CANCER SCIENCE INSTITUTE OF SINGAPORE

IN THE SPOTLIGHT

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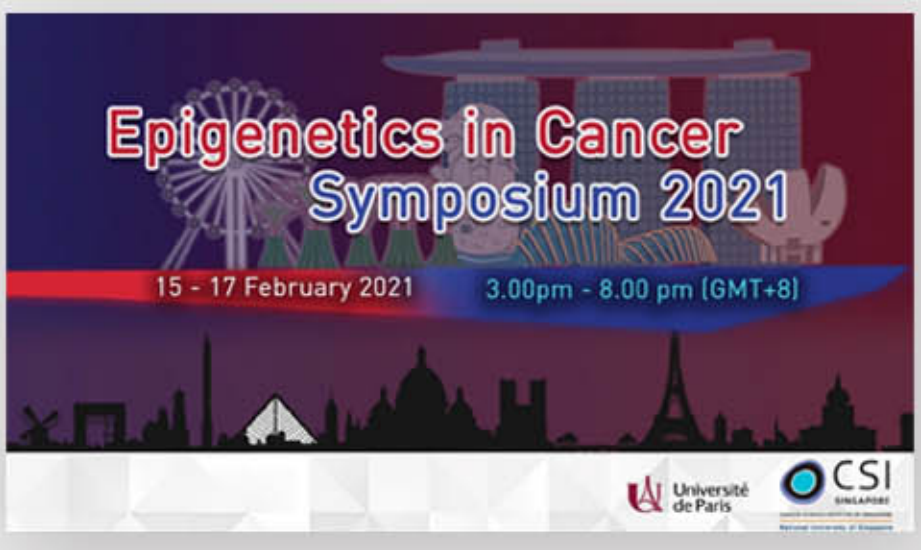
NEWS & ACHIEVEMENTS



Epigenetics in Cancer Symposium 2021

The Epigenetics in Cancer Symposium 2021 has concluded successfully! Jointly organized by the Cancer Science Institute of Singapore, NUS and the Université de Paris, the symposium drew an overwhelming turnout of 442 participants hailing from 32 countries. Despite the travel restrictions this year, the virtual program proved to be an excellent platform not only for the global scientific community to share ideas and forge meaningful collaborations across borders but as a space for cross-cultural exchange and immersion.

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[Listen] Health Matters – Mechanism to Control Replenishment of Blood Cells

Prof. Daniel Tenen shares his team's recent breakthrough on radio station CNA938's "Health Matters with Daniel Martin". In this interview, Prof. Tenen explains how findings from this decade-long study of Tip60 may hold promise for novel approaches for blood cancers & other blood-related diseases.

listen now >>>

MNK1 and MNK2 Enforce Expression of E2F1, FOXM1, and WEE1 to Drive Soft Tissue Sarcoma. (*Oncogene*, Feb 2021)

MAP kinase-interacting serine/threonine-protein kinase 1 and 2 (MNK1/2) have been established as a contributor to oncogenic translation in soft tissue sarcoma (STS). However, the impact of MNK1/2 on oncogenic transcription remains poorly explored. Researchers from Prof. H. Phillip Koeffler's group recently conducted a study which unveils crucial roles of MNK1/2 and their downstream targets in STS tumorigenesis. Their findings provide the rationale and strategy for targeting MNK1/2 in STS, paving the way for improved therapeutic strategies for STS treatment.

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H3K27me3-rich Genomic Regions Can Function as Silencers to Repress Gene Expression via Chromatin Interactions. (*Nat Commun*, Jan 2021)

H3K27me3 is an epigenetic modification to the DNA packaging protein Histone H3 which is associated with transcriptional repression. Recent research by Dr. Melissa Fullwood's team has yielded important clues about looping silencers in H3K27me3-rich regions (MRRs) and their mechanisms of function. They established that MRRs contain silencers in the human genome and developed a method for the identification of such silencer regions. By utilizing CRISPR excision, results revealed that MRRs can control gene regulation by acting as silencers looping over to gene promoters, thereby making looping silencers a promising target for cancer treatment.

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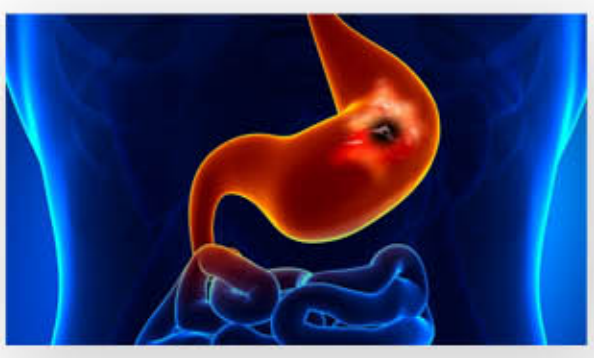
"3G" Trial: An RNA Editing Signature to Guide Gastric Cancer Chemotherapy. (*Cancer Res*, Feb 2021)

Gastric cancer (GC) remains the third leading cause of cancer death worldwide, with a higher incidence in Asia population. In collaboration with the National University Hospital (NUH) and Singapore Gastric Cancer Consortium (SGCC), researchers from Dr. Polly Chen's group established adenosine-to-inosine (A-to-I) RNA editing as a new player contributing to GC development. Findings from this impactful study have provided the rationale and therapeutic merits of RNA editing events, holding promise for improved chemotherapy treatment against this deadly cancer.



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