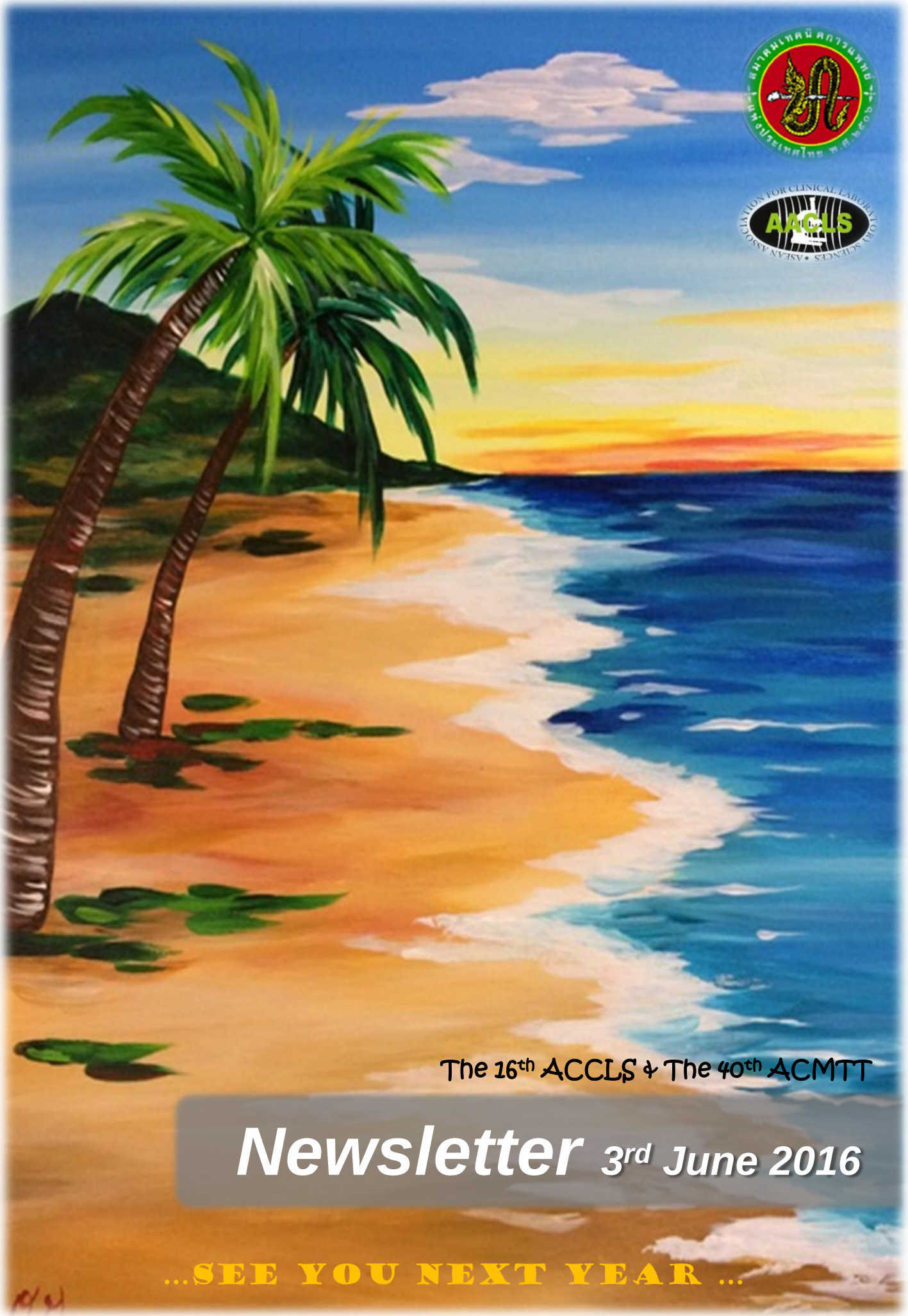
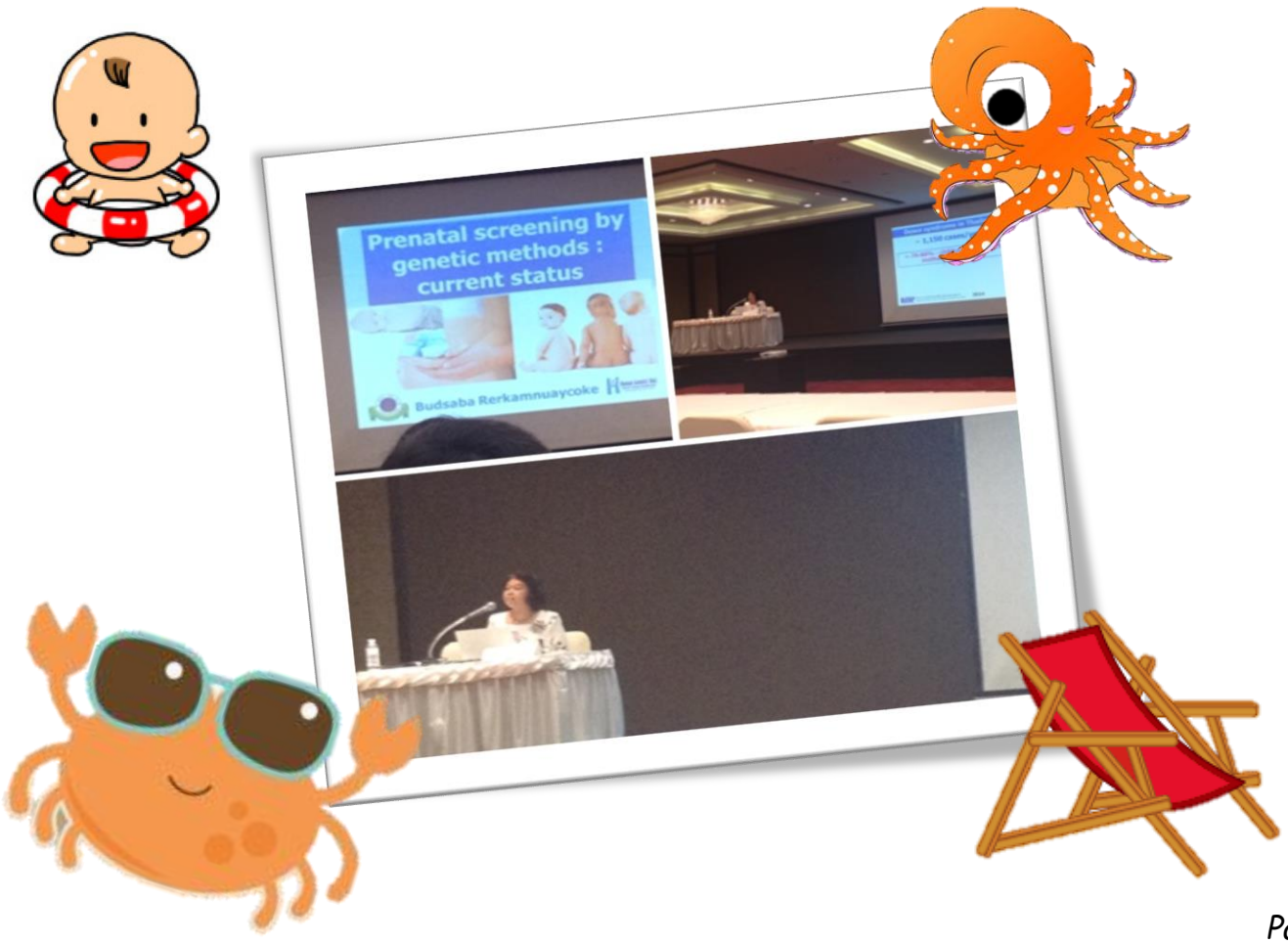
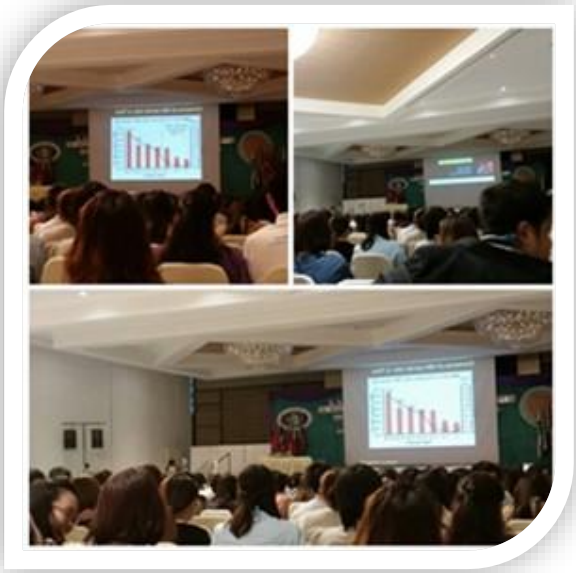

The 16th ACCLS & The 40th ACMTT
Newsletter 3rd June 2016
...SEE YOU NEXT YEAR ...

Prenatal screening by genetic methods: current status

This session presented by Assoc.Prof. Budsaba Rerkamnuaychoke (Ph.D.). The speaker lectured about the genetic techniques that involved in prenatal diagnosis. First, the lecturer pointed out the incidence of common genetic diseases, Down syndromes. Moreover, the lecturer illustrated the ideal goal of pregnancy that parents must have normal baby in both physical and mental characteristics. Next, the lecturer classified and described techniques for genetic disease screening and stated pros and cons of each technique. First techniques was cytogenetic analysis studying karyotype of fetal cells. This technique required cell culture skills and was time consuming technique. Second technique was fluorescence *in situ* hybridization (FISH) technique, which used specific probes to detect common abnormality chromosomes during cell division at interphase or metaphase stage. The limitation of this technique was the sensitivity when using multiple probes assay. Last, the speaker described some current method in routine genetic diagnosis laboratory. There were cytogenetic analysis, QF-PCR, BoBs, array CGH and NIPT. In addition, the speaker also emphasized the quality control in genetic laboratory and suggested the requirement of genetic counselling in routine genetic laboratory.



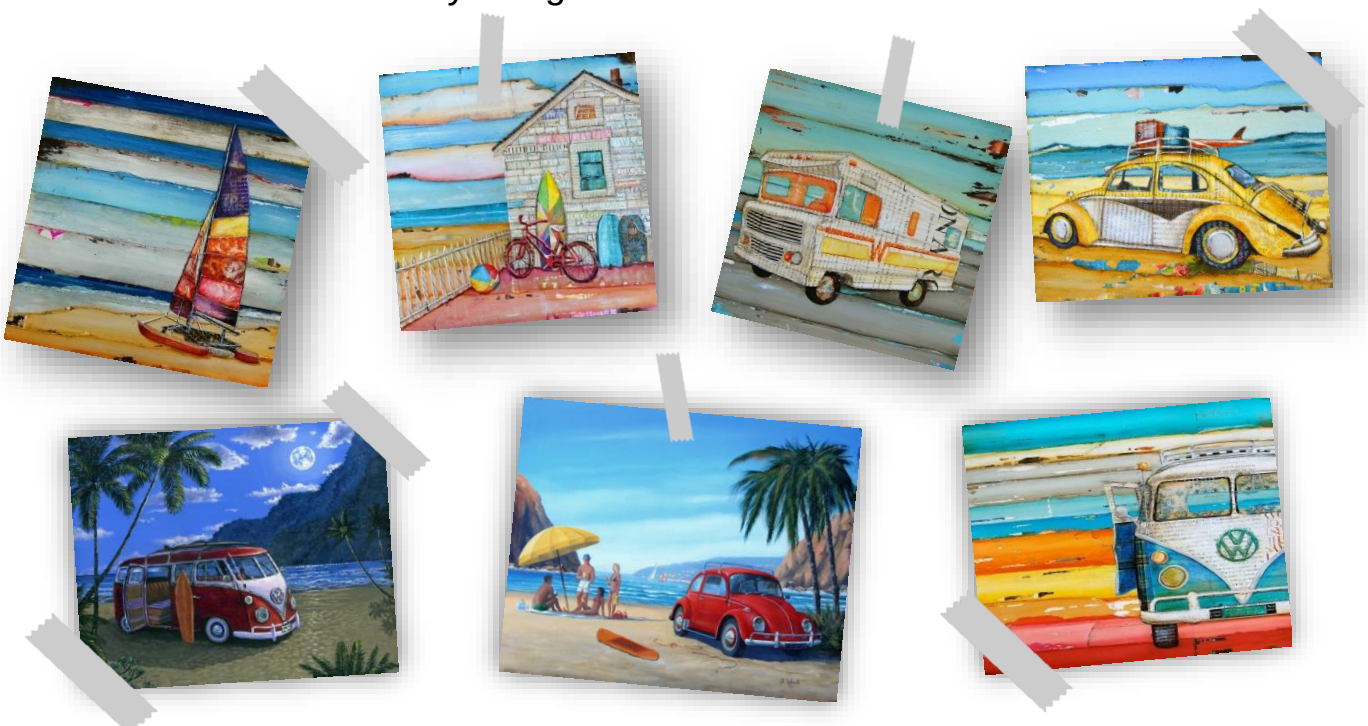
New era of viral hepatitis



This session presented by Assoc.Prof. Suda Louisirirotchanakul (Ph.D.). The speaker lectured about the virology of hepatitis virus and classification of hepatitis virus (A-E). The transmission of hepatitis A and E viruses (HAV and HEV) was from fecal-oral route whereas the hepatitis B and C viruses (HBV and HCV) was transmitted by blood, sexual intercourse and mother-to-child transmission. Moreover, the speaker summarized the laboratory test for hepatitis virus infection.

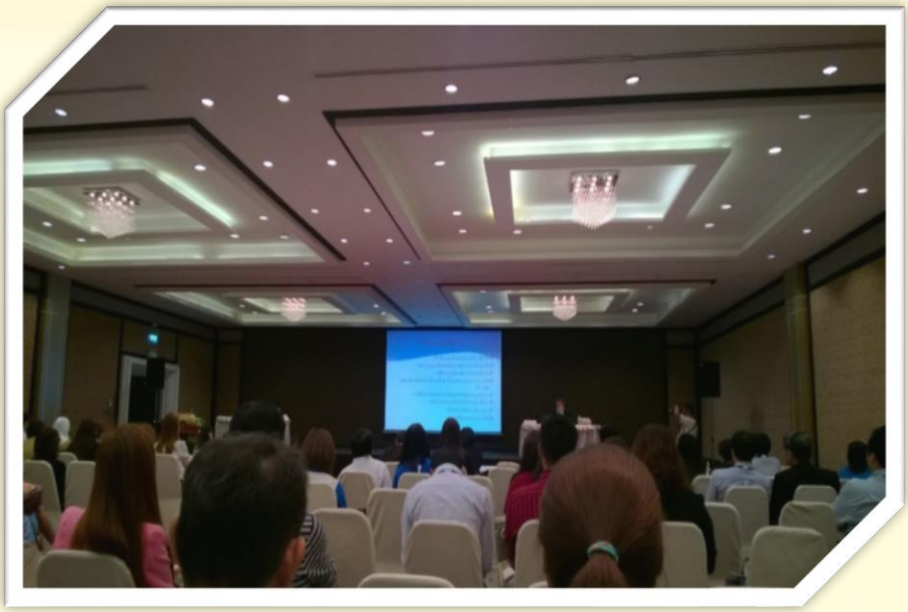
For example, acute HAV should be investigated by using anti-HAV IgM. HBsAg should be considered for confirming acute HBV infection. Anti-HCV and HCV RNA were done for confirming acute HCV infection. In HEV infection, anti HEV-IgM, HEV RNA virus should be considered for testing.

At present, HEV was considered as important virus in medical fields because of a high incidence. In Thailand, the prevalence was 4-5%, especially in elderly people. This virus could cause both acute and chronic infection. Chronic HEV infection was mostly found in immunosuppression patients. Treatment of HEV infection was successful by using ribavirin.



Highlight topic from 2nd day of meeting

How to deal with standard calibration



This topic was presented by Mr.Satit Sangme. As we know all the equipment which relate and effect to the lab result, need to be calibrated. Why? Because the calibration will show the error of equipment when compare with the standard one. With the standard calibration, the accuracy and precision lab result we will get.

Flow cytometry and its application

Prof. Dr. Kovit Pattanapanyasat kindly gave a lecture about the flow cytometry and its application. He said that the principle of Flow cytometry is quite basic “The analysis of cells which go through the column cell by cell using laser absorbance and present as analog signal”. However, the challenged thing is the result analysis. The more fluorescent we use, the more data we will get. We can calculate by the formula $\mathbf{2^n}$,. *n=the number of fluorescent color we use*. Nowadays, flow cytometry was applied for both clinical and research field.