

VETERINARY EDUCATION IN TAIWAN

THE 17TH AAVS CONFERENCE
NOV. 21-22, 2018, TOKYO, JAPAN



國立臺灣大學
National Taiwan University



國立中興大學
National Chung Hsing University



國立嘉義大學
National Chiayi University

國立屏東科技大學
National Pingtung University of Science and Technology



亞洲大學
ASIA UNIVERSITY

Chian-Ren Jeng¹, Chao-Chin Chang²

¹School of Veterinary, National Taiwan University

²College of Veterinary Medicine, National Chung Hsing University

Overview

- ✓ FOUR 5-year undergraduate programs
- ONE 4-year post-baccalaureate program

- ✓ 3 veterinary colleges
- 1 professional school
- 1 post-graduate department

- ✓ Confer DVM degree
Doctor of Veterinary Medicine

- ✓ 280 DVM graduates/year
~ <100 MS graduate/year
~ <10 PhD graduate/year

- ✓ Board certification (computer-based) for licensed practice
 1. Veterinary pathology
 2. Veterinary pharmacology
 3. Laboratory diagnosis
 4. Veterinary general disease
 5. Veterinary infectious disease
 6. Veterinary public healthAverage of 60 is required

- ✓ Recognized by Hong Kong & Malaysia Government
(NTU & NCHU)



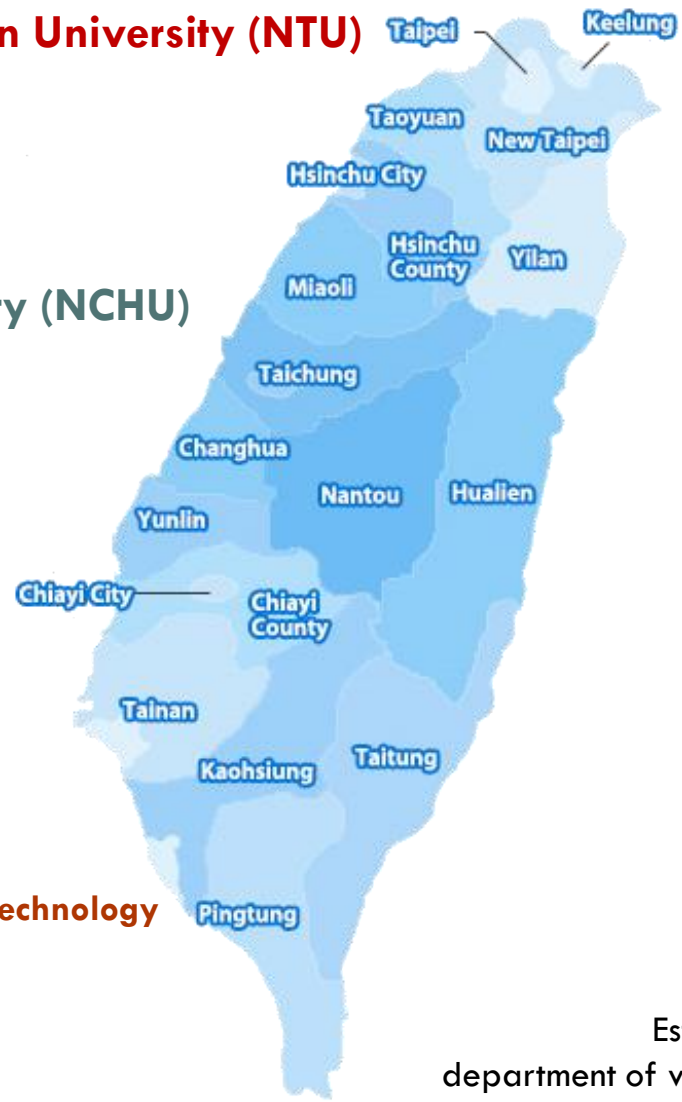
Veterinary Colleges in Taiwan: Location

1928 **National Taiwan University (NTU)** Taipei Keelung 1945/1959

1919 **National Chung-Hsing University (NCHU)** 1970
2005 **Asia University** 2016

1919 **National Chia-Yi University (NCYU)** 2000

1924 **National Ping-Tung University of Science and Technology (NPUST)** 1991



Established year for
department of veterinary medicine

Veterinary Colleges in Taiwan: Organization

National Taiwan University (NTU)

School of Veterinary Medicine
DVM, MS, PhD (2008)

National Chung-Hsing University (NCHU)

College of Veterinary Medicine
DVM, MS, PhD (1999)

Asia University

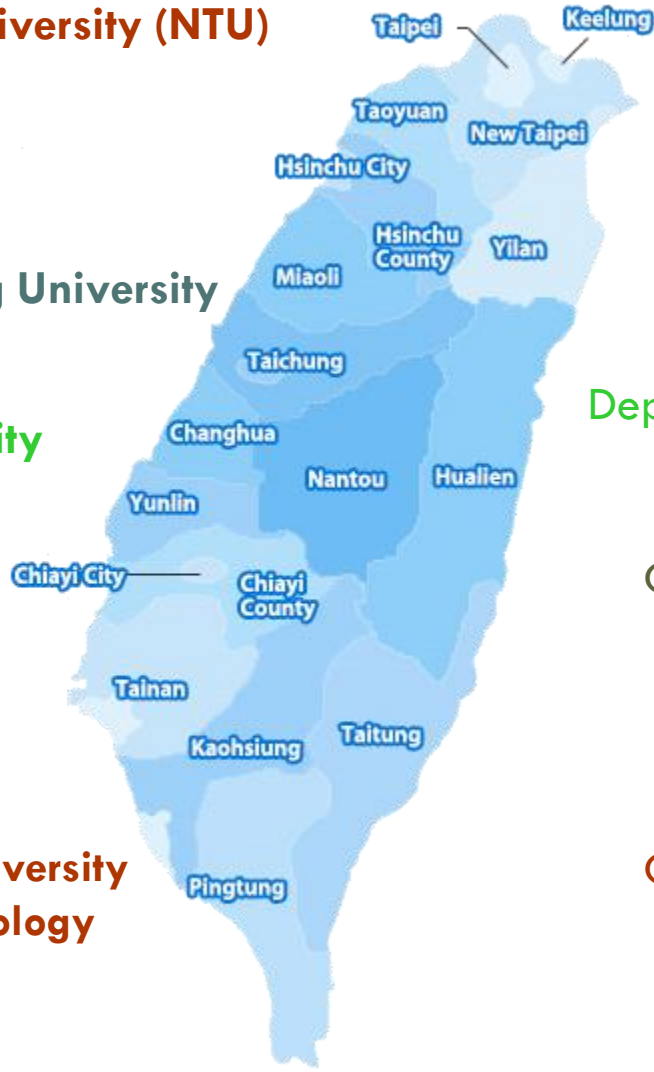
Department of Veterinary Medicine
DVM (2016)

National Chia-Yi University (NCYU)

College of Veterinary Medicine
DVM, MS (2016)

National Ping-Tung University of Science and Technology (NPUST)

College of Veterinary Medicine
DVM, MS, PhD (2011)



Veterinary Colleges in Taiwan: School System

National Taiwan University (NTU)

5 year - undergraduate

National Chung-Hsing University (NCHU)

5 year - undergraduate

Asia University

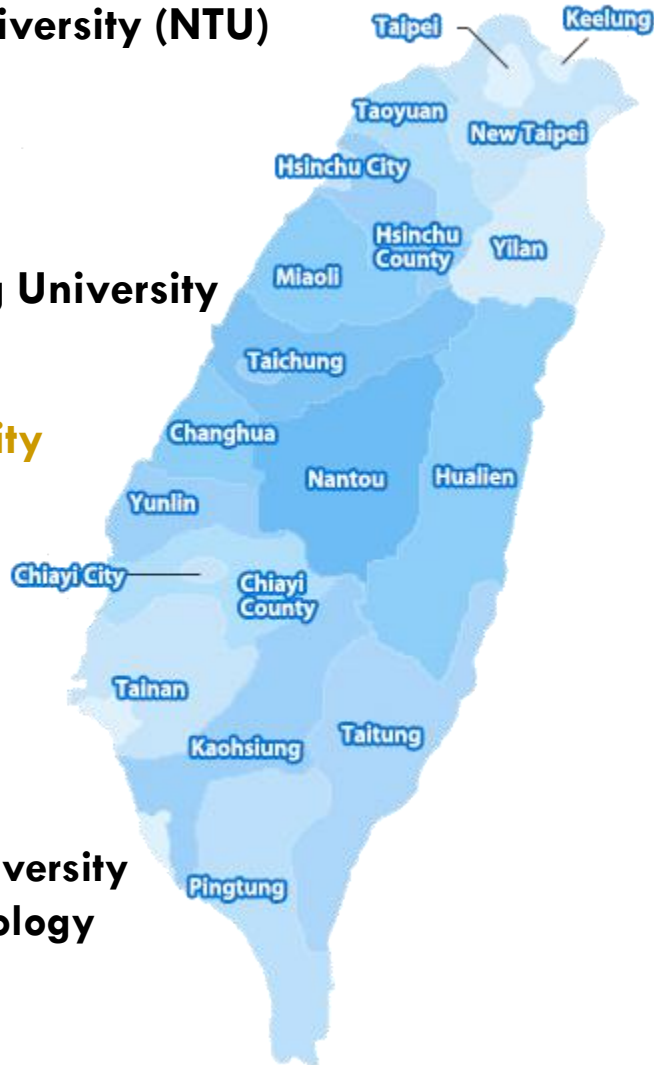
4 year – post-baccalaureate

National Chia-Yi University (NCYU)

5 year - undergraduate

National Ping-Tung University of Science and Technology (NPUST)

5 year - undergraduate





AAVS 2018

Veterinary Colleges in Taiwan: Current Deans



NTU
Dr. Chian-Ren Jeng



NCHU
Dr. Chao-Chin Chang



Asia University
Dr. Chi-Hsien Chien



NCYU
Dr. Shih-Jen Chou



NPUST
Dr. Shin-Chu Chen



國立臺灣大學獸醫專業學院

國立臺灣大學獸醫專業學院





Veterinary Colleges in Taiwan: Key Facts

	Prof	Associate Prof	Assistant Prof	Lecture	PhD%
NTU	15	11	10	0	100%
NCHU	29	12	7	0	100%
NCYU	5	8	2	0	93%
NPUST	9	10	9	0	93%
Asia	4	2	4	0	100%

Upside-down Pyramid

Veterinary Colleges in Taiwan: Key Facts

School of Veterinary Medicine National Taiwan University

	Organization	Affiliated institutes
NTU	<ul style="list-style-type: none">1. Department of Veterinary Medicine2. Institute of Veterinary Clinical Sciences3. Graduate Institute of Molecular and Comparative Pathology	<ul style="list-style-type: none">1. Veterinary Hospital2. Center for zoonosis studies3. Center for animal disease and development of food product analysis
NCHU	<ul style="list-style-type: none">1. Department of Veterinary Medicine2. Graduate Institute of Pathobiology3. Graduate Institute of Microbiology and Public Health	<ul style="list-style-type: none">1. Veterinary teaching hospital2. Animal disease diagnosis center
NCYU	<ul style="list-style-type: none">1. Department of Veterinary Medicine	<ul style="list-style-type: none">1. Veterinary teaching hospital2. Animal disease diagnosis center
NPUST	<ul style="list-style-type: none">1. Department of Veterinary Medicine2. Graduate Institute of Wildlife Conservation3. Graduate Institute of Animal Vaccine Technology	<ul style="list-style-type: none">1. Veterinary teaching hospital2. Animal disease diagnosis center3. Center for Animal Vaccine and adjuvant development4. Center for wildlife conservation service

OIE Core courses for Day one competence

Early	Biochemistry	Genetics
	Anatomy	Physiology
	Immunology	Biomathematics
	Animal welfare and ethology	
Mid	Parasitology	Pharmacology/Toxicology
	Pathology	Transmissible disease
	Microbiology	Epidemiology
Mid to Late	Rural economics, business management, and animal production	Clinical and diagnostic sciences
	National and international veterinary legislation	
Late	Herd health management and nutrition	Public health
	Food safety/ hygiene	Professional jurisprudence and ethics
Throughout	Communication	



Core Veterinary Courses in Taiwan

1 st	Anatomy (& lab)	General Chemistry (& lab)	Organic Chemistry (& lab)
	Zoology	Animal Welfare	Biostatistics
2 nd	Biochemistry (& lab)	Physiology (& lab)	Bacteriology (& lab)
	Parasitology (& lab)	Virology (& lab)	Immunology (& lab)
	Histology (& lab)		
3 rd	Pathology (& lab)	Diagnostic Imaging (& lab)	Pharmacology (& lab)
	Anesthesiology (& lab)	Obstetrics and Reproduction	Infectious Disease
4 th	Clinical Pathology (& lab)	Public Health (& lab)	Internal Medicine
	Swine Diseases	Fowl Disease	Aquatic Animal Disease
	Exotic Animal Disease	Ruminant Diseases	
	Small Animal Surgery	Large Animal Surgery	
5 th	Epidemiology	Jurisdiction and Ethnics	Clinical Conference (CC)
	Clinical Rotation (7 Groups) : Small animal surgery 、 small animal internal medicine 、 exotic and aquatic animals 、 clinical pathology 、 pathology & swine disease 、 Large animal 、 Fowl & laboratory animals		



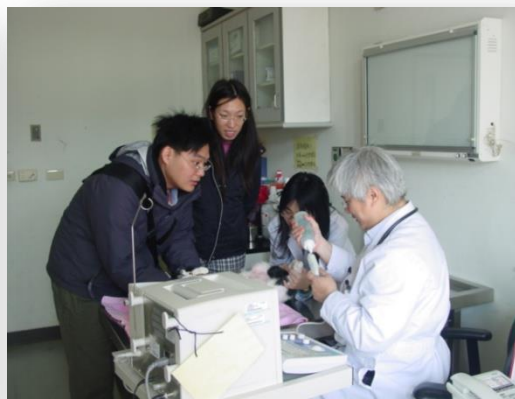
Selective Courses

Animal Behavior	E M Technique	Nutritional Disease
Animal Necropsy Technology	Embryology	Ophthalmology
Animal Rights Thoughts	Endocrinology	Pigeon Disease
Animal Vaccine and Practice	Endoscope Technique	Principles of Pharmacokinetics
Bioanalytical Techniques	Equine Disease	Small Animal Dentistry
Biostatistics	Fluid Therapy	Strategy for Veterinarian Career
Canine Sports Medicine	Genetics	The Life and Death of Animals
Cardiology	Global Animal Protection and Public Policy	Toxicology
Cell Biology	Hematology/Clinical Hematology	Traditional Chinese Veterinary Medicine
Chinese Herbal Medicine	Hospital Management	Veterinary Acupuncture
Clinical Microbiology	Laboratory Animals	Veterinary Dermatology
Clinical Neurology	Leadership and Management	Veterinary Entomology
Clinical Nutrition	Molecular Biology	Veterinary Oncology
Clinical Pharmacology	Mycology	Veterinary Pediatrics
Diagnostic Cytology	Neuroelectrophysiology	Veterinary Preventive Medicine
Diseases of Wild and Pet	Nursing Practice in Companion	Veterinary Radiology

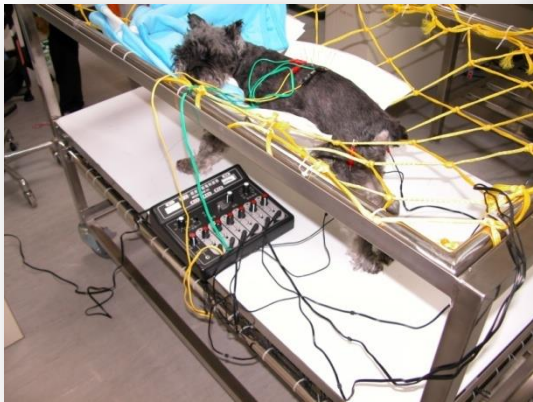
Clinical Rotation in NTUVH

- Block system training
- Six blocks in one semester, last year (2 semesters) of the DVM program (internal medicine, surgery、clinical path/image, production medicine/wards, necropsy)





Electro -
acupuncture



Electro -
acupuncture



Wormwood
warm needle



Dry needles



Laser
acupuncture

Section of Small Animal Surgery



Ward Service

- An all-year round program supports daily care
- 24 hours ward service
- Residents, interns, and veterinary technicians, rotating senior students



Large Animal



ZOO ANIMAL

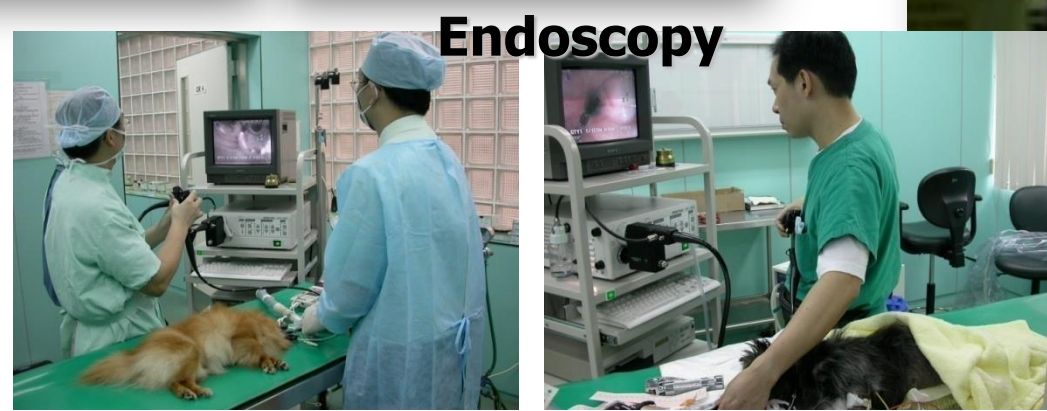
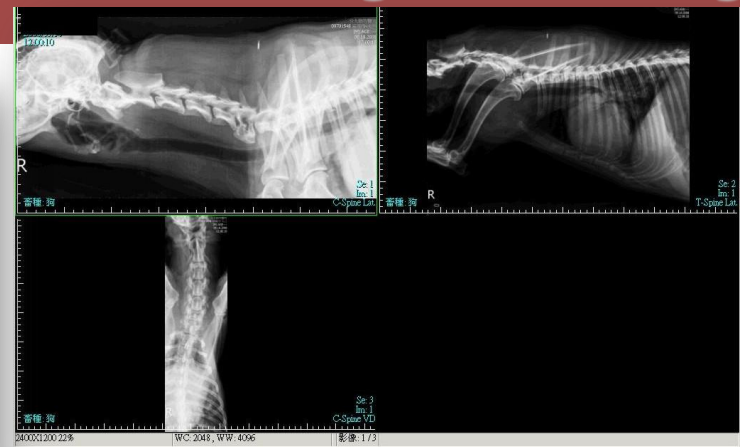
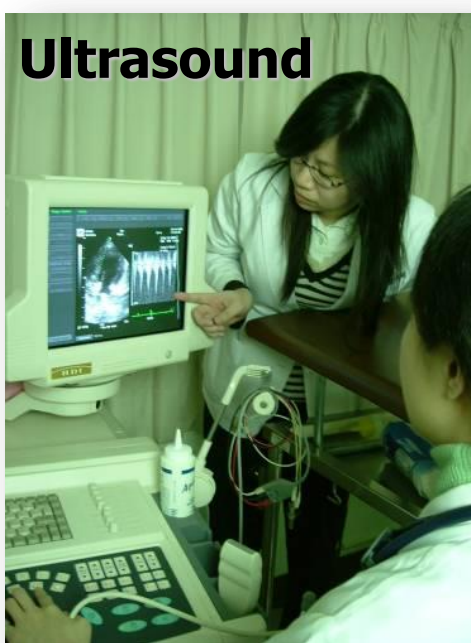
ZOO ANIMAL HEALTHY EXAMINE



Exotic pet disease

- General clinic, basic examination, surgery , hospitalization.
- Patient: small mammals, birds, reptiles, amphibians, marines
- Examination: microscopic examination, laboratory examination , radiography, ultrasonography , CT.





Diagnostic Imaging Service

- Digital radiography, ultrasound, 16-slice spiral computed tomography (CT) and magnetic resonance imaging (MRI).
- Clinical teaching for the undergraduate education, intern and resident training program.





Resident Training Programme

- NTUVH Resident Training Programme
 - Small animal surgery
 - Small animal internal medicine
 - Large Animal & Wildlife Medicine
 - Veterinary Pathology
 - 3-4 year program
 - Required: case load, publication (SCI paper)
- NCHUVH
 - Intern → Resident → CR → VS
 - Required: case load, publication (SCI paper)

Veterinary Specialty Society in Taiwan

Comparative Pathology

Chinese Traditional Medicine

Veterinary Dermatology

Veterinary Internal Medicine

Veterinary Kidney Specialists

Veterinary Ophthalmology

Veterinary Orthopaedic

Veterinary Pathology

Veterinary Surgeons



財團法人李良玉畜牧獸
醫學文教基金會



中華民國獸醫病理學會



中華傳統獸醫學會



中華民國比較病理學會



臺灣獸醫外科專科醫學
會



中華亞太小動物中醫學
會



財團法人慈愛動物福利
基金會



台灣獸醫眼科醫學會



財團法人亞洲動物福利
協會



財團法人獸醫畜產發展
基金會



中華民國獸醫皮膚醫學
會



台灣獸醫骨科醫學會



台灣省畜牧獸醫協會



台灣臨床獸醫師協會



財團法人新北市獸醫臨
床醫學會



中華民國小動物臨床研
究會



財團法人李崇道博士基
金會



中華民國獸醫學會



社團法人中華獸醫師聯
盟協會



財團法人動物醫學研究
基金會



中華民國獸醫內科醫學
會

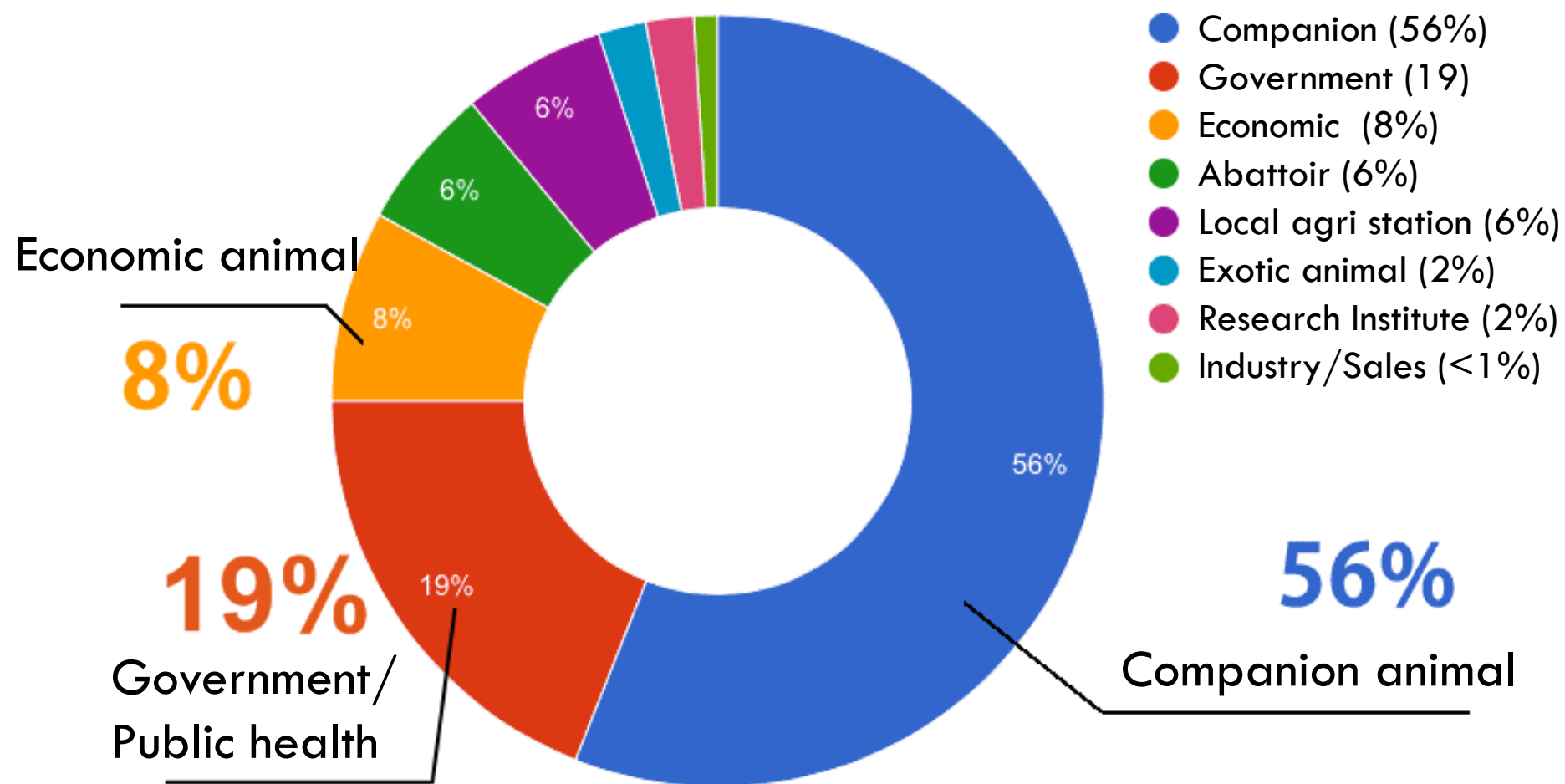


中華民國獸醫腎臟專科
醫學會

Serve as bases for CE

Registered Veterinarians in 2014-2018

Future Challenge: **Need vs Interest !!**



The best reward of Good Education

**Board certified (to be)
specialist /alumni working in
the university**

**Board certified specialist
working in the industry**

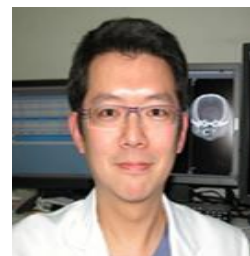
**Board certified specialist
working in Taiwan**



Dr. Po-Yen Chou
(NTU, DVM, 2003)
BVM, MVM, **DACVS**
(Small Animal Surgeons)
**UC Davis School of
Veterinary Medicine**



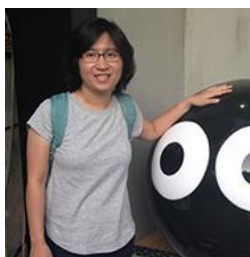
Dr. Cindy Lin
(NTU DVM, 2002)
DVM/PhD/**DACVP**
(Veterinary
Pathology)
**UC Davis
Clin Path
International
Diagnostic Center**



Dr. Kuan-Sheng Chen
(NCHU, DVM, 1999)
DVM, MVS, PhD, **MANZCVS**
(Australian and New
Zealand College of
Veterinary Scientists in
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**Assistant Professor at
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Dr. Ronald Koh
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Assistant Professor
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Dr. Yun-Ting Wang
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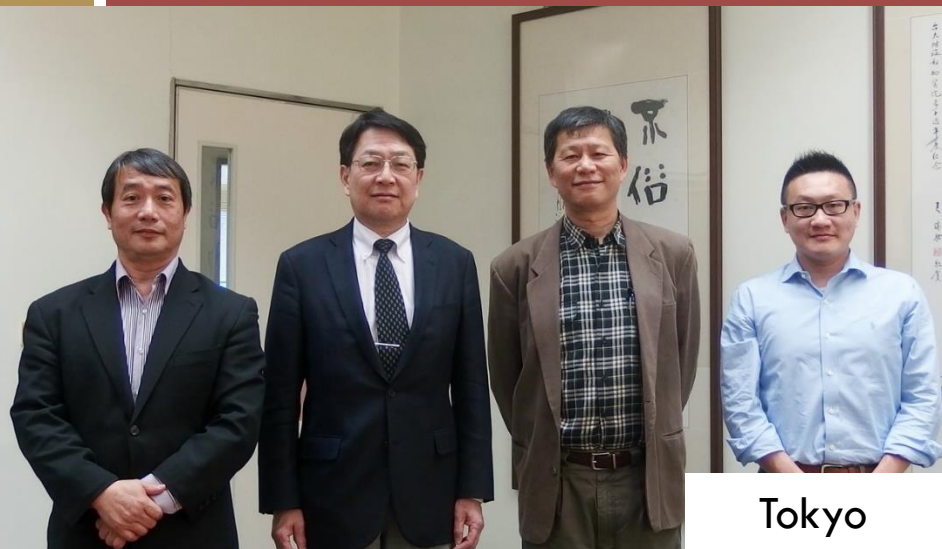


Dr. Ya-Pei Chang
(NTU DVM)
Diplomat of European
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Dr. Andy Law
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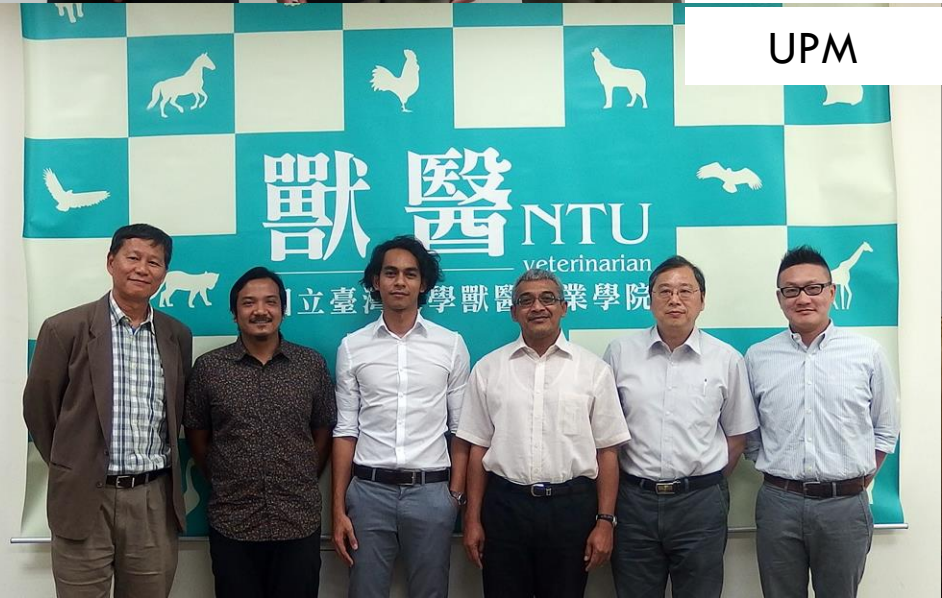
Working together to improve Veterinary Education in Asia



Tokyo



Azabu



UPM



Kyoto



Future Challenge: moving toward a 6-year undergraduate program

- More practical (clinical) training
- To be better connected to the international system
 - ▣ Main Stream: Undergraduate 6 years or post-graduate 4 years
- Better recognized for degree equivalency
- Lack of police support, no incentive and no supplementary support, not sustainable yet.

Region	Country	System
N. America	All vet colleges	Post graduate 4 years
British	Cambridge, royal vet colleges....	mostly 6 years, some 5 years (Edinburgh)
Europe	Utrecht, Poland,	6-year
Australia	Sydney, Melbourne, Murdoch....	6-year
Asian	Japan, Korea, Thailand, ...	6-year
	Taiwan , Malaysia , China , Spain, New Zealand	

Future Challenge: international accreditation of veterinary education program

□ Challenges faced:

- ✓ DVM program recognized by Hong Kong (NTU & NCHU) will be expired on Dec. 2023 if our program is not under accreditation process, either AVMA, EAEVE, RCVS, Australia-New Zealand (AVBC Inc.)
- ✓ Application of international accreditation of our program?



Contributors

- College of Veterinary Medicine, National Chung Hsing University
 - ▣ Prof. Chi-Chung Chou



Thanks for your attentions

