

# N2CR INSIGHTS

THE QUARTERLY NEWSLETTER OF N2CR

## LATEST NEWS AND ACHIEVEMENTS

### N2CR Welcomes New Leadership



Prof Goh Boon Cher

Dr Anand Jeyasekharan

A/Prof Deng Lih Wen

N2CR ushered in a new phase of transformation, led by Prof Goh Boon Cher as Director & Dr Anand Jeyasekharan as Deputy Director as well as A/Prof Deng Lih Wen as Co-Research Director alongside A/Prof Too Heng-Phon, to bring N2CR to greater heights.

N2CR extends its heartfelt gratitude to our Founding Director, Prof Ashok Venkitaraman, for his visionary leadership.

### Our new Site-Specific Resources (SSR) Leads



A/Prof Raymond Tsang

Dr Yong Wei Peng

SSR supports tissue-focused cancer research to improve outcomes and tackle treatment resistance.

### Our New N2CR Themes & Theme Leads

#### SCOUT & COMPASS

We are pleased to introduce two new N2CR research themes to advance translational research and foster cross-disciplinary collaboration on the unique challenges of Asian cancers.

#### COMPASS

(Customised Oncology through Molecular Profiling and Strategic Selection)

Charting the Future of Precision Oncology



COMPASS Theme Leads

Dr Dennis Kappel

Dr Joshua Tay

#### SCOUT

(Screening and Carcinogenesis: Origins in Unique Tissues)

Decoding Cancer's Beginnings for Healthier Tomorrow



SCOUT Theme Leads

Dr Cheek Chit Fang

Dr Melissa Ooi

## INSPIRING YOUNG MINDS

### A Day in the World of Cancer Research and Healthcare

#### EDUCATIONAL OUTREACH

### N2CR Outreach: Engaging Future Scientists

N2CR welcomed 50 students from five secondary schools for a field day on 29 October 2025, showcasing the roles of scientists and clinicians in cancer research, as well as healthcare professionals supporting patient care. The students enjoyed presentations from our N2CR clinicians and researchers, along with tours of the Pathology Museum & RNA Lab at NUS, and the clinical facilities at NCIS.

This programme was developed with NCIS, the Department of Pathology & ncRNA at Yong Loo Lin School of Medicine at NUS, and the Science Centre Singapore.



Click here for more photos of our event.

Hear what our fellow educators had to say!



### N2CR Invited Speaker Seminar

Prof Ankit Bharat, Chief of Thoracic Surgery at Northwestern University Feinberg School of Medicine and Executive Director of the Canning Thoracic Institute, delivered an insightful lecture on 'Lessons in Cancer Immunology from Lung Transplants for Metastasis and Covid' during his visit on 11 November 2025.

Stay tuned for more engaging talks in our series, where leading experts will continue to share cutting-edge discoveries and translational insights shaping the future of cancer research.



Latest News  
Page 1

Research News  
Pages 2

Highlights of 2025  
Page 2 & 3

Announcements  
Pages 3



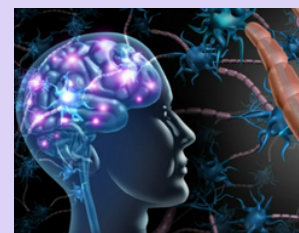
## RESEARCH NEWS (OCT - DEC 2025)

**Recharging the Aging Brain: DMTF1 to the Rescue**

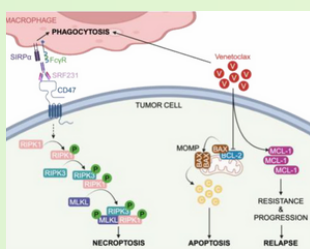
(Science Advances; Yajing Liang, ... Yuin-Han Loh, Derrick Sek Tong Ong)

As we age, stem cells in the brain — responsible for repair and renewal—become less active. Researchers, led by N2CR member Dr Derrick Ong, discovered that a protein called DMTF1 is crucial for keeping these stem cells active. In models of premature aging caused by damaged chromosome ends (called telomeres), DMTF1 levels dropped, and brain stem cell multiplication decreased. Restoring DMTF1 rescued their growth.

DMTF1 works by switching on helper genes (Arid2 and Ss18) that open up DNA and activate other growth-related genes. Without these helpers, stem cells lose their ability to renew. This breakthrough suggests DMTF1 as a promising target to counter age-related brain decline by reactivating stem cell function, offering hope for therapies that could preserve brain health as we grow older.

[Read More](#)**Targeting CD47 – Unlocking an Alternative Cell Death Pathway in Blood Cancer Treatment**

(Journal of Hematology &amp; Oncology; Stephen JF Chong ... Ruben D Carrasco, Matthew S Davids)



A recent study has uncovered that blocking the immune checkpoint protein CD47, long recognised for enabling immune clearance of cancer cells via phagocytosis, also activates a distinct cell death pathway known as necroptosis. Using advanced techniques across lymphoma and leukemia models, researchers demonstrated that anti-CD47 antibodies eliminate tumour cells by switching on a molecular 'death program' via the RIPK1/MLKL axis.

Importantly, combining CD47 blockade with drugs that block cancer cell survival proteins (such as the BCL-2 inhibitor venetoclax) proved beneficial in cancers highly reliant on those proteins, but counterproductive in others. Co-first authored by N2CR member Dr Stephen Chong, this work refines our understanding of CD47 biology and informs rational, patient-tailored combination strategies in blood cancers.

[Read More](#)

## HIGHLIGHTS OF 2025

**N2CR Retreat**

Our retreat at the Grand Copthorne Waterfront Hotel on 25 July 2025 was a fantastic day of engaging discussions, delicious food by the riverside, and plenty of camaraderie.

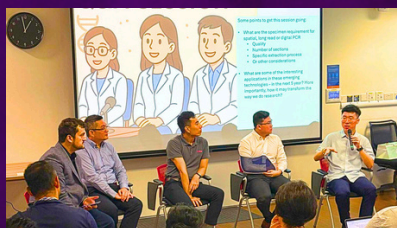
We also held a special **Appreciation Session** to thank our past Theme Leads, ExCo, and Committee members for their invaluable contributions to N2CR. Their dedication and leadership have been instrumental in shaping the centre's growth and success, and it was meaningful to celebrate their impact together.

**ACADEMIC TALKS**

In March, N2CR was honoured to host Prof Edison Liu for an engaging seminar on 'Mapping Genes That Determine Immune Checkpoint Inhibitor Response in Cancer'. Prof Liu is an Advisor & Visiting Professor at NUS Medicine as well as a Professor & President Emeritus at The Jackson Laboratory in USA.

**N2CR 2025 Seminar Spotlight**

N2CR actively engages with industry to bring fresh perspectives and introduce cutting-edge technologies to cancer research.



N2CR organised a Lunch & Learn Session in May with Darwin Science and Next Level Genomics, where five speakers presented on 'Revolutionizing Genomic Discovery: Spatial Multiomics, Long-Read Sequencing & Digital PCR'.

**INDUSTRY TALKS**

In July, we partnered with 10x Genomics to host a talk, 'Add a New Dimension to Your Cancer Research with Single Cell and Spatial Technologies', showcasing how advanced tools are able to dive deeper into disease pathology.



## A New Chapter Begins

The **N2CR Postdoc & Graduate Student Club** launched its first talk of 2025 on 5 September, marking a new chapter under President Dr Stephen Chong. These sessions aim to bring postdocs and students together to exchange ideas, build connections, and foster learning, networking, and career development in cancer research. The second talk in the series featured Dr Yong Wai Khang, who presented 'Quantitative Proteomics in Action: Case Studies, Expertise and Core Support', highlighting its impact in advancing translational cancer research.

## RESEARCH HIGHLIGHTS 2025



### 'Efficacy of Combined Pembrolizumab and Bevacizumab in Platinum-Resistant Nasopharyngeal Carcinoma'

The Lancet Oncology, Feb 2025

Study shows that combined pembrolizumab & bevacizumab boosts tumour response in platinum-resistant nasopharyngeal carcinoma, pointing to a potential new standard of care.

**Prof Goh Boon Cher**

[Read More](#)



### 'Enhancing Lenalidomide Efficacy in Multiple Myeloma'

Blood, 13 Mar 2025

Research identified ADAR1 as a key driver of lenalidomide resistance in multiple myeloma, highlighting it as a promising therapeutic target to improve treatment outcomes.

**Prof Chng Wee Joo and A/Prof Polly Chen**

[Read More](#)



### 'Unveiling p53's Role in DNA Protection: New Cancer Insights'

Nucleic Acids Research, 11 Nov 2024

Research uncovers how p53 and RRM2B safeguard DNA replication by curbing PARP1 hyperactivation under oxidative stress—revealing new pathways for precision cancer therapies.

**Dr Cheek Chit Fang**

[Read More](#)



### 'Overcoming Drug Resistance in Leukemia'

Leukemia, 24 Jul 2025

New study shows that combining venetoclax with an AKT inhibitor significantly reduced resistant cancer cells and improved survival in mice, offering a promising new treatment strategy.

**Prof Shazib Pervaiz and Dr Stephen Chong**

[Read More](#)



### 'Prospective Evaluation of QPOP in Relapsed/ Refractory Non-Hodgkin's Lymphoma'

JCO Precision Oncology, 23 Jul 2025

An AI-guided drug testing tool (QPOP) helped tailor treatments for difficult-to-treat lymphoma, improving patient responses and survival compared to standard therapies.

**Dr Anand Jeyasekharan**

[Read More](#)

## ANNOUNCEMENTS

### N2CR 2026 Seed Grant Calls

#### SCOUT

*Decoding Cancer's Beginnings for Healthier Tomorrow*

**Apply by: 1 Apr 2026, 9am**

1. Large Exploratory
2. Small Pilot

#### COMPASS

*Charting the Future of Precision Oncology*

**Apply by: 15 Apr 2026, 9am**

1. Foresight
2. Refresh
3. Companion to Cancer Care

For more info, please refer to the grant call email

For queries, please email: [n2cr@nus.edu.sg](mailto:n2cr@nus.edu.sg)

Visit our Site-Specific Resources for the following services

Tissue Requisition and Tissue Microarray (TMA)

Histology Services

Facility Booking

Please click on the services for further information or email [n2cr@nus.edu.sg](mailto:n2cr@nus.edu.sg) with any queries.

### N2CR Bulletin

We have created a WhatsApp group to share announcements on seminars, conferences, grant calls and events with our N2CR community.



- Connect
- Share
- Collaborate