Academic Medicine Innovation Institute
SingHealth Duke-NUS

SingHealth DukeNUS ACADEMIC MEDICAL CENTRE
Alice Lee Innovation Centre of Excellence

ALICE LEE INNOVATION CENTRE OF EXCELLENCE

E-Newsletter Issue 3: Aug 2024



Preface

Prototyping is a crucial part of the design and development process when crafting an innovative solution. It allows innovators to explore ideas and demonstrate that these ideas can become real-world solutions.

Prototypes can serve different purposes. Low-fidelity prototypes are hand-drawn sketches that focus on conceptual layout and basic functionality, while high-fidelity prototypes closely resemble the final solution in both appearance and functionality. Each type of prototype plays a unique role in addressing different stages of the innovation journey.

At A.L.I.C.E., our capabilities and industry network can serve as a bridge to bring innovative projects to reality. In this edition of the newsletter, let's dive in to learn more about how we support both AMC Innovators and our partners on their innovation journey and hear from our featured partners about what they can offer at different phases of innovation.

Spotlight

Medtech nexus within SingHealth to drive innovative ideas from Bench to Bedside to Business

In this issue, we shine spotlight on A.L.I.C.E @ CGH Campus launched on 8 April 2024. Let us hear from Ms Lydia Tan, Director of A.L.I.C.E @ CGH Campus, on how the centre has and will continue to work with healthcare professionals to advance innovation.



Ms Lydia Tan
Director,
ALICE @ CGH Campus

"ALICE @ CGH campus under the CGH Office of Innovation (OOI) will continue to be the pillar of support for CGH Innovators. The OOI plays a critical role in supporting innovation by implementing strategic initiatives and fostering collaborative partnerships. By leveraging its in-house capabilities and being a part of SingHealth ALICE Network, OOI facilitates the development and adoption of cutting-edge technologies and processes, adding value to the delivery of care. Additionally, OOI serves as a hub for disseminating knowledge and best practices, as well as advocating for supportive policies and regulations that encourage and streamline healthcare innovation. The OOI is a catalyst for driving transformative advancements in healthcare, enhancing patient outcomes, and addressing complex challenges within the healthcare ecosystem through Innovation. "

Changi General Hospital
SingHealth

OFFICE OF INNOVATION
Collaborate • Innovate • Translate



ALICE @ CGH Campus 3D Printing Hub

A facility to bolster CGH's capabilities in healthcare innovation and to empower our staff with quick prototyping tools for testing and iterations.

1. Equipped with advanced technology to support a broad spectrum of design and prototyping needs, including FDM and SLA 3D printers.
2. Engineering and design expertise working alongside our healthcare professionals to transform innovative ideas into practical solutions through rapid and iterative prototyping.
3. Support proof-of-concept (POC) and validation of new medical device designs.
4. Drive innovation at CGH by fostering a culture of innovation and accelerate medical device development.

For more information, kindly emaill OOI at innovation@cgh.com.sg

SingHealth DukeNUS Academic Medical Centre
Alice Lee Innovation Centre of Excellence
SGH Campus



As a vibrant greenhouse for SingHealth innovation projects, ALICE @ SGH Campus Makerspace encourages seamless collaboration among staff to explore, design, prototype, and test initial ideas in a secure environment. It is an open-access resource for all SingHealth staff. Located within SGH campus, a highly regulated healthcare environment, it serves as a safe space for SingHealth staff to experiment, fail fast and iterate their ideas quickly on the front lines. Rapid prototyping can be done in-house, without the need for staff or project teams to individually procure equipment such as 3D printers, laser cutters, or even regular mechanical and electrical tools.



For more information, kindly emaill ALICE @ SGH Campus at innovationcentre@singhealth.com.sg

Partners Feature

Bringing Industry and Clinicians together to expedite problem sloving and deployment - The ALICE Way

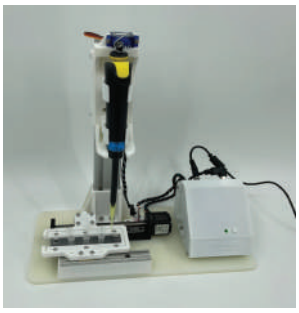
Unlock the full potential of your innovation! Find out more from our network of trusted commercial partners and leverage on their professional prototyping support to propel your innovative project forward.



mēkā









Meka Innovation Pte Ltd is an ISO9001 certified product design agency specialising in medical device design and development. But, they build other things too. They assist clients in designing, prototyping, and manufacturing hardware products. Meka Innovation have worked with research institutions, startups and various Multi-National Companies to bring products to market.

The goal is to make it easier to bring hardware medical devices to market. Clinicians, as clients can clearly see the problems and potential solutions. They will need the right support to bring their ideas to life. Meka Innovation aims to provide the support with their designers and engineers to design, prototype and test until the solution fulfils the needs.

> *"ALICE @ SGH Campus has been very helpful with networking. We've met a lot of potential partners and clients via the events. ALICE @ SGH also serves as a knowledge base and connector for us. Through ALICE @ SGH Campus, we are also looking forward to connecting with more clinicians to help them bring their ideas to reality."*
>
> Mr Shafiq Bashir,
> CEO of Meka Innovation Pte Ltd

Contact Us

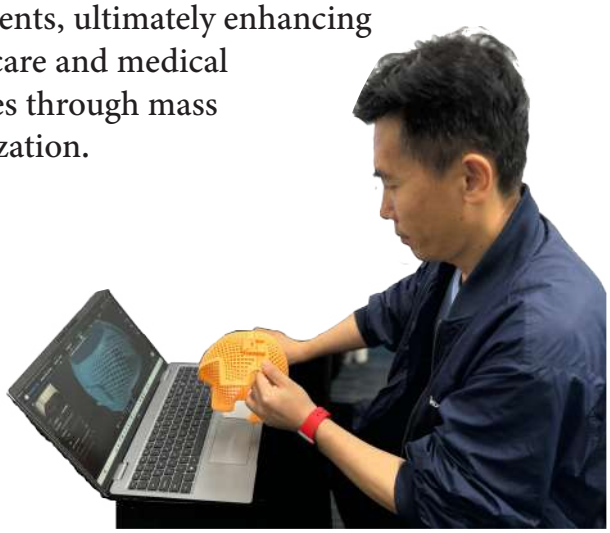
Discover how our professional services can elevate your healthcare company to new heights of success. Embark on an exciting partnership today—contact us to explore possibilities for your business!

innovationcentre@singhealth.com.sg



ELH Tech began as a Computer Numerical Control (CNC) machining house in 2009 and has since evolved into a leading advanced manufacturing company specialising in 3D printing consulting and services. With a strong presence in educational institutions, aerospace, and defence industries, they offer a comprehensive range of solutions that cater to diverse needs.

ELH Tech are well-equipped to assist within the healthcare ecosystem by leveraging their advanced 3D printing and consulting capabilities. They offer customised solutions for medical device prototyping, producing patient-specific implants, and creating anatomical models for surgical planning. ELH Tech's expertise in design consulting, feasibility assessment, and reverse engineering ensures that healthcare providers receive high-quality, tailored solutions. With a wide range of materials and cutting-edge technologies like SLA, SLS, MJF and DMLS, they produce durable and precise medical components, ultimately enhancing patient care and medical outcomes through mass customization.



3D Printing Capabilities





- Feasibility Assessment:
  a. Evaluating the potential of designated items for additive manufacturing.
- Design Consulting:
  a. Providing expert guidance to optimize designs for 3D printing.
- 3D Scanning:
  a. Utilizing 3D scanning technology to recreate and improve existing parts.
- Post-Printing Processing:
  a. Ensuring the highest quality finish and functionality for printed parts.
- Printing Services
  a. Fused Deposition Modeling (FDM)
  b. Stereolithography (SLA)
  c. Selective Laser Sintering (SLS)
  d. Multi Jet Fusion (MJF)
  e. Direct Metal Laser Sintering (DMLS)
  f. Hybrid Metal Printing
  g. Directed Energy Deposition(DED)

> *The ALICE @ SGH Campus team has been crucial in our partnership by connecting us with numerous enthusiastic clinicians to collaborate on various projects. With the support of their in-house engineers, we have gained a better understanding of project requirements and medical expertise. This collaboration has allowed us to tailor our solutions more effectively to meet the specific needs of the healthcare industry. The partnership has significantly benefitted our company by enhancing our project outcomes, deepening our industry knowledge, and solidifying our position in the medical additive manufacturing sector.*
>
> Mr Saipraveen Dharmaraj,
> Operations Assistant Manager

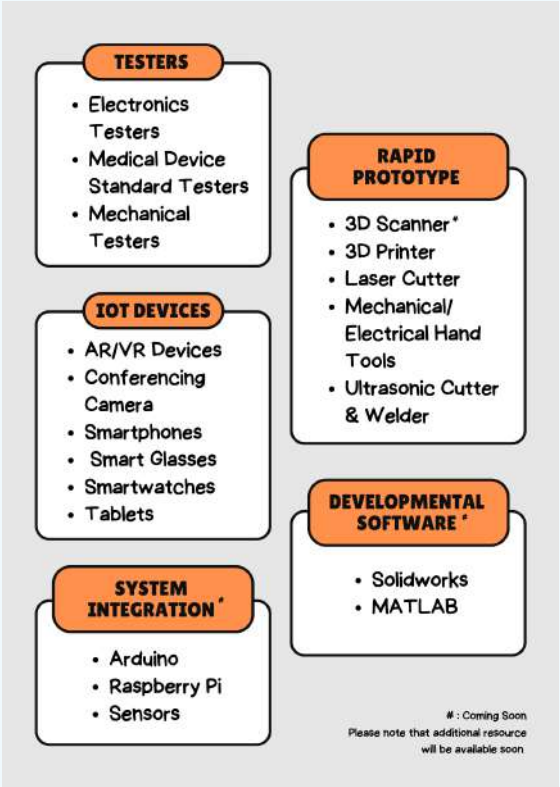
ALICE @ SGH Campus: Your Ideal Collaborator

Access Value-Adding Capabilities for Impactful Innovations

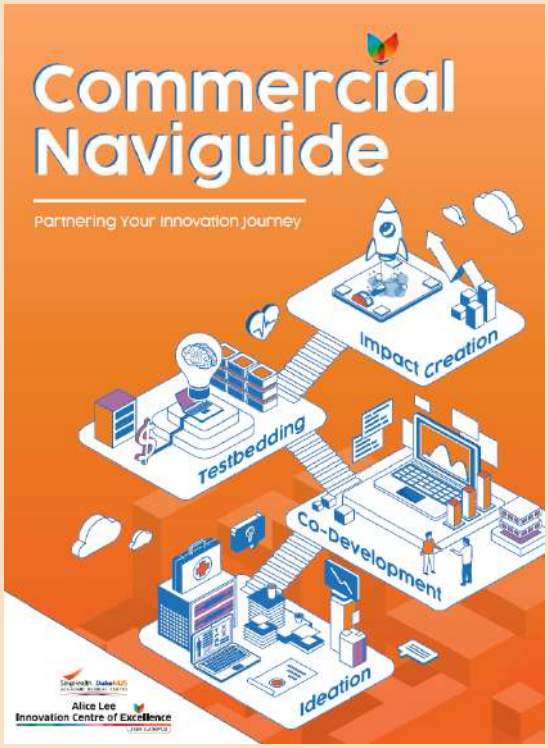
Resources for AMC innovators

Concept Ideation, Rapid Prototyping and Testing Services

Engineers in our centre will assist AMC innovators in conceptualizing novel healthcare solutions. To enhance the success rate of fabrication, our engineers will assist innovators in creating digital 3D models to facilitate design review and iterations. Furthermore, innovators can tap into the rapid prototyping and testing resources in our Centre Makerspace to create mock-up prototypes and generate needed pre-data for grant application. All equipment can be booked and scheduled access by AMC staff via the Facilities Reservation System (FRS).



Resources for Commercial Partners



Forged Tailored Collaborations

At ALICE @ SGH Campus, we believe in forging strong alliances with like-minded organisations to revolutionise the healthcare landscape. Besides serving our internal community, we also support the wider innovation ecosystem in furthering their solutions, leveraging on our strength as the largest healthcare cluster in Singapore. This Commercial Naviguide aims to guide commercial partners in navigating the healthcare innovation landscape within SingHealth.

Scan the QR code or click on the link to find out more:

https://www.singhealthdukenus.com.sg/innovation/ALICE/naviguide

Grants / Funding Opportunities available

OPENS	GRANTS / FUNDING	QUANTUM	PERIOD
SEPTEMBER	ACP Programme Clinical and System Innovation Main Grant	$100,000	up to 3 Years
	ACP Programme Funding Innovation Seed Grant	$25,000	18 Months
	Singapore Therapeutics Development Review (STDR) Pre-Pilot Programme	$100,000	1 Year
	Singapore Therapeutics Development Review (STDR) Pilot Programme	$330,000 (Phase 1) $500,000 (Phase 2)	1 Year
	Singapore Biodesign Innovation Fellowship Program	Non-monetary support (Stipend, tuition and international travel support)	1 Year
OCTOBER	Group Allied Health Catalyst Programme	$2,000 (Standard) $50,000 (Catalyst)	1 Year
	SingHealth Allied Health & Pharmacy Innovation Challenge	$2,000 (Standard) $50,000 (Catalyst)	2 Years
	Singapore General Hospital Innovation Grant	$100,000	1 Year
NOVEMBER	Duke-NUS Khoo Khoo Bridge Funding Programme (KBrFA)	$125,000	1 Year
	SingHealth Polyclinic Innovation Grant	Decided upon review	1 Year
	JCTeD Bridge Accelerator Program	$50,000	1 Year
DECEMBER	Singapore National Research Foundation Fellowship	$2,500,000	5 Years
YEAR-ROUND	A*STAR Digital Health Accelerator (DHA)	No funding cap (Potentially up to $1,000,000)	6-18 months
	A*STAR HHP IAF Pro-positioning Programmes	Realistic Quantum for scope of work	Realistic Period
	A*STAR IAF - Industry Collaboration Projects	Realistic Quantum for scope of work	3 Years
	A*STAR Programmatic Funds (MTC Domain)	up to $10,000,000	up to 5 Years
	NHIC Innovation to Develop	$300,000	1 Year
	NHIC Innovation to Industry	$300,000	1 Year
	NHIC Innovation to Startup Program	$1,300,000	≥1 Year
	NHIC Innovation to Protect Patent Support Scheme	$40,000	1 Year
	NMRC Clinical Trials Grant: CTG - Industry Collaborative Trials	$4,940,000	5 Years
	Singapore National Research Foundation Central Gap Fund	$2,000,000	2 Years
	Population Health Research Grant (Thematic Category)	No stipulated caps in fundings	No stipulated caps in duration

Note: The information is accurate as of July 2024

For more information, kindly email us at

innovate@singhealth.com.sg

Colleagues at SingHealth Office of Innovation (SHOFI) will be glad to furnish further information.

Our Partners



Find out more about Alice Lee Innovation Centre of Excellence

innovationcentre@singhealth.com.sg

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