

N2CR

INSIGHTS

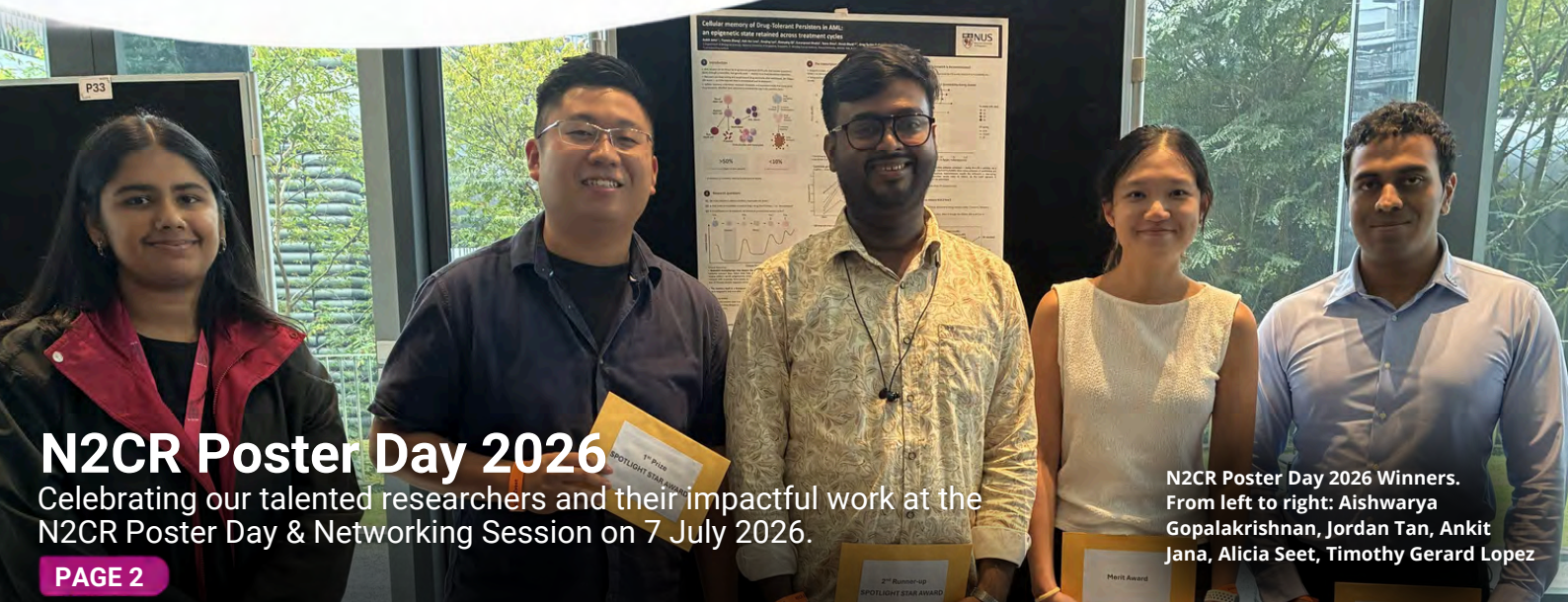
QUARTERLY NEWSLETTER OF N2CR



NUS Centre for Cancer Research
Yong Loo Lin School of Medicine



ISSUE 20 | JUL – SEP 2026



N2CR Poster Day 2026

Celebrating our talented researchers and their impactful work at the N2CR Poster Day & Networking Session on 7 July 2026.

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N2CR Poster Day 2026 Winners.

From left to right: Aishwarya Gopalakrishnan, Jordan Tan, Ankit Jana, Alicia Seet, Timothy Gerard Lopez

RESEARCH SPOTLIGHT

From Discovery to the Clinic

Follow A/Prof Too Heng-Phon's journey from laboratory discovery to the threshold of clinical testing.

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CANCER RESEARCHERS' STORIES

[Click to watch](#)

New Episode

Prof Goh Boon Cher reflects on his career in cancer pharmacology, translating discoveries into new treatments, and balancing life as a clinician, researcher and leader.



MEET OUR NEW MEMBERS



Dr DING Lingwen
Dept of Pathology, NUS



Dr Aaron FOO
Dept of Surgery, NUS



Dr LIU Chuang
Dept of Physiology, NUS



Dr NI Qianqian
Dept of Pharmacology, NUS



Dr Dawn NIN Sijin
Dept of Biochemistry, NUS



Dr SEOW Wei Jie
Dept of Medicine, NUS

SAVE THE DATE

N2CR Retreat 2027

Friday, 19 March 2027

Details to follow

Connect Collaborate Grow

NUS Medicine Award 2026

Outstanding Research Fellow

Outstanding Mentor for Research Fellows



WINNER
Dr Stephen CHONG
N2CR & Dept of Physiology, NUS



SECOND RUNNER-UP
Dr LAM Hiu Yan
N2CR & Dept of Pharmacology, NUS



WINNER
Dr Chandra Sekhar BHOL
N2CR & Dept of Pharmacology, NUS



RESEARCH NEWS
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SCIENTIFIC EXCHANGE THIS QUARTER
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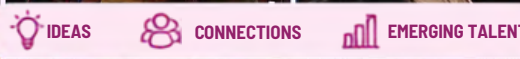
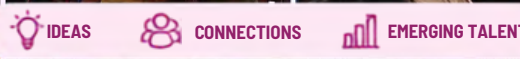
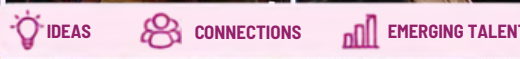
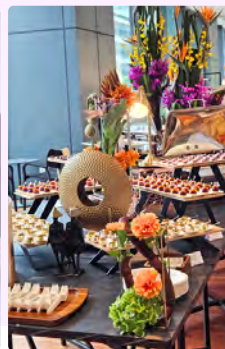
UPCOMING EVENTS
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QUARTERLY HIGHLIGHT: N2CR POSTER DAY

Our Poster Day & Networking Session, held on 7 July 2026, brought together members of the N2CR community for an engaging day of research sharing, lively discussion and meaningful connections.

The event provided a platform for our researchers and students to showcase their work, exchange ideas and insights, and connect with others across N2CR. The enthusiastic discussions reflected the breadth of research within our community and the value of coming together to learn from one another.

Congratulations to our poster winners, and well done to all our presenters for sharing their research with such enthusiasm. Thank you to everyone who participated and helped make the event a success.



TRANSLATIONAL RESEARCH SPOTLIGHT

A/Prof Too Heng-Phon: Translating Discovery to the Clinic

From decoding molecules in blood to engineering tumour-seeking cells, A/Prof Too Heng-Phon's research career reflects the often challenging journey of translating laboratory discoveries into cancer treatments. Today, one such innovation is approaching an important milestone: a Phase 1 clinical trial at NUHS.



A/Prof Too Heng-Phon
N2CR & Dept of
Biochemistry, NUS

Small molecules, big possibilities

For Prof Too Heng-Phon, Associate Professor (A/Prof) at N2CR and Dept of Biochemistry, NUS, translational research has been a recurring theme.

His work on microRNAs (miRNAs) – tiny RNA molecules that help regulate gene activity – helped advance blood-based approaches for early cancer detection and received the **Singapore's President's Technology Award** in 2021.

His research has since expanded from detecting cancer to developing new ways to treat it, including difficult tumours such as glioblastoma (GBM), an aggressive brain cancer with high recurrence and limited treatment options.

Together with Dr Sarah Ho Yoon Khei, Dr Woo Jun Yung and collaborators, A/Prof Too developed a non-viral method to engineer mesenchymal stem cells (MSCs) to seek out and kill tumours.

This approach formed the basis of AGeM-102, a cell-based therapy that uses these engineered MSCs to carry therapeutic agents directly to the tumour microenvironment, enabling more localised, less side-effects and coordinated anti-cancer activity.

From lab to veterinary patients

Before an experimental therapy can reach human patients, researchers need evidence that the underlying concept works and can be developed safely.

The team's approach was studied in laboratory and preclinical mouse models, but an unusual translational opportunity also arose through veterinary medicine.

Since 2018, genetically engineered MSCs were used to treat dogs and cats with naturally occurring, advanced cancers for which treatment options were limited. Unlike standard laboratory models, these companion animals were veterinary patients with spontaneous cancers, offering valuable real-world insights into how the therapy behaved in larger, biologically complex animals. Their naturally occurring cancers also better reflect some of the biological complexity of human disease.

These studies provided valuable insights that helped refine the therapeutic approach and build an important translational bridge towards human application.

Next step: Towards patients

In 2024, A/Prof Too, Dr Sarah Ho & Dr Woo Jun Yung established AGeM Bio, an NUS spin-off to advance the technology towards human use.

An NMRC Clinical Trial Grant has since been awarded to N2CR member & NUH neurosurgeon Adj A/Prof Vincent Nga to support a **Phase 1 study of AGeM-102 in patients with recurrent high-grade glioblastoma**.

The early-stage trial will focus primarily on safety and feasibility, marking an important milestone in a journey that has progressed from laboratory discovery through preclinical and veterinary studies to the threshold of human testing.

A/Prof Too's journey captures the essence and excitement of translational research – where discovery is only the beginning. From pioneering microRNA diagnostics to engineering cells for cancer therapy, his work reflects a sustained pursuit of one goal: bringing scientific discoveries closer to patients.

Read more



The Straits Times:
More on the
Animal Studies



The Straits Times:
Towards Human
Trials



The Science
Behind the
President's
Technology Award

DISCOVERIES IN FOCUS

Highlighting the latest research and discoveries from across N2CR.

Click or scan to
explore more



FEATURED IN THE STRAITS TIMES

Dr Alan Prem Kumar and his team have discovered a way to turn off the “master switch” driving aggressive triple-negative breast cancer. By targeting the DP103 gene with a drug called RX-5902, the team achieved a massive 90% reduction in tumour size in lab models while sparing healthy cells.

This breakthrough could lead to highly personalised, targeted treatments for patients facing this aggressive disease.

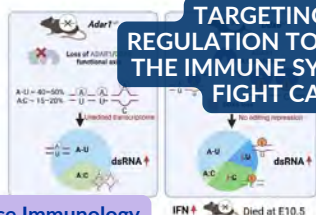
Click [here](#) to read the full feature in The Straits Times.

Click [here](#) to read publication.



Turning Off Breast Cancer's 'Master Switch'

TARGETING RNA REGULATION TO HELP THE IMMUNE SYSTEM FIGHT CANCER



Science Immunology

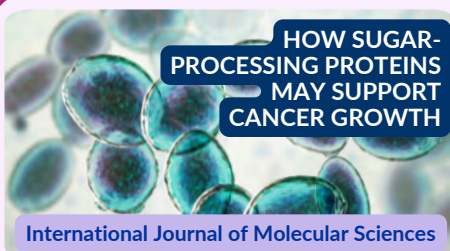
Larry Ng ... Dahai Luo, Leilei Chen

Our cells have built-in safeguards that help the immune system distinguish the body's own RNA from foreign RNA, such as RNA produced during a viral infection. Cancer cells can take advantage of these safeguards to avoid immune detection.

Research led by N2CR member **A/Prof Polly Chen** and her team, identified a mechanism that helps cancer cells suppress immune activity. When this mechanism was disrupted, double-stranded RNA accumulated within the cancer cells, triggering an antiviral-like immune response.

The findings suggest that targeting this mechanism could help make cancer cells more visible to the immune system and may offer a promising new approach to cancer immunotherapy.

HOW SUGAR-PROCESSING PROTEINS MAY SUPPORT CANCER GROWTH



International Journal of Molecular Sciences

Vivienne XY Chua ... Ophry Pines, Norbert Lehming

Cancer cells change how they use sugar to support their rapid growth. Using yeast as a laboratory model, researchers found that two proteins involved in processing sugar may also influence how cells detect and respond to damaged DNA.

Research led by N2CR member, **A/Prof Norbert Lehming** and his team, suggests that this connection could allow damaged cells to continue dividing, potentially contributing to cancer development and treatment resistance.

Further research is needed to determine whether the same process occurs in human cancer cells.

PERSONALISING TREATMENT FOR AGGRESSIVE OVARIAN CANCER



Oncogene

Vignesh Sundararajan ... Chit Fang Cheok, David Tan

High-grade serous ovarian cancer (HGSOC) is a common and aggressive form of ovarian cancer. Its Mesenchymal and Stem-like A (Mes/Stem-A or MSA) subtypes are associated with advanced disease and poorer outcomes.

ATR inhibitors are promising drugs targeting cancer cells with high DNA replication stress, but side effects can limit their use.

In this study led by N2CR members **A/Prof David Tan** and **Dr Cheok Chit Fang**, researchers found that MSA subtypes had higher replication stress and greater sensitivity to ATR inhibitors.

These findings could help identify patients most likely to benefit, but further clinical studies are needed to confirm if this approach can improve treatment outcome.

Extranodal NK/T-cell lymphoma (ENKTL) and EBV-positive nodal T/NK-cell lymphoma (nodal-TNKL) are rare, aggressive lymphomas with overlapping features but distinct biology.



The Phyu ... Ling-Wen Ding, Siok-Bian Ng

In a study co-led by N2CR members **Prof Ng Siok-Bian**, **Dr Ding Ling-Wen** and **Dr Leong Sai Mun**, an international team mapped DNA methylation across both lymphomas, revealing striking differences. ENKTL showed increased methylation linked to reduced expression of tumour-suppressor and lineage-regulatory genes, while nodal-TNKL showed widespread hypomethylation associated with immune-response pathways.

The researchers also identified two epigenetically distinct ENKTL groups, with the more highly methylated group showing greater genomic instability and poorer overall survival. The findings could help distinguish these lymphomas, identify higher-risk ENKTL and inform future biology-driven treatment strategies.

What is essential for normal development can become harmful when activated in the wrong context. The protein SYCP1 is a particularly striking example.



Louise C Brennan ... Wee-Wei Tee*, Ursula L McClurg*

Normally, SYCP1 plays an important role in the formation of reproductive cells, but researchers have discovered that cancer cells can repurpose this developmental protein to support their growth and survival.

In a recent study co-led by N2CR primary member **A/Prof Tee Wee Wei**, researchers found that SYCP1 is abnormally reactivated in several cancer types, including breast cancer. In cancer cells, SYCP1 helps control genes involved in DNA repair and cell division, processes that are critical for tumour growth. Removing SYCP1 impaired cancer cell growth and migration, and made the cells more sensitive to certain chemotherapy drugs.

These findings reveal how cancer can exploit proteins normally restricted to reproductive development, highlighting SYCP1 as a potential therapeutic vulnerability in cancer.

SCIENTIFIC EXCHANGE THIS QUARTER

Bringing our research community together to share ideas, insights and expertise.



INNOVATION

From Discovery to Impact

12 AUGUST 2026

Dr Vanessa Ding, Innovation Catalyst at NUS Enterprise, shared how intellectual property (IP) helps translate research discoveries into real-world impact.

The seminar covered protecting innovations, patenting considerations before publication, and how IP supports commercialisation through licensing, partnerships and spin-off companies.



NURTURING TALENT

Developing Talent

14 AUGUST 2026

Year 4 PhD students Kho Yun Suen and Lee Rui Xue presented their research at the N2CR Internal Seminar.

Yun Suen explored obesity-driven changes in oesophageal cancer, while Rui Xue shared her work developing high-throughput assays to evaluate novel immunotherapies for lymphoma and sarcoma.



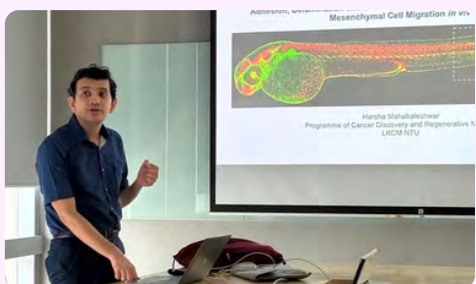
RESEARCH IMPACT

Inside Scientific Publishing

26 AUGUST 2026

Dr Angela Eggleston, Deputy Editor at Nature, offered an insider's perspective on scientific publishing.

She discussed the editorial process at Nature, the evolving role of journals in an increasingly digital world, and efforts to ensure accuracy, transparency and accessibility in scientific research.



GROWING TOGETHER

Postdoc & Graduate Student Club

25 SEPTEMBER 2026

Dr Harsha Mahabaleshwar, Research Fellow at LKCMedicine-NTU, shared how cells migrate during development using zebrafish models. His research examines the signals controlling cell adhesion, detachment and direction.

These findings offer valuable insights into cancer metastasis, where cancer cells exploit developmental pathways to migrate and spread to other tissues.



COMMUNITY SHARING

Science Meets the Public

26 SEPTEMBER 2026

N2CR member A/Prof Polly Chen spoke at the Diana Koh Learning Series, held at the Singapore Botanic Gardens, sharing research from her laboratory in an engaging and accessible way for the public.

Dr Silvana Talisa Wijaya from NUH also spoke at the event, highlighting her research on enhancing immunotherapy response in liver cancer.



N2CR SEMINAR SERIES

Seminar Spotlight

29 SEPTEMBER 2026

N2CR hosted Dr Ni Qianqian for an Invited Speaker Seminar, where she shared her research on nucleic acid technologies for RNA therapy and gene editing, from next-generation lipid nanoparticle delivery to mRNA engineering. Her talk also highlighted the potential of these technologies in cancer immunotherapy, gene editing and protein supplementation therapy.



UPCOMING EVENTS

More opportunities to learn, connect and be inspired.

Save the dates!

8
OCT
2026

N2CR Invited Speaker Series

3 to 4 pm: CRC Auditorium, MD11

Prof John LaCava from the University of Nebraska Medical Center will present on 'LINE-1 retrotransposons: assays, interactions, and molecular pathology'

30
OCT
2026

N2CR Internal Seminar

1 to 2 pm: CRC Auditorium, MD11

Featuring talks by Year 4 PhD students, Viresh Krishnan Sukumar & Faith Cheong Jiunn Fung.

8
DEC
2026

N2CR Invited Speaker Series

11 am to 12 pm: CRC Auditorium, MD11

Prof Stephanie Ma from The University of Hong Kong will speak on 'Oncofetal Reprogramming in Hepatocellular Carcinoma: Mechanisms and Therapeutic Opportunities.'



Through collaboration and learning,
we advance cancer research together.



Click here to find out more about our
events on the N2CR website.