

PROF. OON'S SPEECH 25 ANNIVERSARY CELEBRATION OF THE SUCCESSFUL NATIONAL HEPATITIS B VACCINE PROGRAM & LAUNCHING OF BOOK "THE CANCER VACCINE WHICH TRANSFORMED SINGAPORE AND THE WORLD.

SATURDAY 2 OCTOBER 2010.@ OLD PARLIAMENT HOUSE, SINGAPORE @ 7.pm

Good Evening to all of you. Our Guest of Honor Minister of Health Khaw Boon Wan, Minister for Community Development, Sports and Youth Professor Vivien Balakrishnan, distinguished guests, and colleagues. I personally thank Minister Khaw Boon Wan for coming here to launch my book "The Cancer Vaccine that transformed Singapore and the World"

At the passing of the Abolition of Slavery throughout the British Empire by an Act of the British Parliament in 1807, then Foreign Secretary Clarkson said in the House of Commons of William Wilberforce, the moving force behind twenty years to abolish slavery " Some men are remembered by their deeds. Napoleon, when he goes to bed will remember the blood of thousands of men killed in the battlefield, but Wilberforce will go to bed knowing that slavery is no more!"

Today , many thousands of lives and millions all over the world have been saved by a vaccine, which was used successfully 25 years ago as a World Health Organization project to eradicate both hepatitis B and liver cancer.

More importantly, the implementation of the program,( though it started with much anxieties on short and long term safety), has today , after 25 years,has been proven to be a very safe vaccine . There are no long term,( then unknown ) disease such as mad cow disease, autoimmune disease or serious encephalopathy.

At that time , the directive that came to our team from the then Prime Minister, Mr. Lee Kuan Yew, was to make this vaccination program 300% safe . A disaster, or contamination of the vaccine would have led to billions of dollars of compensation, and political backlash, as the use of the vaccine was needed by all our young children and adults under 20yers of age .

As the Principal Investigator, appointed by the International Agency for Research in Cancer/ World Health Organization, and by our Government, I was invited to conduct a study entitled " to monitor the changing trends of Liver Cancer before and after hepatitis B Vaccination.

Our book, " The Cancer Vaccine that transformed Singapore and the World " , is a success story of our pioneers and records the historical and significant changes that transformed our country not only in terms of infectious disease control, but the industrial transformation , which took us from a third world " trading" nation, to a first world nation with active biomedical industries contributing to significant economy and the health of many throughout the world

It also led to a significant transformation and changes in our curriculum , so that our students, Ph. D graduates could now take on the transfer of highly sophisticated technology which we could not do 25 years ago, when we talked about the transfer of technology, to reduce the cost of production in first world countries.

This evening I am very honored by so many of you gathered here to commemorate one of the momentous period of history of our small country.

Although we sing with joy ,the success of this vaccination program that today it has become routine, and many youth and children, do not even know much about the history of this pioneering program, where the aim , to stop both vertical and horizontal transmission of the infection and the long term sequelae of developing liver complications and liver cancer.

Many of our pioneering team, worked so cheerfully, to booster the moral of the children, babies, mums, dads, medical, nursing, students, national servicemen. I am sad that some of them are no longer here with us today.

I lost Sister Rose Smith, my Research Sister in 1996and Staff Nurse Loo Yok Lin. Sister Leong Kwee Liam, Prof. Tan Kim Leong , are ill and unable to come today. They were the cheerful staff that motivated mums and dads to bring up their babies for vaccination, and then came regularly followed them up for 15 years in the KK Hospital Pediatric Unit , to see how durable that vaccination was.

There are no long term side effects, like mad cow disease, autoimmune diseases, demyelinating brain disease. There is herd immunity. Liver cancer rates have fallen and continue to decline. Carrier rates have dropped to 2.4% and no child under 15 yrs has acute jaundice since 2005. In other words our vaccination program has saved many lives not only Singapore lives but many millions of lives overseas as other countries followed the childhood immunization program introduced by us.

We were the first country in the world to embark on this vaccine , but this vaccine was also the first cancer vaccine intervention vaccine study to be conducted by International Agency for Research in Cancer , World Health Organization and Singapore or cirrhosis and liver failures, and liver cancer, a top three killer in the world and the Asia pacific region. to determine whether this vaccine would reduce the high incidence of acute jaundice cases, severe liver

Today that answer is categorically YES.

IARC/WHO Director Dr. Christopher Wild, in his congratulatory message describes this achievement as one of the greatest success stories of the last century of international collaboration. Today this vaccine has gone out to the poorest of the poor through international consortiums, and is saving the lives of these children. This was small but humble part which IARC & WHO played in it.

Many of our Ministers and Deputy Prime Minister Wong Kan Seng and senior Singapore Press Holding Staff, journalists, like Mr. Cheong Yip Seng and Miss Chen Ai Lian had asked me to record these memoirs for our historical medical museum for our young, and the future pioneers.

It was indeed a pleasant challenge to go through the past and back to the many dusty files, news cuttings, journals, find colleagues and witnesses, still alive to write this epic and epoch story of one of our nation's greatest public health and industrial achievements. Most satisfying medically, and as a researcher is to see the vaccine works, no side effects nor harm done to the recipients, and millions of lives saved all over the world, from a small project launched here 25 years ago.

To bring this epic story to the public, I would also like to thank, Mrs. Shirley Hew, Executive Director of Straits Times Press and her staff, her deputy Mrs. Shova Loh, and Mrs. Karen Kwek who was brought in by Shirley to write this story. "The True Story. "The Cancer Vaccine that transformed Singapore and the World"

Karen and myself have autographed the book which you receive tonight. Only 400 books are signed out of the 2,000 printed.

Karen wrote the story, like a Sherlock Holmes detective novel, of searching for the unknown killer, crime and detection, secret meetings and tells not only about this unknown killer virus, but its detection, and the endeavor by Mankind to make a vaccine against it.

It also tells how the major deficiencies identified in the vaccine project of how we tried to make the vaccine for human usage but at that time, we did not have the Ph.Ds with manufacturing and quality control knowhow's nor the ability to regulate these products for human usage.

The urgent need for higher technological education, regulatory practices, led to a political will to change our mindset of staying in the then safety thinking of trading, then to risk of facing failures in embarking in R &D. There was the courage to make the necessary Curriculum changes to embrace the future of research and development in Biotechnology, so that Singapore can leap frog to accept and understand transferred higher technology, and generate its own products from its R&D.

Today we see the fruits of these products coming from so many of our Institutions, like IMCB first, then to others and to Biopolis and Nanopolis and pharmaceuticals which have set up in Singapore.

Small pox, has been eradicated by vaccination and polio in most countries, but Hepatitis B is reduced but not completely licked. It still lurks around, and there are mutational forms which arise spontaneously as these viruses compete for survival amongst themselves, but some have become resistant to certain antiviral agents.

Our HBV carrier rate has dropped from some 10% in the 1970s to 2.4%. I urge that we should not be complacent, so I like to encourage continued monitoring and strengthening of HB Vaccinations and vigilance in research and funding to detect unusual mutational forms and make new vaccines and antiviral drugs against them. This is where the R&D in HBV should be focused.

Lastly, my publishers invited me to write a Dedication in the book, I found it difficult, as my writings had always been in journals..but a dedication to whom...! After reflections and in prayer, I was able to come out with this dedication.

**Dedicated to all pioneers who dare to take their believes to venture into the unknown, trusting only in God to guide them over the abyss of failure to make the discoveries for the betterment of human society.**

Like Wilberforce, there were many giants in the history of the HBV, many have passed on. Let us stand up...take up our glasses and make a drink to “ The Pioneers of Medicine and to HBV research”

I would now like to present a gift to:

First Mr. Peter Seah, Chairman of SingHealth, on behalf of the Singapore General Hospital, which was then the base and coordinating centre for much of the Liver Cancer, Hepatitis, and vaccine studies at the Ransome Research Laboratory.

This gift consists of the Contract between the International Agency for Research/WHO and our former University Department of Medicine I, and myself as the Principal Investigator to study “The changing trends of liver Cancer before and after hepatitis B Vaccine”. Also the gift of two original photographs of Professors Sir Gordon Arthur Ransome and Seah Cheng Siang, two of our greatest doyens in Medicine.

The second gift is the photographs of Professor Sir Gordon Arthur Ransome and Seah Cheng Siang, both Masters of the Academy of Singapore, Singapore. Professor Ransome was the founder President of the Singapore Academy of Medicine. May I invite the Master to accept this gift.

