## Award category 3 - Technology development and application through local partnerships

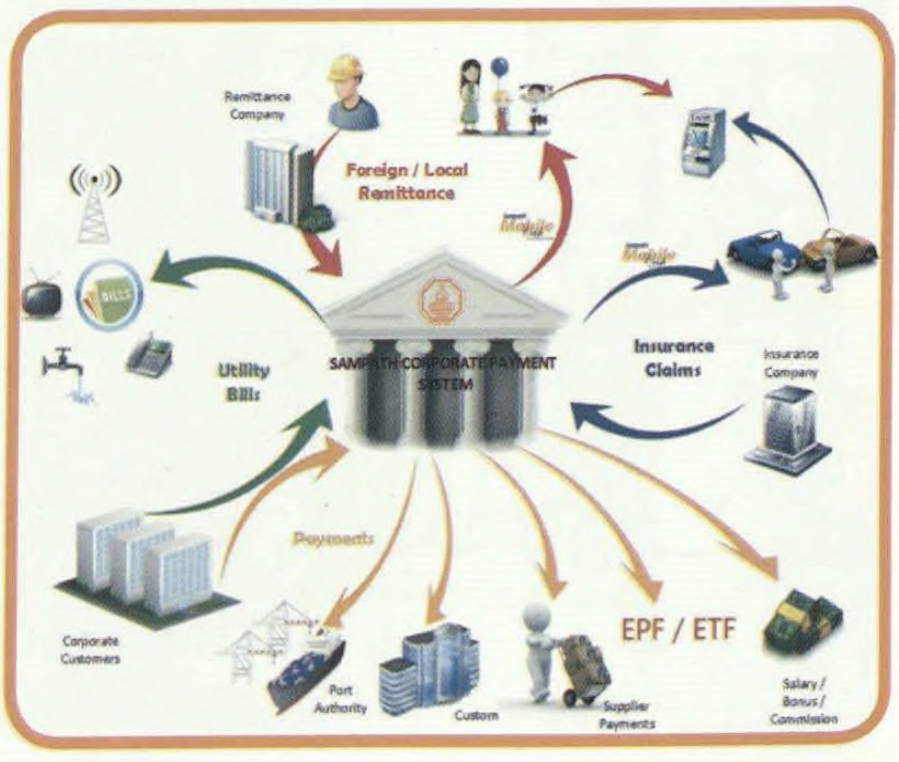
### Sampath Vishwa Corporate System

"Sampath Vishwa Corporate" system can be described as the only corporate financial payment portal available in Sri Lanka which supports for wide range of corporate financial needs with secure, hassle free, and fully automated advanced features. It enables various kinds of payments such as employee salaries, EPF/ETF payments, insurance payments, supplier payments, interest/dividend payments, commission payments, Custom duty and Port Authority payments and more. It supports for corporate customers executing multiple payments from a single platform who can now manage their financial necessities easily with less effort and lower cost. Apart from payments, Vishwa Corporate System provides valuable contribution towards imports and exports related services such as facilitating for open DCs, DC settlement, export purchases, export central collection etc.

Sampath Vishwa Corporate System has addressed all the issues related to payments and collections circumstances experienced by corporate customers. This system maintains secrecy and privacy of their payment details, and eliminates wasting money on cash and payment files transportation, postage fees, and delays in payment processes and so on.

Ability to handle any type of payment to anyone at anytime from anywhere is the uniqueness of Vishwa Corporate System. Even non account holders can be benefited through this system and 24X7 available multiple delivery channels guarantee continuous customer service through the system. Supporting for beneficiaries without pre-registration process and facilitating for cardless and bookless transactions are also unique features of Vishwa Corporate System.

Multi layered architecture has been adopted for the design of Vishwa Corporate System and it is equipped with security features such as multi-level authorization, data encryption, secured data transmission channels and secure PINs/ OTPs (One Time Password). Especially Vishwa Corporate System ensures the confidentiality of sensitive customer



information through sophisticated security features. The design of the system provides enormous expandability achieved by the capability of easy integration with external payment systems in the market. Development standards used for the system ensure robustness and performance of system in order to provide high quality service to its customers.

Vishwa Corporate System is an avenue of increasing fee-based income of the bank and it has already proven its value to corporate customers through high volume of transactions and the existing corporate customers with the Vishwa Corporate System.

## *About the winner*

Sampath Bank is one of the leading private sector banks in Sri Lanka; ranking 3rd largest in terms of total deposits, total advances & total Assets.

Being recognized as an emerging and dynamic player, they continued to maintain this image by expanding into all potential areas in the country, offering new products and innovative financial solutions and growing at a rapid pace. The Bank now has 219 branches located throughout the country.

Sampath Bank was able to record a post tax profit growth of 55.9% for the 3rd quarter of 2014. A number of Key financial ratios have been improved during the period as well, enabling Sampath Bank to become a much stronger player.

It is the objective of Sampath Bank to continue with this growth momentum in future, both in terms of business volumes & profitability and to become a driving force in Sri Lanka.

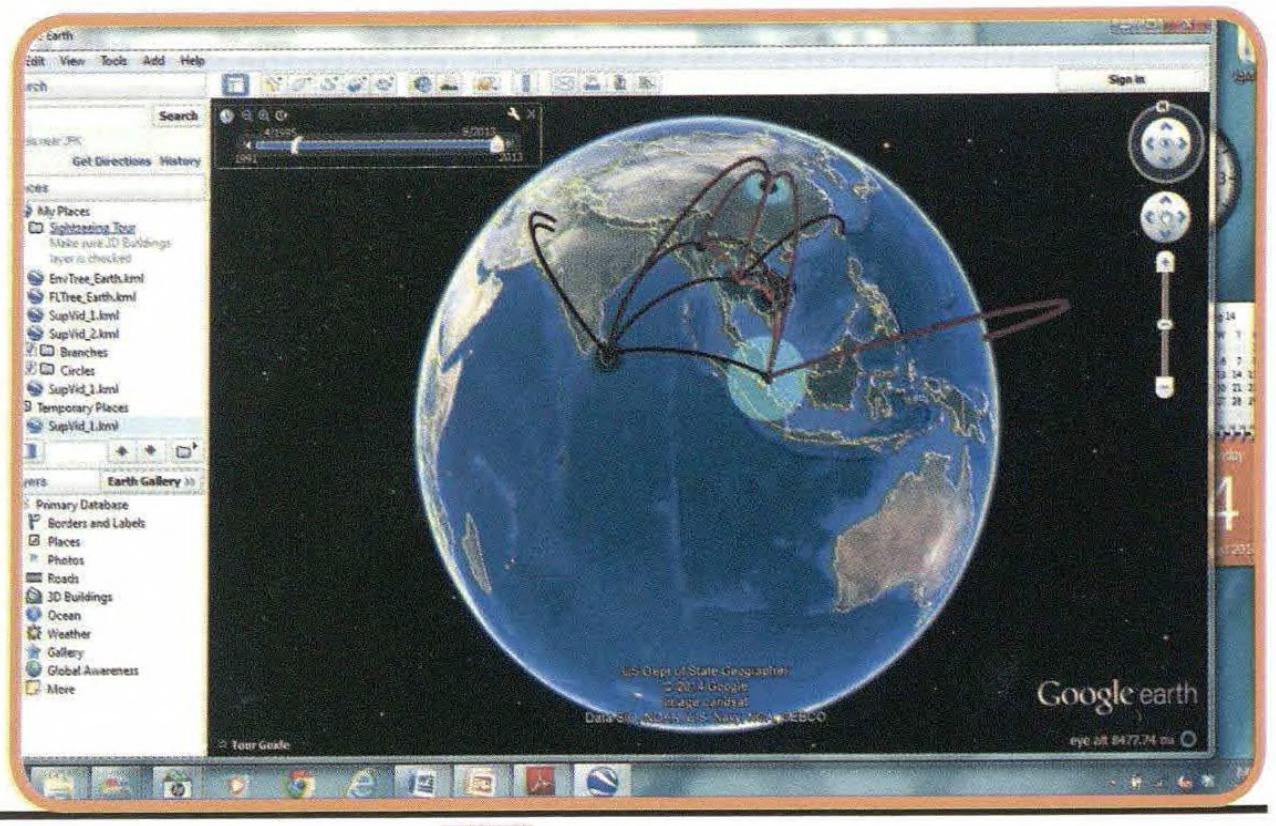
SampathBank
WE PRESENT YOUR FUTURE

## Award category 4 - Harnessing advanced technologies through international collaboration

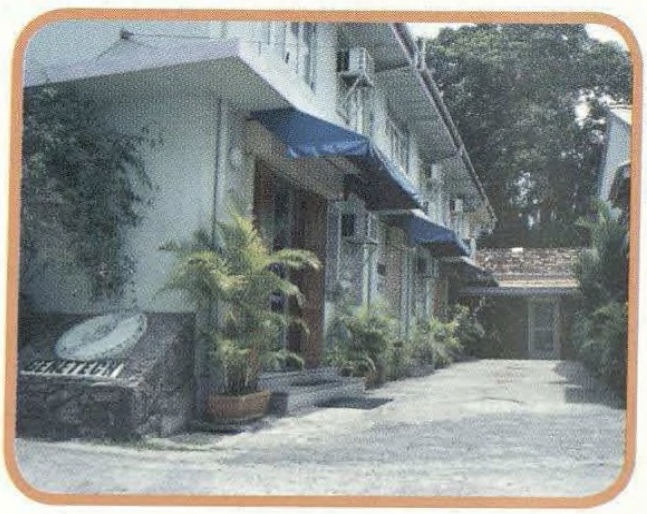
### Establishing an internationally funded research program to study dengue in Sri Lanka

Ever since 2009, dengue has been a serious problem afflicting Sri Lankan society. While the number of deaths has declined recently, there have been over 40,000 reported dengue cases in 2013. Unfortunately, relatively less basic research is being done in Sri Lanka to understand the problem as it relates to our population. These projects while being foreign funded largely, study dengue in the Sri Lankan context while the results can be applied globally. The Sri Lankan component of this work was done at Genetech Research Institute, a private non-profit research institute, in Sri Lanka, in collaboration with overseas institutes and all of the work was supported by foreign funds. Three main projects are highlighted in this work and two projects have resulted in scientific publications.

The Dengue T cell project was carried out in collaboration with Prof. Alex Sette at the La Jolla Institute of Allergy & Immunology (LIAI), California, USA. As part of the project, two Sri Lankan junior scientists worked at LIAI for a period of 3 months to be trained in T cell assays. This project started with the LIAI scientists using existing dengue strain information and HLA typing information to predict possible dengue T cell epitopes using advanced bioinformatics methods. A total of 8000 possible peptides were predicted in this manner and all of them were synthesized and tested using Sri Lankan healthy donor samples from individuals exposed to dengue in the past. This allowed us to identify ~400 biologically relevant peptides and of these ~300 were unique epitopes that no one else had identified before. This knowledge is currently being used to identify dominant peptides that are presented in acute dengue patients. This part of the project is ongoing and we have applied for more grants to further identify T cell receptors and to understand the adaptive immune response during a dengue infection. Further work has been done by Prof Sette's group using these peptides to test dengue vaccines which are in the trial stages to understand the efficacy of these vaccines.

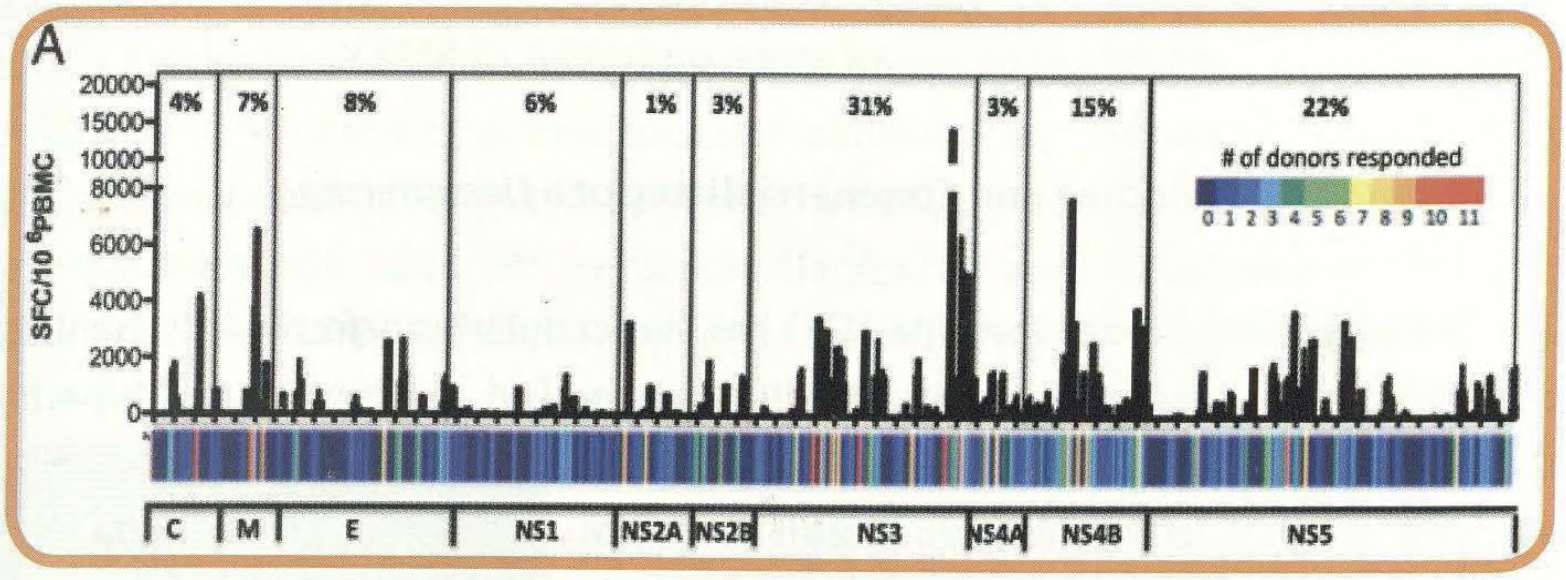


As we collected dengue patient samples we decided to follow up on some previous research done in collaboration with the Epidemiology Unit of the Ministry of Health to identify the currently circulating dengue strains. At this time, Dr Karen Ocwieja (MD/PhD student from University of Pennsylvania (UPenn), USA) wanted to visit our lab and was able to obtain a fellowship to fund her visit to Sri Lanka. The work she did utilized samples collected for our T cell project and viruses were isolated at GRI and full length sequencing was carried out. She collaborated with other scientists at UPenn in tracing the phylogeography of the dominant dengue 1 strain currently circulating (since 2009) in Sri Lanka. Our investigation showed that this strain is a particular virulent strain and had travelled from Thailand to China, then to Sri Lanka. From Sri Lanka it had travelled to Pakistan & Singapore. The American Journal of Tropical Medicine & Hygiene publication highlights this important work on tracing the travel of this virus.



The third project involves a US, National Institutes of Health funded global study to identify the genetic variants in humans that result in some humans having serious Dengue Hemorrhagic Fever(DHF) while others are normal when infected with the dengue virus (Dengue Population Genetics Program-DPGP). A global study with over 8000 dengue patients was planned by Prof. Mark Loeb at McMaster University, Canada and Sri Lanka was to contribute 1200 samples (with full clinical data plus multiple levels of testing) to this study. This study started at the beginning of 2012 and we have been able to collect a total of 560 mild dengue, 478 DHF and 202 control samples up to this point to complete the sample collection in Sri Lanka. All of the analysis is done using high throughput gene analysis and cannot be done in Sri Lanka. Currently the genome analysis is being done and results will be published in an international journal for all to benefit. This project will provide valuable population genetics data to understand whether individuals are more vulnerable to getting DHF when infected with the dengue virus.

All this work was done through the Genetech Research Institute in collaboration with two hospital sites in Sri Lanka (Dr Ananda Wijewickreme, Consultant Physician at Angoda Base Hospital/ Infectious Disease Hospital in Colombo and Dr Gayani Premawansa, Consultant Physician at North Colombo Teaching Hospital, Ragama). In addition, Prof Sunil Premawansa has been a collaborator in starting these projects and has supervised some of the side projects that have resulted from this work. The National Blood Center of the Ministry of Health, provided samples that could not be used by patients for the T cell project. Ethics approval for all these projects has been obtained from the Ethics Review Committee, Medical Faculty of Colombo, Sri Lanka.




Higher peak (black bars) show regions of the dengue virus proteins that are presented to T cells in humans. Weiskopf et al. E2046 - E2053, April 11, 2013

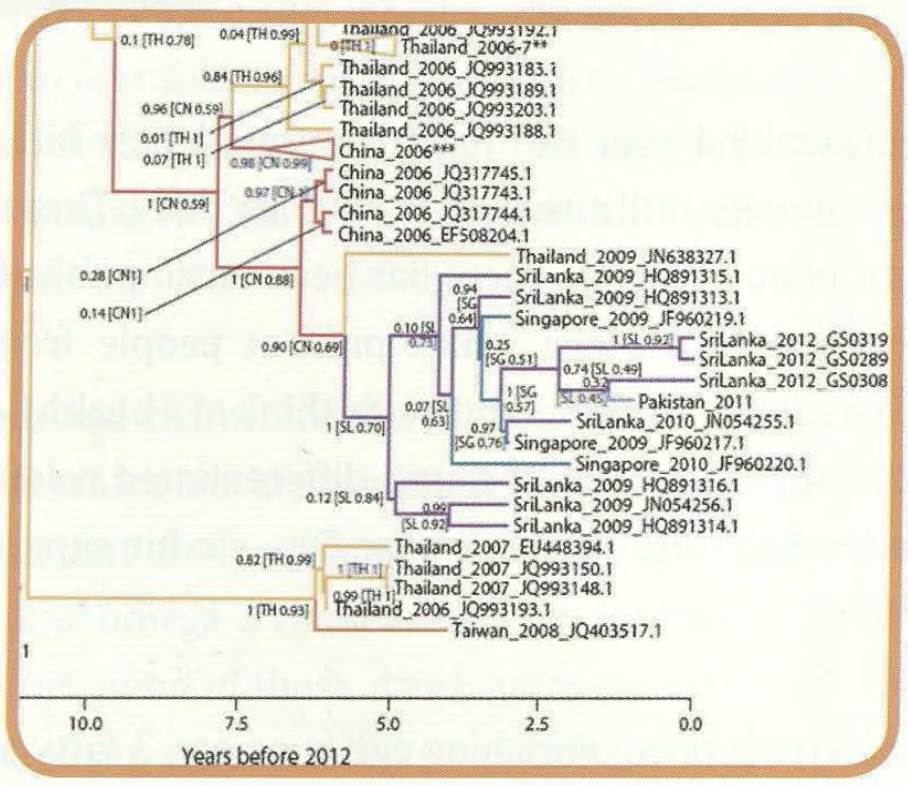
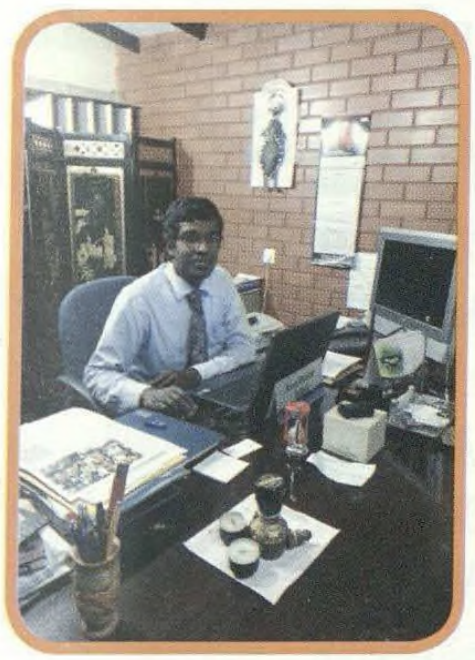



*Fig. 2, Ocwieja et al. Am.J.Trop.Med.Hyg., 91(2), 2014 pp.225-234*

## *About the winner*



**Dr Aruna Dharshan De Silva**

He is currently the Director/ Senior Scientist of Genetech Research Institute, Colombo, Sri Lanka. He is an Adjunct associate Professor at La Jolla Institute of Allergy & Immunology, California, USA and a visiting lecturer at University of Colombo. He obtained his PhD in Immunology from the Pennsylvania State University, College of Medicine, USA. His main research area focuses Dengue pathogenesis.