



## **The Need**

**Childhood cancer is the second major cause of death among children in Singapore. Annually, there are between 120-140 newly diagnosed cases, and approximately 43% are leukemia cases. The estimated cure rate for childhood leukemia in Singapore averages 80%. For children who can be cured with current therapy, we need to develop even better treatment to reduce the toxicity so that they will have a better quality of life. In the neighbouring countries in the region, the estimates range from 4% to 55%. In contrast, the cure rate for childhood leukemia at St. Jude Children's Research Hospital (St Jude) in Memphis, Tennessee, USA, is approximately 90%. There is a need to develop in Asia, world-class capability for the treatment of pediatric cancers by adopting state-of-the-art medical practices in terms of organization, clinical treatment, training ,care and research.**

## **The Mission**

**Danny Thomas, founder of St. Jude Children's Research Hospital, launched the fight to cure childhood cancer by declaring that : "No child should die in the dawn of life". VIVA Foundation, will work together with St Jude researchers to translate and to improve the survival rate and cure of children with cancer, especially childhood leukemia, in Singapore and elsewhere in Asia.**

**VIVA Foundation's immediate task is to raise funds to help pay for the upgrading of the facilities and equipment in the National University Hospital (NUH) Children's Cancer Center (CCC), the establishment of a cellular therapy programme and training fellowships for doctors and nurses from Singapore and the region to train at St. Jude and the CCC respectively.**

## **Strategy**

**VIVA Foundation has fostered a close partnership between St. Jude, NUH, and NUS. St Jude through its International Outreach Programme, will help NUH become a world class center for the treatment of pediatric cancers, clinical research and training of doctors and nurses from Singapore and the region. Capability will also be developed in cellular therapy, including bone marrow, cord blood and haploidentical transplants, and natural killer cell infusions. St. Jude will also work with NUS to advance academic medicine in the field of pediatric oncology.**

## **Partners**

**St. Jude's Children's Research Hospital, is one of the largest charities in the United States, and raises funds annually to support about 3,000 doctors, nurses and scientists engaged in basic science and clinical research related to the treatment and cure of children with cancer.**

It was founded by Danny Thomas, a well-known entertainer, and is a stellar example of American philanthropy.

Pediatric oncology is one of the clinical disciplines of NUH. Each year, it sees 125 new cases in its current facilities, and 50% of the patients are foreigners, mainly from the ASEAN region. NUH consults on about 45% of the estimated total number of 140 newly diagnosed cases of children's cancer in Singapore each year. The volume grows year on year, as each child will take an average of 2 years of treatment and follow-up to be in remission. Since 2000, NUH has established a pediatric in-patient cancer facility, and the children's blood cancer services. The impact of a dedicated facility is dramatic, as NUH reported a significant decrease in central venous line infection. The vision of NUH is to bring pediatric cancer treatment to its highest level in Asia. This will not only help give children from Singapore suffering from cancer a greater survival rate, but will provide a vital resource to children throughout the region.

National University of Singapore (NUS) Yong Loo Lin School of Medicine has identified cancer to be one of the most important focus areas for research. NUS researchers in close collaboration with doctors from NUH and the region have successfully designed new treatment protocols for childhood leukaemias specifically tailored to our local needs. Through competitive funding from the National Medical Research Council and A\*STAR/Singapore Cancer Syndicate, NUS through this new partnership with St Jude, will continue to improve on the treatment of childhood leukaemia and cell-based therapies.

## **Programmes**

### **NUH Children's Cancer Center Development**

Space assigned to this center in an existing NUH building will be redeveloped. This center when completed will house the inpatient and outpatient wards, and will have state-of-the-art transplant facilities, including HEPA air filters. This facility will be the seat of the St. Jude-Singapore International Outreach Programme.

### **Distinguished Visitors Programme**

Visiting experts who are renowned world authorities in pediatric oncology and stem cell transplantation, will share their knowledge and experience with members of the CCC and medical practitioners from the region. Many of the visiting experts will be associated with St. Jude due to St. Jude's partnership with NUH-CCC.

### **NUH Clinical Research Programme**

Qualified experts will engage in clinical research to find better treatment and new cures for childhood cancer and work with the CCC's local and regional fellows. Transplant capability will be enhanced in bone marrow, cord blood, haploidentical and natural killer cell transplant, and it is hoped that this programme will lead clinical research in this field.

### **St. Jude-Singapore International Outreach Programme**

NUH in collaboration with St. Jude will train foreign doctors and nurses from the region at NUH for 1 to 3 years. Regional centers of excellence will be designated in ASEAN countries and teams of up to 2 doctors and 4 nurses each will be trained in Singapore and deployed at the respective centers. The centers will establish their own pediatric oncology programmes, and support themselves through fundraising by their local charities .

### **Annual St. Jude-Asia Forum in Pediatric Oncology**

This annual Forum will gather top doctors and scientists from all over the world and provide a platform in Asia for them to exchange information and collaborate in research. Invitees will include principal investigators for Acute Lymphoblastic Leukemia, Acute Myeloid Leukemia, and Cellular Therapy.

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