

## Summary Report of:

### 7<sup>th</sup> AFLAS Congress (Singapore)

Dates: 7<sup>th</sup> to 11<sup>th</sup> November

Venue: Raffles City Convention Centre (RCCC)

Theme: Advancing Frontiers in Lab Animal Science

Keynote/Plenary Speakers;

1. Dr. Cynthia Pekow  
ICLAS and University of Washington, USA
2. Dr. Patricia Turner  
Professor, Department of Pathobiology  
University of Guelph, Canada
3. Dr. Wang Linfa  
Director, Programme in Emerging Infectious Diseases  
Duke NUS Medical School, Singapore
4. Dr. Lynn Anderson  
ICLAS and Covance Laboratories, USA
5. Prof. Mark Richards  
NUHS, Singapore

Speakers (By Invitation);

1. Dr. Ana Perez  
ICLAS/ Taconic
2. Dr. Ann Turner  
Executive Director  
AALAS
3. Dr. Anwar Norazit  
Faculty of Medicine, University of Malaya
4. Dr. Arvind Ingle  
ACTREC, India
5. Dr. Bruce Williams  
Senior Pathologist  
Joint Pathology Centre, USA
6. Dr. Chan Shing Leng  
Research Assistant Professor, Cancer Science Institute of Singapore  
NUS, Singapore
7. Prof. Chris Charles  
NUS, Singapore
8. Dr. Christian Bluechel  
Head of R&D, Biomedical Engineering Research Centre  
Temasek Polytechnic, Singapore
9. Mr. Christian Lawrence

- Boston Children's Hospital, USA
10. Dr. Christiane Geyer  
University Hospital Muenster, Germany
  11. Dr. Cynthia Besch-Williford  
IDEXX, USA
  12. Dr. Edward Chow  
Assistant Professor  
NUS, Singapore
  13. Dr. Enoka Bandularatne  
Philip Morris International Research, Singapore
  14. Dr. Erika Sasaki  
CIEA, Japan
  15. Dr. Eun Hee Kim  
KBIO, South Korea
  16. Dr. Fumio Ike  
Senior Research Scientist  
RIKEN, Japan
  17. Dr. Gao Kai  
Peking Union Medical College, China
  18. Dr. Gao Ran  
Associate Professor  
Institute of Laboratory Animal Sciences
  19. Dr. Hansjoachim Hackbarth  
University of Veterinary Medicine, Germany  
\*Absent with apologies\*
  20. Dr. Hansoo Park  
Assistant Professor  
Gwangju Institute of Science and Technology, South Korea
  21. Dr. Holl Davun  
Royal University of Agriculture, Cambodia
  22. Dr. Ilonka Guenther  
NUS, Singapore
  23. Dr. Jason Villano  
Asst Professor, Unit for Laboratory Animal Medicine  
University of Michigan, USA
  24. Dr. Jeff Wyatt  
University of Rochester, USA
  25. Dr. Kathryn Bayne  
AAALAC-I, USA
  26. Dr. Ki Taek Nam  
Yonsei University, South Korea
  27. Dr. Lars Mikkelsen  
CEO  
Ellegaard Gottingen, Denmark

28. Dr. Mangala Gunatilake  
Founder of SLALAS
29. Dr. Manuel Berdoy  
ICLAS/University of Oxford
30. Prof. Mark Chan  
NUHS, Singapore
31. Prof. Maria Nilda M. Munoz  
Science Ambassador  
Department of Science and Technology (DOST) , Philippines
32. Dr. Ng Lee Ching  
Director  
EHI, Singapore
33. Dr. Nguyen Ba Tieg  
Head of Laboratory Animal Center  
Vietnam National University of Agriculture
34. Dr. Norjmaa Batchimeg  
Senior Specialist  
Science and Technology Center, MNUMS, Mongolia
35. Prof. Patri Vergara  
Professor in Physiology  
School of Veterinary Science, Universitat Autònoma de Barcelona, Spain
36. Dr. Philip Lee  
A\*STAR, Singapore
37. Dr. Raj Uthamanthil  
Fred Hutchinson Cancer Research Center, USA
38. Ms. Sally Westlake  
AALAS, USA
39. Dr. Satoshi Kunita  
Jichi Medical University, Japan
40. Dr. Shinya Ayabe  
RIKEN, Japan
41. Dr. Suzanne Craig  
Medical University of South Carolina, USA
42. Dr. Takeshi Takahashi  
CIEA, Japan
43. Dr. Tam Wai Leong  
Principal Investigator  
GIS, Singapore
44. Dr. Tom Carney  
Assistant Professor  
Lee Kong Chian School of Medicine, NTU
45. Dr. V A Barathi  
SERI, Singapore
46. Dr. Vanessa Jensen

University of Texas, USA

47. Dr. Vijay Pal Singh  
CSIR-Institute of Genomics & Integrative Biology, India
48. Dr. Yasuyuki Shiraishi  
Associate Professor  
Tohoku University, Japan
49. Dr. Yoshihiro Miwa  
Asst Professor, Department of Molecular Pharmacology  
University of Tsukuba, Japan
50. Ms. Chin Poh Yin  
SPRING Singapore

Congress Participants;

Total number of participants = 429

Local Delegates (Singapore): 242

Overseas Delegates: 187

Countries Breakdown (Overseas):

- Australia = 3
- Austria = 1
- Cameron = 1
- Canada = 4
- China = 16
- Djibouti = 1
- France = 1
- India = 12
- Indonesia = 16
- Japan = 18
- Malaysia = 15
- Mongolia = 1
- Netherlands = 1
- Nigeria = 1
- Philippines = 16
- Sierra Leone = 1
- South Korea = 36
- Spain = 1
- Sri Lanka = 1
- Switzerland = 1
- Taiwan = 20
- Thailand = 15
- United Kingdom = 1
- United States = 4

Final Program;

7<sup>th</sup> November 2016 (Pre – Congress)

Pathology of research animals: Charles Louis Davis DVM Foundation

The 3Rs in Action: Practical Implementation in Research Settings

ICLAS General Assembly

Congress Welcome Dinner

8<sup>th</sup> November 2016

Opening and speeches : Guest of Honour and AFLAS President

Keynote Speaker #1 : Beneficiaries of Laboratory Animal Science : Cynthia Pekow, ICLAS and U of Washington, USA

Break, vendor exhibits and poster set-up

Keynote Speaker #2 : Harmonising global animal welfare for advancing frontiers in Lab Animal Science : Lynn Anderson, ICLAS and Covance Laboratories, USA

Keynote Speaker #3 : Global Perspectives on the Role of Gut Microbiota on Animal Model Reproducibility : Pat Turner, Ontario Vet College, Canada

Voice of One : Speaking on Animal Research : Ann Turner, AALAS, USA

Lunch, vendor exhibits and poster viewing

Theme : Emerging Infectious Diseases

Keynote Speaker : Bats and emerging infectious diseases : Wang Linfa, Duke NUS Medical School, Singapore

Vector Borne Arbovirus, including Zika virus, in Asia : Ng Lee Cheng, EHI, Singapore

The importance of basic research in infectious diseases of laboratory animals : Fumio Ike, RIKEN, Japan

Break, vendor exhibits and poster viewing

Theme : Translational Research and Cardiovascular Trials in Asia

Keynote Speaker : Is Singapore facing Cardiovascular Catastrophe? Mark Richards, NUHS, Singapore

Preclinical translational approaches in artificial organ research : Yasuyuki Shiroishi, Tohoku University, Japan

Thrombotic and bleeding models for antithrombotic drug discoveryAnimal models of thrombosis and bleeding : Mark Chan, NUHS, Singapore

Modelling the spectrum of cardiovascular disease: Ovine and porcine studies : Chris Charles, NUS, Singapore

9<sup>th</sup> November 2016 – 2 tracks (Olivia or Sophia Room)

Olivia Room

Track A : Advancing Frontiers with Animal Models and Continuing Education

Genetically modified marmoset for modeling human disease : Erika Sasaki, CIEA, Japan

Development and application of novel humanized mice with improved human immune system : Takeshi Takahashi, CIEA, Japan

Establishment of an evaluation system for efficacy for new drug candidates using humanized mouse models : Eun Hee Kim, KBIO, South Korea

Break, vendor exhibits and poster viewing

Pig model of kidney failure : Christian Bluechel, AWAK

Creating a World Class Program through Training and Certification : Sally Westlake, AALAS, USA

Continuing Education in Lab Animal Science : Jason Villano, U of Michigan, USA

Lunch, vendor exhibits and poster judging

Track C : Pathology of Laboratory Animals

Case studies on emerging / tropical diseases (1) : Bruce Williams, Joint Pathology Centre, USA

Case studies on emerging / tropical diseases (2) : Bruce Williams, Joint Pathology Centre, USA

Pathologic lesions in animal models of diabetic retinopathy : V A Barathi, SERI, Singapore

Break, vendor exhibits and poster viewing

The Other 3R's - Recognize, Remove and Retest: Addressing Challenges in Rodent Health Monitoring : Cynthia Besch-Williford, IDEXX, USA

Mouse digestive tract pathology : Ki Taek Nam, Yonsei University, South Korea

Mouse resources to understand human disease pathogenesis : Shinya Ayabe, RIKEN, Japan

Zebrafish pathology : Cynthia Besch-Williford, IDEXX, USA

Sophia Room

Track B : Refinement, Alternatives, 3Rs

Pain recognition, assessment and mitigation in rodents : Pat Turner, Ontario Vet College, Canada

Frontiers in refinements : Hansjoachim Hackbarth, U of Vet Med, Germany

In vivo optical imaging: blessing or curse for the 3Rs? : Christiane Geyer, University Hospital Muenster, Germany

Break, vendor exhibits and poster viewing

ICLAS Laboratory Animal Quality Programs : Patri Vergara, ICLAS

ICLAS Genetic Monitoring Program : Ana Perez, ICLAS

Experimental Design : Manuel Berdoy, ICLAS

Lunch, vendor exhibits and poster judging

Track D : Patient Derived Xenografts

Nanotechnology and Cancer in Rodent Models : Suzanne Craig, Med U of S Carolina, USA

Nanotechnology in Non-Rodent Models : Vanessa Jensen, U of Texas, USA

Patient Derived Tumor Xenograft Models – Promise, Potential and Practice : Raj Uthamanthil, Fred Hutchinson Cancer Research Center, USA

Break, vendor exhibits and poster viewing

Current Advances in Patient Derived Xenograft Models : Tam Wai Leong, GIS, Singapore

Transforming Clinical Samples into Mouse Models with Patient Derived Xenografts : Chan Shing Leng, NUS, Singapore

Genomic Medicine and Patient Derived Xenograft : Hansoo Park, Ewha Womans University, S Korea

Maximising take rate of human tumour xenografts for oncology drug developments : Arvind Ingle, ACTREC, India

10<sup>th</sup> November 2016 – 2 tracks (Olivia or Sophia Room)

Olivia Room

Track E : Biomedical Imaging

Metabolic imaging with hyperpolarized C13 : Philip Lee, A\*STAR, Singapore

Imaging of Orthotopic Mouse Models of Hepatocellular Carcinoma : Edward Chow, NUS, Singapore

Application of large animal imaging in medical research and drug development : Ilonka Guenther, NUS, Singapore

Break, vendor exhibits and poster viewing

Recent Advances in Molecular Imaging : Kai Gao, Peking Union Medical College, China

Development of model mice for in vivo non-invasive Near Infra Red imaging : Yoshihiro Miwa, University of Tsukuba, Japan

In Vivo Optical Imaging in Animal Experiments: A Tightrope Walk between Possibilities and Limitations : Christiane Geyer, University Hospital Muenster, Germany

Lunch, vendor exhibits and poster viewing

Track G: AFLAS Country updates

China (Gao Ran), Sri Lanka (Mangala Gunatilake),

Philippines (Maria Nilda Munoz) and Mongolia (Batchimeg Norjmaa)

Break

Vietnam (Ngeyen Ba Tiep) and Cambodia (Holl Davun)



Sophia Room

Track F : Social Housing and Aquatics

Behavioral considerations for social housing of macaques and marmosets : Kathryn Bayne, AAALAC-I, USA

Rabbit social housing : Jeff Wyatt, U of Rochester, USA

Minipig socialisation and enrichment : Lars Mikkelsen, Ellegaard Gottingen, Denmark

Break, vendor exhibits and poster viewing

New frontiers of zebrafish science: implications for veterinary care and management : Christian Lawrence, Boston Children's Hospital, USA

Small Fish, Big Pond' : Anwar Norazit, University of Malaya, Malaysia

Surveying the peptidome both confirms CRISPR mutations and defines pathomechanism' : Tom Carney, NTU, Singapore

Lunch, vendor exhibits and poster viewing

Track H : Best Practices, etc

Singapore's GLP Compliance Program : Chin Poh Yin, SPRING Singapore

Pathology Data Collection & Reporting Best Practices : Patricia Neves, PMI Singapore

Progress in standardization of laboratory animal welfare in Japan : Satoshi Kunita, Jicji Medical University, Japan

11<sup>th</sup> November 2016 (Post – Congress)

ICLAS Ethics Workshop (Half Day)

Advanced IACUC Course [AAALAC International] (Whole Day)

Microsurgery Workshop (Whole Day)

Pictures;

**Cambodia**



**Mongolia**



**Philippines**



**Sri Lanka**



**China**



**Vietnam**



ICLAS Ethics Workshop



