregnant cow that required intervention. The vet explained how to identify the calf in the mother's womb. The vet even allowed us to help pull out the calf. It was so overwhelming to finally see the calf being born safe and sound. We are super grateful for the patience and trust of the vets and the TAs at Cornell for giving us such a memorable hands-on experience."

Rachel Yeung

"We were very fortunate to have the opportunity to go to Cornell. During the first week, we had a few brief lectures to introduce us to the animals we were going to be in contact with. Then, for the next four weeks, we rotated between dairy cows, horses, sheep and cattle. There were a few days where we were also introduced to animals like alpacas and llamas, which was exciting since most of us hadn't had much experience with them prior to the Cornell trip.

During our dairy cow rotation, we got our first experience at bovine palpations. It was really exciting and I remember barely containing my excitement as I gloved up. We were told to feel and identify the hoof of the baby calf inside the mother's uterus and to do that, we had to insert our arm in the rectum of the mother. To this day, it was probably one of the strangest experiences I've ever had!

At the horse stables, we learnt how to guide foals around and it was quite difficult at times because some of the foals were really young. We would go to the stables every morning and muck out. At first, we didn't really know what we were doing, but by the end of we week, we became experts at what we did! As soon as we entered a stall, we could tell how long it was going to take and how much work we would have to put in based on the type and the quantity of the poo!.

On the last day of the dairy cow week, a few of us got the chance to hand-feed a newborn calf with milk. It was such a precious experience and it was amazing to see new life occurring before our very own eyes!"





Tse Ming-yi

“The trip to Cornell was a learning curve for me... I experienced some favourite moments with animals and I chalked up a couple of ‘new breakthroughs’ for myself.

For the first time, I escorted an anxious and ‘jumpy’ foal to a paddock, milked ewes, sheared sheep, did dairy cow rectal palpation, took a selfie with goats and much, much more. To me, it was not just a trip to learn about animal husbandry with 11 of my university mates. It was also about widening my horizon and getting to know how things are done in other countries and territories with regard to animal husbandry - how different practice methods have their own unique advantages.

One of my most memorable experiences was during the dairy cow rotation. The vet-in-charge of the dairy barn had found a cow with uterine torsion (commonly known as twisted uterus) in her late pregnancy. The vet explained in great detail how he had diagnosed the complication and how the problem could be solved by using a technique known as Schaeffer’s method. This method basically involves tying up the cow and having her lie on one side and then flipping her to her other side while a person half-knelt on her underbelly to keep the uterus static. The mere fact that no surgery was actually required and that the whole problem was fixed within 10 minutes left me in awe.

Cornell offers a range of very established learning facilities with very experienced staff who knew exactly what a vet student should know. I wouldn’t trade the experiences I had gained in Cornell for the world.”

The trip to Cornell University, Ithaca, NY, was part of the extramural studies (EMS) that the students had to undergo as part of City University of Hong Kong’s Bachelor of Veterinary Medicine programme (BVM). Students must complete a prescribed minimum of 12 weeks of pre-clinical EMS during the first 2 years of the 6-year programme. It is hoped that through these EMS placements, students will gain valuable frontline experiences which will, not only sharpen their skills, but also make them confident and polished vets by the time they graduate. Often the EMS programme is the first real hands-on experience students will have with many species.

Before EMS placements can take place, there is the Pre-EMS programme whereby students are taught the rudimentary basics of animal husbandry. Pre-EMS programmes are usually conducted at local farms and animal shelters.

林雋希:

「能有康奈爾大學之旅，我十分感恩。第一個星期，我們在羊棚觀察難產病例，獸醫要把羊嬰拉出來，我們為牠們抹身保暖，協助牠們呼吸。教學助理教我們分辨分娩困難的跡象，學會什麼時候要召喚獸醫到場。

我們也學習了餵飼、接種疫苗、抽血、擠奶、修蹄及採集糞便樣本來統計寄生蟲等日常畜牧工作技巧。

在輪值照顧乳牛時，有一頭懷孕乳牛需要支援，獸醫教我們怎樣在牛媽媽的子宮裡找到牛嬰，甚至讓我們幫忙拉出牛嬰。當我們看見牛嬰呱呱墜地都感動不已。我們衷心感激康奈爾大學的獸醫及教學助理的耐心和信任，讓我們獲得如此難忘的親身經歷。」

楊冬瑤:

「康奈爾大學之旅是難能可貴的機會。我們在第一個星期上了幾堂課，認識自己將要接觸的動物。之後的四個星期，我們輪流照顧乳牛、馬匹、綿羊和黃牛，認識羊駝和駱馬時更興奮，因為我們大部分在去康奈爾大學前從未接觸過這兩種動物。

我們照顧乳牛時第一次嘗試牛觸診，最初心情興奮，但一戴上手套便很緊張。我們找到牛媽媽子宮內牛嬰的蹄，因此要把手臂伸進牛媽媽的直腸，這成為我至今最奇妙的經驗之一。

我們又在馬厩學習趕馬，不過若遇上幼馬，工作就很吃力。我們每天早上還要打掃馬厩，最初大家對怎樣做茫無頭緒，但一星期後都成了專家，只要一踏進馬厩，單憑馬糞的模樣和數量便知道這份差事要做多久！

最後一天照顧乳牛時，有些同學可以用手餵飼牛嬰，當新生命出現自己眼前，那種經驗原來如此寶貴。」

謝明懿:

康奈爾之旅對我來說是很好的學習旅程，我跟動物渡過了一些十分美好的時刻，也經歷了好幾次「突破」。

我第一次將焦急亂跳的馬趕到牧場，還第一次擠羊奶、剪羊毛、做乳牛直腸觸診，跟山羊自拍。對我來說，這不單是我跟 11 位大學同學認識畜牧業的旅程，也有助我擴闊視野，認識其他國家的畜牧業，學習各種方法的獨特優勢。

我其中一項最難忘的經歷是照顧乳牛。乳牛場的負責獸醫發現一隻乳牛在懷孕後期子宮扭曲，他詳細解釋診斷過程和 Schaeffer's 治療技術，基本上是先將乳牛網綁，讓牠側身臥地，由人半跪在牠的下腹穩定其子宮，再讓乳牛翻身到另一邊，重複該個動作。最終，乳牛無需做手術，獸醫只要十分鐘就可解決問題，令我歎為觀止。

康奈爾大學提供許多優良設施，由經驗豐富的工作人員教導獸醫學生使用，這種經驗實在無價。」

紐約伊薩卡康奈爾大學之旅是城大獸醫學學士課程學生必修校外課程的其中一部分。學生需要在六年課程的首兩年完成最少 12 個星期的臨床前校外課程，從而獲得寶貴的前線經驗。相關課程為學生提供第一次親身接觸動物的機會，不單磨煉他們的技巧，更令他們畢業時可成為更自信優秀的獸醫。

學生參加校外課程之前要先完成校外課程先修班，學習畜牧業的基本知識。這些先修班通常在本地農場或動物庇護所進行。





CityU Veterinary Diagnostic Laboratory

With all the laboratory sections fully operational, City University President, Professor Way Kuo, Dean of the Jockey Club College of Veterinary Medicine and Life Sciences (JCC), Professor Michael Reichel and Director of CityU VDL, Dr Fraser Hill cut a ribbon to officially open the business, followed by a traditional pig cutting ceremony attended by clients, dignitaries and guests.

The newest pathologist to join CityU VDL is Dr May Tse. Dr Tse was born and grew up in Hong Kong before studying veterinary science at the University of Edinburgh and recently undertook a three year anatomic pathology residency at Cornell University in the USA. After successfully completed the board examinations in 2018, Dr Tse returned to Hong Kong to join the veterinary pathology team at CityU VDL (see Dr. Tse's separate article in this issue).

Diagnostic testing in many sections is undertaken at CityU VDL and many interesting cases are being encountered. For example, molecular and immunohistochemical testing for feline coronavirus (the cause of feline infectious peritonitis) has confirmed numerous cases in local cats. This viral disease of cats can present with a variety of clinical signs and can be a challenge to diagnose. Having these latest tests on site means the diagnosis can be confirmed quickly and confidently.

Heavy rain during late summer of 2018 resulted in flooding and pooling of water; ideal conditions for *Leptospira* organisms to survive, leading to a spike of leptospirosis cases in dogs. Molecular and serological tests have confirmed a novel *Leptospira interrogans* species in local dogs and ongoing investigations are underway in conjunction with researchers from the public health department of the JCCVMLS.

Parasites have been identified in a number of animal species in the past few months since the laboratory opened including a gill fluke parasite in a fish fry (figure 1), heartworm microfilariae (*Dirofilaria immitis*) in a blood smear from a dog (figure 2), a lung worm larvae from goat faeces (figure 3), *Cystoisospora canis* in the faeces of a puppy with diarrhoea (figure 4) and *Isospora felis* from the faeces of a cat (figure 5). Direct examination of faeces from animals after treatment with solutions to float the various pathogens is a rapid way to detect a variety of organisms including parasite larvae and eggs, giardia, and protozoa.

A wide range of veterinary diagnostic testing options are now available at CityU VDL and have been enthusiastically received by clients. In addition, Bachelor of Veterinary Medicine students have participated in problem based learning sessions with laboratory staff.

城大動物醫療 檢驗中心

香港城市大學校長郭位教授、賽馬會動物醫學及生命科學院院長禮哲教授、城大動物醫療檢驗中心總監姚費沙博士共同為正式啟用的城大動物醫療檢驗中心剪綵，並與一眾客戶、政要和嘉賓參與切燒豬儀式。

謝珮瑩博士是城大動物醫療檢驗中心最新上任的病理學家。她在香港出世和長大，於愛丁堡大學獲得獸醫學學士學位，最近於美國康奈爾大學完成為期三年的獸醫解剖病理學專科實習計劃。她於2018年獲得認證資格，回到香港加入城大動物醫療檢驗中心的病理學團隊（詳見本期介紹謝博士的專稿）。

城大動物醫學檢驗中心進行多個範疇的診斷測試，處理過許多有趣個案，例如曾進行貓科動物的冠狀病毒分子和免疫組織化學檢測（貓傳染性腹膜炎的原因），在本地貓中發現多個病例。這種在貓身上發現的病毒性疾病會以多種不同的臨床病徵呈現出來，不易診斷，這些即場進行的最新測試有助獸醫快速準確地作出診斷。

2018年夏季後段有連場大雨，導致水淹和雨水積聚，最容易令鈎端螺旋體病滋長，令很多狗隻感染鈎端螺旋體病。分子和血清學測試證實，本地犬隻出現一種新型鈎端螺旋體物種，因此城大動物醫療檢驗中心正與賽馬會動物醫學及生命科學院傳染病與公共衛生學系的研究員攜手作研究。

城大動物醫學檢驗中心自幾個月前啟用以來，已在不同種類的動物身上發現寄生蟲，包括魚苗中的刺鰓寄生蟲（圖1）、狗的血塗片中的心絲蟲微絲蚴（圖2）、山羊糞便中的肺蠕蟲幼蟲（圖3）、腹瀉小狗糞便中的胞囊孢子蟲（圖4），以及貓糞便中的貓等孢球蟲（圖5）。在動物接受診治後，中心會直接檢查牠們的糞便，用溶液使各種病原體漂浮上來，這是檢查寄生蟲幼年和卵、賈第蟲及原生動物等各種生物體的快速方法。

城大動物醫療檢驗中心現正應各種獸醫要求作診斷測試，深受客戶歡迎。此外，獸醫學學士課程學生亦與中心職員進行了以問題主導的學習環節。

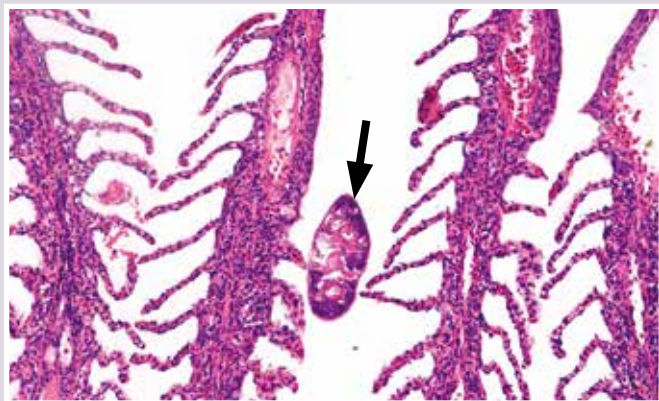


Figure 1: Gill fluke parasites in fish fry attached to gill filaments (arrow). Haematoxylin and Eosin staining at 200 times magnification
圖1：魚苗中的刺鰓寄生蟲



Figure 2: A heartworm microfilaria is visible among the red blood cells of a dog blood smear
圖2：狗的血塗片中的心絲蟲微絲蚴



Figure 3: A lungworm larvae isolated from faeces of a goat.
圖3：山羊糞便中的肺蠕蟲幼蟲



Figure 4: *Cystoisospora canis* visualised in a faecal smear from a puppy with diarrhoea
圖4：腹瀉小狗糞便中的胞囊孢子蟲

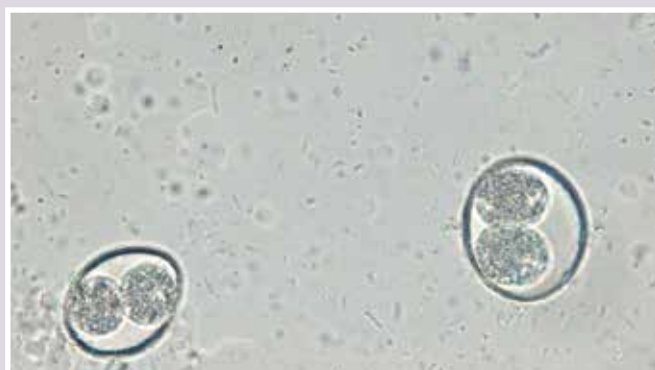


Figure 5: *Isospora felis* seen in a faecal smear from an adult cat
圖5：貓糞便中的貓等孢球蟲

Introducing Veterinary Pathologist Dr May Tse Pui-ying, *BVM&S, MRCVS, Dip ACVP*

Can you share with us your experience in the United States where you have just finished a 3-year residency programme?

I was offered a three-year scholarship provided by the Jockey Club College of Veterinary Medicine and Life Sciences (JCC) (then the School of Veterinary Medicine) in 2015 which allowed me to enrol in a residency programme in veterinary anatomic pathology at the College of Veterinary Medicine, Cornell University in the United States. During the residency, I attended various pathology related courses, attended conferences to present cases, and published my research project in the Journal of Veterinary Pathology on microphthalmia in Portuguese Water Dogs. Apart from work, I have enjoyed the natural environment of Ithaca with the beautiful falls and trails. In the summer of 2018, I passed the certification examination of the American College of Veterinary Pathologists in anatomic pathology.

Why did you choose to study veterinary anatomic pathology from the beginning?

I was born and grew up in Hong Kong. After obtaining my veterinary degree from the University of Edinburgh in 2010, I worked at the veterinary laboratory in the government's Agriculture, Fisheries and Conservation Department (AFCD). I was responsible for the disease investigation on local pig and chicken farms, aquaculture farms, and performed post mortem examinations or animal cruelty cases. I developed my interest in anatomic pathology through working with these cases.

Can you share with us your routine work at CityU's Veterinary Diagnostic Laboratory?

Veterinary anatomic pathology services include surgical biopsy and necropsy which means I have to handle both living and dead animals. For example, I have to determine whether a dog's tumour, removed by a veterinarian, is cancerous by inspecting the biopsy samples, or determine whether the collective deaths on a fish farm is caused by parasites, bacteria or viruses by conducting a post mortem examination.



Isn't it disturbing for you to deal with tumors and dead bodies every day?

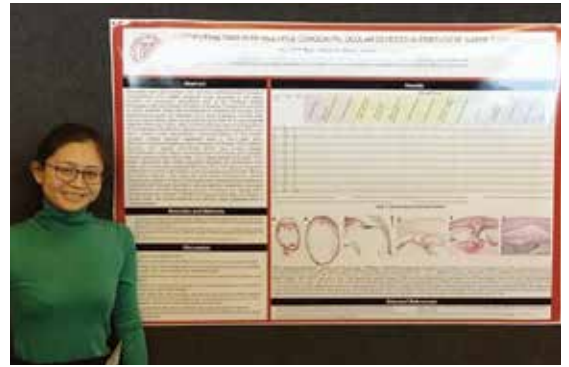
No, I find it very meaningful instead! Veterinarians need my surgical biopsy results to diagnose and cure sick pets. A farm will carry out emergency plan once it realizes that its animals are killed by infectious disease to prevent the spread of the epidemic. Safeguarding Hong Kong health is a lofty mission of all local veterinarians.

Why are these residency programmes important to Hong Kong?

These residency programmes will greatly enhance the development of local veterinary medicine as Hong Kong currently lacks local qualified veterinary pathologists. I hope JCC will send more local veterinarians for additional residencies in various subjects, such as critical care medicine, surgery, internal medicine and dermatology to improve our local companion animal, livestock farming and aquaculture industries. My own personal interest is in neoplasia (cancer) and fish pathology but I am also interested in pursuing my research aspiration. I would seriously consider a PhD with CityU and Cornell vet schools should the opportunity arise.

認識獸醫解剖病理學家 謝珮瑩獸醫

英國愛丁堡大學獸醫學學士
英國皇家獸醫學院院員
美國獸醫病理學院專科醫師



你剛從美國實習三年回來，可否分享你的實習經驗？

2015年，我獲城大賽馬會動物醫學及生命科學院頒授為期三年的獎學金，赴美國康奈爾大學動物醫學院進修獸醫解剖病理學。這段期間，我出席形形色色跟病理學相關的課堂和會議，在《獸醫病理學期刊》發表葡萄牙水狗的小眼球症的研究論文。我閒時也愛行山和觀賞瀑布，享受伊薩卡市的自然風光。2018年夏天，我通過美國獸醫病理學家學會的獸醫解剖病理學認證資格。

你最初為何選擇修讀獸醫解剖病理學？

我生於香港，長於香港。2010年，我在蘇格蘭愛丁堡大學獲得獸醫學學士後，便加入香港漁農自然護理署獸醫化驗所，負責研究本地豬場、雞場和魚場的疾病，也要為虐畜個案驗屍，因而對獸醫解剖病理學培養起興趣來。

可否跟我們分享你在城大動物醫療檢驗中心的日常工作？

獸醫解剖病理學的服務包括手術活檢和死後屍檢，因此我

要處理的動物有生也有死。例如一隻寵物狗長了腫瘤，獸醫把腫瘤割下來後，便由我化驗腫瘤組織，研究腫瘤是否癌細胞；又例如魚場的魚集體死亡，我便負責化驗牠們的屍體，確定牠們是寄生蟲、細菌或病毒感染。

你終日跟腫留和屍體打交道，不覺得厭惡嗎？

不，我覺得很有意義！獸醫要治療生病的寵物，必須知道牠的生病原因，便要靠我的化驗結果。農場一旦發現動物死於傳染病時，便會立即制訂緊急應變，防止疫情散播。我深信所有本地獸醫都矢志為香港人的健康把關。

這些實習計劃對香港有何意義？

香港一直缺乏合資格的本地獸醫病理學家，這類實習計劃對香港的獸醫發展貢獻極大，我希望城大賽馬會動物醫學及生命科學院發展其他專科實習計劃，如重症醫學、外科、內科、皮膚病學等各科培訓，有助提升香港的農場和養殖業管理。我對腫瘤科和魚類病理學的興趣較大，也樂意發展其他獸醫學專科，如有機會更想重返康奈爾大學攻讀博士學位。





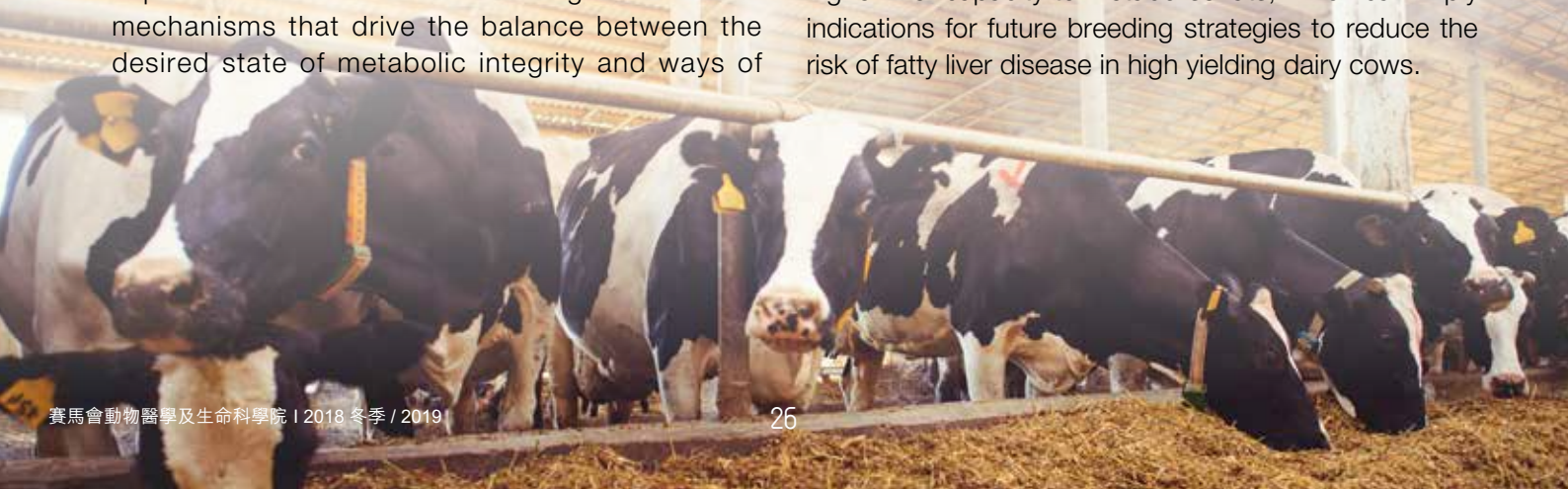
Metabolism Research for Healthy Livestock Production

Introducing the research profile of our newly appointed Assistant Professor in Animal Physiology

Dr. Ákos Kenéz joined the Jockey Club College of Veterinary Medicine and Life Sciences in June 2018, right after spending three months as a visiting faculty member at Cornell University's College of Veterinary Medicine. Dr. Kenéz will teach our BVM students the multidisciplinary course in a problem-based format, which will not only provide fundamental knowledge on the vital function of organ systems in health and disease but also prepare our students to be independent learners and to develop medical reasoning skills to find solutions in clinically relevant scenarios.

Dr. Kenéz graduated from the University of Veterinary Medicine Budapest, Hungary and completed his PhD at the University of Veterinary Medicine Hannover, Germany. His main research focus has been to improve our current understanding of molecular mechanisms that drive the balance between the desired state of metabolic integrity and ways of

pathophysiological dysregulation in high producing livestock animals. Production efficiency has a high priority in livestock farming systems and genetic selection has led to intensified growth and production rates in poultry, pig and dairy cattle. However, peak growth and production can trigger increased metabolic stress due to activation of inflammatory pathways, insulin resistance and oxidative stress, compromising animal health and welfare. Getting a better understanding on cellular signalling and metabolic fine-tuning mechanisms driving nutrient partitioning and pathophysiological dysregulation would help us developing novel nutritional, genetic and therapeutic strategies to ensure metabolic integrity even in high-producing animals. In their latest publication Dr. Kenéz and colleagues showed that certain mitochondrial DNA determinants in Holstein cows are associated with a higher liver capacity to metabolise fats, which can imply indications for future breeding strategies to reduce the risk of fatty liver disease in high yielding dairy cows.



健康牧場生產 的代謝研究

Ákos Kenéz 博士最近出任賽馬會動物醫學及生命科學院動物生理學助理教授，消息令人振奮。

Kenéz 博士在康奈爾大學動物醫學院擔任訪問教授三個月後，於 2018 年 6 月加入賽馬會動物醫學及生命科學院，將會教授我們的獸醫學學士學生以問題為本的跨學科功能障礙課程，闡述健康和疾病中的器官系統重要功能，令學生能更獨立地學習，培養醫學推理能力，在各種臨床相關的情況下解決問題。

Kenéz 博士在匈牙利布達佩斯獸醫學院畢業後，再於德國漢諾威獸醫學院完成博士課程。他的研究旨在讓社會更了解分子機制，平衡高產量畜牧業的理想代謝完整性及病理生理失調方式。畜牧業講求生產效率，遺傳選擇會導致家禽、豬隻和乳牛極速成長和生產。然而，這可能導致炎症、胰島素抗藥和氧化應激，從而增加新陳代謝的壓力，危害動物的健康和福利。

信號傳導與病理生理失調可促進營養分配和改善病理生理失調，相關研究有助我們制訂新的營養、遺傳和治療策略，確保高產量動物也有完整代謝。Kenéz 博士的團隊最近發表研究，顯示荷斯坦乳牛某些線粒體去氧核糖核酸與代謝脂肪的肝功能較高有關，這個發現可成為飼養策略的調整參考，從而減低高產量乳牛的脂肪肝風險。

Introducing Dr Michael Doube

We are glad to welcome Dr Michael Doube as Associate Professor in Anatomy at the Department of Infectious Diseases and Public Health. Michael earned his veterinary degree at Massey University, New Zealand and a PhD at Queen Mary, University of London, on early changes in the equine third metacarpal bone in the same site as later condylar fracture. During a postdoc at Imperial College London's Department of Bioengineering, in collaboration with the RVC's Structure and Motion Laboratory, Michael investigated scaling of bone microstructure and gross dimensions in relation to animal size. To accomplish this research, Michael started the BoneJ software project, which brought together existing and new programs for bone image analysis. After a stint at the Light Microscopy Facility of the Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, Michael returned to London to take up a lectureship within The Royal Veterinary College's Department of Comparative Biomedical Sciences.



Michael's research concentrates on imaging and bioimage informatics of skeletal tissues but since joining the Department, Michael has been busy adapting the Cornell Problem-Based Learning model to the CityU context and our BVM curriculum. Problem-Based Learning embeds didactic material into a case-based framework, so that students see the relevance of the material from day one, and are encouraged

to develop their independent learning skills. Our second year students will be starting the Animal Body I in January 2019, where they will learn how single fertilised egg cells develop into the full range of tissues and organs in the adult mammal, bird, and fish. Michael has also been will preparing to deliver this material using up-to-date digital technologies: all lecture notes and examinations will be online and paperless and the new pathobiology laboratory will be supported by a brand new digital classroom, in which every student microscope has a camera and tablet computer so students can share their learning and save annotated images for later study. Michael has also been busy specifying new research laboratory equipment: purchase of light microscopes and X-ray microtomography scanners that can make 3D movies of small specimens, such as bones. These instruments will be the imaging workhorses in the department, equipped with sensitive cameras to detect fluorescent molecules and special chambers to allow tissue samples to remain alive for hours to days enabling the observation of cell behaviour.



歡迎 Dr Michael Doube



我們歡迎 Michael Doube 博士出任傳染病與公共衛生學系的解剖學助理教授。Doube 博士於新西蘭梅西大學完成獸醫學學士課程，並於倫敦瑪麗皇后大學獲得博士學位，研究主題為馬匹第三掌骨的早期變化及髌突骨折。他其後在倫敦帝國學院生物工程系進行博士後研究，與皇家獸醫學院結構及運動實驗室合作，研究與動物體積相關的骨微觀結構和總尺寸縮放。Doube 博士為這項研究開發了 BoneJ 軟件，結合骨骼圖像分析的新舊程式。他其後前往德國德勒斯登，在馬克斯普朗克分子細胞生物學與遺傳學研究所的光學顯微鏡中心工作；後來重回倫敦，於皇家獸醫學院比較獸醫學系任教。

Doube 博士主要研究骨絡組織成像和生物圖像信息學，自加入賽馬會動物醫學及生命科學院後，致力將康奈爾大學以問題主導的學習模式應用於城大獸醫學學士課程。這種模式將教學材料融入案例框架，讓學生一開始已認識到如何實際應用教材，從而培訓出獨立學習的能力。我們的二年級學生會於 2019 年 1 月開始修讀「認識動物（一）」課程，學習受精卵如何發展為成年哺乳類、雀鳥和魚類的整套組織和器官。Doube 博士又忙於將教材以先進數碼技術呈現：所有講義和考試將在網上無紙化進行，新的病理學實驗室也會由全新的數碼教室支援，每位學生的顯微鏡既有相機和平板電腦，可以互相分享學習心得，又能儲存帶有註釋的圖像，方便日後溫習。Doube 博士同時正籌備全新研究實驗室的設備，包括購買光學顯微鏡、X 光微斷層掃描儀，用來製作如骨骼等小標本的三維電影。這些儀器將成為傳染病與公共衛生學系的重要工具，可配合偵測熒光分子的敏銳相機及能將組織樣本保存數小時至數天的特別庫，用作觀察細胞活動。



The Director of the Centre for Animal Welfare, Dr. Howard Wong, welcomes delegates to the UFAW 2018 Conference 城大動物福利中心總監王啟熙獸醫歡迎出席「英國動物福利聯盟 2018——跨國界動物福利」世界會議的各地代表

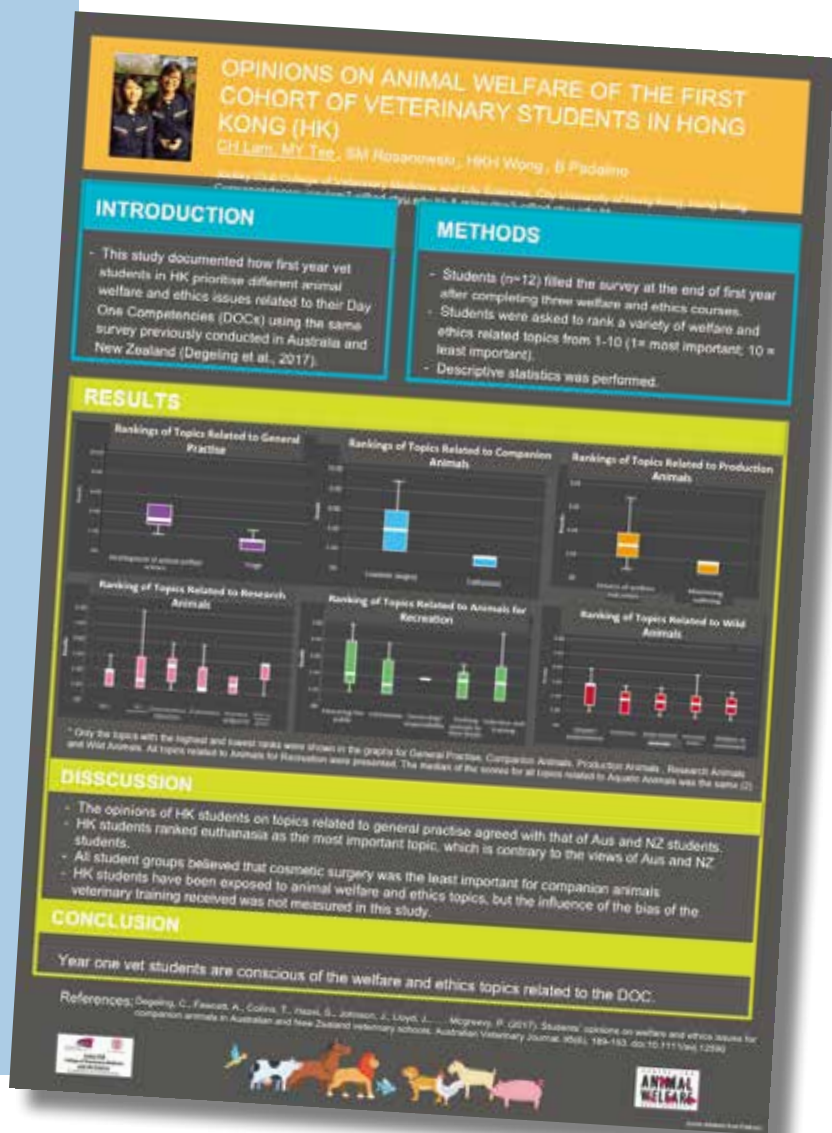
The UFAW 2018 – Animal Welfare Across Borders global conference was held at City University in late October 2018. Jointly hosted by the Universities Federation for Animal Welfare, the New Zealand Ministry of Primary Industries and the Centre for Animal Welfare of the Jockey Club College of Veterinary Medicine and Life Sciences, it brought together 200 world leading scientists, researchers and stakeholders from all over the globe who are engaged in animal welfare. Officiating at the opening ceremony were the CityU Council Chairman, Mr. Lester Huang, President of City University, Professor Way Kuo, the Permanent Secretary for Food and Health of the Hong Kong Government, Mr. Phillip Yung, the New Zealand Consul General for Hong Kong, Mr. Carl Worker, Dr. Huw Gollledge from UFAW, Dr. Leung Siu-fai, the Director of Agriculture, Fisheries and Conservation, the Assistant Commissioner of Police Support, Hong Kong Police, Mr. Crusade Yau and Dr. Howard Wong, the Director of the Centre for Animal Welfare.

The Hong Kong Police and Agriculture, Fisheries and Conservation Department provided us with a window into their latest animal welfare initiatives, the joint Animal Watch Scheme (https://www.police.gov.hk/ppp_en/11_useful_info/aws.html) and the proposed amendments to animal cruelty legislation that will be announced soon.

Over 2 full days the audience was treated to a wide range of pertinent topics from cat and dog welfare in Thailand to livestock transport in Italy, from the influence on social health of companion animal ownership and euthanasia in Hong Kong, to industry attitudes to welfare of the pig industry in China. Animal Welfare remains a hotly debated topic in Asia and with the College having placed animal welfare centre stage in its veterinary curriculum, CityU was honoured to have this timely opportunity to shine the light on this important issue.

UFAW Conference 2018 Animal Welfare Across Borders

英國動物福利 聯盟會議



2018年10月底，城大舉行「英國動物福利聯盟2018——跨國界動物福利」世界會議，由英國動物福利聯盟、新西蘭初級產業部和賽馬會動物醫學及生命科學院動物福利中心合辦，參加者包括200多位世界著名科學家、研究員和全球動物福利持分者。多位嘉賓主持開幕典禮，包括城大校董會主席黃嘉純先生、城大校長郭位教授、食物及衛生局常任秘書長容偉雄先生、新西蘭駐香港總領事伍開文先生、英國動物福利聯盟代表 Huw Golledge 博士、漁農自然護理署署長梁肇輝博士、香港警務處助理處長丘紹箕先生，以及城大動物福利中心總監王啟熙獸醫。

香港警務處及漁農自然護理署為我們介紹最新的動物福利措施、聯合「動物守護計劃」(https://www.police.gov.hk/ppp_en/11_useful_info/aws.html)，以及即將公布的虐畜法例修訂建議。

在為期兩天的活動中，參加者得以探索廣泛的相關議題，包括泰國貓狗福利、意大利牲畜運輸、香港寵物擁有權和安樂死對社會健康的影響，以及中國養豬業界對動物福利的態度。動物福利在亞洲仍然是備受爭議的話題，賽馬會動物醫學及生命科學院將動物福利列為其獸醫學課程的主題之一，城大有幸藉這次難得機會在這關鍵議題發揮作用。





Forensic Veterinary Medicine and Animal Abuse

動物法醫 與虐畜

The College of Veterinary Medicine and Life Sciences was very pleased to host two eminent experts on animal welfare, Professor Ranald Munro and Dr. Paula Boyden, especially in the rather morbid area of animal abuse. Professor Munro and Dr. Boyden gave lectures and workshops over the course of several days to the Hong Kong Police Training College, an invited group of animal welfare NGOs and our local veterinary professionals and students. They outlined the types of cases of animal abuse that maybe encountered and provided suggestions on the most helpful ways to undertake investigations into suspected animal abuse including crime scene examination, the handling of samples and subsequent forensic investigations. Cases of neglect and physical trauma, malnourishment were also described and important features that could help arrive at conclusions were highlighted. Our veterinary colleagues also received a fantastic talk on the importance of taking a thorough history and the role of forensic pathology in fatal cases. A vital component of animal abuse, that of related child abuse (and other forms of familial abuse), was also discussed at length with the emphasis of ensuring that different agencies work hand in hand to tackle these serious issues.



賽馬會動物醫學及生命科學院有幸邀請到專門研究病態虐畜的著名動物福利專家 Randal Munro 教授及 Paula Boyden 博士，為香港警隊學院、動物福利志願組織，以及本地獸醫專業人員和學生主持為期數天的講座及工作坊。他們分享自己處理過的各種虐畜個案及最有效的查案方法，包括犯罪現場搜證、樣本處理及相關法醫調查，亦談及動物受疏忽照顧、身體創傷及營養不良的個案，並解釋協助查案的要點。我們的獸醫同事也出席了一個精彩講座，領略到掌握傷病整個變化過程的重要性，以及法醫病理學在致死個案中所佔的角色。講座亦詳述虐畜與虐兒及其他家庭暴力的關係，強調社會各界應攜手杜絕這些嚴重問題。

Professor Ronald Munro



Prof Munro graduated from Glasgow University in 1967 and worked in Kenya, Hong Kong and the South Pacific before joining the pathology section of the British Government's Veterinary Laboratory service. He was appointed Head of Pathology for the Veterinary Laboratories Agency (VLA), UK in 1998. With a long-term involvement with animal welfare he is a former Chairman of the Scottish SPCA and President of the World Society for Protection of Animals. Following his retirement from the VLA he was appointed Honorary Professor of Forensic Veterinary Pathology at the Royal Veterinary College, London and Honorary Fellow in the Royal School of Veterinary Studies, Edinburgh where he specialised in forensic pathology in free-living species, companion animals and farmed livestock.

Munro 教授 1967 年畢業於格拉斯哥大學，曾於肯尼亞、香港及南太平洋工作，再加入英國政府獸醫實驗室病理部，於 1998 年出任英國獸醫實驗研究所病理學主管。他長期致力推動動物福利，曾任蘇格蘭愛護動物協會及世界動物保護協會會長。Munro 教授於英國獸醫實驗研究所退休後，出任倫敦大學皇家獸醫學院法醫獸醫病理學榮譽教授。他也是愛丁堡皇家獸醫學院榮譽院士，專門研究野生動物、寵物及養殖牲畜的法醫病理學。金會重要調查員之一，也曾參與兩個歐盟撥款資助的非洲豬瘟研究項目，包括在英國動物衛生國家實驗室進行傳播實驗。他於 2017 年與八位來自英國、法國、澳洲和中國的學者發表論文，警告非洲豬瘟將會傳入中國。

Dr. Paula Boyden



Dr. Paula Boyden graduated from the Royal Veterinary College, University of London in 1992. She spent 11 years in general practice before moving into industry in 2003 and joined Dogs Trust in 2010, where she is now Veterinary Director. Paula has an ongoing interest in the 'link'; the interrelationship between domestic violence, child abuse and cruelty to animals. She has spoken widely on the subject, is treasurer of The Links Group and is regularly involved in undergraduate training on Non-Accidental Injury (NAI) within the UK veterinary schools. Paula is a founder member and treasurer of the Association of Charity Vets and board member of the Blue Dog Trust. She chairs the Pet Advertising Advisory Group (PAAG), sits on the British Small Animal Veterinary Association's Scientific Committee and is a member of the Wales Animal Health and Welfare Framework Group. Paula received BSAVA's J A Wight Memorial Award in 2017 for her contribution to the welfare of companion animals.

Paula Boyden 博士 1992 年畢業於倫敦大學皇家獸醫學院，在從事普通科獸醫 11 年後，於 2003 年投身動物福利工作，至 2010 年加入英國犬隻福利組織 Dogs Trust，現為該組織的獸醫總監。Boyden 博士熱衷發掘事物之間的關係，經常談論家庭暴力、虐兒及虐畜的相互關係。她是英國組織 The Links 的司庫，亦為許多英國獸醫學院有關蓄意傷害的本科生課程講課，也是慈善獸醫協會的創辦成員及司庫。Boyden 博士是 Blue Dog Trust 董事及寵物廣告諮詢小組主席，亦出任英國小動物獸醫協會科學委員會、威爾斯動物健康及福利框架小組成員。2017 年，她因對寵物福利的卓越貢獻而獲英國小動物獸醫協會頒贈 J A Wight 紀念獎。的學者發表論文，警告非洲豬瘟將會傳入中國。



Kamei Chicken Founder *and* CityU Veterinary School

At the Life Education Farm which spans 30,000 square feet deep in the lush greens of Ma On Kong Tsuen, Yuen Long, Taiwan cherry trees are withering while guava plants are just beginning to bear fruit. Kwok Ming Cheung, widely known as the founder of Kamei Chicken, pulled a Chinese Feverine out of an *Allamanda Schottii* flower plant.

“Grown elsewhere Chinese Feverine can be used for making steam buns or repellent. Here, all it is doing is blocking the sunlight the flowers need. Value is conditional. A stone is precious only when people find it useful. Everyone thinks a diamond is precious; to me it is just a stone,” he explained.

The farm, which Kwok established in 2011, is home to almost 100 animal species including children’s favourite rabbits and goats, as well as creepy snakes, rats and lizards. They are all valuable to him, he said. “An animal as small as an earthworm has the tremendous job of helping us prepare our soil for strong and healthy plants. But first you have to understand them.”

A Poultry Nutrition master graduate and his Life Education Farm

Holding a master degree in poultry nutrition from the University of British Columbia, Canada, Kwok had conducted research on experimental poultry farms. The founding of a healthier chicken brand, Kamei Chicken a few years ago earned him the title of “Master poultry farmer.” In his free time, he manages the Life Education Farm, which hosts primary and secondary school students every weekend. More than 10,000 people have visited so far.

Kwok believes that life education should start from an early age. “People should know that it is not only our own lives, but all lives on earth that matter. Human beings aren’t independent. Environmental issues aren’t just about waste management but maintaining a balanced eco system. I hope the next generation can come to understand this at my farm.”

His ideas coincide with JCC, CityU which has been promoting the concept of “One Health,” a multi-disciplinary teaching and research approach with an aim to enhance the health of human, animals and the environment. JCC launched a 6-year Bachelor of Veterinary Medicine degree programme 2 years ago and Kwok has made substantial donations not only to BVM students in the form of student scholarships but to the BVM Extra-Mural studies programme and the Veterinary Summer School programme for high school students.

Tackling emerging infectious diseases such as avian flu

Kwok believes that Hong Kong should have locally trained veterinarians to tackle emerging infectious diseases. The city went through a few avian flu epidemics from 1997 to 2008 to which his farm has also fallen victim. All of his chickens were killed after a few of them were found infected. “As a Master’s degree holder in poultry nutrition, I was always able to tell when my chickens fell sick, but since viruses evolve so rapidly nowadays, we need experts on this subject matter.”

In Hong Kong, food safety policies are managed not by veterinarians, but doctors who tend to warn the public “not to touch live live poultry” during avian flu

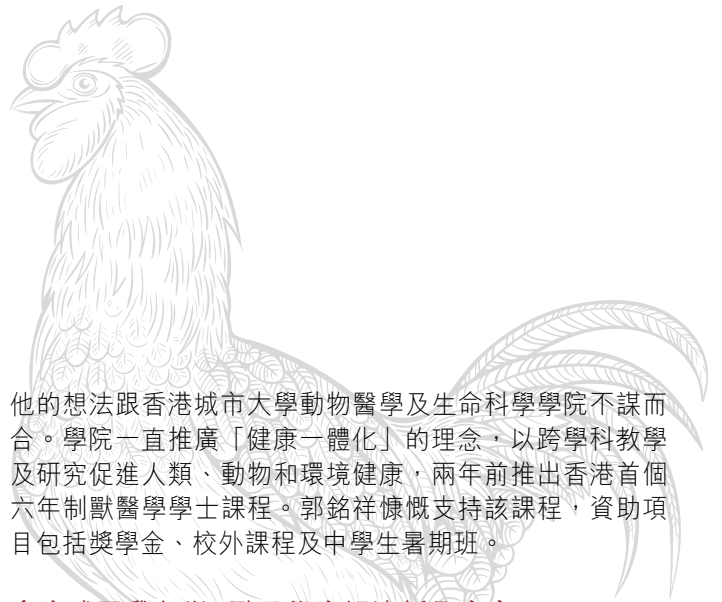


outbreaks. Kwok always found this warning puzzling. “Not all chickens have avian flu. This kind of warning unnecessarily instills a public fear of chickens, even leading to a ban on all backyard poultry. All this has deprived many people of fresh chicken, a hugely popular food,” he said.

His Life Education Farm aims to deepen people’s understanding of animals. Today, he went to visit his old friend “Piglet” in the farm. Initially the 6-year-old African grey parrot was reluctant to leave its cage, but eventually grabbed one of Kwok’s fingers. It held on and man and bird shared a moment of affection and happiness together. Humans, animals and the environment have always been interdependent. Kwok hopes that by donating to JCC’s BVM programme, he can let this message reach more people.



嘉美雞之父郭銘祥 與城大動物醫學院



元朗八鄉馬鞍崗村的青山綠水深處，有個3萬多平方呎的「生命教育農莊」，這兒的台灣櫻花最近凋謝，但番石榴剛剛結果。這天，有「嘉美雞之父」之稱的郭銘祥前來觀花，把纏在黃蟬上的雞屎藤一手拔掉。

他解釋：「雞屎藤長在別的地方可做茶果或驅蚊，長在這兒便擋住黃蟬吸收陽光。一件東西的價值視乎落在甚麼地方，有用是寶，沒用是草，人人都當鑽石是寶，但鑽石對我來說只是草。」

郭銘祥在2011年成立「生命教育農莊」，飼養接近100種動物，不單有小孩喜愛的白兔和山羊，也有令大家聞之色變的蛇、鼠和蜥蜴。任何動物在他眼中都有長處，「像蚯蚓這麼卑微的動物，可以翻開泥土，讓植物茁壯成長，關鍵是我們對動物認識有多少。」

禽畜營養學碩士 辦生命教育農莊

郭銘祥擁有加拿大英屬哥倫比亞大學禽畜營養學碩士銜頭，論文關於在實驗農場養雞。他多年前研發出較為健康的嘉美雞，被冠以「碩士雞農」的稱號。他閒時打理「生命教育農莊」，這兒逢周末接待中、小學生，多年來參觀人次過萬。

他深信生命教育應從小開始：「我們不單關注自己的生命，更要明白世上所有生命都息息相關，人類不可以獨善其身。環保議題不只是關於廢物處理，更要學懂維持生態平衡。我希望下一代能透過生命教育農莊明白這個道理。」

他的想法跟香港城市大學動物醫學及生命科學學院不謀而合。學院一直推廣「健康一體化」的理念，以跨學科教學及研究促進人類、動物和環境健康，兩年前推出香港首個六年制獸醫學學士課程。郭銘祥慷慨支持該課程，資助項目包括獎學金、校外課程及中學生暑期班。

禽流感聞雞色變 獸醫學院解決新興疾病

郭銘祥深信香港應當培訓本地獸醫，以應付突如其來的新興疾病。自1997至2008年，香港經歷數次禽流感，他屬下農場的雞隻亦因受感染而遭銷毀，「我讀禽畜營養學，農場內的雞是否有病我看得出來，但現今疾病變種太快，必須有這方面的專家。」

他指目前掌管香港食物安全政策的多是醫生，而不是獸醫，遇上禽流感只會呼籲市民「不要接觸活家禽」，他大惑不解道：「不是所有雞都有禽流感，但這種宣傳會令大家聞雞色變，後來還嚴禁散養活家禽，令很多市民『冇啖好食』。」

「生命教育農莊」的意義，在於讓下一代對動物加深認識。這天他探望老朋友「豬仔」，這隻六歲的非洲灰鸚鵡最初不願離開鐵籠，後來小爪牢牢抓住郭銘祥的手指不放，一人一鳥玩得不亦樂乎。人類、動物和環境本就相濡以沫，他希望透過捐助動物醫學及生命科學學院的獸醫學士課程，把這個訊息傳播開去。



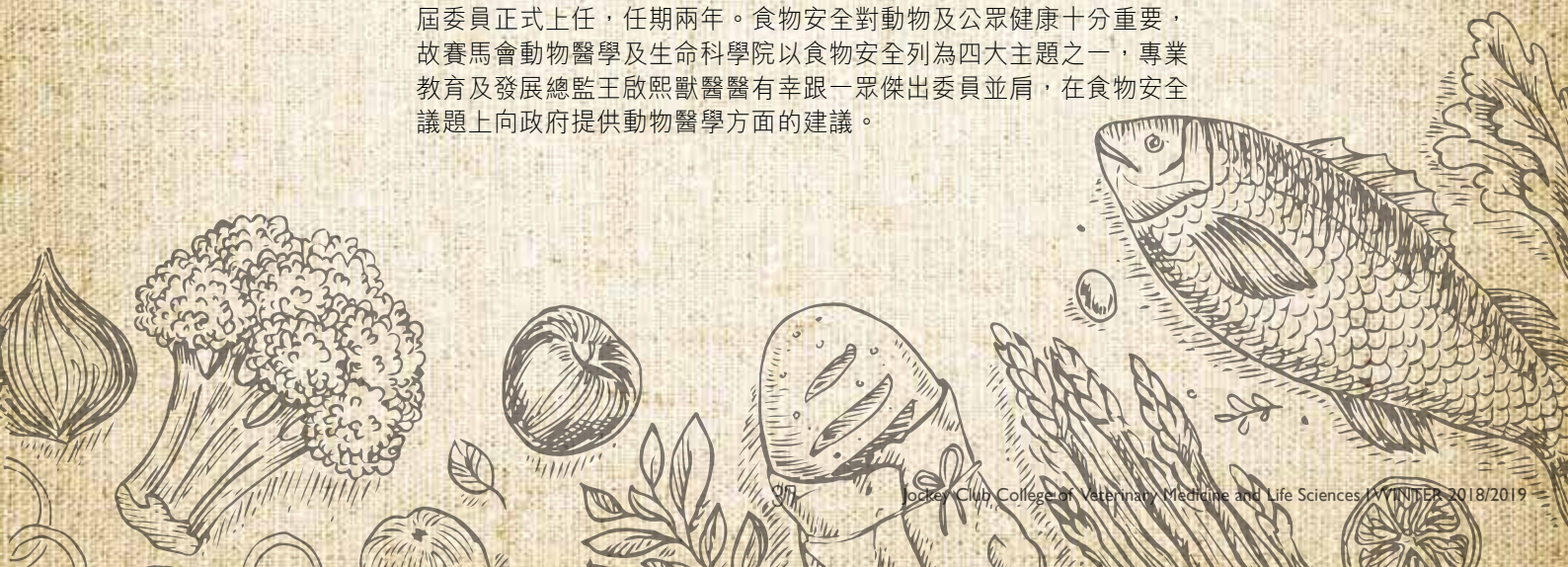
Expert Committee *on Food Safety*

食物安全專家委員會



The new term of the Hong Kong Government Centre for Food Safety's Expert Committee on Food Safety began in December 2018 and runs for 2 years. Given the importance of food safety to animal and public health, the veterinary curriculum has prioritised food safety as one of the four foci of the College of Veterinary Medicine and Life Sciences and Dr. Howard Wong, Director of Professional Development, was honoured to be included as a distinguished member of the committee in helping to provide veterinary advise to the Government on food safety matters.

2018年12月，香港政府食物安全中心食物安全專家委員會的新一屆委員正式上任，任期兩年。食物安全對動物及公眾健康十分重要，故賽馬會動物醫學及生命科學院以食物安全列為四大主題之一，專業教育及發展總監王啟熙獸醫醫有幸跟一眾傑出委員並肩，在食物安全議題上向政府提供動物醫學方面的建議。



First JCC Cornell PhD collaboration student graduates

賽馬會動物醫學及生命科學院與康奈爾大學首名聯營博士生

The College was very pleased to announce the completion and graduation, in record time, of our first JCC student from our Interdisciplinary PhD programme with Cornell involvement in December 2018.

Immediately upon finishing his PhD studies at CityU, Dr Feng GAO has now joined the “Sixth Affiliated Hospital of Sun Yat-sen University” in Guangzhou as an Associate Professor. Dr. Gao was offered a tenured position available through a special track. The Sixth Affiliated Hospital is a hospital that specialises in gastro-intestinal (GI) disease. His research achievements in GI cancers perfectly matches the hospital’s focus and his expertise in big data and artificial intelligence will also prove to be extremely valuable to the hospital. “without this PhD programme and strong support from the college, I would never be able to do this”, said Dr. Gao. At CityU, Dr GAO was supervised by assistant professor Xin Wang, from JCC’s Department of Biomedical Sciences, and at the Cornell end by the renowned scientist, Professor Andrew YEN of the Department of Biomedical Sciences.

This is a first example of the success and strength of our PhD collaborative work with Cornell University’s College of Veterinary Medicine and a sign of good things to come – there are now close to 30 students in this special PhD programme, more than half of whom have now spent time with their co-supervisors in Ithaca, NY – more will graduate this coming year and hopefully all go on to stellar careers here in Hong Kong, and in the region. The JCC wishes Dr. Gao the best of luck in the future.



賽馬會動物醫學及生命科學院在美國康奈爾大學協助下開辦跨學科博士課程，第一班學生已於 2018 年 12 月以最短時間畢業，令人振奮。

高峰博士完成城大博士課程後，即於廣州中山大學附屬第六醫院出任助理教授，並特別獲得終身教席。中山大學附屬第六醫院專門研究胃腸疾病，而高博士的胃腸癌研究成果正好發揮醫院所長，他在大數據及人工智能方面的專業知識也會為醫院帶來極大貢獻。他說：「我今天的成績全賴這個博士學位及賽馬會動物醫學及生命科學院的支持。」高博士先後追隨城大賽馬會動物醫學及生命科學院生物醫學系助理教授王鑫博士、康奈爾大學生物醫學系著名科學家 Andrew Yen 教授修讀博士課程。

這個與康奈爾大學動物醫學院聯營的博士課程，第一班學生的成績有目共睹，並會承先啟後。現有近 30 位學生修讀此課程，超過一半已於紐約伊薩卡跟隨導師修讀課程，於明年畢業後將成為香港及亞洲區棟樑。賽馬會動物醫學及生命科學院僅祝願高博士前程似錦。

Professor Dirk Pfeiffer receives the 'Roger Morris Award for Outstanding Contribution to Veterinary Epidemiology and Economics'

Dirk Pfeiffer 教授獲頒 Roger Morris 獸醫流行病學及經濟學傑出貢獻獎

Prof. Dirk Pfeiffer (Chair Professor of One Health / Associate Dean (Research) of Jockey Club College of Veterinary Medicine and Life Sciences / Director of the Centre for Applied One Health Research and Policy Advice) has received the 'Roger Morris Award for Outstanding Contribution to Veterinary Epidemiology and Economics' at the 15th International Symposium of Veterinary Epidemiology and Economics (ISVEE 15) which took place in Chiang Mai, Thailand, on 12 - 16 November 2018. This award recognises the impact and significance of his lifetime contributions to the field of veterinary epidemiology.

Prof. Pfeiffer was also the opening keynote speaker with his presentation 'Translating epidemiology into evidence and practice'.

賽馬會動物醫學及生命科學院副院長、健康一體化講座教授兼應用健康一體化研究及政策中心總監 Dirk Pfeiffer 教授，於 2018 年 11 月 12 至 16 日在泰國清邁舉行的第 15 屆獸醫流行病學及經濟學國際研討會上，獲頒「Roger Morris 獸醫流行病學及經濟學傑出貢獻獎」，表揚他在獸醫流行病學領域的畢生貢獻。

Pfeiffer 教授為研討會發表題為「將流行病學轉化為證據及實踐」的開幕演辭。



Prof. Pfeiffer receives the award from the Deputy Minister of Agriculture and Cooperatives, Mr. Luck Wajananawat. Pfeiffer 教授獲泰國農業合作部副部長 Luck Wajananawat 先生頒獎



Professor Dirk Pfeiffer and Professor Roger Morris
Professor Dirk Pfeiffer 與 Professor Roger Morris

Did you know that:

People used to believe that the 'eyes' on the male peacock's feathers were placed there by the Greek Goddess Hera in memory of the hundred eyed giant, Argos?

We now know that they are there for courtship, and even though peacocks spend a lot of their energy making them, the effort in gaining an advantage in attracting Peahens seems to be worth it.

