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Department of Physiology  
Yong Loo Lin School of Medicine

# One Physiology

Issue: January - March 2018

## News & Events

### Welcome new Head of Department



With effect from February 1, 2018, A/Prof Lim Kah Leong has assumed headship at the Department. A warm welcome to A/Prof Lim and a big thank you to Prof Soong Tuck Wah for his tremendous contributions as previous Head of Department.

### New Senior Management Committee

**Head of Department**  
A/Prof Lim Kah Leong

**Deputy Head of Department**  
A/Prof Reshma Taneja

**Director of Operations**  
A/Prof Thiruma Valavan Arumugam

**Director of Research**  
Prof Shen Han-Ming  
A/Prof Lim Hsiu Kim, Lina (Deputy)

**Director of Education**  
A/Prof Herbert Schwarz (Life Sciences)  
A/Prof Celestial Yap (Clinical)  
Dr Chen Zhixiong (Deputy)

**Director of Finance and Compliance**  
A/Prof Manoor Prakash Hande

### 1st Symposium of MSC Cancer Program, "Mediators of Cellular Aging & Cancer Connecting Science & Medicine"

### Muscle Biology in Health & Disease





Congratulations to Prof Shazib Pervaiz and the organizing committee for putting together a successful symposium on cancer science! Special thanks to Nurulhuda Nassir for helping out!

[Visit website](#)

Congratulations to A/Prof Reshma Taneja and Dr Thai Tran for having organized an excellent symposium on Muscle biology! Special thanks to Chong Oi Khuan and Wong Hooi Ling for helping out!

[Visit website](#)  
[Link to photo gallery](#)

### Faculty Retreat



Physiology academic staff had a retreat on 26 February 2018 at Hotel Jen Orchard Gateway to discuss on where we are heading and how to move ourselves forward towards achieving academic (research & teaching) excellence.

[Link to photo gallery](#)

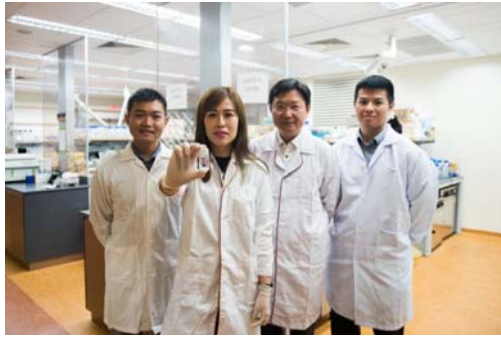
### Safety Management Review Meeting



Department Safety and Health Committee organised a Safety Management Review Meeting on 19 March 2018 to review the department's safety performance in 2017 and plan actions for 2018.

### Physiology in the News

### Physiology in the News



Dr Eliza Fong and Prof Hanry Yu from the Department of Physiology, NUS, has engineered *in vitro* conditions conducive for culture of patient derived hepatocellular carcinoma through the use of 3D macroporous cellulosic sponge system. Their work was featured in The Straits Times on 28 February 2018 in an article entitled "Lab-grown liver tumours help Singapore scientists to develop anti-cancer drugs".

[Read The Straits Times article](#)



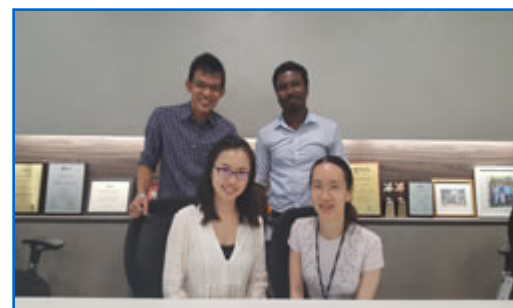
Dr Thai Tran's latest discovery on fighting the flu virus by blocking CD151 was featured on Channel NewsAsia Singapore Tonight 28 March 2018, Capital 95.8FM News 28 March 2018, BioSpectrum Asia 28 March 2018 and The Straits Times 12 April 2018. The multidisciplinary team from NUS YLLSoM showed that flu viruses can hijack CD151 proteins, and thereafter clone and multiply themselves before invading and colonising new victims.

[Watch interview by Channel NewsAsia](#)  
[Read BioSpectrum Asia article](#)  
[Read The Straits Times article](#)

## Swee Liew-Wadsworth Research Publication Awards



## New IT Committee



Welcome to new IT Committee with Dr Ivan Low, Arjun Raj Segar, Chong Pey Rou and Phoebe Koh on board.

For IT issues, please approach Arjun at ext. 15181 or email at [phsars@nus.edu.sg](mailto:phsars@nus.edu.sg).

Congratulations to the winners of Swee Liew-Wadsworth Research Publication Awards.

[List of winners](#)

## Welcome new members



Welcome to Mr Arjun Raj Segar, who joins our Admin team as Senior Executive on 26 March 2018. He will manage and support our Department IT matters.



Congratulations to Dr Tee Wee Wei on his newborn child!

## Recent Publications - Congratulations to all!

Generation of matched patient-derived xenograft in vitro-in vivo models using 3D macroporous hydrogels for the study of liver cancer

Fong ELS, Toh TB, Lin QXX, Liu Z, Hooi L, Mohd Abdul Rashid MB, Benoukraf T, Chow EK, Huynh TH, Yu H. Biomaterials. 2018 Mar;159:229-240.

[Abstract](#)

Molecular mechanisms of cell death: recommendations of the Nomenclature Committee on Cell Death 2018

Galluzzi L, Vitale I, Aaronson SA, et al. Cell Death Differ. 2018 Mar;25(3):486-541.

[Full text](#)

Cubic membrane formation supports cell survival of amoeba Chaos under starvation-induced stress

Chong K, Almsherqi ZA, Shen HM, Deng Y. Protoplasma. 2018 Mar;255(2):517-525.  
[Abstract](#)

### [Dual role of autophagy in hallmarks of cancer](#)

Singh SS, Vats S, Chia AY, Tan TZ, Deng S, Ong MS, Arfuso F, Yap CT, Goh BC, Sethi G, Huang RY, Shen HM, Manjithaya R, Kumar AP. Oncogene. 2018 Mar;37(9):1142-1158.

[Abstract](#)

### [Altered function of neuronal L-type calcium channels in ageing and neuroinflammation: Implications in age-related synaptic dysfunction and cognitive decline](#)

Navakkode S, Liu C, Soong TW. Ageing Res Rev. 2018 Mar;42:86-99.

[Abstract](#)

### [Differential Binding of Human ApoE Isoforms to Insulin Receptor is Associated with Aberrant Insulin Signaling in AD Brain Samples](#)

Chan ES, Chen C, Soong TW, Wong BS. Neuromolecular Med. 2018 Mar;20(1):124-132.

[Abstract](#)

### [Vitamin D\(3\) Supplementation Reduces Subsequent Brain Injury and Inflammation Associated with Ischemic Stroke](#)

Evans MA, Kim HA, Ling YH, Uong S, Vinh A, De Silva TM, Arumugam TV, Clarkson AN, Zosky GR, Drummond GR, Broughton BRS, Sobey CG. Neuromolecular Med. 2018 Mar;20(1):147-159.

[Full text](#)

### [Combination Therapy with Low-Dose IVIG and a C1-esterase Inhibitor Ameliorates Brain Damage and Functional Deficits in Experimental Ischemic Stroke](#)

Chen X, Arumugam TV, Cheng YL, Lee JH, Chigurupati S, Mattson MP, Basta M. Neuromolecular Med. 2018 Mar;20(1):63-72.

[Abstract](#)

### [H\(2\)S to Mitigate Vascular Aging: A SIRT1 Connection.](#)

Arumugam TV, Kennedy BK. Cell. 2018 Mar 22;173(1):8-10.

[Full text](#)

### [Notch signaling and neuronal death in stroke](#)

Arumugam TV, Baik SH, Balaganapathy P, Sobey CG, Mattson MP, Jo DG. Prog Neurobiol. 2018 Mar 21. pii:S0301-0082(17)30139-9.

[Abstract](#)

### [CD137L dendritic cells induce potent response against cancer-associated viruses and polarize human CD8+ T cells to Tc1 phenotype](#)

Dharmadhikari B, Nickles E, Harfuddin Z, Ishak NDB, Zeng Q, Bertolotti A, Schwarz H. Cancer Immunol Immunother. 2018 Mar 5.

[Abstract](#)

Dharmadhikari B, Zeng Q, Wu M, Schwarz H. Cancer Res. 2018 Feb 28.

### [A FTH1 gene:pseudogene:miRNA network regulates tumorigenesis in prostate cancer](#)

Chan JJ, Kwok ZH, Chew XH, Zhang B, Liu C, Soong TW, Yang H, Tay Y. Nucleic Acids Res. 2018 Feb 28;46(4):1998-2011.

[Full text](#)

### [Molecular targets and anti-cancer potential of escin](#)

Cheong DHJ, Arfuso F, Sethi G, Wang L, Hui KM, Kumar AP, Tran T. Cancer Lett. 2018 Feb 21;422:1-8.

[Abstract](#)

### [Cross Talk Between Cellular Redox State and the Antiapoptotic Protein Bcl-2](#)

Pohl SÖ, Agostino M, Dharmarajan A, Pervaiz S. Antioxid Redox Signal. 2018 Feb 15. [Epub ahead of print]

[Abstract](#)

### [Transcriptome Analysis Reveals Intermittent Fasting-Induced Genetic Changes in Ischemic Stroke](#)

Kim J, Kang SW, Mallilankaraman K, Baik SH, Lim JC, Balaganapathy P, She DT, Lok KZ, Fann DY, Thambiayah U, Tang SC, Stranahan AM, Dheen ST, Gelderblom M, Seet RC, Karamyan VT, Vemuganti R, Sobey CG, Mattson MP, Jo DG, Arumugam TV. Hum Mol Genet. 2018 Feb 13.

[Abstract](#)

### [Directed Differentiation of Adult Liver Derived Mesenchymal Like Stem Cells into Functional Hepatocytes](#)

Luo X, Gupta K, Ananthanarayanan A, Wang Z, Xia L, Li A, Sakban RB, Liu S, Yu H. Sci Rep. 2018 Feb 12;8(1):2818.

[Full text](#)

### [Triple negative breast cancer in Asia: An insider's view](#)

Wang C, Kar S, Lai X, Cai W, Arfuso F, Sethi G, Lobie PE, Goh BC, Lim LHK, Hartman M, Chan CW, Lee SC, Tan SH, Kumar AP. Cancer Treat Rev. 2018 Jan;62:29-38.

[Abstract](#)

### [IL-23 \(Interleukin-23\)-Producing Conventional Dendritic Cells Control the Detrimental IL-17 \(Interleukin-17\) Response in Stroke](#)

Gelderblom M, Gallizioli M, Ludewig P, Thom V, Arunachalam P, Rissiek B, Bernreuther C, Glatzel M, Korn T, Arumugam TV, Sedlacik J, Gerloff C, Tolosa E, Planas AM, Magnus T. Stroke. 2018 Jan;49(1):155-164.

[Abstract](#)

### [TGFβ1-mediated suppression of cytochrome P450\(CYP\) induction responses in rat hepatocyte-fibroblast co-cultures](#)

Yu Y, Ananthanarayanan A, Singh NH, Hong X, Sakban RB, Mittal N, Xiaobei L, Robens J, Xia L, McMillian M, Yu H. Toxicol In Vitro. 2018 Jan 31;50:47-53.

[Abstract](#)

### [Hippocampal area CA2: an emerging modulatory gateway in the hippocampal circuit](#)

Benoy A, Dasgupta A, Sajikumar S. Exp Brain Res. 2018 Jan 31.

[Abstract](#)

### [Epigenetics: the panacea for cognitive decline?](#)

Sharma M, Raghuraman R, Sajikumar S. Aging (Albany NY). 2018 Jan 18;10(1):1-2.

[Full text](#)

### [Reactive Oxygen Species and Oncoprotein Signaling-A Dangerous Liaison](#)

Chong SJF, Lai JXH, Eu JQ, Bellot GL, Pervaiz S. Antioxid Redox Signal. 2018 Jan 9. [Epub ahead of print]

[Abstract](#)

### [Discovery of indolylpiperazinylpyrimidines with dual-target profiles at adenosine A2A and dopamine D2 receptors for Parkinson's disease treatment](#)

Shao YM, Ma X, Paira P, Tan A, Herr DR, Lim KL, Ng CH, Venkatesan G, Klotz KN, Federico S, Spalluto G, Cheong SL, Chen YZ, Pastorin G. PLoS One. 2018 Jan 5;13(1):e0188212.

[Full text](#)

### [Biophysical studies and NMR structure of YAP2 WW domain - LATS1 PPxY motif complexes reveal the basis of their interaction](#)

Verma A, Jing-Song F, Finch-Edmondson ML, Velazquez-Campoy A, Balasegaran S, Sudol M, Sivaraman J. Oncotarget. 2018 Jan 3;9(8):8068-8080.

[Full text](#)

## Upcoming Events

1. Admin office and LT/LE Retreat - 21 June 2018
2. Safety and Health Day - 25 June 2018
3. Physiology Day - August 2018
4. Physiology Symposium - 24-25 September 2018

Visit us on the web at [Physiology](#)

Contents: 1st Symposium of MSC Cancer Program, "Mediators of Cellular Aging & Cancer Connecting Science & Medicine" organising committee, Muscle Biology in Health & Disease organising committee, A/Prof Lim Kah Leong, IT Committee

Design: IT Committee