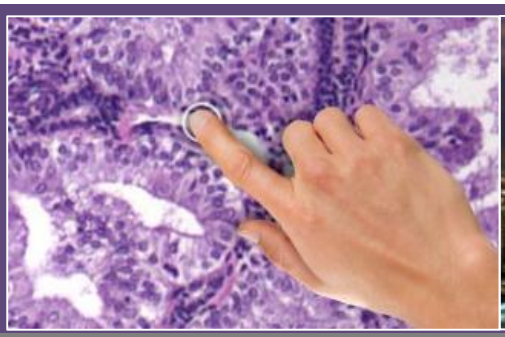
22nd-23rd August 2016, Kuala Lumpur



2nd Digital Pathology Congress: Asia

UNDERSTANDING & UTILIZING DIGITAL PATHOLOGY AS A TOOL FOR ADVANCING PATHOLOGY PRACTICE & ENABLING ENHANCED PATIENT CARE

Following the success of their 2015 meeting, Global Engage is pleased to announce the 2nd Digital Pathology Congress: Asia which will be held on August 22nd-23rd 2016 in Kuala Lumpur, in conjunction with the International Academy of Pathology, Malaysian Division. The conference is the sister meeting to the highly successful European event, and is part of Global Engage's Digital Pathology series, which includes events in America each July, and Dubai each November. **We are also pleased to announce that the event will be opened by Dato Dr Azman Abu Bakar, Director of Medical Development Division at the Ministry of Health Malaysia.**

Digital Pathology offers increased workflow efficiency, greater interconnectivity, and the possibility to utilise image analysis software in a wide range of pathological applications. These advances are allowing improved decision making and diagnostic capability, ultimately enabling enhanced patient care. As a result of these advantages, Digital Pathology is rapidly gaining momentum worldwide. Within Asia, the growth of Digital Pathology is facilitating the creation of telepathology networks, providing an infrastructure able to cope with the demands of growing populations.

Attracting over 150 industry & academic experts in 2016, this two-day interactive meeting will provide the opportunity to take home cutting edge strategies, techniques, and case study examples to allow you to fully understand the technology, accompanying informatics and image analysis tools. This will be achieved through a vibrant exhibition room, full of solution providers showcasing their technologies, networking breaks, poster presentation sessions, expert led case study presentations and incisive Q&A panel discussions.

Confirmed speakers include:

Jianyu Rao
Professor of Pathology, Chief of Cytopathology and Director of International Telepathology Program, David Geffen School of Medicine, UCLA

Dongfeng Tan
Professor, Division of Pathology & Lab Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX

Toby Cornish
Associate Professor and Director of Pathology Informatics at University of Colorado Anschutz Medical Campus

Conference Synopsis

Digital Pathology - Strategy and Technology

- Introduction, benefits & future developments of Digital Pathology
- Implications on pathology practice
  - Uses in education and training
  - International trade and its ramifications
- Converting to/ integration of digital pathology
  - User implementation experiences
- Technology advances in digital pathology
- Standardisation in Digital Pathology
- Regulations in Digital Pathology
- Quality assurance, control and improvement
- Validation methods
- Panel Discussion – Overcoming barriers in adoption of Digital Pathology

Pathology Informatics

- Acquisition, processing, archiving & retrieval of WSI
- Improving WSI workflow efficiency
- Cloud computing / storage solutions
- Access through mobile devices
- Pathology PACS
- Pathology IT
- Integration with LIMS / LIS
- Telepathology
  - Virtual networks
  - Use in remote areas

Virtual Microscopy & Digital Image Analysis

- Overcoming challenges in image analysis
  - Image standardization
  - Troubleshooting guide
- Computer aided diagnoses
- User interfaces
- Image registration
- Image quality and scanning speed
- Quantitative image analysis research
- Visualization methods for diagnosis and prognosis
- Image Processing
- Pattern recognition
- Scoring & Annotation tools
- Algorithm development / Image analysis algorithms

Digital Pathology Applications and Research Case Studies

Research case studies utilizing digital pathology in: -

- Clinical trials support
- Diagnosis
- Diagnostics
- Next generation sequencing
- Biomarker analysis /research / quantification
- Tissue-based research / imaging
- Biobanking
- Precision / personalised medicine
- Image analysis

This year's event will be held in conjunction with the International Academy of Pathology, Malaysia Division. The IAP is dedicated to the advancement of pathology though educational exchanges worldwide. Collectively, providing a forum for the presentation and discussion of advances in the understanding of pathological process, and for the presentation of scientific, technological and methodological advances.

2nd Digital Pathology Congress: Asia - Sponsors 2016

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08.00-08.55	**Registration & Coffee**
08.55-09.00	**Global Engage Opening Address**
09.00-09.30	**Practice of Digital Pathology in Academic and Private Settings** Principles of digital pathology and major roles are outlined with practical examples and experiences gained during the past three years. Efficient communications, turnaround time, and team efforts are to be discussed. Potential of digital pathology in the era of precision medicine is to be addressed. Confirmed: **Dongfeng Tan, Professor, Division of Pathology/Lab Medicine, The University of Texas MD Anderson Cancer Centre, Houston,**
09.30-10.00	**International Telepathology 2nd Opinion Consultation: Opportunities and Challenges** A Telepathology program was initially established in October 2010 between the medical center of University of California at Los Angeles (UCLA) and the Second Affiliate Hospital of Zhejiang University (SAZJU), People's Republic of China. The program has been expanded to multiple hospitals and institutions in China. The function of the Telepathology is to provide second opinion diagnosis by UCLA pathologists to physicians in various institutions abroad. Both cytological and histological cases are included. Our successful Telepathology operation has stimulated other activities including Tele-radiology, Tele-oncology, Tele-pediatrics, etc. In this discussion, we will discuss the opportunities of International Telepathology, and share our experience as well as challenges in all aspects of Telepathology, including technical requirements, legal issues, billing and charging, and QC issues. Confirmed: **Jianyu Rao, Professor of Pathology Epidemiology, Chief of Cytopathology and Director of International Telepathology Program, Ronald Reagan Medical Center and David Geffen School of Medicine, UCLA**
10.00-10.30	**Opening Ceremony** 10:00 – **Arrival of Y.B Dato' Dr Azman Abu Bakar, Director of Medical Development Division at the Ministry of Health Malaysia** 10:05 – **Welcome by Dato' Dr Norain Karim, Consultant Pathologist and Head of Pathology Department, Hospital Raja Permaisuri Bainun** 10:10 – **Address by Global Engage** 10:15 – **Opening Address Y.B Dato' Dr Azman Abu Bakar, Director of Medical Development Division at the Ministry of Health Malaysia** 10:20 – **Multimedia Presentation: 'The benefits of Digital Pathology'**
10.30-11.40	**Morning Refreshments** **Poster Presentation Sessions** **One-to-One Meetings**
11.40-12.10	Confirmed: **Tan Soo Yong, Head of Histopathology & AMPL Senior Principal Investigator, A* STAR Institute of Molecular and Cell Biology**
12.10-12.40	Confirmed: **Samar Betmouni, Director Clinical Pathology, Faculty of Life Sciences, Deputy Director Health & Wellbeing Centre, DHEZ, University of Bradford**
12.40-13.10	**Solution Provider Presentation** For sponsorship opportunities please contact Gavin Hambrook / Nick Best at Sponsorship@globalengage.co.uk
13.10-14.10	**Lunch** **Poster Presentation Sessions** **One-to-One Meetings**
14.10-14.40	**Technical guidelines for digital pathology systems and equipment harmonized with digital pathology clinical guidelines** In Japan, telepathology applications for intraoperative quick diagnosis commenced in the mid-1990s. Some standardization activities related to telepathology also commenced. A common communication protocol to connect different types of telepathology systems to each other was demonstrated in 2000, although these were not considered practical. Pathologists discussed and established telepathology clinical guidelines in 2005. Recently, whole slide imaging systems became popular in the fields of telepathology quick diagnosis and telepathology consultation. The Japanese Society of Digital Pathology organized a technical guidelines committee (TGC) and clinical guidelines committee (CGC) in 2014. In 2015, the TGC proposed draft technical guidelines and CGC proposed draft clinical guidelines. In 2016, the TGC and CGC had joint meetings to harmonize those guidelines. Confirmed: **Ikuo Tofukuji, Professor, Department of Healthcare Informatics, Faculty of Health and Welfare, Takasaki University of Health and Welfare**
14.40-15:10	**Solution Provider Presentation** For sponsorship opportunities please contact Gavin Hambrook / Nick Best at Sponsorship@globalengage.co.uk
15.10-15.40	Confirmed: **Shanorbanun Sahran, Associate Professor and Head of Centre for Artificial Intelligence Technology, Universiti Kebangsaan Malaysia**
15.40-16.40	**Afternoon Refreshments** **Poster Presentation Sessions** **One-to-One Meetings**
16.40-17.10	**Next Generation Tissue Pathology in the era of Precision Oncology** Precision medicine is beginning to permeate into cancer and non-cancer diseases, both anatomical pathology and oncology sits at the vanguard. Cancer is a genomic disease with most malignancies harbouring a myriad of both mutated oncogenes and tumour suppressor genes that orchestrate multiple molecular pathways. Global efforts to characterise thousands of genomes spanning all major cancer types has benefited the pathology and oncology community immensely both for diagnostic and therapeutic biomarkers. In recent years the hallmarks of cancer have been updated to include the tumour microenvironment, which is a dynamic and complex entity, comprised of a milieu of cellular phenotypes. The current "*grind and find*" approach to molecular analyses leads to the loss of tissue context, which has been shown in recent years to be of clinical significance. This talk will discuss and demonstrate the development of both next generation tissue assays and novel digital pathology applications to evaluate the tumour microenvironment that may serve as complementary diagnostics in the era of precision oncology. Confirmed: **Ryan Hutchinson, Fellow in Molecular Pathology, University of Melbourne**

17.10-17.40 **Through the Microscope: A Molecular adjunct to Histological analysis**

While a great many things can be determined from visual analysis of a tumour, many of today's anti-cancer therapies rely on molecular diagnosis to determine if they will be effective. As a result multiple studies have been done since the early 2000's to determine what frequency of a given mutation is significant when determining a course of treatment. Many of these studies use only a broad estimate of tumour purity when extracting DNA, and as a result there is often disagreement between studies over the threshold of significance. Working with newly developed software to more precisely calculate tumour purity along with highly sensitive molecular pathology techniques, our study aims to better correlate variant allele frequency with tumour cell percentages for a clearer reference of what mutant percentages are decisive in patient treatment.

Confirmed:
Anthony Dowers, Fellow, University of Melbourne

Chairman's Closing Remarks and End of Day 1

17.40-18.40 **Drinks Reception**

Day 2 2nd Digital Pathology Congress: Asia – 22nd-23rd August 2016, Kuala Lumpur, Malaysia

08.30-09.10 **Morning Coffee**
One to One Meetings

09.10-09.45 **WSI Telepathology for International Expert Consultation and Second Opinion**

Digital Pathology has the potential to disrupt and reshape many areas of pathology practice, including how expert consultation services are marketed and delivered. Because of its digital nature, it facilitates remote diagnosis and has the potential to eliminate great distances and erase international borders. In the United States, for example, a number of academic reference laboratories are trying to establish digital international consultation services. Despite the potential of global digital consultation services, there remain significant logistical, cultural, political and technical barriers that must be overcome. These barriers and different approaches to overcoming them will be discussed.

Confirmed:
Toby C. Cornish, MD, PhD, Associate Professor of Pathology, Medical Director of Pathology Informatics, University of Colorado School of Medicine

09.45-10.20 **Early Adoption and Implementation of Digital Pathology**

The University of Pittsburgh Medical Center has been at the forefront of implementing and adopting digital pathology. This has included telepathology as well as primary sign-out. The lessons learned from early adoption and recommendations for the utilization of digital pathology will be discussed. Telepathology efforts have been with other sites in the United States as well as international. Additionally, we have begun implementing digital pathology and integrating digital pathology in a prospective, in-line fashion within the workflow of our laboratory and this process will be discussed.

Confirmed:
Douglas Hartman, Associate Professor of Pathology and Associate Director or the Pathology Informatics Division, University of Pittsburgh

10.20-10.50 **Solution Provider Presentation**

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10.50-12.00 **Morning Refreshments**
Poster Presentation Sessions
One-to-One Meetings

12.00-12.30 **Knowledge management in context: Implications for clinical pathologists**

Modern clinical laboratories are highly efficient, but bring challenges for the clinical pathologist. How does the pathologist provide timely, patient-specific interventions within the constraints of a high volume automated environment?

We have deployed the Rippledown knowledge management system to facilitate pathologist-managed, patient-specific clinical intervention in patient care. This includes highly contextual diagnostic interpretation and physician-directed advice on guideline compliance. As well, Rippledown allows us to automate highly context-specific business rules and individual client preferences such as reflex testing, billing and others. Rippledown automates the management of contextual conflicts, reducing the need for high level knowledge engineering support and protracted testing. Clinical pathologists themselves own and manage the knowledge acquisition as a routine desktop tool. Evidence of benefit includes improving rates of detection for Familial Hypercholesterolaemia (FH). Early detection of FH allows effective treatment, yet this disorder with greatly increased of CAD and early death is under-diagnosed in the community. The rapid growth of a highly nuanced clinical knowledge base brings its own challenges. Moving away from basic, explicit rules models, which are context-poor but highly auditable, reduces the transparency of the knowledge representation. Thus performance at a near-human level seems to require a trade-off between effectiveness and auditability. These challenges require further analysis by the clinical pathology community.

Confirmed:
Glenn Edwards, National Medical Director at St John of God Pathology

12.30-13.00	**Delivering safe and effective test result communication, management and follow-up** The quality and safety of patient care is under risk by pathology or medical imaging results that are not seen and followed up. Previous research has shown instances where test results are not followed up in 20 – 65% of inpatients and in up to 75 % of patients treated in an emergency department. Health information technology (IT) can play a very important role in ensuring that all test results are followed up in a timely manner. However, the utilisation of health IT needs to be underpinned by clearly defined standards of communication, responsibility and accountability. This involves the engagement of all stakeholders including pathology, medical imaging, hospital management and patients, to ensure that test result communication, management and follow-up is safe and effective. Confirmed: **Andrew Georgiou, Senior Research Fellow at Centre for Health Systems & Safety Research, Centre for Health Systems and Safety Research, Macquarie University**
13.00-13.30	**Solution Provider Presentation** For sponsorship opportunities please contact Gavin Hambrook / Nick Best at Sponsorship@globalengage.co.uk
13.30-14.30	**Lunch** **Poster Presentation Sessions** **Scheduled One-to-One Meetings**
14.30-15.00	Confirmed: **Chee Bin Ong, Veterinary Pathologist, A* STAR Institute of Molecular and Cell Biology, Malaysia**
15.00-15.30	**Moving Pathology Team Based Learning into the Digital Age** Team Based Learning (TBL) consists of individual readiness assurance test (iRAT), team readiness assurance test (tRAT), team applications (tAPP), and peer assessment components In order to eliminate paper and simplify administration, these components were made into web deliverable modules. The web-based tRAT & tAPP have the full functionality of expensive self-scoring scratch off multiple answer sheets. Peer assessment modules allow each team member to rate their peers using either radio buttons, sliding bars, or divide the points as well adding text comments. Real time monitoring is now effortlessly possible. From database stored results, learners can track their performance and midterm & final grades are automatically calculated using any percent weighting for iRAT, tRAT, tAPP, and peer assessment. Confirmed: **Richard Lindquist, Associate Professor, Pathology and Laboratory Medicine, University of Connecticut SOM**
15.30-16.00	**Detection & extraction of oesophagus epithelial layer from virtual slide** - What is the boundary effect and how do we overcome it? - Detecting and extracting the epithelial layer - Dysplasia Grading using epithelial texture features Confirmed: **Afzan Adam, Associate Professor and Director of Pathology Informatics at University of Colorado Anschutz Medical Campus**
16:00-16:30	Reserved: **Dickson Lukose. Chief Research Director - Big Data Analytics, Semantic Technology, Artificial Intelligence, MIMOS**
16.00-16.30	**Afternoon Refreshments** **Poster Presentation Sessions**
16.30	**Conference Close**

Venue

Renaissance Kuala Lumpur Hotel
Corner of Jalan Sultan Ismail and
Jalan Ampang,
Kuala Lumpur
50450
Malaysia

A discounted group rate is available to all attendees. Details of how to book are available on registration. Space is limited and accommodation is available on a first come basis.