

chapter

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*“smART BRAIN”*

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In the smART Brain section, visitors can expect a dynamic yet entertaining science journey and educational time. “The Master Hat” is specially designed to portray the left-right brain dominance : the right brain is often regarded as the more creative side whilst the left brain is regarded as the analytical side.

Neuroscientists can map precisely the brain regions that control various parts of the body. “Little Man Inside Us” is a visual representation of the concept of “the body within the brain” that takes the visitors into the neurological “map” of the anatomical division of the brain. “The AMAZEING Brain” is another interactive model that engages curious visitors to understand the sophisticated and trillions of brain connection in a more creative and colourful way.

The world is ageing rapidly and by 2035, Malaysia will be an ageing nation when 15 % of the population is classified as senior citizens. “Walking Patterns” highlights the decline in the sense of equilibrium in the ageing population. Loss of ability to maintain a sense of balance is disorienting and dangerous. Without it, just about everything else in life can become an insurmountable obstacle.

An ever-increasing number of Malaysians are also afflicted with neurodegeneration. Alzheimer’s disease is one of the many neurodegenerative diseases highlighted at NYAWA’16. “Alzheimer’s Brain Changes”, an exhibit that takes visitors to explore the world of shrinking brain characterized by

accumulation of senile plaques and loss of neurones. Visitors also have a chance to witness the beauty of neuro-gliovascular network that contributes toward organizing the brain’s structural architecture.

In August 2016, the World Health Organization (WHO) declared Zika virus as a global public health threat. “The Ambiguous Mystery” – reveals congenital Zika virus infection that is associated with foetal brain abnormalities including microcephaly. Brain tumour is a dreadful disease yet in the microscopic world, some of them are artfully beautiful with stunning colors whereas some are ferocious looking as presented by the “Nasty Beauty”. How shocking it is if one-third of humanity may host the “Little Mind Benders” parasite - *Toxoplasma gondii*? These small obligate parasites infect the brain, wander in it and bend the host’s mind to their will, subsequently changing the host’s behaviour.

Besides human brain, visitors will also get to explore different animal brains. “High Brain” features the abnormal morphological changes of the neurones in the rat model under the detrimental effect of ketum. Ketum has been consumed by natives of Malaysian and other regions of Southeast Asia who believe that this herb provides a calming effect and a relaxing euphoria.

If you ever ask “do plant have brains?”. Yes, they do! “Plant Nervous System” is something that cannot be missed, an exhibit that shows electrical impulses generated by plant cells akin to nerve cells in animals!