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PHYSIOLOGY

NEWSLETTER

JANUARY - MARCH 2020

NEWS

Emergency Response Core Team

In the midst of COVID-19 situation, Physiology Emergency Response Core Team has been working hard. Kudos to this team.

Professor Reshma Taneja
Associate Professor Herbert Schwarz
Associate Professor Manoor Prakash Hande
Associate Professor Thai Tran
Dr Zakaria Ali Moh. Almsherqi
Tan Boon Choo, Diana
Chan Bixiu Michelle
H'ng Shiau Chen
Ong Yeong Bing
Uma Thambiyah

AWARDS

**Yong Loo Lin School of Medicine
Research Excellence Award for
AY2018/2019**

**Commendation Award for Health
and Safety Performance at
NUSSHA 2020**



Dear A/Prof Reshma Taneja

Congratulations

Department of Physiology on receiving the
Commendation Award
for
Safety & Health Performance

The award will be presented at the
NUSSHA Ceremony 2020
Celebrating People, Partnerships & Progress

Guest of Honour:
Professor Tan Eng Chye

20 August 2020 (Thu), 11am - 1pm
NUS Shaw Foundation Alumni House

Congratulations to Dr Ling Shuo-Chien who has been awarded Yong Loo Lin School of Medicine Research Excellence Award for AY2018/2019

Congratulations to Physiology for receiving the Commendation Award for Health and Safety Performance at NUSSHA 2020. Please join us to congratulate our entire Safety Team led by Associate Professor Manoor Prakash Hande and Dr Zakaria Ali Moh. Almsherqi!

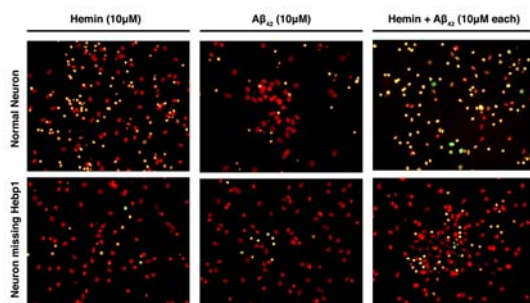
Swee Liew-Wadsworth Research Publication Awards

Gold Research Award	Silver Research Award
No WY, Tai YK, Cheng JC, Liang J, Tian S-H, Chan C, Gan A, Sze JH, Cheong H-M, Goh E, Chong SF. In vivo molecular imaging of neuronal NMDA receptor localization in the mouse brain. <i>Autophagy</i> 2019; 15(9): 1373-1382.	Bellot GL, Dong X, Lefebvre A, Sebastian SJ, Balino-Haberle I, Pizarro S, Puhandran ME. MSCD is implicated in accelerated wound healing upon Negative Pressure Wound Therapy (NPWT). A case is made for MSCD agonists as adjuncts for wound management. <i>Redox Biol.</i> 2019; Jan; 20:307-320.
Lin P, Li J, Gubina A, Wang YT, Wu Y, Shen Y, Wu Y, Guo Y, Quong C, He H, Wang H, Wang L, Ling H, Song S, Xia D, Chen RH, Toozil SA, Shaheen M. In vivo imaging of neuronal NMDA receptor localization and its functional role in synaptic plasticity. <i>Autophagy</i> 2019; Nov; 15(11): 1979-1994.	Bhat AV, Palanichamy Kala M, Rao VK, Pignata L, Lim HJ, Suriyanarthy S, Chang KT, Lee VK, Guccione E, Taneja R. Epigenetic Regulation of the PTEN-AKT-RAC1 Axis by GSK-3 β Controls Tumor Growth in Avascular Proliferative Lesions. <i>Cancer Research</i> 2019; May 1; 79(9): 2232-2243.
Cell CP, Pardo M, Tai YK, Ho WY, McLean CA, Morris CP, Wray WW, Meyer R, Chou C, Gonzalez R, Vemuri S, Brown S, Vannucci M, Chen S, Wei C, Cao L, Li Y, Lee Y, Chen S, Lin T, Ho YK, Wong LW. Cortical Neurogenesis and Synaptic Plasticity: Implications for Alzheimer's Disease. <i>Neurobiologia</i> 2019; Nov; 138(3): 793-811.	Ling SC, Oestler SG, Tokunaga S, Ho WY, Lim K, Ivers H, Pahnke PA, Tsai SH, Tse TM, Cheng JC, Palarayn D, Suri NB, But A, Veltri A, Sun S, McAlone-Dornes H, Hart JS, Spring D, Kappel N, Lee GH, Takashima S, Muraoka M, Shirai CE, Toldan Kallag G, Le Spada AR, Lager-Touraine C, De Cruz S, Cleveland DW. Overriding FUS aggregation in mice triggers gain-of-function dysfunction in RNA metabolism and autophagy-lysosome axis. <i>eLife</i> 2019; Feb 12; 8.
	Wong LW, Tenn JV, Ibanez CF, Sellikumar S. The p75 Neurotrophin Receptor is an Essential Mediator of Impairments in Hippocampal-Dependent Learning, Plasticity and Memory Induced by Sleep Deprivation. <i>Journal of Neuroscience</i> 2019; Jul 10; 39(28): 8452-8466.

Click [here](#) to view winners of Swee Liew-Wadsworth Research Publication Awards.

MEDIA COVERAGE

Assistant Professor John Chua was on the news!



Assistant Professor John Chua Jia En, his former PhD student Dr Oleksandr Yagensky, and collaborators published an article about the potential early marker of AD, heme-binding protein 1 (Hebp1), in the prestigious open-access journal eLife. The team of researchers presented strong evidence to support a role for Hebp1 in the development and progression of AD, encompassing findings in both preclinical models and postmortem brains of AD patients.

News Coverage:

[NUS Medicine News](#)

EVENTS

Chinese New Year Celebration



The department celebrated Chinese New Year on 4 February 2020 with Lantern Festival quiz and festive food.

PROMOTION

Promotion to Full Professor



Congratulations to Professor Reshma Taneja who has been promoted from Associate Professor to Full Professor!

PUBLICATIONS

[Inhibition of Histone Deacetylase Reinstates Hippocampus-Dependent Long-Term Synaptic Plasticity and Associative Memory in Sleep-Deprived Mice](#)

Wong L-W, Chong YS, Wong WLE, Sajikumar S

Cerebral Cortex. 2020 Mar 16. bhaa041. doi: 10.1093/cercor/bhaa041

[Full Text](#)

[Maternal factor NELFA drives a 2C-like state in mouse embryonic stem cells](#)

Hu Z, Tan DEK, Chia G, Tan H, Leong HF, Chen BJ, Lau MS, Tan KYS, Bi X, Yang D, Ho YS, Wu B, Bao S, Wong ESM, Tee WW.

Nature Cell Biology. 2020 Feb;22(2):175-186. doi: 10.1038/s41556-019-0453-8. Epub 2020 Jan 13.

[Abstract](#)

[Cytoskeletal Proteins in Cancer and Intracellular Stress: A Therapeutic Perspective](#)

Ong MS, Deng S, Halim CE, Cai W, Tan TZ, Huang RY, Sethi G, Hooi SC, Kumar AP, Yap CT.

Cancers (Basel). 2020 Jan 18;12(1). pii: E238. doi: 10.3390/cancers12010238.

[Abstract](#)

[Autophagy Modulators: Mechanistic Aspects and Drug Delivery Systems](#)

Tavakol S, Ashrafizadeh M, Deng S, Azarian M, Abdoli A, Motavaf M, Poormoghadam D, Khanbabaei H, Afshar EG, Mandegary A, Pardakhty A, Yap CT, Mohammadinejad R, Kumar AP.

Biomolecules. 2019 Sep 25;9(10). pii: E530. doi: 10.3390/biom9100530.

[Abstract](#)

[Targeting autophagy using natural compounds for cancer prevention and therapy](#)

Deng S, Shanmugam MK, Kumar AP, Yap CT, Sethi G, Bishayee A.

Cancer. 2019 Apr 15;125(8):1228-1246. doi: 10.1002/cncr.31978.

[Abstract](#)

[CD137 negatively affects "browning" of white adipose tissue during cold exposure](#)

Srivastava RK, Moliner A, Lee E-S, Nickles E, Sim E, Liu C, Schwarz H and Ibáñez CF
Journal of Biological Chemistry. 2020 Feb 14;295, 2034-2042. doi:
10.1074/jbc.AC119.011795.

[Abstract](#)

[CD151 in Respiratory Diseases](#)

Wong AH, Tran T

Front Cell Dev Biol. 2020 Feb 7;8:64. doi: 10.3389/fcell.2020.00064. eCollection 2020.

[Abstract](#)

[Adaptor Protein Regulation in Immune Signalling](#)

Verma NK, Tran T and Kelleher D

Frontiers in Immunology. 2020 Mar 13. doi: 10.3389/fimmu.2020.00441

[Full Text](#)

[The relevance of soluble CD137 in the regulation of immune responses and for immunotherapeutic intervention](#)

Luu K, Shao Z, Schwarz H

J Leukoc Biol. 2020 Feb 13. doi: 10.1002/JLB.2MR1119-224R

[Abstract](#)

[CD137 ligand interacts with CD32a to trigger reverse CD137 ligand signaling](#)

Zeng Q, Soe YM, Lim Y, Sobota RM, Schwarz H

Cell Mol Immunol. 2020 Feb 19. doi: 10.1038/s41423-020-0370-6

[Abstract](#)

[Destroy, what destroys you](#)

Luu K, Nickles E, Schwarz H

Oncoimmunology. 2019 Nov 3;9(1):1685301. doi: 10.1080/2162402X.2019.1685301.
eCollection 2020.

[Full Text](#)

[IL-13-driven alterations in hepatic cholesterol handling contributes to hypercholesterolemia in a rat model of minimal change disease](#)

Low LD, Lu L, Chan CY, Chen J, Yang HH, Yu H, Lee CGL, Ng KH, Yap HK.

Clin Sci (Lond). 2020 Jan 31;134(2):225-237. doi: 10.1042/CS20190961.

[Abstract](#)

[Superoxide induced inhibition of death receptor signaling is mediated via induced expression of apoptosis inhibitory protein cFLIP](#)

Hirpara JL, Subramaniam K, Bellot G, Qu J, Seah S, Loh T, Tucker-Kellogg L, Clement MV, Pervaiz S.

Redox Biol. 2020 Feb;30:101403. doi: 10.1016/j.redox.2019.101403.

[Full Text](#)

[Targeting Mitochondrial Apoptosis to Overcome Treatment Resistance in Cancer](#)

Ngoi NYL, Choong C, Lee J, Bellot G, Wong ALA, Goh BC, Pervaiz S.

Cancers (Basel). 2020 Mar 2;12(3). pii: E574. doi: 10.3390/cancers12030574

[Abstract](#)

[Targeting Cell Metabolism as Cancer Therapy](#)

Ngoi NYL, Eu JQ, Hirpara J, Wang L, Lim JSJ, Lee SC, Lim YC, Pervaiz S, Goh BC, Wong ALA.

Antioxid Redox Signal. 2020 Feb 10;32(5):285-308. doi: 10.1089/ars.2019.7947.

[Abstract](#)

[Mitochondrial Dysfunction in Age-Related Metabolic Disorders](#)

Natarajan V, Chawla R, Mah T, Vivekanandan R, Tan SY, Sato PY, Mallilankaraman K. Proteomics. 2020 Mar 4:e1800404. doi: 10.1002/pmic.201800404.

[Abstract](#)

UPCOMING EVENTS

1. NUS-CMU Joint Symposium, 15- 16 June 2020
2. [2nd Pan-Asia Symposium on Genetics of Brain Disorders 2020, 13- 15 July 2020](#)
3. [APMEC 2021, 20-24 Jan 2021](#)

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