




Alice Lee 
Innovation Centre of Excellence
SGH CAMPUS

ALICE LEE INNOVATION CENTRE OF EXCELLENCE

Issue 1 : Launch of A.L.I.C.E @ SGH Campus



Alice Lee Innovation Centre of Excellence



SGH CAMPUS

A.L.I.C.E @ SGH Campus

Formerly recognized as SingHealth Duke-NUS The Innovation Centre, we are thrilled to announce our rebranding through the generous philanthropic donation from the Lee Foundation. We are thrilled to announce our rebranding to Alice Lee Innovation Centre of Excellence (A.L.I.C.E @ SGH Campus) on 22nd September 2023, through the generous philanthropic donation from the Lee Foundation. Embrace a new era of innovation and excellence with us!

How do we assist

A.L.I.C.E @ SGH Campus will look into the following areas to support and serve the innovation needs AMC innovators and Commercial Partners.

01

A physical platform to convene & co-develop innovation ideas

02

Form partnership & collaboration opportunities

03

Support on matching domain specific technologies and service providers

04

Provide prototyping support to advance early phase projects

Our Vision

To be the Leading Translation Platform in Transforming Healthcare Delivery Through Impactful Innovations

Everyone has a role to play in innovation.

- Assoc Prof Henry Ho, Director
A.L.I.C.E @ SGH Campus



The team behind A.L.I.C.E @ SGH Campus

Capabilities

Designed to foster collaboration, ideation, and transformation in the healthcare landscape, explore out dynamic space and services below

- ◆ Professional services for Commercial Partners
 - ◆ E.g. Product Awareness, Collaborate on Healthcare solutions, Consultation and Forging of Tailored Collaborations
- ◆ Professional services for AMC Innovators
 - ◆ E.g. Seed Grant Guidance & Application, Project Management and Resource Matching, Concept Ideation, Rapid Prototyping Equipment
- ◆ Supporting Project Development
 - ◆ I.e. IoT Devices and Prototyping Equipments Available for Loan
- ◆ Centre Spaces

Project Showcase

AMC innovators may seek specific support from A.L.I.C.E @ SGH Campus to project manage and resource match collaboration projects.

Here are some projects assisted by the team that were showcased during the Launch of A.L.I.C.E @ SGH Campus.



Blue Mirror

This hands-free solution is powered by artificial intelligence (AI) technology and Google Cloud to enable automated guidance and checks according to hospitals' PPE protocol. The customised solution comprises of three modes – the PPE Buddy, Train and Practice, and Visitor. When installed, the solution transforms a tablet into a digital mirror to guide the users through the correct procedure on wearing and removing PPE.



MIC@Home

MIC (Mobile Inpatient Care)@Home is a “virtual ward” service that allows suitable patients to recover at home instead of being hospitalised. The model augments hospital capacity and leverages remote clinical monitoring so that patients can be safely managed at home. MIC@Home was first piloted at SGH (i.e. SGH@Home) with promising results and has now been scaled to three other SingHealth hospitals, namely CGH, KKH and SKH.



Respiree

CGH collaborated with Respiree and A*STAR to develop and deploy clinically validated wearable sensors for remote surveillance of vital signs to track changes in patients' clinical status. AI is being built to predict patient's deterioration and allow for early intervention. The technology could also monitor patients in observation wards and emergency department as well as post-discharge in patients' homes so that care can continue in the community setting.



Journey behind the Success

uSINE®



Background

Neuraxial procedures are commonly performed for a wide range of therapeutic and diagnostic indications. However, the associated risk of multiple puncture attempts may increase the risk of complications. Furthermore, the steep learning curve and difficulty of pattern recognition of spinal structures in neuraxial ultrasonography can be challenging to even experienced operators, especially when difficult spinal anatomy is present.

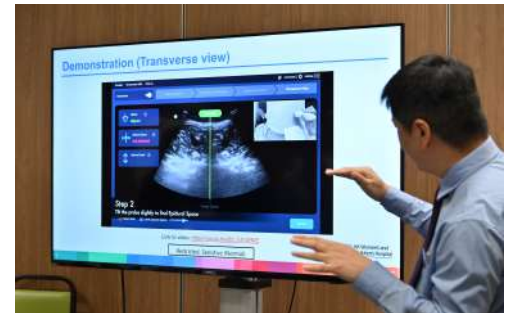
Development

The team developed the world's first ultrasound-based guidance system to determine the optimal insertion site and angle for neuraxial procedures - uSINE® by using machine learning algorithm and automated spinal landmark ultrasound imaging of the lumbar spine. This procedure shall enable clinicians to conduct pre-procedural scans to identify more precise needle insertion point and angle. The use of uSINE® in patients with normal BMI showed that the first attempt success rate was 92%.

Supports received

The journey of uSINE® began as a pilot study sponsored by KKH Health Endowment Fund, followed by Singhealth Foundation-National Health Innovation Centre (NHIC) grant to validate the concept before moving on to productise the software.

The teams received other funding support resulting in the spinning-off with HiCura Medical Pte Ltd. As a Class B medical device that obtained clearance by the HSA, usage of uSINE in clinical practice was approved in May 2023. KKH was an early adopter of this technology. uSINE® runs on the existing ultrasound infrastructure and is currently marketed as a software that is agnostic to ultrasound machines.



aiTriage™



aiTriage™ is a novel cardiac risk stratification system developed by Professor Marcus Ong and his research team at Singapore General Hospital (SGH) and Duke-NUS. It combines heart rate variability (HRV), electrocardiogram (ECG) parameters, and vital signs to generate real-time risk scores for major adverse cardiac events (MACE). It aims to address the challenges of time-consuming and subjective triage processes for chest pain cases by introducing a solution that utilizes machine learning algorithms. Clinical studies have shown that aiTriage outperforms traditional risk stratification methods in terms of accuracy, reliability, and efficiency.

Healthcare providers can generate a MACE risk score within minutes using the aiTriage™ app during the triage stage in the Emergency Department (ED). This reduction in wait time for blood test results not only improves operational efficiency but also speeds up decision-making providing confidence in discharging low-risk patients.

How did aiTriage™ achieve commercialisation

aiTriage™'s innovative solution received significant funding from SingHealth, NHIC, and DxD, propelling its development. After winning the Tech-Factor Challenge in 2016, they attracted investors and established TIIM Healthcare Pte Ltd to advance aiTriage™. With additional funding, aiTriage™ transformed from a prototype into a commercially viable product. In November 2022, team aiTriage™ achieved a major milestone with approval from the HSA to sell in Singapore. This regulatory endorsement solidifies aiTriage's trustworthiness and effectiveness in healthcare.

By engaging with organizations, partners, and healthcare professionals, Team aiTriage™ has harnessed the power of collaboration, gaining valuable expertise, resources, and diverse opportunities.



UPCOMING GRANTS

Internal Grants

Grants & Funding	Details	Application Window
Academic Medicine Innovation Institute (AMII) Adoption Grant	Quantum: \$500,000 Stage: Adoption	July
Clinical & Systems Innovation (CSI) Main Grant	Quantum: \$100,000 Stage: POC	March/ October
Innovation Seed Grant (ISG)	Quantum: \$25,000 Stage: Prototyping, POC	March/ October
SGH Innovation Grant (SIG)	Quantum: \$50,000 Stage: Prototyping, POC	April/ October
SingHealth Allied & Pharmacy Innovation Challenge	Quantum: \$2,000 for Standard Funding and up to \$50,000 for Catalyst Funding Stage: All	October
SingHealth RHS - SUTD Population Health Innovation Fund (PHIF)	Quantum: \$100,000 Stage: Prototyping, POC	June
SKH Innovation Grant (SKIG)	Quantum: \$25,000-\$50,000 Stage: Prototyping, POC	January/ July

External Grants

Grants & Funding	Details	Application Window
A*STAR Health & MedTech HTPO Seed Fund	Quantum: \$500,000 Stage: POC, Translation	June
MOH Health Innovation (MHI) Fund	Quantum: up to 90% for POC and 80% for POV Stage: POC,POV	Year Round
National Health Innovation Centre (NHIC) Innovation to develop (I2D)	Quantum: \$300,000 Stage: Translation, Commercialisation	Year Round
National medical research council (NMRC) Clinician Innovator Award	Quantum: \$100,000 - \$200,000 Stage: Prototyping, POC	July
National Research Fund (NRF) Central Gap Fund	Quantum: \$2 Million Stage: Translation	Year Round
NHIC Innovation to industry (I2I)	Quantum: \$300,000 Stage: Licensing, Commercialisation	By Invitation only

*Detail are correct as of 30 Novbemer 2024

For more information about grants applications, do email us at innovationcentre@singhealth.com.sg

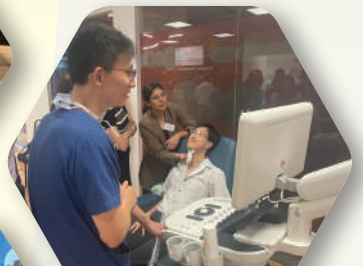
EVENTS within A.L.I.C.E



VentureBlick Pitch Talk



Voltade Sharing



Thyroid US Workshop



DeepRacer Event hosted by A.L.I.C.E @ SGH Campus and SingHealth Division of Digital Strategy



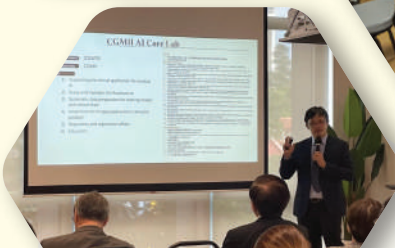
AI Journal Club hosted by SingHealth AIO and SGINnovate



SHEBA Innovation Forum hosted by SHEBA Medical Centre and Do-IT



Getinge TORIN and T-Doc Awareness Sharing hosted by A.L.I.C.E @ SGH Campus and Getinge



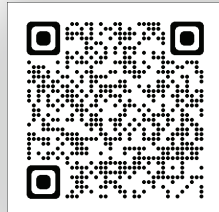
Vist by Chang Gung Memorial Hospital hosted by Do-IT



NHIC I2Start Roadshow



3D Printing 101 Workshop hosted by A.L.I.C.E @ SGH Campus



Find out more about Alice Lee Innovation Centre of Excellence -

 <https://www.singhealthdukenus.com.sg/innovation/ALICE>

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