

Healthcare Innovation from Academia into Practice with NHIC Funding

29th August 2017



One Stop Platform for Healthcare Clusters

*NHIC is a one stop platform providing support to healthcare clusters to accelerate healthcare innovation.
NHIC does not take ownership of IP, nor recover expenses/take revenue share*

NUHS

National University
Health System

Ng Teng Fong General Hospital
National University Hospital
National University Cancer Institute, Singapore
National University Heart Centre, Singapore
NUS Faculty of Dentistry
NUS Saw Swee Hock School of Public Health



Yong Loo Lin
School of Medicine



Khooh Teck Phuat Hospital
Tan Tock Seng Hospital
Institute of Mental Health
National Skin Centre, Singapore
NHG Polyclinics



Changi General Hospital
KK Women's and Children's Hospital
Singapore General Hospital
Sengkang Health
National Cancer Centre, Singapore
National Dental Centre, Singapore
National Heart Centre, Singapore
National Neuroscience Institute
Singapore National Eye Centre
Singapore Eye Research Institute
SingHealth Polyclinics



NHIC

National Health
Innovation Centre

Consultants:



APPROVED

Regulatory



Engineering



Patenting



Prototyping/
Manufacturer



Market
research



Deal
Formation

Partners:



Translators



Incubators



Companies



Agencies



Government

National Health Innovation Centre

Provide Singapore's clinical research sector with translational funding and strategic guidance to stimulate healthcare innovation and commercialisation



Accelerating Healthcare Innovation

Development
(12-18 months)

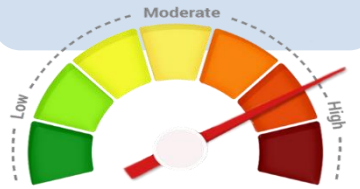
Translation
(12-36 months)

Productisation
(12-36 months)

NHIC National Health Innovation Centre



Funding the development of commercially-attractive innovations



MedTech

I2Start

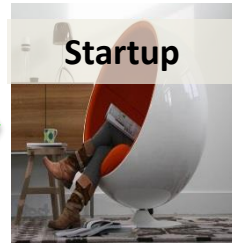
I2License

Biopharma

I2Discover



SPRING
singapore
Enabling Enterprise
STARTUP SG
TECH



Startup



NHIC National Health Innovation Centre
Innovation to Industry (I2I)



Licensing



Experimental Therapeutics Centre
A*STAR
D3 EBC
CREATING GROWTH ENHANCING LIVES

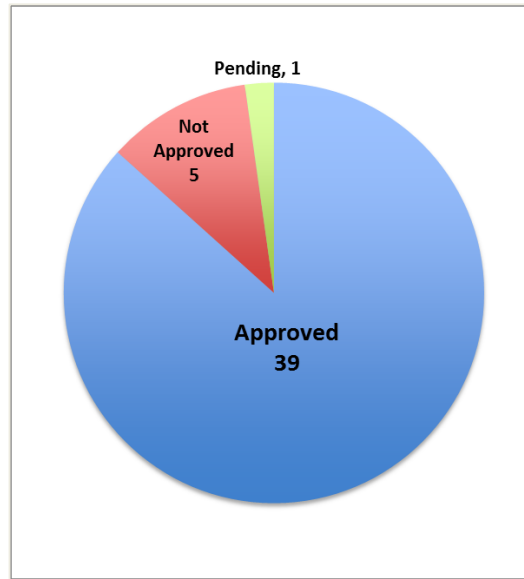
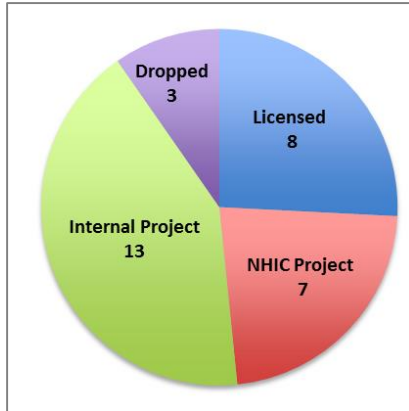


Drug discovery & development

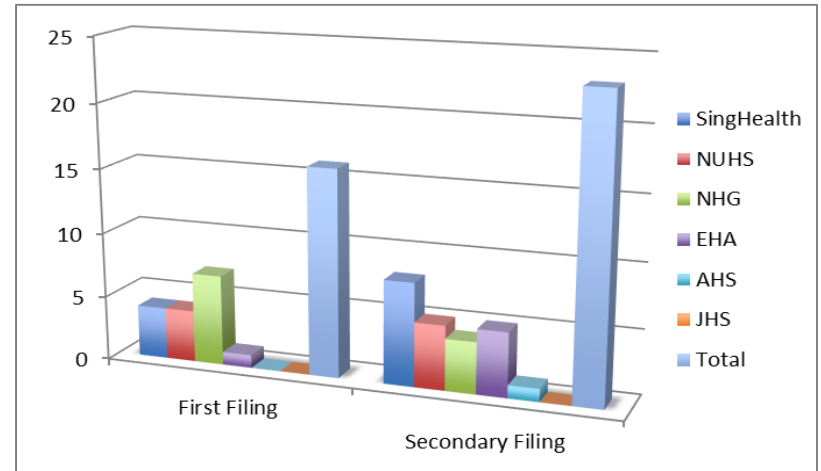
I2P Portfolio Analysis

Total I2P Applications = 45

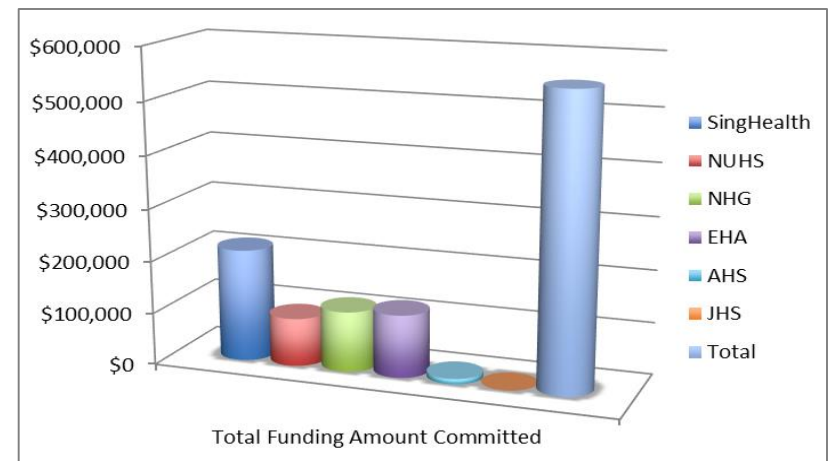
Patent Families Funded: 31



I2P Applications Approved: 39



Total Funding Amount Committed: \$525,500

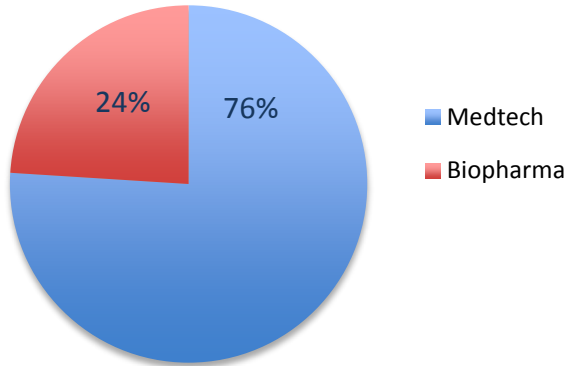


Licence Information	No. of patent families licensed
Stackable Cryogenic vials (NUHS)	1
Ready-to-eat texture modified meal (EHA)	1
Identification and Quantification of Zika Virus (NHG)	1
Device for insertion into a body cavity (NUHS)	1
Fibrosis antibodies (SingHealth)	4

NB: Updated as of June 2017

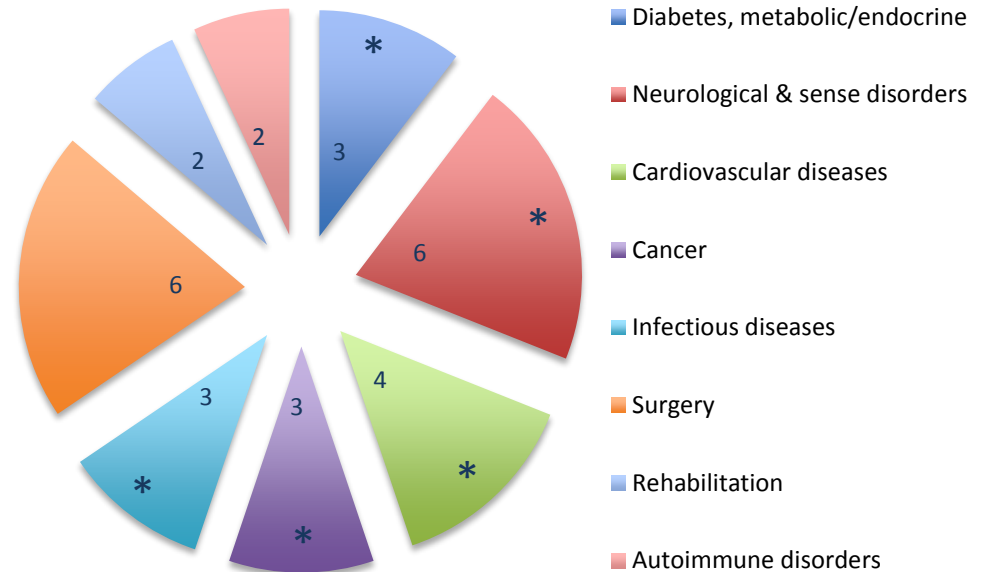
I2D Portfolio Analysis

Funding profile

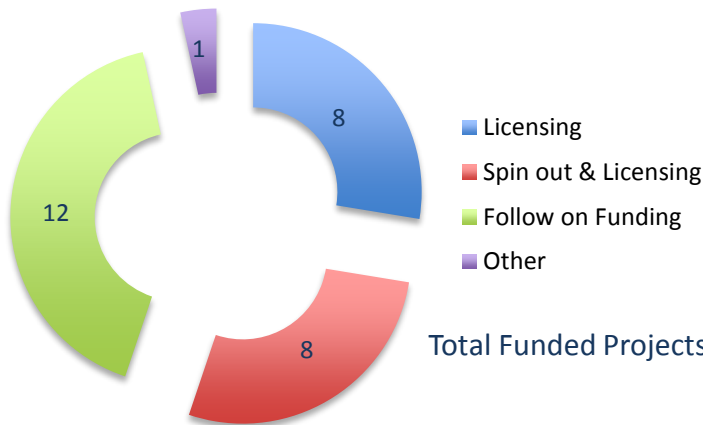


Funded projects by technology sector

Funded projects by therapeutic field



*Focus areas under RIE2020



Total Funded Projects: 29

Funded projects by potential outcome

I2P Licensing Case Study

Ready-to-eat Textured Modified Meal (EHA)



Invention

- The method of processing and preparation of the product.
- 14 recipes and three textures – finely minced, coarsely minced, and blended to suit patients with swallowing difficulty.



Engagement and Evaluation

- Performed a Prior Arts Search for patentability.
- Guided the inventor on patent and claims drafting.
- Funded Provisional and PCT patent applications under I2P.



Strategy and Marketing

- Participated TechInnovation 2015, IP marketplace exhibition.
- Guided CGH team on licensing valuation, agreement drafting & review, and negotiations with the licensee.



Commercial and Economic Outcomes

- Inked an exclusive license to Health Food Matters, S'pore SME.
- Acquired a central kitchen to produce 2,000 meals daily.
- Product launch in Q2Y2017 in Singapore.



***Signing Ceremony between CGH & Health Food Matters on 19 Sep 2016**

I2D Project Case Study

Development of a Portable Device for Real-time Risk Stratification of Adverse Cardiac Events



Clinical Need:

- Chest pain patients may proceed to a Major Adverse Cardiac Event (MACE)
- Stratify chest pain patients re risk of MACE



Solution:

- Intelligent software incorporating heart rate variability, ECG, vital signs for rapid real-time risk stratification of chest pain patients



Value Proposition:

- Early intervention and intensive monitoring of only at-risk patients to reduce clinical workload



Target Market:

- Chest pain is second principal reason for visits to ED in US. 129.8m visits in US; 120,000 at SGH



Commercial Path

Diagnostics Development Hub



- Start up formed Nov 2016
- DxD investing \$100K in cohort study

Healthcare Impact

- Identification and early clinical intervention for patients are risk of MACE

NHIC Value Impact

- Regulatory strategy
- Introduction to DxD Hub
- Link to potential investors

Project Outcome

- Software incorporating clinical parameters to predict risk of MACE
- Pilot clinical trial at SGH



Singapore General Hospital
SingHealth

Thank you

