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PHYSIOLOGY NEWSLETTER

JULY - SEPTEMBER 2020

NEWS

Head of Department, Physiology



With effect from 1 August 2020, Professor Reshma Taneja has been appointed Head, Department of Physiology, NUS Medicine.

**Assistant Dean (Education), NUS
Medicine**

New Interim Lab Manager



With effect from 1 August 2020, Yong Tan Fong has been stepped in as interim Lab Manager, Department of Physiology. She will oversee laboratory technologists and executives matters in the department. Koh Shu Wen has stepped in as interim Deputy Lab Manager. We thank Tan Fong and Shu Wen for stepping up to their roles. We thank H'ng Shiau Chen for her contributions over the past years.

**Editor for Experimental Brain
Research**



Senior Lecturer Dr Chen Zhi Xiong has been appointed as Assistant Dean (Education), NUS Medicine.



Associate Professor Saji Kumar Sreedharan has been appointed as an "Editor" for the Molecular and Cellular Section for the international Journal of "Experimental Brain Research".

AWARDS

NUS Faculty of Science Outstanding Undergraduate Researcher Prize 2019/2020 (Individual)



Congratulations to Mr Ong Shujian from Prof Henry Yu's lab on winning NUS Faculty of Science Outstanding Undergraduate Researcher Prize 2019/2020 (Individual).

NUS Medicine Awards 2020



Congratulations to all Physiology NUS Medicine Award recipients on their well-deserved recognition.

Special Recognition Award: A/Prof Koh Dow Rhoon

Long Service Award: Miss Asha Reka Das

Research Excellence Award: Dr Ling Shuo-Chien

Best Graduate Research Publication Award: Dr Dominic Paul Lee Kok Sheng & Dr Lu Guang

Yeoh Seang Aun Prizes (in Tuberculosis and Infectious Diseases) - Graduate Prize: Mr Saravanan S/O Gunaseelan

Outstanding Mentor Award for

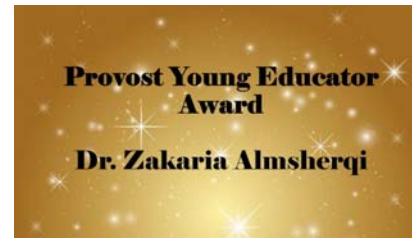
Research Fellows: Dr Wong Lik Wei
Teaching Excellence Award: Prof Reshma Taneja

National Day Awards



Associate Professor Sanjay Khanna was awarded Long Service Medal at National Day Awards. We thank A/Prof Khanna for his contributions over the years.

Provost Young Educator Award



Lecturer Dr Zakaria Almsherqi was awarded Provost Young Educator Award. Well done Dr Zakaria.

NUS Graduate Students' Society (GSS) 3MT Competition Finalist



Ms Cheong Hui Juan Dorothy from A/Prof Thai Tran's lab has been awarded NUS Graduate Students' Society (GSS) 3MT Competition - finalist, congratulations Dorothy.

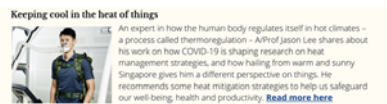
1st runner up for Best Basic Science Poster, NCAM meeting 2020



Ms Joanne Lam from A/Prof Lina Lim's lab has been awarded 1st runner up for best basic science poster, NCAM Meeting 2020, 29 July 2020, congratulations Joanne.

MEDIA COVERAGE

A/Prof Jason Lee featured on MEDSPRESSO, NUS News, and LianHe Zaobao



Research Associate Professor Jason Lee was featured on MEDSPRESSO, NUS News and LianHe Zaobao for his research work on heat management strategies in the midst of COVID-19.

Feature in [MEDSPRESSO](#)

Full Article in [NUS News](#)

Full Article in [LianHe ZaoBao](#)

Dr Chen Zhixiong featured on MEDSPRESSO and The Straits Times



Senior Lecturer Chen Zhixiong was featured on MEDSPRESSO and The Straits Times for his opinion paper on how training the next generation of physicians will require a new paradigm for medical education in a post pandemic world.

Feature in [MEDSPRESSO](#)

Full Article in [The Straits Times](#)

A/Prof Jason Lee featured on MEDSPRESSO and Channel News Asia



Research Associate Professor Jason Lee was featured on Channel News Asia for his research work on how rising global temperature will impact humans, society and development.

Feature in [MEDSPRESSO](#)
[Watch CNA episode here](#)

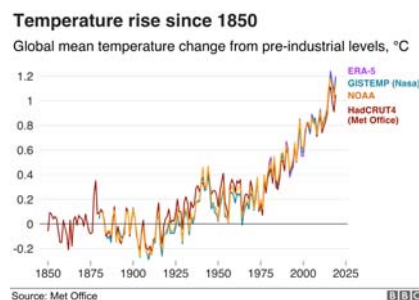
Dr Goh Jorming published an article in Justrunlah



Research Assistant Professor Goh Jorming published an article on exercising regulation to boost one's immunity against COVID-19.

Full article in [Justrunlah](#)

A/Prof Jason Lee featured on BBC



Research Associate Professor Jason Lee was featured on BCC for his research work on heat effects on humans.

Full Article in [BBC](#)

EVENTS

A/Prof Jason Lee organised Dialogue: Heat in the Workplace



Research Associate Professor organised a Dialogue: Heat in the Workplace together with Elspeth Oppermann, LMU Germany. This Dialogue provides a rapid

Dr Ivan Low invited as expert panellist on Activehealth



Dr Ivan Low was invited as one of the expert panellist for the Activehealth Webinar Series on topics related to the

tour through key recent developments in the world of occupational heat health. Held on 29 July 2020, the dialogue consisted of updates from a panel of three experts and practitioners on the state of the science, new research outcomes into often overlooked worker populations, and practical interventions into occupational heat health in Europe, Central America and Vietnam. The presentations were followed by a facilitated panel discussion.

[Watch the Dialogue](#)

effects of exercise on learning and cognitive performance. The Activehealth Webinar Series is a collaborative initiative between ActiveSG and Singapore Public Service Division to promote physical activity participation amongst public service officers during the COVID19 pandemic outbreak and circuit breaker.

PUBLICATIONS

[Magnetic fields modulate metabolism and gut microbiome in correlation with Pgc-1 \$\alpha\$ expression: Follow-up to an in vitro magnetic mitohormetic study](#)

Yee Kit Tai, Charmaine Ng, Kristy Purnamawati, Jasmine Lye Yee Yap, Jocelyn Naixin Yin, Craig Wong, Bharati Kadamb Patel, Poh Loong Soong, Pawel Pelczar, Jürg Fröhlich, Christian Beyer, Charlene Hui Hua Fong, Sharanya Ramanan, Marco Casarosa, Carmine Pasquale Cerrato, Zi Ling Foo, Rina Malathi Pannir Selvan, Elina Grishina, Ufuk Degirmenci, Shi Jie Toh, Pete J Richards, Ali Mirsaidi, Karin Wuertz-Koza, Suet Yen Chong, Stephen J Ferguson, Adriano Aguzzi, Monica Monici, Lei Sun, Chester L Drum, Jiong-Wei Wang, Alfredo Franco-Obregón

FASEB J. 2020 Jul 6. doi: 10.1096/fj.201903005RR. Online ahead of print.

[Abstract](#)

[Cell-Derived Vesicles as TRPC1 Channel Delivery Systems for the Recovery of Cellular Respiratory and Proliferative Capacities](#)

Felix Kurth, Yee Kit Tai, Dinesh Parate, Marc van Oostrum, Yannick R. F. Schmid, Shi Jie Toh, Jasmine Lye Yee Yap, Bernd Wollscheid, Alaa Othman, Petra S. Dittrich, Alfredo Franco-Obregón

Advanced Biosystems. online published on 02 September 2020. doi:

10.1002/adbi.202000146

[Full Text](#)

[Use of digital platform to encourage good laboratory practices during departmental safety inspections](#)

Yeong Bing Ong, Uma Thambiyah, Phoebe Kang Sheing Koh, Nurulhuda Mohamed Nassir, Hooi Ling Wong, Manoor Prakash Hande

Journal of Environment and Safety / Volume 11 (2020) Issue 2 / Pages 7-10. DOI:

10.11162/daikankyo.E19PROCP15

[Abstract](#)

[Thermoregulatory responses to ice slurry ingestion during low and moderate intensity exercises with restrictive heat loss](#)

Sharifah B Alhadad, Ivan C C Low, Jason K W Lee

J Sci Med Sport. 2020 Jul 15;S1440-2440(20)30685-X. doi: 10.1016/j.jsams.2020.07.002.

[Abstract](#)

[Patients' and healthcare professionals' perspectives towards technology-assisted diabetes self-management education. A qualitative systematic review](#)

Sneha Rajiv Jain, Yuan Sui, Cheng Han Ng, Zhi Xiong Chen, Lay Hoon Goh, Shefaly Shorey

PLoS One. 2020 Aug 17;15(8):e0237647. doi: 10.1371/journal.pone.0237647. eCollection 2020.

[Full Text](#)

Neuroblastoma patient-derived cultures are enriched for a mesenchymal gene signature and reflect individual drug response

Esther Hee, Meng Kang Wong, Sheng Hui Tan, Zhang'E Choo, Chik Hong Kuick, Sharon Ling, Min Hwee Yong, Sudhanshi Jain, Derrick W Q Lian, Eileen H Q Ng, Yvonne F L Yong, Mee Hiong Ren, Nurfarhanah Syed Sulaiman, Sharon Y Y Low, Yong Wei Chua, Muhammad Fahmy Syed, Tony K H Lim, Shui Yen Soh, Prasad Iyer, Michaela S F Seng, Joyce C M Lam, Enrica E K Tan, Mei Yoke Chan, Ah Moy Tan, Yong Chen, Zhixiong Chen, Kenneth T E Chang, Amos Hong Pheng Loh

Cancer Sci. 2020 Aug 10. doi: 10.1111/cas.14610. Online ahead of print.

[Full Text](#)

Biomimicking Fiber Platform with Tunable Stiffness to Study Mechanotransduction Reveals Stiffness Enhances Oligodendrocyte Differentiation but Impedes Myelination through YAP-Dependent

William Ong, Nicolas Marival, Junquan Lin, Mui Hoon Nai, Yee-Song Chong, Coline Pinese, Sreedharan Sajikumar, Chwee Teck Lim, Charles Ffrench-Constant, Marie E Bechler, Sing Yian Chew

Small. 2020 Aug 12;e2003656. doi: 10.1002/sml.202003656. Online ahead of print.

[Abstract](#)

Anti-malarial drug, artemisinin and its derivatives for the treatment of respiratory diseases

Dorothy H J Cheong, Daniel W S Tan, Fred W S Wong, Thai Tran

Pharmacol Res. 2020 Aug;158:104901. doi: 10.1016/j.phrs.2020.104901.

[Full Text](#)

MicroRNAs in chronic airway diseases: Clinical correlation and translational applications

Bryce W Q Tan, Wei Liang Sim, Jit Kong Cheong, Win Sen Kuan, Thai Tran, Hui Fang Lim

Pharmacol Res. 2020 Jun 23;160:105045. doi: 10.1016/j.phrs.2020.105045.

[Abstract](#)

Decellularized liver as a translucent ex vivo model for vascular embolization evaluation

Yanan Gao, Zhihua Li, Yin Hong, Tingting Li, Xiaoyan Hu, Luyao Sun, Zhengchang Chen, Zijian Chen, Zhiheng Luo, Xin Wang, Jian Kong, Guanglei Li, Hsing-Lin Wang, Hwa Liang Leo, Hanry Yu, Lei Xi, Qiongyu Guo

Biomaterials. 2020 May;240:119855. doi: 10.1016/j.biomaterials.2020.119855. Epub 2020 Feb 10.

[Abstract](#)

Bile canaliculi contract autonomously by releasing calcium into hepatocytes via mechanosensitive calcium channel

Kapish Gupta, Inn Chuan Ng, Gowri Manohari Balachander, Binh P Nguyen, Lisa Tucker-Kellogg, Boon Chuan Low, Hanry Yu

Biomaterials. 2020 Aug 11;259:120283. doi: 10.1016/j.biomaterials.2020.120283. Online ahead of print.

[Abstract](#)

COVID-19 and thermoregulation-related problems: Practical recommendations

Hein Daanen, Stephan Bose-O'Reilly, Matt Brearley, D. Andreas Flouris, Nicola M.

Gerrett, Maud Huynen, Hunter M. Jones, Jason Kai Wei Lee, Nathan Morris, Ian Norton , Lars Nybo, Elspeth Oppermann, Joy Shumake-Guillemot & Peter Van den Hazel
Temperature. 2020. doi: 10.1080/23328940.2020.1790971.

[Full Text](#)

[Role of Histone Deacetylases in Skeletal Muscle Physiology and Systemic Energy Homeostasis: Implications for Metabolic Diseases and Therapy](#)

Haili Tian, Sujuan Liu, Jun Ren, Jason Kai Wei Lee, Ru Wang, Peijie Chen
Front Physiol. 2020 Aug 11;11:949. doi: 10.3389/fphys.2020.00949. eCollection 2020.

[Full Text](#)

[Peroxynitrite promotes serine-62 phosphorylation-dependent stabilization of the oncoprotein c-Myc](#)

Deepika Raman, Stephen J.F. Chong, Kartini Iskandar, Jayshree L. Hirpara, and Shazib Pervaiz

Redox Biol. 2020 Jul; 34: 101587. doi: 10.1016/j.redox.2020.101587

[Full Text](#)

[Redox signaling in the pathogenesis of human disease and the regulatory role of autophagy](#)

Shazib Pervaiz, Gregory L Bellot, Antoinette Lemoin, Catherine Brenner
Int Rev Cell Mol Biol. 2020;352:189-214. doi: 10.1016/bs.ircmb.2020.03.002.

[Abstract](#)

[Noncanonical Cell Fate Regulation by Bcl-2 Proteins](#)

Stephen Jun Fei Chong, Saverio Marchi, Giulia Petroni, Guido Kroemer, Lorenzo Galluzzi, Shazib Pervaiz

Trends Cell Biol. 2020 Jul;30(7):537-555. doi: 10.1016/j.tcb.2020.03.004.

[Abstract](#)

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

Natalie Yan Li Ngoi, Clarice Choong, Joanne Lee, Gregory Bellot, Andrea Li Ann Wong, Boon Cher Goh, Shazib Pervaiz

Cancers (Basel). 2020 Mar 2;12(3):574. doi: 10.3390/cancers12030574.

[Full Text](#)

[Massively parallel single-molecule telomere length measurement with digital real-time PCR](#)

Yongqiang Luo, Ramya Viswanathan, Manoor Prakash Hande, Amos Hong Pheng Loh and Lih Feng Cheow

Science Advances 21 Aug 2020; Vol. 6, no. 34, eabb7944. DOI: 10.1126/sciadv.abb7944

[Full Text](#)

[Histone variants in skeletal myogenesis](#)

Nandini Karthik, Reshma Taneja

Epigenetics. 2020 Aug 2;1-20. doi: 10.1080/15592294.2020.1795606.

[Abstract](#)

UPCOMING EVENTS

1. [Frontiers in Cancer Science 2020](#), 2-6 November 2020, Singapore (Organisers: David M. Virshup (Chairman), Dean Ho, Anand D Jeyasekharan, Sudhakar Jha, Joanne Ngeow, Sin Tiong Ong, Shazib Pervaiz, Kanaga Sabapathy, Wai Leong Tam, Vinay Tergaonkar)
2. [Strategies and Approaches to Build Resilience in the Early Years of Health Professions Education](#), 22 January 2021, Singapore (Organisers: Zhi Xiong Chen, Neil Osheroff and Jian Yi Soh)
3. [APMEC 2021](#), 20-24 January 2021

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