Summary Report of:

7th AFLAS Congress (Singapore)

Dates: 7th to 11th 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 Tiep  
   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
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;

7th 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

8th 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 discovery: Animal models of thrombosis and bleeding: Mark Chan, NUHS, Singapore

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

9th 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
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
10th 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 (Nguyen 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

11th 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
ICLAS Ethics Workshop
Today's Agenda

- Ethics
- Ethics and making decisions
- Tea Break
- Design of animal experiments
- Welfare as a top priority