



### **Stem Med Update**

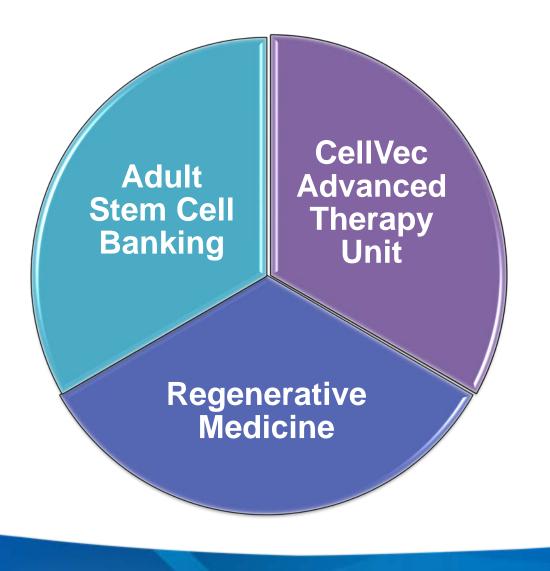
24<sup>th</sup> April 2018



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### **Present Facilities & Accreditation**

- Stem Med Cellular Laboratory is equipped with ISO Class 5 cleanroom laboratory to perform sophisticated cell culturing.
- Licensed by *Ministry of Health (MOH),* Singapore to process, cryopreserve and store Bone Marrow, Peripheral Blood Stem Cells

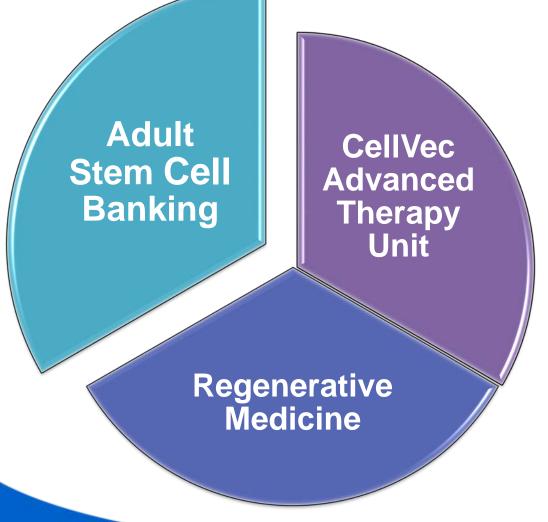






## **Stem Med**





Adult Stem Cell Bank

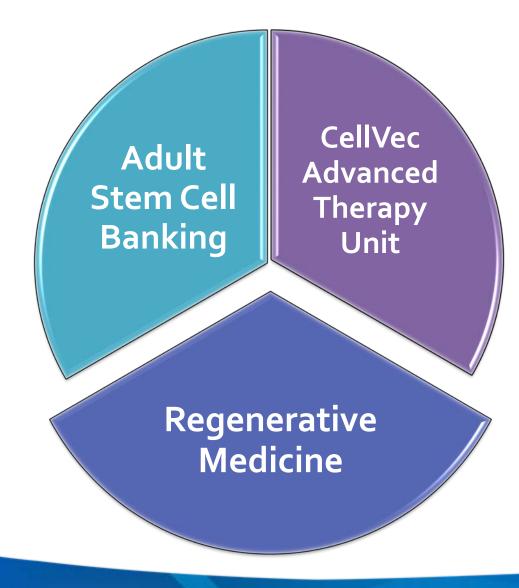
- Storing Adult Blood and Bone Marrow

 Supports Parkway Cancer Centre Bone Marrow Transplant Centre

(Largest Private Transplant Service in the region)



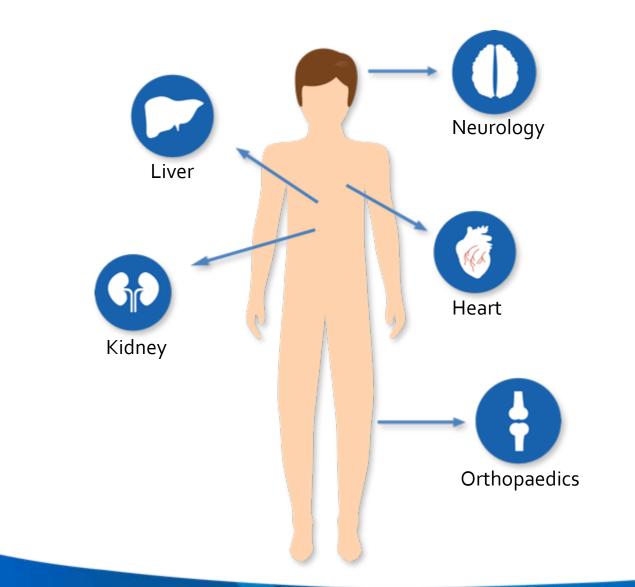


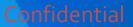


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### Potential of Stem Cells Therapies









• Phase I/II clinical trial in Singapore opened 2018 Mesenchymal Stem Cell Therapy for Liver Cirrhosis

• Further studies on joints and neurological indications in development

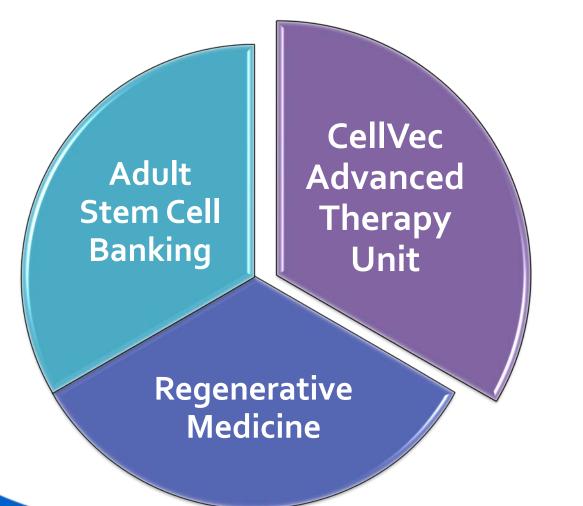
• Collaboration with regional centers for cellular therapy





### **Stem Med**





The Cellular and Gene therapy division termed CellVec was established in Q1 2017

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# FDA Approves First CAR T-cell Therapy



Posted on August 31, 2017 by Karen Honey, PhD

Yesterday marked a much anticipated milestone for the oncology community: The U.S. Food and Drug Administration (FDA) announced the first approval of a type of immunotherapy known as CAR T-cell therapy.



Cost per therapy \$450,000 USD

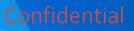
# **Gene and Cellular Therapy**



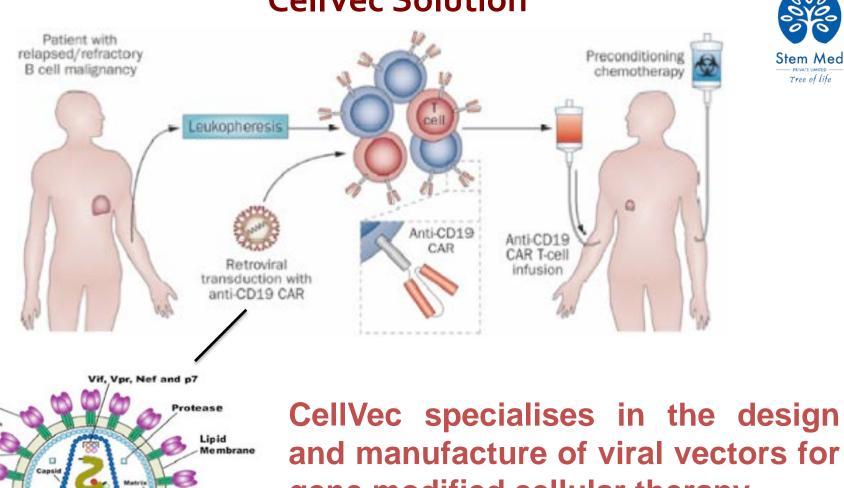
Rapid rise in gene and cellular therapies FDA approved for clinical use

New and booming era of cell therapy manufacturing – (est 17% year on year global growth with market value of >\$1 billion USD by 2022)

Viral vectors form basis of many of the cell and gene therapies – but production is labour intensive and costly



#### **CellVec Solution**



Nucleocapsid

firal RNA Genome

gp120

Docking Giveoproty

gp41 Transmembrane Glycoprotein

Integrase

Reverse Transcriptase gene modified cellular therapy

# **CellVec - Strategic Advantage**



**Location** : Singapore – biotech centre, manufacturing reputation, strong regulatory and IP protection

**Expertise** : World-class scientific team, strong academic and industrial collaborations

**Timing** : World-wide boom in gene and cellular therapy, bottlenecks in viral vector manufacturing, opportunities to disrupt technology and be market leader







## **CellVec Advanced Therapy Unit**

First in region high specification GMP Lab due to be completed end Q4 2018

To start producing clinical grade products early Q2 2019

Once fully operational in 2019/2020 – capacity to produce 25+ batches of viral vector/year

Current global commercial manufacturing price per batch : SGD \$700,000-1,000,000/batch



# Thank You



Stem Med PRIVATE LIMITED Tree of life