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# NATIONAL HEALTH INNOVATION CENTRE SINGAPORE

An Innovation & Enterprise Office (IEO)  
for Public Healthcare Institutions

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# Consortium for Clinical Research and Innovation Singapore (CRIS)

## Vision

To nurture and build for Singapore, cutting edge capabilities and innovation in clinical research and translation



## Programme Horizontals



### Clinical Trials



### Health Economics & Outcomes Research



### Industry Engagement

Spearheading and developing core capabilities, infrastructure and scientific leadership for **clinical research** in Singapore

To become a global leader in the translation of **cardiovascular research** for better health and economic outcomes

Cohesive and focused national-level **cancer research and translational programme** for value based treatment of cancers

Coordinate a whole-of-government effort to implement Singapore's **National Precision Medicine** programme

Drive impactful health and economic outcomes for Singapore by catalysing **innovation and enterprise** endeavours

Provide quality manufacturing of **cellular-based therapeutics** and develop **cell therapy** services to industry and patients



We provide the public healthcare institutions of Singapore with **translational funding** and **strategic guidance** to accelerate healthcare innovation and commercialisation.

### OUR VISION

Singapore as a leading hub for **health innovation & enterprise** in Asia

### OUR MISSION

Drive impactful health and economic outcomes for Singapore by **catalyzing** innovation and enterprise endeavours in the healthcare research community through public and industry **partnerships**

# Supporting Clinical-led Innovation to Accelerate Translation, Commercialisation & Healthcare Delivery

Restricted, Sensitive (Normal)



## IDEATION

## DEVELOPMENT

## COMMERCIALISATION

## ADOPTION

### Innovation to Protect (I2P)

Funds the patent expenses of innovation

**Joint MedTech Grant-JMT**  
Support exploratory efforts for early stage innovations



### Innovation to Develop (I2D)

Develops commercially attractive innovation

**Innovation to Startup (I2START)**  
Brings together resources to support start-ups at Institutions



### Innovation to Industry (I2I)

Supports co-development with an industry partner

### Innovation to Adopt (I2Adopt)

Supports commercially viable innovation for implementation, adoption

## Clinical Innovation and Adoption Initiative



Partnership

Partnership between healthcare institutions, industry, policy makers and accreditation boards to strengthen support from early stages of development



Talent Development

Guide clinicians on commercialisation strategies, support in nurturing of healthtech entrepreneurship

# TECHNOLOGY AREAS FUNDED

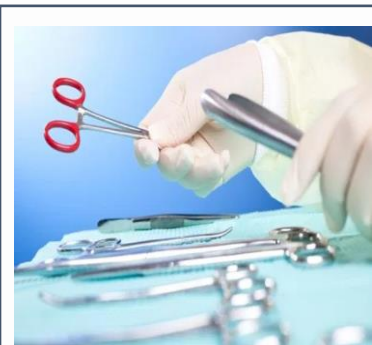


## DIAGNOSTICS

Diagnosis performed with the aid of AI based on imaging or sensor reading.

Biomarker based IVDs or CDx for clinical diagnostic and precision medicine applications.

MedTech



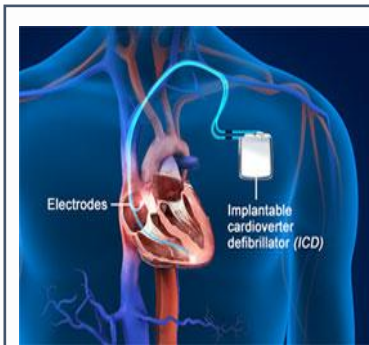
## SURGERY TOOL

Use during a procedure, device that are largely mechanical.



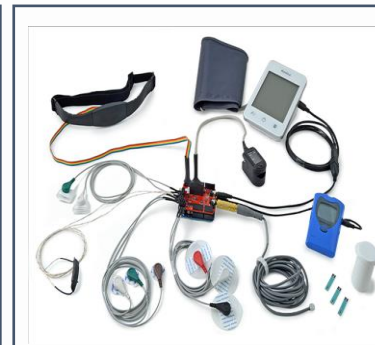
## HEALTH IT

Apps, VR/AR, Cloud, without a diagnosis.



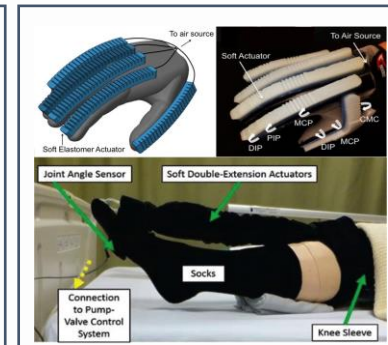
## IMPLANT

Implantable devices



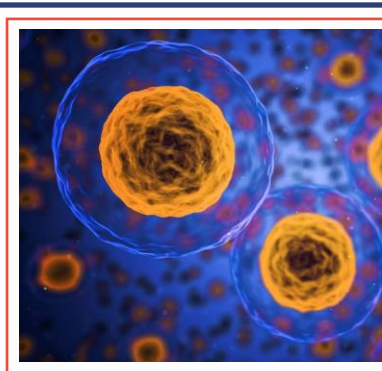
## SENSORISED FEEDBACK SYSTEM

Sensor providing close loop feedback to users, semi or fully automated.



## THERAPY

Therapeutic Tools



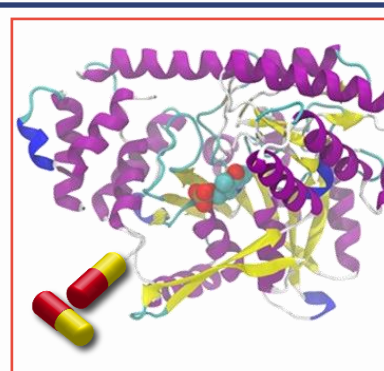
## DRUG DELIVERY

Formulations, excipients and adjuvants that improve drug release, distribution and absorption profile.



## SMALL MOLECULES

Small molecule drug candidates with specific druggable targets.



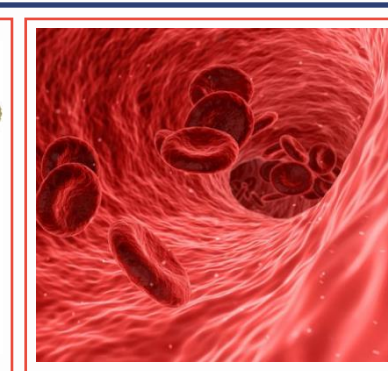
## PEPTIDES/PROTEINS

Peptide and protein-based therapeutics targeting specific receptors or biomolecular interactions.



## ANTIBODY

Antibody-based (mAbs) therapeutics targeting immune/inflammatory systems or tumour surface antigens.



## CELL THERAPY

Approaches in autologous and allogeneic stem cell transplants or adoptive cell transplants (CAR-T).

BioPharma and Stem Cell Therapy

# Beyond Grant Funding

## Support and resources Available

### Commercialization Potential Assessment

Prelim market research, connect with strategic partners

### IP Assessment

IP assessment on novelty, inventiveness, industry applicability

### Funding Pathway Guidance

Recommend appropriate funding source based on TRL & commercial end-point

### Regulatory Assessment

Regulatory strategy report, intended use statement, predicates, risk classification, standard compliance list.

### Product Development

Provide guidance on technical development plan and determination of TPP.

### Clinical Trial Advisory

Provide guidance on study design, analysis, and reporting etc

### Business Planning

Provide guidance on business model and development

### I&E Training

Provide I&E workshop opportunities to NHIC-funded projects – design thinking, biodesign bootcamp, PD & QMS, business model and implementation

**Others: Clinical trial advisory, IP support & assessment, HE studies, vendor selection, etc.**

### Tech Marketing

Tech outreach and marketing for potential out-licensing partners / investors

### Strategic partnership

Facilitate partnerships between project and industry, work with policy makers / accreditation boards to facilitate commercialization

### Regulatory Advisory

Provide regulatory support post-grant

# Innovation to Protect Grant (I2P)

## Funding patent expenses for inventions.

### Eligibility Criteria

- Applicant must be Head / Deputy Director / Director of the healthcare cluster designated office
- Applicant applies on behalf of inventors that hold a primary appointment at:
  - local public hospital or
  - public health institution or
  - national specialty centre

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### Healthcare Cluster Designated Office

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NHG Group Research

NUHS Research Office

SingHealth Office of Intellectual Property (SHIP)

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### Funding Criteria

- Strong patentability
- Technology development plan
- Commercialisation strategy



## Open

Throughout the year



## Up to \$40,000

Depending on:

- Stage of patent protection
- Ownership ratio



## 6 – 12 months

Depending on stage of patent protection



## Submission

via designated office of healthcare cluster

NHIC does not take ownership of IP, nor recover expenses/take revenue share

# Innovation to Develop Grant (I2D)

**Funding for development of a healthcare innovation to a commercialisable endpoint.**

## Eligibility Criteria

Principal Investigator must hold primary appointment in a

- local public hospital or
- public health institution or
- national specialty centre or
- academic medical school

and be salaried by the institution



## Funding Criteria

- Healthcare impact
- Commercial potential
- Strong preliminary data
- Technology development plan



**3**

Grant calls per year  
1<sup>st</sup> Friday of:  
**Feb, Jun, Oct**  
(institutional dates may vary)



**\$300,000**

(inclusive of max.  
30% IRC)



**12 months**

(max. 6 months  
extension)



**Submission**

via designated office  
of healthcare cluster

NHIC does not take ownership of IP, nor recover expenses/take revenue share



# Innovation to Industry Grant (I2I)

**Co-development of healthcare innovation with an industry partner.**

## Eligibility Criteria

- Successfully completed I2D funded projects (or equivalent as deemed appropriate by NHIC)
- Co-development with an industry partner to license the technology.



## Funding Criteria

- Healthcare impact
- Commercial potential
- Clinical feasibility data
- Binding agreement with an industry partner as a licensee



**Open**

Throughout the year

**Application by Invitation only**



**\$300,000**

**Awarded to institutions**  
(inclusive of max. 30% IRC)



**12 months**

(max. 6 months extension)



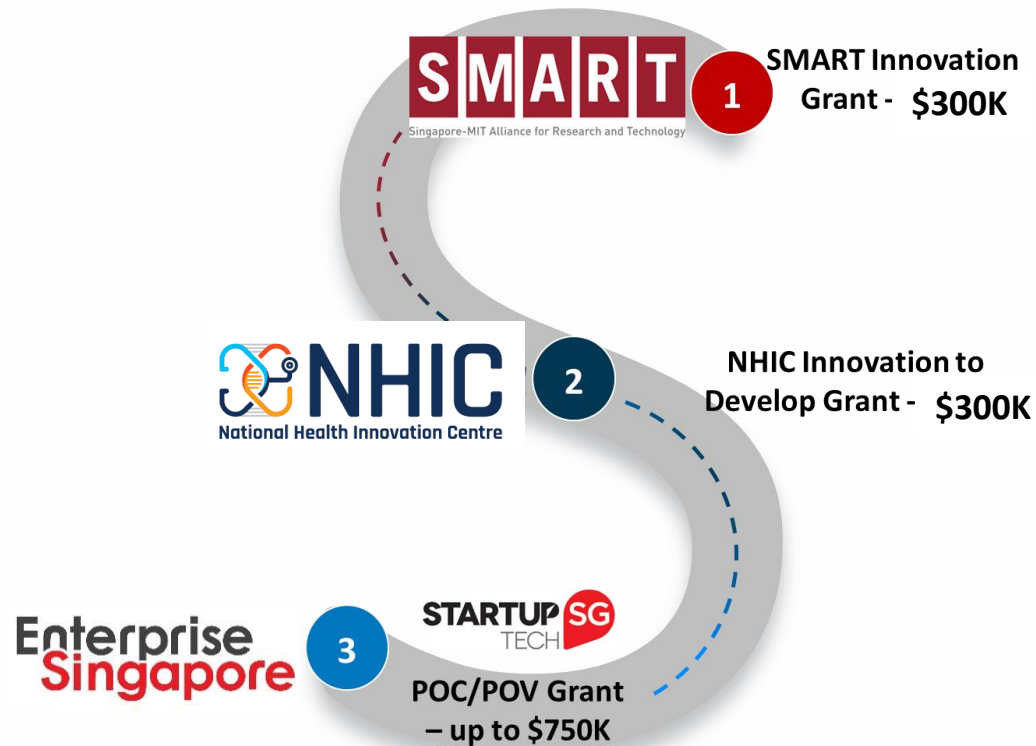
**Submission**

via designated office of healthcare cluster

NHIC does not take ownership of IP, nor recover expenses/take revenue share

# Innovation to Startup (I2START)

A premium funding program targeted at HealthTech start-ups from Singapore public institutions.



The tripartite partnership between NHIC, SMART, and Enterprise Singapore strategically bring together funding and resources to support start-ups.

## Eligibility Criteria

- Entry: TRL 3\* and above
- Health Technologies in the following areas;
  - Clinical diagnostics
  - Medical device and products
  - Digital health
  - Life science tools, etc
- Team with the intent to start-up a company
- Team must consist of one Clinical PI and Technical PI from public institutions

**Clinical PI** must hold primary appointment in a

- local public hospital or public health institution or national specialty centre or academic medical school and be salaried by the institution



## Letter of Intent

Submit LOI to I2Start Grant Secretariat at [grant@nhic.cris.sg](mailto:grant@nhic.cris.sg)

Please visit [www.nhic.sg](http://www.nhic.sg) to find out future submission dates.

# National Research Foundation (NRF) Central Gap Fund (Central Gap)

**A national-level platform to resource impactful and preferably collaborative projects to translate research outcomes into products, processes and/or services that generate economic and societal benefits for Singapore.**

## Eligible Entities

Local public hospitals, public health institutions and national specialty centres.

## NHIC's Role

- NHIC is the designated Innovation and Enterprise Office (IEO) for public hospitals, public health institutions and national specialty centres.
- All Central Gap applications must be endorsed by NHIC in its capacity as IEO.

## Funding Criteria

- Project scope
- Commercialisation potential
- Team composition
- Technical innovation
- Institutional support



**Open**

Throughout the year  
Applications to be  
batch processed



**>\$300,000**



**24 months**



**Pre-engagement**

**with NHIC is required**

More info please visit [www.nrf.gov.sg/funding-grants/central-gap-fund](http://www.nrf.gov.sg/funding-grants/central-gap-fund)

# Central Gap Roadshow

Advancing Innovation: Insights into the NRF Central Gap Fund

 Tue 25 Jun 2024

 12:00pm - 1:00pm

 Online via Zoom

 [Register here](#)

## Programme Highlights

- + Introduction of NHIC's role as an Innovation and Enterprise (I&E) Office  
*Dr Pauline Tay, Director, NHIC*
- + Sharing of Central Gap and Application Process  
*Mr Tan Chor Kiang, Director (I&E), National Research Foundation*
- + Experiences of Grant Awardees  
*A/Prof Yeo Khung Keong, National Heart Centre Singapore*  
*Dr Srinivas Bhylahalli, CEO, Trisail Medical*
- + Q&A

*\*Open to public healthcare institutions and academic medical centres in Singapore*



<https://for.sg/cgroadshow>

Organised by



# Private Sector and International Partnerships

## Private Sector Corporate and Venture Partnerships

- ❖ Open Innovation/Collaboration
- ❖ Venture Building/Investments
- ❖ Talent Exchange and Development
- ❖ Knowledge sharing



## International Partnerships

- ❖ Co-development/Collaboration
- ❖ Co-funding/Venture Investments
- ❖ Market Access
- ❖ Clinical Network



# Performance Dashboard

## Key Performance Indicators

Since the start of operation in June 2014, NHIC has achieved these KPIs through our funding and facilitation of the healthcare clusters in Singapore.

As of 01 Dec 2023



No. of Licenses facilitated

69



Licensing revenues

\$S\$4.38M



Start-up companies

23



Private investment

\$S\$82M



Start-up valuation

\$S\$220M



Products launched

16



Market entries

34

### Pre-Seed



### Seed



### Series A



### Series B



# NHIC supports your Innovation Journey

**NHG:** **Dr Michael Ho**  
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**Dr Chuah Yon Jin**  
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For general enquiries, please email [\*\*enquiry@nhic.cris.sg\*\*](mailto:enquiry@nhic.cris.sg)

Thank you

