



15th Asian Association of Veterinary Schools Congress

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f Share

20-22 October, 2016
Taipei, Taiwan R.O.C

11 17 20 50
Days Hours Mins Secs



Oct. 20, 2016

Veterinary Education in Taiwan



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



Chou, Chi-Chung



亞洲大學
ASIA UNIVERSITY

DVM, PhD

Dean of College NCHU



國立中興大學獸醫系
DEPARTMENT OF VETERINARY MEDICINE
NATIONAL CHUNG HSING UNIVERSITY



國立嘉義大學
獸醫學系



國立屏東科技大學獸醫學院獸醫學系
Department of Veterinary Medicine, College of Veterinary Medicine, NPUST



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Neighboring Friends



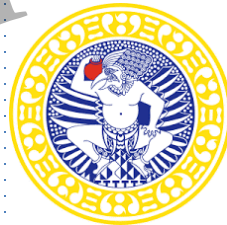
國立臺灣大學
National Taiwan University



國立中興大學
National Chung Hsing University



亞洲大學
ASIA UNIVERSITY



國立嘉義大學
National Chiayi University



香港城市大學



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



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

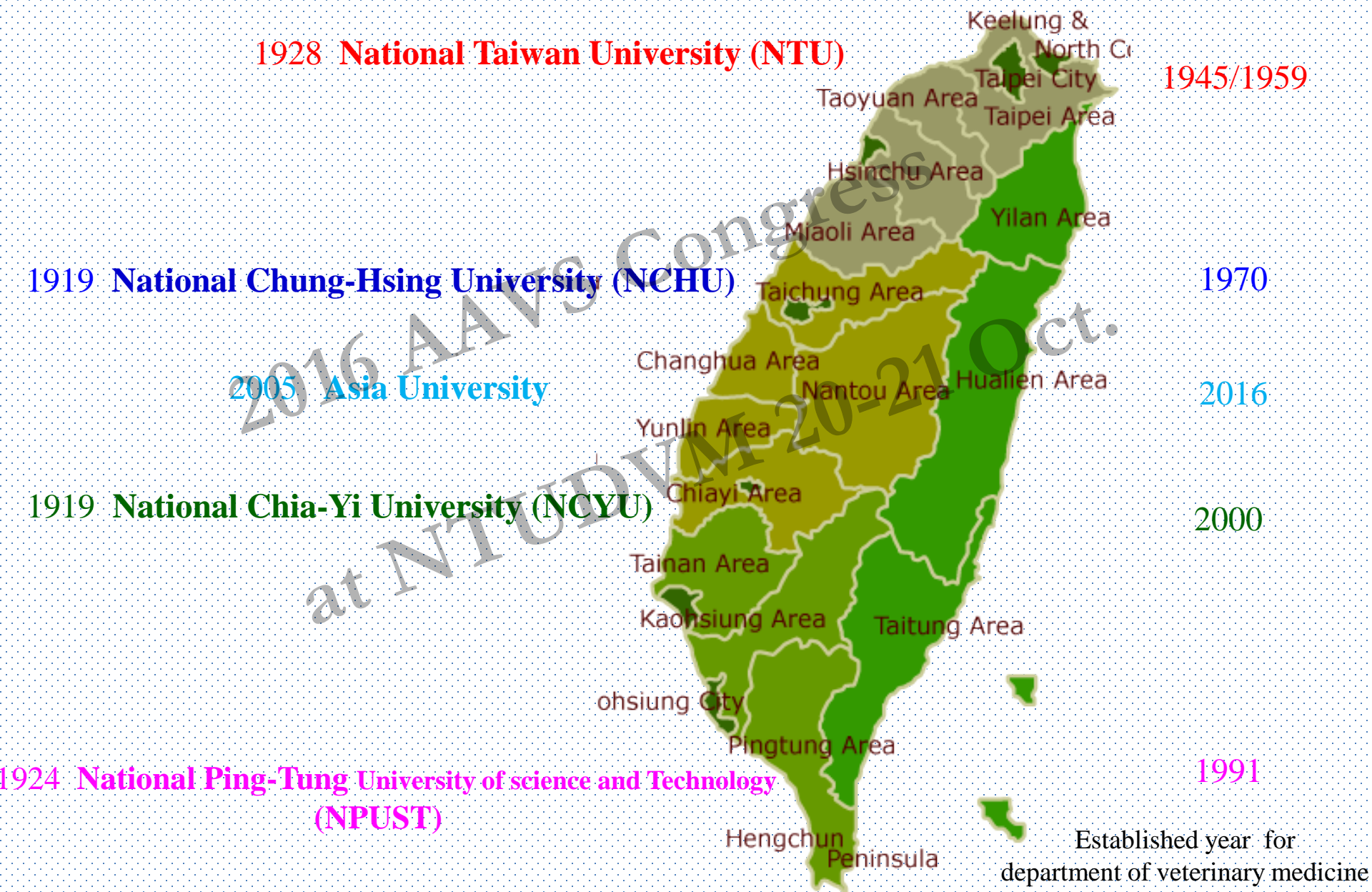
- ✓ 280 DVM graduates/year
- ~ <100 MS graduate/year
- ~ <10 PhD graduate/year

- ✓ 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 health

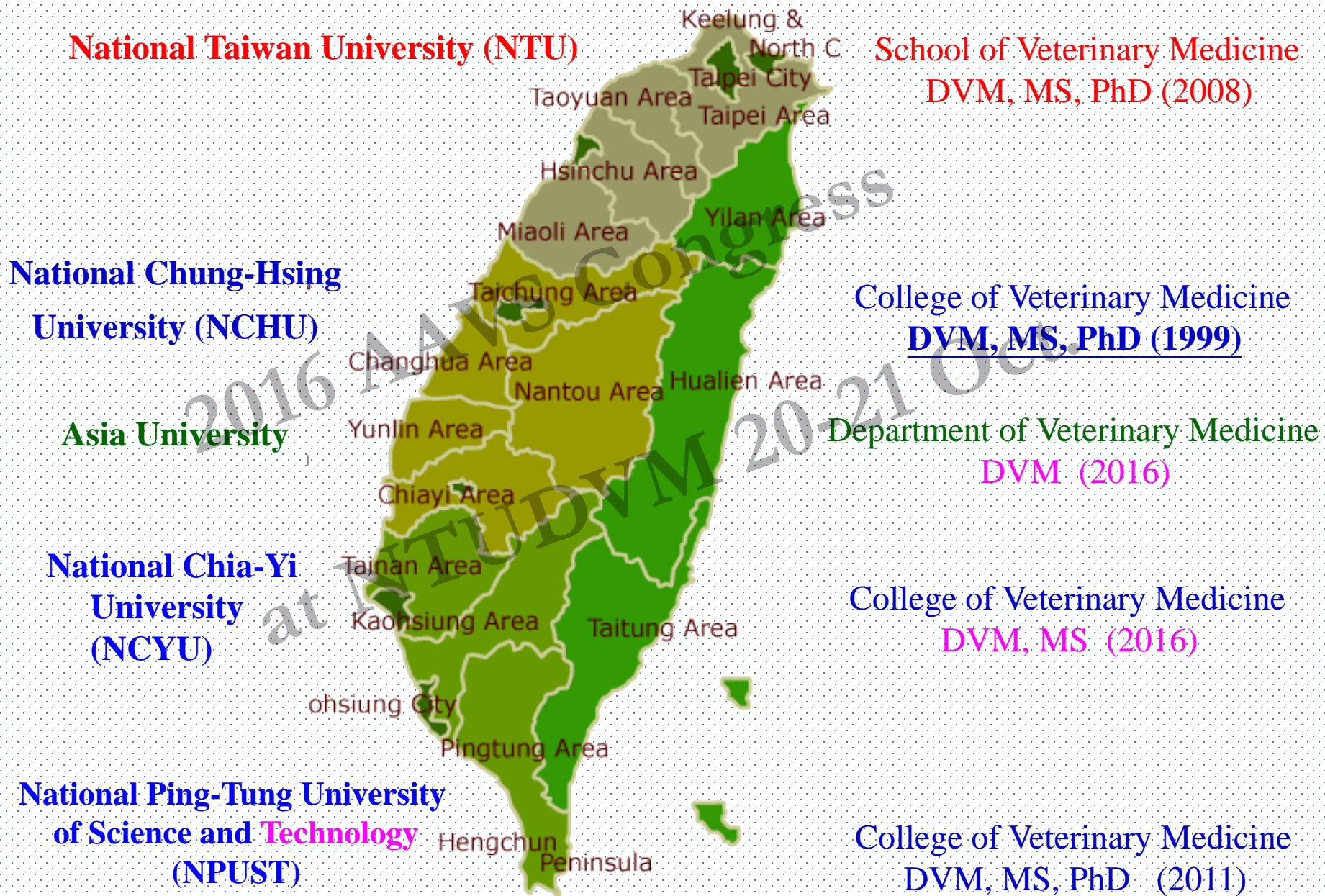
Average of 60 is required

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

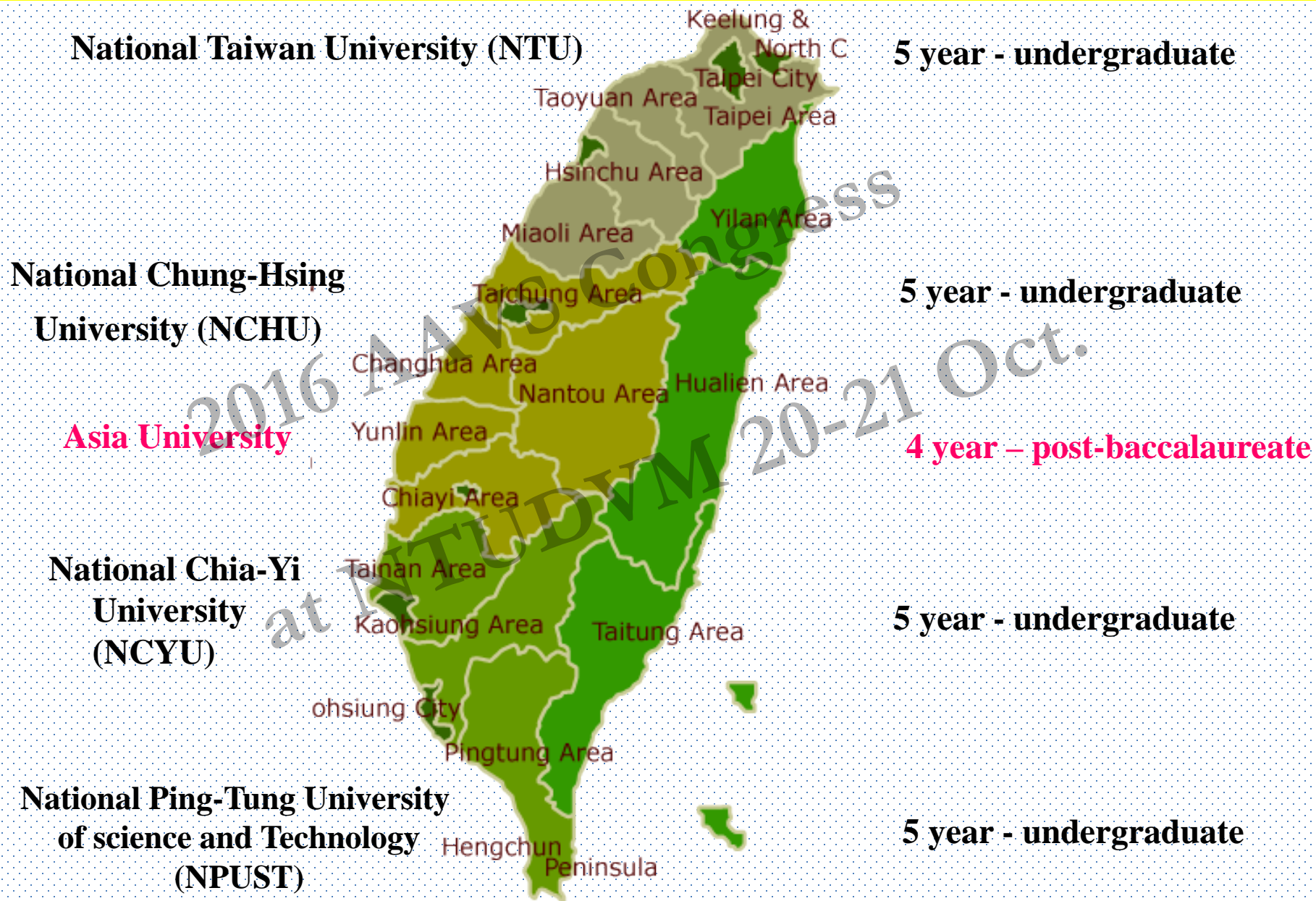
Veterinary Colleges in Taiwan: Location



Veterinary Colleges in Taiwan: Organization



Veterinary Colleges in Taiwan: School System



Veterinary Colleges in Taiwan: Current Deans



NTU

Dr. **Chou** Chin-Cheng



NCHU

Dr. **Chou** Chi-Chung



Asia University

Dr. Chien Chi-Hsien



NCYU

Dr. **Chou** Shih-Jen



NPUST

Dr. Chen Shin-Chu



Veterinary Colleges in Taiwan: Key Facts

	Faculty	Student Total	Student DVM	Student Graduate	T/S Ratio	Graduation Credits
NTU	38	445	329	116	13	182 (152)
NCHU	52	573	374	199	11	182 (151)
NCYU	15	276	261	15+10	16	185 (140)
NPUST	30	575	519	56	19	186 (157)
Asia	2	45	45	0	NA	155 (128)



Veterinary Colleges in Taiwan: Key Facts

	Prof	Associate Prof	Assistant Prof	Lecture	PhD%
NTU	15	8	14	1	97%
NCHU	29	12	7	0	100%
NCYU	5	8	2	0	93%
NPUST	9	10	9	0	93%
Asia	2	NA	NA	NA	100%

Upside-down Pyramid

Veterinary Colleges in Taiwan: Key Facts

	organization	Affiliated institutes
NTU	<ol style="list-style-type: none"> Department of Veterinary Medicine Institute of Veterinary Clinical Sciences Graduate Institute of Molecular and Comparative Pathology 	<ol style="list-style-type: none"> Veterinary Hospital Center for zoonosis studies Center for animal disease and development of food product analysis
NCHU	<ol style="list-style-type: none"> Department of Veterinary Medicine Graduate Institute of Pathobiology Graduate Institute of Microbiology and Public Health 	<ol style="list-style-type: none"> Veterinary teaching hospital Animal disease diagnosis center
NCYU	<ol style="list-style-type: none"> Department of Veterinary Medicine 	<ol style="list-style-type: none"> Veterinary teaching hospital Animal disease diagnosis center
NPUST	<ol style="list-style-type: none"> Department of Veterinary Medicine Graduate Institute of Wildlife Conservation Graduate Institute of Animal Vaccine Technology 	<ol style="list-style-type: none"> Veterinary teaching hospital Animal disease diagnosis center Center for Animal Vaccine and adjuvant development Center for wildlife conservation service

OIE Core courses for Day one competence

Early	Biochemistry	Genetics
	Anatomy	Physiology
	Immunology	Biomathematics
	Animal welfare and ethology	
Mild	Parasitology	Pharmacology/Toxicology
	Pathology	Transmissible disease
	Microbiology	Epidemiology
Mild 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 Birds	Nursing Practice in Companion Animals	Veterinary Radiology

Visiting Professors

NCHU	University of Florida Prof. John W. Harvey Clinical Hematology, Cytology <i>Discoverer of <i>Anaplasma platys</i></i>	
NTU NCHU NPUST	Purdue University Dr. Jeff Ko Anesthesiology	
NCHU	University of Hawaii Prof. John Grove Statistics	
NCHU	UC Davis Prof. Bruno Chomel Zoonoses, Emerging Zoonoses, Epidemiology Veterinary Public Health, <i>Discoverer of <i>Bartonella chomelii</i></i>	
NCHU	Louisiana State University Dr. Ron Koh Chinese traditional medicine, acupuncture	

In comparison to OIE courses

Course	Specific	Advanced
1. Public health 2. Food safety/ hygiene 3. Epidemiology 4. Transmissible diseases	Zoonosis Disease prevention and control Food hygiene Veterinary products	Organization of Veterinary Services Inspection and certification procedures Management of contagious diseases Food hygiene
5. National and international veterinary legislate 6. Herd health management and nutrition	<div> <h2>Additional Courses on the Late Stage Is Recommended</h2> </div>	
Rural economics, business management, and animal production		
Professional jurisprudence and ethics		
Communication	Communication skills	Administration and management

Special Programs: Asia University

Animal Hospital Management (12 credits)	Occupational Ethics
	Communication and Interpersonal Relationship
	Cost Accounting for Health Care
	Human Resources Management for Health care
	Financial Management for Health care
	General Management of Animal Hospital
Traditional Chinese Veterinary Medicine (12 credits)	Fundamental Theory of Traditional Chinese Veterinary Medicine (I & II)
	Traditional Chinese Veterinary Medicine Diagnosis and Therapy (I &II)
	Preventive and Therapeutic Strategies of Small Animal Disease

Continue Education in Taiwan

- ✓ To be Started in 2017
- ✓ 120 credit hours every 6 years
- ✓ Required for practice, validate at license renewal

Design:

➤ Credits from each of the following 3 categories are required

1. **Veterinary Specialties** >72

Disease diagnosis, Pathology, public health etc

2. **Veterinary Quality** 12~ 24

Hospital management, client relationship,
communication skills etc

3. **Ethics and Laws** 12~24

Continue Education in Taiwan

	Credit sources	Credit (Ct) counts
1	CE courses offered by University, Vet association, Teaching hospital, Government, Foundation	Participant: 1 Ct/hr Speaker 5 Cts/hr
2	Public health, disease control related courses	2 Cts, max 30 Cts
3	National conferences	Participant: 1 Cts/hr Speaker: 3 Cts Poster: 1 or 2 Cts (1 st author)
4	Internationally recognized veterinary conferences	Participant: 2 Cts/hr Speaker: 10 Cts Poster: 1 or 3 Cts (1 st author)
5	Communication/correspondence courses	1 Cts per course (max. 20 Cts)
6	Web course/seminar	1 Cts per course (max. 40 Cts)
7	Credit courses in universities	5 Cts/ credit hr Max. 15 Cts per semester
8	Credit transfer from other countries	Max 10 Cts/year with proof
9	Training in research institutions	2 Cts/day max 20 Cts
10	Resident training at teaching hospital	30 Cts/ year
11	Peer reviewed original research publication	16 Cts/ paper (1 st author) 6 Cts/ paper (2 nd) 2 Cts/ paper (3 rd and after) Other type paper divided by half

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



Future Change ~ 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

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 Change ~ Moving toward a 6-year undergraduate program

◆ Challenges faced:

- Not a governmental policy so Progress not guaranteed
- Not incentive enough??
4+2 degrees (+ a master-equivalent degree??)
- Lack of consensus on Institutions for small animal practice
- Lack of institutions for economic animal practice

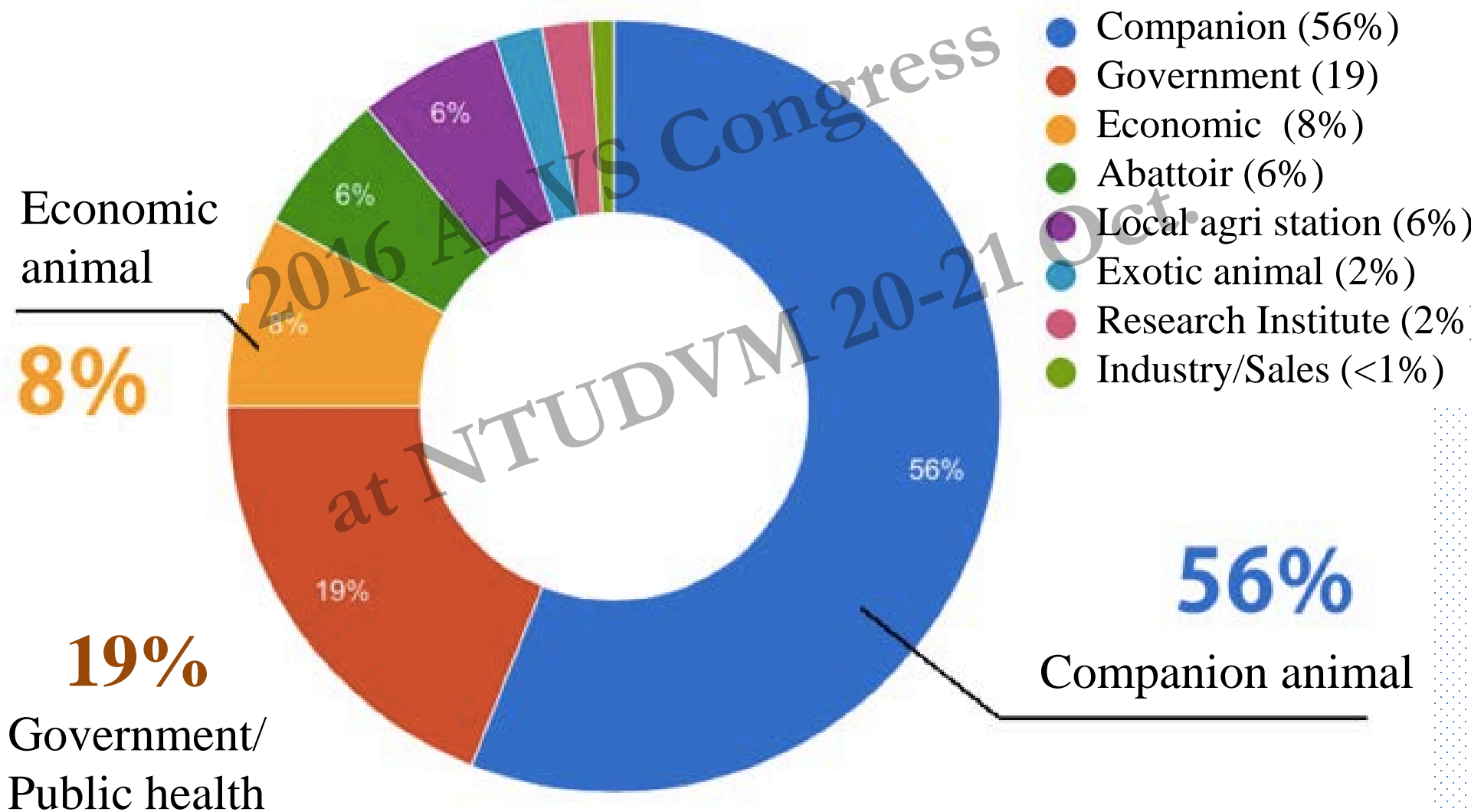


2017?? No way
2018?? Not sure
2019?? We'll see....



Registered Veterinarian in 2014

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



Who we have educated

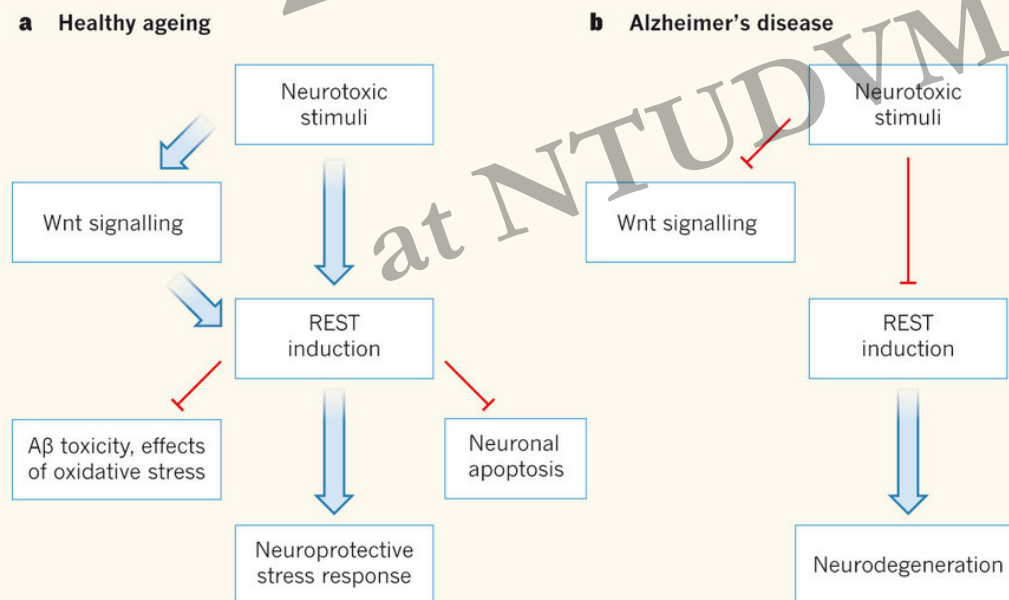
At least in part.....

D.V.M. National Chung Hsing University (1983)

M.S. University of Wisconsin (1986)

Ph.D. University of Texas Southwestern Medical Center (1990)

Search for cure of Alzheimer disease

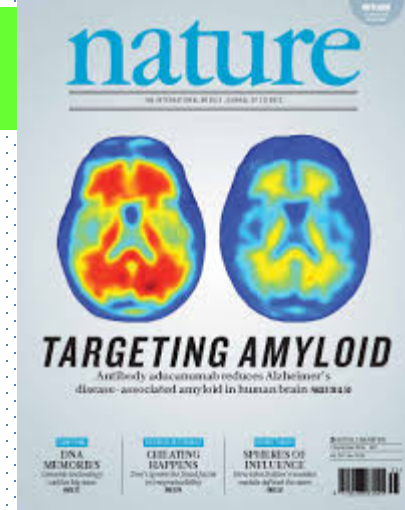


Dr. Li-Huei Tsai

**Institute of Medicine,
Academic Sinica, USA**

**Life Sciences, Council of
Academic Sinica, Taiwan**

Nature Publications by Dr. Li-Huei Tsai



Gjoneska E, Pfenning A, Mathys H, Quon G, Kundage A, **Tsai LH****, **Kellis M****, Conserved epigenomic signals in mice and humans reveal immune basis of Alzheimer's disease. *Nature* **2015** Feb 18; doi: 10.1038/nature14252.

(**Co-Contributing Authors).

Tsai LH, Madabhushi R. Alzheimer's disease: A protective factor for the ageing brain. *Nature* **2014** Mar 27;507(7493):439-40. doi: 10.1038/nature13214. PMID: 24670758.

Wang W, Pan L, Su S, Quinn E, Sasaki M, Jimenez J, Mackenzie I, Huang E, **Tsai LH**. Interaction of FUS and HDAC1 regulates DNA damage response and repair in neurons. *Nature* **2013** September 15; doi:10.1038/nn.3514

Gräff J, Rei D, Guan J, Wang W, Seo J, Henning K, Nieland T, Fass D, Kao P, Kahn M, Su S, Samiei A, Joseph N, Haggarty S, Delalle I, **Tsai LH**. An epigenetic blockade of cognitive functions in the neurodegeneration brain. *Nature* **2012** Feb 29;483(7388):222-6. doi: 10.1038/nature10849

Gao J, Wang WY, Mao YW, Gräff J, Guan JS, Pan L, Mak G, Kim D, Su SC, **Tsai LH**. A novel pathway regulates memory and plasticity via SIRT1 and miR-134. *Nature*. **2010** Aug. 26;466(7310):1105-9. PMCID: PMC2928875.

Guan J-S, Haggarty SJ, Giacometti E, Dannenberg J-H, Joseph N, Gao J, Nieland TJF, Zhou Y, Wang X, Mazitschek R, Bradner JE, DePinho RA, Jaenisch R, **Tsai, LH**. HDAC2 negatively regulates memory formation and synaptic plasticity. *Nature*, **2009** May 7; 459(7243): 55-60

Cardin JA, Carlen M, Meletis K, Knoblich U, Zhang F, Deisseroth K, **Tsai LH**, Moore CI. Driving fast-spiking cells induces gamma rhythm and controls sensory responses. *Nature*, **2009** Jun 4; 459(7247):

Andre Fischer, Farahnaz Sananbenesi, Xinyu Wang, Matthew Dobbin & **Li-Huei Tsai**. Recovery of learning and memory is associated with chromatin remodeling *Nature* **2007** 447, 178-182 doi:10.1038/nature05772;

The best reward of Good Education

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



Dr. Po-Yen Chou (NTU, DVM, 2003)

BVM, MVM, DACVS (Small Animal Surgeons)

UC Davis School of Veterinary Medicine

orthopedic surgery, canine elbow disease and small animal trauma surgery.



Dr. Ronald Koh DVM, MS (NCHU, DVM, 2005)

Assistant Professor

LSU School of Veterinary Medicine

Integrative Medicine, Acupuncture, Chinese Herbal Medicine, Food Therapy, Canine Rehabilitation



Dr. Andy Law DVM (NCHU DVM, 2008)

Assistant Professor

Purdue University, School of Veterinary Medicine

Small animal Surgery

The best reward of Good Education

Board certified specialist working in the industry



Dr. Cindy Lin

(NTU DVM, 2002)

DVM/PhD/DACVP (Veterinary Pathology)

Assistant Research Professor at UC Davis

Clin Path International Diagnostic Center

Hematology, Cytology, Pathology and Biochemistry



Dr. Yun-Ting Wang

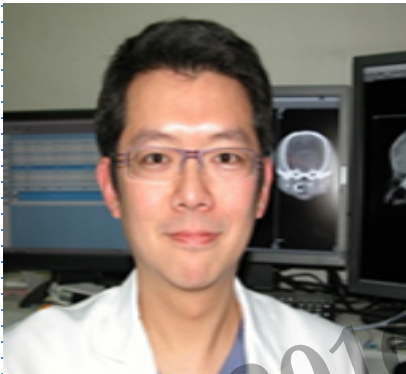
DVM, MS (NCHU DVM 2009)

Diplomat, American College of Poultry Veterinarian

Huvepharma

The best reward of Good Education

Board certified specialist working in Taiwan



Kuan-Sheng Chen (NCHU, DVM, 1999)
DVM, MVS, PhD, MANZCVS
(Australian and New Zealand College of Veterinary
Scientists in Veterinary Radiology)

Assistant Professor at CVM NCHU



Chang Yapei

DVM, MS

(NTU DVM)

Diplomat of European College of Veterinary Neurology

Lecturer at National Taiwan University

Working together to improve Veterinary Education in Asia

NVLU



Nippon



Tokyo



Azabu



Working together to improve Veterinary Education in Asia

Chulalongkorn



Kasetsart



Chiang Mai



Mahidol

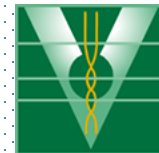


Working together to improve Veterinary Education in Asia





JOINT SYMPOSIUM OF THE 8TH **VETERINARY RESEARCH** AMONG UNIVERSITIES OF VETERINARY MEDICINE IN EAST ASIA FEB 19-21, 2017 (NCHU, TAIWAN)



Dear colleagues and friends

Following many successful past events, the 8th JSVR will be held in National Chung-Hsing University, Taichung, Taiwan during February 19-21, 2017. We are honored to be the host of this event to continue the great tradition. Twenty universities from ten participating countries* are expected to join this exciting event this year.

We sincerely invite young scholars and graduate students to join the symposium as speakers and delegates. Opportunities of oral and poster presentation are available (free application) for all participants. For more information, please use the website:

<https://goo.gl/forms/W5bTKY7I4k5fILMh2>

We are looking forward to meeting you in Taichung, a city full with cultures and dynamic with delicious foods and exquisite sceneries in central Taiwan. Hope you will take this opportunity to interact with peers and seek research cooperations among veterinary researchers in Asia.

Chou ChuChung

Yours Sincerely

Chi-Chung Chou, D.V.M., Ph.D.

Chair of Organizing Committee

ccchou@nchu.edu.tw

Taiwan

NCHU (Host of 2017)

NTU

NCYU

NPUST

Asia University

Japan

Gifu University

Tokyo University

Yamaguchi University

Korea

Seoul University

Vietnam National University of

Agriculture

Thailand

Kasetsart University

Chulalongkorn University

Mahidol University

Chiang-Mai University

Philippine

Philippine University, Cebu

Indonesia

Airlangga University

Malaysia:

Universiti Putra Malaysia

Cambodia

Royal University of Agriculture

Pakistan

University of Agriculture isalabad



مشکرم

ありがとうございます

شکرا (جزیل)

धन्यव

Спасибо

Mulțumesc

Grazie

Kiitos

Merci

Takk

σε ευχαριστώ

Muchos Gracias

Thank you very much

감사합니다

Danke schön

Obrigado

Bedankt

ขอบพระคุณ

Dziękuję

Shukran jaziilan

Tack

Teşekkür ederim

