

# N2CR INSIGHTS

THE QUARTERLY NEWSLETTER OF N2CR

OCT - DEC 2021

ISSUE 1

## LATEST NEWS AND ACHIEVEMENTS



### Congratulations to Associate Professor Too Heng-Phon, recipient of the President's Technology Award 2021

Associate Professor Too Heng-Phon was conferred this award for his innovative work in the detection of microRNA disease biomarkers; which has led to the development of the world's first molecular blood test for the early detection of gastric cancer, when the chance of survival is at its highest.

[Read more](#)

### Dr Tee Wee Wei – EMBO Global Investigator Network 2022



The European Molecular Biology Organization (EMBO) has just announced that eight group leaders have been selected as new members of the prestigious EMBO Global Investigator Network 2022. Congratulations to Dr Tee Wee Wei, one of these eight selected group leaders.

[Read more](#)

### N2CR members among world's most highly cited researchers



Congratulations to our members, Dr Alan Prem Kumar & Associate Professor Gautam Sethi, who have been placed on the list of 'Highly Cited Researchers 2021' (by Clarivate) for the second consecutive year.

[Read more](#)

### Graduate Programme open for applications till 31 Jan 2022

Admission for August 2022 intake is now open for applications!

Further enquiries: N2CR [a] nus.edu.sg



SCAN ME

### This Issue

Latest news and achievements  
Page 1

Research news  
Page 2 to 3

2021 Highlights  
Page 4 to 5

### Upcoming events

#### Jan 2022

Precision Cancer  
Medicine Thematic  
Seminar

Internal Early Cancer  
Intervention Grant Call

#### Feb 2022

Joint NCIS/N2CR Mini  
Symposium

### Follow Us



## RESEARCH NEWS (Oct to Dec 2021)

**Vaccine therapy for nasopharyngeal carcinoma**

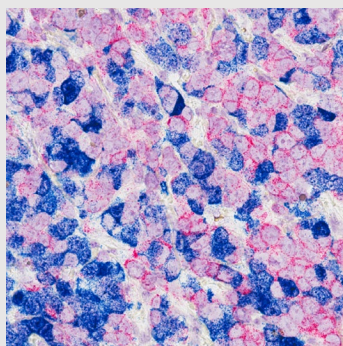
10 December, 2021

Epstein-Barr virus (EBV) is associated with nasopharyngeal carcinoma (NPC) and provides a potential target for dendritic cell vaccine therapy. This phase 1 clinical study led by Prof Goh Boon Cher and A/Prof Herbert Schwarz indicates that a novel type of dendritic cells pulsed with EBV nuclear antigen LMP2 are safe and exhibits promising efficacy when administered following chemotherapy in patients with locally recurrent or metastatic NPC.

[Read more](#)**Liver transplantation for metastatic tumours**

10 December, 2021

More than 50% of colorectal cancer patients develop metastases to the liver. Liver resection is considered the only treatment for patients with colorectal liver metastases. This review by A/Prof Glenn Bonney aims to standardise and define management principles for liver transplantation for non-resectable colorectal liver metastases. These guidelines will provide a framework for better patient selection and organ allocation to improve survival for patients with this disease.

[Read more](#)**Fatty acid oxidation inhibits breast cancer cells in animal models**

December 8, 2021

Fatty acids oxidation (FAO) confers Epithelial-to-mesenchymal transition causing tumorigenicity and drug resistance to cancer cells. This study by A/Prof Tam Wai Leong demonstrates that pharmacological inhibition of FAO could block breast cancer cells in animal models. Hence, the addiction to specific metabolic pathways during distinct steps of cancer progression may be exploited to target specific cell states to open up new avenues for antimetabolite therapeutic strategies for cancer treatments.

[Read more](#)**Pseudogene demethylation activates oncogenes in Hepatocellular carcinoma**

December 8, 2021

Hepatitis B virus (HBV) infection is one of the main causes of Hepatocellular Carcinoma (HCC) which is one of the leading causes of cancer related deaths globally. Pseudogenes have recently been linked to patient prognoses and cancer subtypes. This study helmed by Prof Daniel Tenen focused on oncogene SALL4, a known oncogene in hepatocellular carcinoma (HCC) which is significantly increased in hepatitis patients with HCC.

[Read more](#)

## RESEARCH NEWS (Oct to Dec 2021)



### NUS researchers discover possible new treatment option for aggressive forms of breast cancer

NUS Press release: NUS Yong Loo Lin School of Medicine, 3 Nov 2021

Women diagnosed with the biologically aggressive triple-negative and endocrine-refractory subtypes of breast cancer confront a bleak prognosis because they respond poorly to conventional chemotherapy. Researchers from the NUS Yong Loo Lin School of Medicine have discovered that combining one of the most widely prescribed medication class for type 2 diabetes mellitus known as thiazolidinediones, with an emerging class of cancer drugs known as histone deacetylase inhibitors, elicits robust anti-tumour responses in preclinical models of these breast cancer subtypes.

[Read more](#)

### Potential biomarker to pre-screen radio-resistance

October 11, 2021

The cancer/testis (CT) antigen GAGE are a category of tumour antigens expressed in several cancers. Elevated GAGE expression is positively associated with Radiotherapy (RT) resistance in cervical cancers and RT resistance is a major cause of treatment failure in cancers. This study by Associate Prof Deng Lih-Wen and her team shows that elevated GAGE levels are positively correlated with local and/or distant treatment failure in pre-treatment biopsy samples, suggesting GAGE as a predictive marker for radiotherapy response in cervical cancer.

[Read more](#)

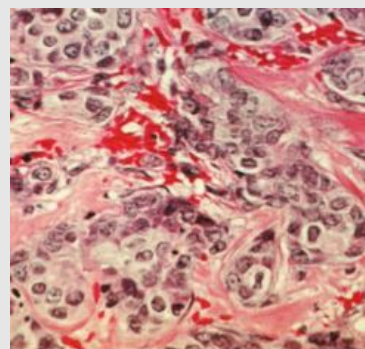


### Precision cancer-based model as a therapeutic approach

October 11, 2021

Metastasis is the main cause of mortality in breast cancer patients. CD82, a metastasis suppressor has been shown to be lowly expressed in metastatic breast cancer. This review by Prof Bay Boon Huat and his team proposes targeting CD82 as a therapeutic approach to hinder metastases in breast cancer patients. The main goal of targeting CD82 as an innovative therapeutic approach is to prevent cancer spread by an appropriate selection of non-metastatic breast cancer patients with low CD82 expression and restoring the CD82 levels with either clinically approved drugs, CD82 peptide mimics or non-coding RNA-based therapeutics.

[Read more](#)



Thank you to all our members for your hard work and dedication in our mission to cure, detect or prevent cancer.

## 2021 HIGHLIGHTS - AWARDS



**2021**  
Graduate Mentor of the Year (GRAMAY)

**Professor Chng Wee Joo**  
Department of Medicine

**Associate Professor Saji Kumar Sreedharan**  
Department of Physiology

**Dr Alan Prem Kumar**  
Dean's Office  
(NUS Centre for Cancer Research) /  
Department of Pharmacology

NUS  
Yong Loo Lin School of Medicine

The GRAMAY Award is an annual award to honour faculty staff for their mentorship and professional development of graduate students in the Yong Loo Lin School of Medicine. The award recognises the importance of Faculty staff in inspiring and nurturing future biomedical and clinician scientists. The recipients would have shown excellence in graduate supervision, professional as well as career development of their graduate students. [Read more](#)

## National Medical Research Council Award 2021

Singapore Translational Research  
Investigator Award (STaR)Professor  
Goh Boon CherClinician Scientist Award -  
Senior Investigator (CSASI)Professor  
Dario CampanaProfessor Lee  
Soo ChinClinician Scientist Award  
- Investigator (CSAINV)Dr Anand  
Jeyasekharan

Transition Award (TA)

Associate Professor  
Glenn Bonney

Dr Raghav Sundar

Congratulations to our  
members on their  
NMRC award

The National Medical Research Council (NMRC) presents various awards annually to honour clinician scientists and researchers for their outstanding achievements and contributions to a better healthcare.

[Read more](#)

## 2021 HIGHLIGHTS - RESEARCH NEWS



“Cancer-causing BRCA2 missense mutations disrupt an intracellular protein assembly mechanism to disable genome maintenance” - *Nucleic Acids Research, Volume 49, Issue 10, 4 Jun 2021*

This study discovered how certain mutations in BRCA2 increase susceptibility to breast, ovarian, prostatic and pancreatic cancer which could create opportunities for preventing or delaying cancer in patients who carry certain faults in BRCA2.

**Professor Ashok Venkitaraman**

[Read more](#)



“Determinants of response to daratumumab in Epstein-Barr virus-positive natural killer and T-cell lymphoma” - *Journal for ImmunoTherapy of Cancer, Volume 9, Issue 7, 2 Jul 2021*

This research proposes a novel rational approach for the evaluation and optimization of daratumumab response in future clinical trials in natural killer T-cell lymphoma patients.

**Professor Chng Wee Joo**

[Read more](#)



“Targeting RNA editing of *antizyme inhibitor 1*: A potential oligonucleotide-based antisense therapy for cancer” - *Molecular Therapy Volume 29, Issue 11, 3 November 2021*

It is found that antisense oligonucleotides (ASOs) - mediated inhibition of RNA editing effectively suppresses tumour incidence and growth, suggesting that many cancer patients may benefit from this ASO-based therapeutics.

**Associate Professor Polly Chen**

[Read more](#)



“A chemical biology approach reveals a dependency of glioblastoma on biotin distribution” - *Science Advances, Volume 7, Issue 36, 3 Sep 2021*

This research article demonstrates that regulating biotin consumption can be clinically considered as a potential node of intervention in patients with glioblastoma.

**Assistant Professor Derrick Ong**

[Read more](#)

Click to listen to our members' interview on CNA (Health Matters)

Dr Andrea Wong



Timed Chemotherapy  
Drug Treatment  
21 April 2021

Prof Daniel Tenen



Mechanism To Control  
Replenishment of Blood Cells  
18 February 2021

Prof Lee Soo Chin



Improving Breast Cancer  
Treatment Outcomes  
7 April 2021