

N2CR INSIGHTS

THE QUARTERLY NEWSLETTER OF N2CR

Yong Loo Lin School of Medicine Excellence Awards 2023



DR DERRICK ONG
RESEARCH EXCELLENCE AWARD



A/PROF POLLY CHEN
RESEARCHER OF THE YEAR AWARD



A/PROF CELESTIAL YAP
TEACHING EXCELLENCE AWARD
(INDIVIDUAL)

Latest News

Catch A/Prof Alfredo Franco-Obregón and Dr Joline Lim on CNA's *On The Pulse*!



A/Prof Alfredo Franco-Obregón and Dr Joline Lim were featured in an episode of *On The Pulse*, which aired on 13 May 2023, where they discussed the effects of low energy magnetic fields on breast cancer cells. This treatment does not affect normal cells and can complement the chemotherapy that patients are already receiving. (Their segment begins at 9.55 mins)

[Click to watch the full episode!](#)



N2CR PHD GRADUATE PROGRAMME

Admission for the January 2024 intake is open for applications!

[Click HERE](#) or [SCAN QR](#) to Learn More



For further enquiries email n2cr@nus.edu.sg

HERE'S WHAT'S UP!

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July

N2CR Graduate Programme Open Day
CSI-N2CR Invited Speaker Seminar

September

NUS-Kanagawa Symposium 2023

Follow us on social media!



OPEN DAY N2CR GRADUATE PROGRAMME COME JOIN US FOR OUR PHD PROJECT PRESENTATION, Q&A AND NETWORKING

Date: Wednesday, 12 July 2023
Time: 10 am to 1 pm
Venue: 14 Medical Drive,
MD6 #04-01A,
Singapore 117599



For more information

Lunch will be provided



Latest News

Welcome to our new N2CR members!



Yang ZHANG

Department of Biochemistry
and School of Computing, NUS
CSI Singapore



TAI Yee Kit Alex

Department of
Surgery, NUS



Anthony KHONG

Department of
Physiology, NUS
CSI Singapore



Jun Siong LOW

Department of Microbiology
and Immunology, NUS
CSI Singapore

Research News (Apr - Jun 2023)

EBV-associated Smooth Muscle Tumours: Novel Findings

(Modern Pathology, Wah NW *et. al.*)

Epstein-Barr virus (EBV)-associated smooth muscle tumours (EBV-SMTs) are rare tumours that can arise in immunosuppressed patients. Such patients include those who are post-transplant or have HIV/AIDS or congenital immunodeficiency. However, understanding of EBV-SMTs in terms of its genomic profile is limited, hindering the development of novel treatments for this disease. This study enhances understanding of EBV-SMTs through the characterisation of EBV-SMT copy number alterations, which are modifications in the number of copies of specific DNA sections in the genome. Their findings lay the foundation for the discovery of novel drugs for the treatment of EBV-SMTs.



[Read More](#)

p53 mutations and cancer: Another twist in the tale

(Nature Communications, Ho TLF *et. al.*)

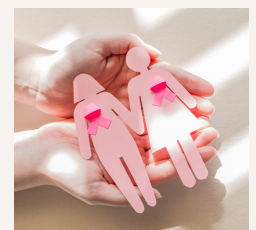
Mutations affecting p53 are amongst the commonest genetic alterations in human cancer. Mutant p53 proteins are thought to promote carcinogenesis either by inactivating p53's cancer-suppressing functions, or instead, by acquiring new, cancer-promoting activities. But the latter route, in particular, is not well understood. A new study led by Prof Ashok Venkitaraman, now reveals another twist in the p53 tale, which promises new approaches to treating p53-mutant cancers. Dr Teresa Ho and Prof Venkitaraman investigated the problem by studying p53 proteins with mutations in specific domains, where domains are distinct structural and/or functional regions in a protein. The authors demonstrated that mutations in either one of two key domains of the p53 protein promote tumour growth by enhancing the activity of an important growth-promoting signal, Epidermal Growth Factor Receptor (EGFR), through mechanisms specific to each domain. Their findings shed new light on how p53 mutants promote tumour growth and pave the way for the improvement of therapies targeting p53 and/or EGFR.



[Read More](#)

Controlling breast cancer spread (Nature Communications, Zhang J *et. al.*)

The limited efficacy of treatment options for advanced stage and relapsed breast cancer necessitates the development of novel therapies. Metastasis, the migration of cancer cells from the original tumour site to secondary sites, is a major contributor to breast cancer progression and cancer-associated mortality. Epithelial-mesenchymal-transition (EMT), a key vastly dynamic biological process, affords cancer cells an increased capacity for survival as well as the ability to migrate across sites in the body, leading to metastasis and cancer progression. Discoveries made in this study, helmed by Dr Tee Wee Wei, demonstrate the crucial roles of the proteins, NELF-E, SLUG, and KAT2B, and their interplay in the regulation of EMT. By delineating the mechanism through which NELF, SLUG and KAT2B, enhance the expression of genes that control EMT, the findings made in this study highlight the potential of targeting NELF-E and KAT2B in the development of novel therapies for cancer.

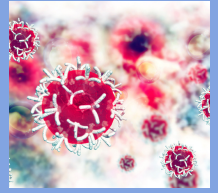


[Read More](#)

Research News (Apr - Jun 2023)

Understanding of Natural Killer/T Cell Lymphoma (Molecular Cancer, Zhou J *et. al.*)

Extranodal natural killer/T-cell lymphoma (NKTL) is an aggressive cancer associated with poor survival outcome. The development of novel and more effective therapies for NKTL requires a better understanding of the biology of NKTL and the processes involved in driving the expression of key oncogenes. In this study led by Prof Chng Wee Joo, A/Prof Takaomi Sanda and A/Prof Ong Choon Kiat, the authors identified and profiled super-enhancers present in NKTL, where super-enhancers are specific regions of DNA that greatly increase expression of certain genes. Through this study, the authors identified TOX2, a transcription factor highly expressed in NKTL and associated with poorer survival outcome. Their findings highlight the targeting of TOX2 as a novel therapeutic target to improve treatment for NKTL patients. **Read More**

**Patterns of Oncogene Coexpression at Single-Cell Resolution Influence Survival in Lymphoma** (Cancer Discovery, Hoppe MM *et. al.*)

Different combinations of oncogene activation in cancer cells can affect patient outcomes. Specifically, in this study led by N2CR member Dr Anand Jeyasekharan, the authors looked at a type of cancer called diffuse large B-cell lymphoma (DLBCL) and used microscopic imaging to identify a specific combination of oncogene expression that consistently predicted survival across multiple patient groups. They also proposed a way to estimate gene expression from patient samples that could help predict outcomes and identify new targets for therapy. The hope is that this research will lead to better ways of predicting and treating cancer, ultimately improving patient outcomes. **Read More**

Upcoming Events

CSI-N2CR INVITED SPEAKER SEMINAR

20 July 2023, 1 - 2 pm

Venue: CRC Auditorium

Speaker: Prof Song Shumei

**"Novel targets and Targeting Strategies for Gastric Cancer Progression and Metastasis--focus on Hippo/YAP1 signaling in peritoneal metastasis"**

Prof Song Shumei from the University of Texas MD Anderson Cancer Center, will be in Singapore in July for the Singapore Gastric Cancer Consortium. She'll be kindly stopping by NUS to give a talk on the above topic.

TRANSLATION EXCHANGE (TRES) GRANT CALL

You are invited to attend the
TRES Club Meeting on

Wednesday, 16 August 2023, 6pm
MD6-13-02N - CeTM - L13 conference
room (13-02N)

To participate, please email n2cr@nus.edu.sg by
2nd August 2023

[Click here to learn more](#)

**Joint NCIS-N2CR Seed Funding Programme Mini-Symposium**

29 August 2023, 9am - 11am
NUHS Tower Block T08-04

Programme**Talk Title**

Predictive biomarkers for targeting replication stress in ovarian cancer

Role of tumour-associated microbiota and the impact on the pre-metastatic niche in colorectal liver metastases

A Phase II trial of neural network-based treatment decision support tool in patients with refractory solid organ malignancies

Speakers

Dr David Tan &
Dr Cheok Chit Fang

Dr Nigel Tan &
A/Prof Glenn Bonney

Dr Robert Walsh &
Dr Anand Jeyasekharan

NUS - Kanagawa Symposium 2023
Advances in Cancer Research

DATE 4 - 5 September 2023 (Monday & Tuesday)

VENUE NUS Centre for Life Science (CeLS) Auditorium (Level 1)



NUS Centre for Cancer Research
Yong Loo Lin School of Medicine



YOKOHAMA
CITY
UNIVERSITY

