

# N2CR INSIGHTS

THE QUARTERLY NEWSLETTER OF N2CR

JAN - MAR 2022

ISSUE 2

## LATEST NEWS AND ACHIEVEMENTS

### New partnership with NUSMed Clinician Scientist Development Unit (CSDU)

Given the shared interest in developing the next generation of research talent, a new partnership is formed between CSDU and N2CR: **'N2CR-CSDU Career Development Programme'** which is designed to nurture promising young clinician-scientists with an interest in cancer research. This Career Development Programme will cover a number of elements, from finding N2CR mentors for the budding-clinician scientist, to jointly funding research projects, with the eventual intent that the budding clinician-scientist is able to develop his/her research ideas into competitive grants.

Budding clinician-scientists who are accepted as N2CR-CSDU Career Development Fellows will become associate members of N2CR with access to a range of educational and research talks and activities.

[Read more](#)



### N2CR & NCIS first joint Mini-Symposium on 18 February 2022



The first joint National University Cancer Institute of Singapore (NCIS) – NUS Centre for Cancer Research (N2CR) mini-symposium was successfully held virtually.

This joint initiative between NCIS and N2CR aims to provide start-up funding for promising new projects that emphasise translational research projects in cancer and to promote collaboration between bench scientists and clinicians in the NCIS/NUHS/NUS campus. To Date, 14 Seed Grants have been awarded under this initiative.

In this mini symposium, chaired by Prof Ashok Venkitaraman and Prof Lee Soo Chin, awardees discussed the impact of their funded research projects and how they addressed challenges to diagnose, treat and cure cancer.

[Read more](#)

### Exposed: A/Prof Too Heng-Phon, Co-founder of MiRXES, scuba dives and plays Xbox



We had the privilege of speaking with A/Prof Too Heng-Phon, Research Director of N2CR and Co-founder of MiRXES, on winning the President's Technology Award 2021. MiRXES is a startup biotech company with a mission to save lives through early detection of cancer.

A/Prof Too is not only at his best when conducting research at his lab at MD7, but also when playing Tom Clancy games on Xbox.... and is a Senior Black Belt holder in karate.

[Click here to listen to our interview](#)

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### Upcoming events

#### April 2022

Townhall Meeting  
Invited Speaker Seminar

#### May 2022

Precision Cancer Seminar

#### June 2022

Early Cancer Intervention Seminar

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## RESEARCH NEWS (Jan to Mar 2022)

**Understanding tumour architecture for treating Gastric Cancer**

Gastric cancer is a leading cause of global cancer morbidity and mortality. Gastric tumours frequently exhibit high levels of heterogeneity with distinct clinical behaviours between individual patients representing a barrier to disease management.

Dr Raghav Sundar, one of the four co-first authors of this study published in *Cancer Discovery*, and team used unique **single cell analysis** approach for gaining insights on gastric tumour cell types and identified increased plasma cell proportion in diffuse type tumours. These findings highlight dysregulated cell states in gastric tumour as predictors of poor clinical prognosis. Hence understanding of the gastric tumour architecture carries potential for therapeutic target and/or predictive biomarker discovery.

[Read more](#)

**Cost effective blood-based test for early detection of cancer**

Several multi-cancer early detection tests based on novel blood-based biomarkers, such as cell-free DNA or circulatory miRNA, help to make cancer screening cost-effective and more accessible by complementing current standard-of-care clinical diagnostic tests. This review by A/Prof Too Heng-Phon and team summarises clinical utility of circulatory miRNAs for early disease detection and highlights the need for point-of-care testing for earlier detection of cancer for intervention with precision medicine.



[Read more](#)

**Combinational therapeutic strategy for Breast Cancer treatment**

Breast cancer is the leading cause of cancer-associated death for women worldwide. Chemotherapy is the mainstream treatment for invasive breast cancer. However, chemotherapy-associated adverse events may result in early termination of cancer treatment.

In this article, A/Prof Franco-Obregon and team demonstrate the sensitivity of breast cancer cells to combinational therapy of chemotherapy and pulsed electromagnetic field therapy. The potential value of this unique combination merits future investigation into new therapeutic strategies for breast cancer treatment.

[Read more](#)

**A novel inhibitor has therapeutic potential against Pancreatic and Hepatocellular Cancers**

This study reports a novel inhibitor, mercaptopyridine oxide (MPO), which promotes inhibition of growth in pancreatic and hepatocellular cancer cell lines by inducing cell cycle arrest. Hence, authors in this study led by Prof Shazib Pervaiz provides proof-of-concept for therapeutic potential of this novel inhibitor against cancers.



[Read more](#)

RESEARCH NEWS (Jan to Mar 2022)

**A novel therapeutic target for Hepatocellular Carcinoma (HCC)**

Oncoproteins play essential roles in the development of various human cancers. This study led by A/P Gautam Sethi *et al* found increased levels of the novel oncoprotein, Cln Three Requiring 9 (CTR9), in tumour tissues from HCC patients that increases tumour growth in mouse models. Thus, proposing this CTR9 as a therapeutic target for the treatment of HCC.

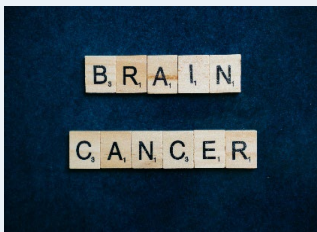
[Read more](#)



**Nanoparticles, a potential new treatment for Solid Brain tumour**

Glioblastoma (GBM) is the most aggressive form of solid brain tumours with limited treatment options. Nanoparticles have been shown to induce an antitumour effect and target GBM selectively. Researchers in this study, published in *Advanced Materials* and co-led by Dr Derrick Ong, provides evidence for the possible application of nanoparticles to treat GBM and other advanced-stage solid tumours.

[Read more](#)



**Immunotherapy as treatment for Gastric or Oesophageal Adenocarcinoma**

The combination of chemotherapy (or targeted therapy) with immunotherapy is emerging rapidly as a promising strategy in the first line treatment of advanced gastric cancer, gastroesophageal junction cancer, or oesophageal adenocarcinoma (GEAC) in the clinical trials. This study, published in *Journal of Clinical Oncology* and led by Dr Raghav Sundar, provides the basis to initiate a more detailed reassessment in the selection of treatment options for first-line metastatic GEAC patients using combination of immunotherapy and chemotherapy.

[Read more](#)



**UPCOMING EVENTS**

*April*

**Invited Speaker Seminar**

18 April 2022, 5 to 6 pm

- Prof Reshma Taneja
- Dr Amos Lee

**Townhall Meeting**

29 April 2022, 5 to 6 pm

*May*

**PCM Seminar**

30 May 2022, 5 to 6 pm

*June*

**ECI Seminar**

27 June 2022, 5 to 6 pm

