



National Health Innovation Centre

October 2015

NHIC *National Health
Innovation Centre*

Accelerating Healthcare Innovation

Agenda

1. NHIC Overview and Objectives

2. NHIC Grants

3. Partnering in Ecosystem

- Enabling Innovation
- Accelerating Innovation

4. Special Initiatives

- NHIC – AstraZeneca collaboration

NHIC Overview

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



Clinician-led projects with healthcare impact and commercial potential

NHIC National Health Innovation Centre



COMMERCIALISATION

*Licensing
Spin outs*

FOLLOW-ON FUNDING

*DxD
SERI incubator
SPRING*

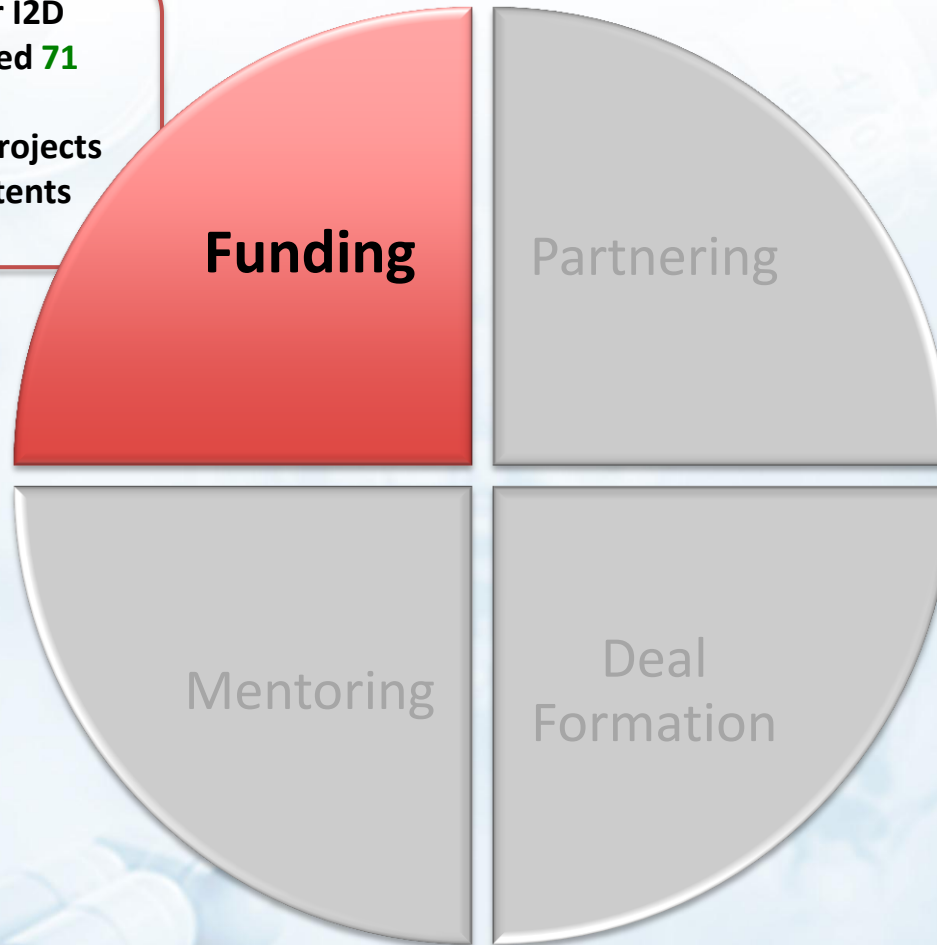
NHIC Objectives

Identify and support projects with healthcare impact & commercial potential



NHIC Objectives - Funding

- Closed **5** calls for I2D grant and received **71** applications
- Funded **12** I2D projects
- Funded **4** I2P patents



NHIC Grant Streams

INNOVATION TO PROTECT (I2P)

- Funding of patenting expenses for an innovation that is commercialisable

- For innovations that have demonstrated initial proof-of-concept in *in vitro* and *in vivo* research / laboratory models
- Development of the innovation by creating a practical, deliverable plan with commercialisable outcomes
- Up to \$250k for 1 year

INNOVATION TO IMPLEMENT (I2I)

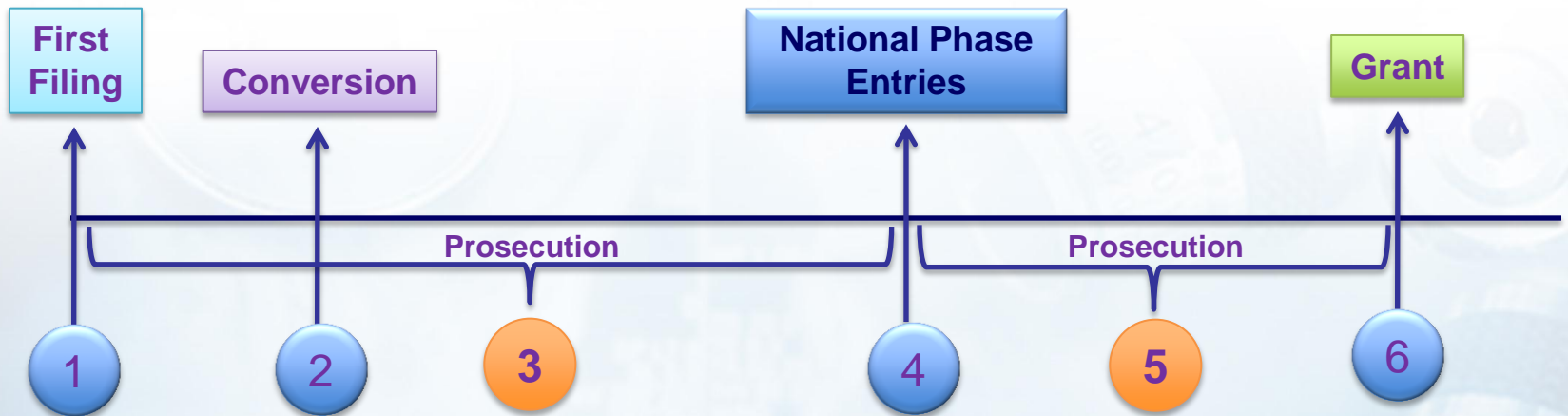
- For innovations that have successfully completed I2D phase
- Implementation of the innovation, in conjunction with a commercial partner
- Up to \$1M for 2 years

INNOVATION TO DEVELOP (I2D)

Innovation to Protect (I2P) Grant

- **Aim:**
 - To support innovators in identifying and protecting their inventions. NHIC will fund the initial protection of the IP if it determines that there is significant commercial potential to the inventions.
- **Eligibility Criteria:**
 - At least one of the innovators must hold a primary appointment in a local public hospital/public health institution/national specialty centre/academic medical centre and salaried by the institution.
- **Grant Frequency:**
 - Open for application throughout the year
- **Submission Mode:**
 - Submission by your IP/Research/Innovation Office of your Cluster
 - Email to: ip@nhic.sg

I2P Grant Quantum



- 1, 2, 4 and 6: The respective healthcare clusters are required to submit their Invention Disclosures and recommendation to apply for I2P funding.
- 1: Funding quantum for first filing is up to S\$10K.
- 2 and 4: Funding quantum for secondary filing is up to S\$40K on conversion and national phase entries of not more than 2 countries.
- 4: NHIC will fund filing in not more than 2 countries. Filing in more than 3 countries can be considered on a case-by-case basis.
- 3 and 5: Cumulative office actions > S\$20K for any one country will require additional approval from NHIC Oversight Committee.

Innovation to Develop (I2D) Grant

- **Aim:**

- To provide continued support for projects that have established the technical/scientific merit and feasibility of the proposed innovation, to continue the exploratory efforts initiated, and develop to increase private sector commercialisation of innovations derived from applications.

- **Eligibility Criteria:**

- Principal Investigator must hold a primary appointment in a local public hospital/public health institution/national specialty centre/academic medical centre and salaried by the institution.

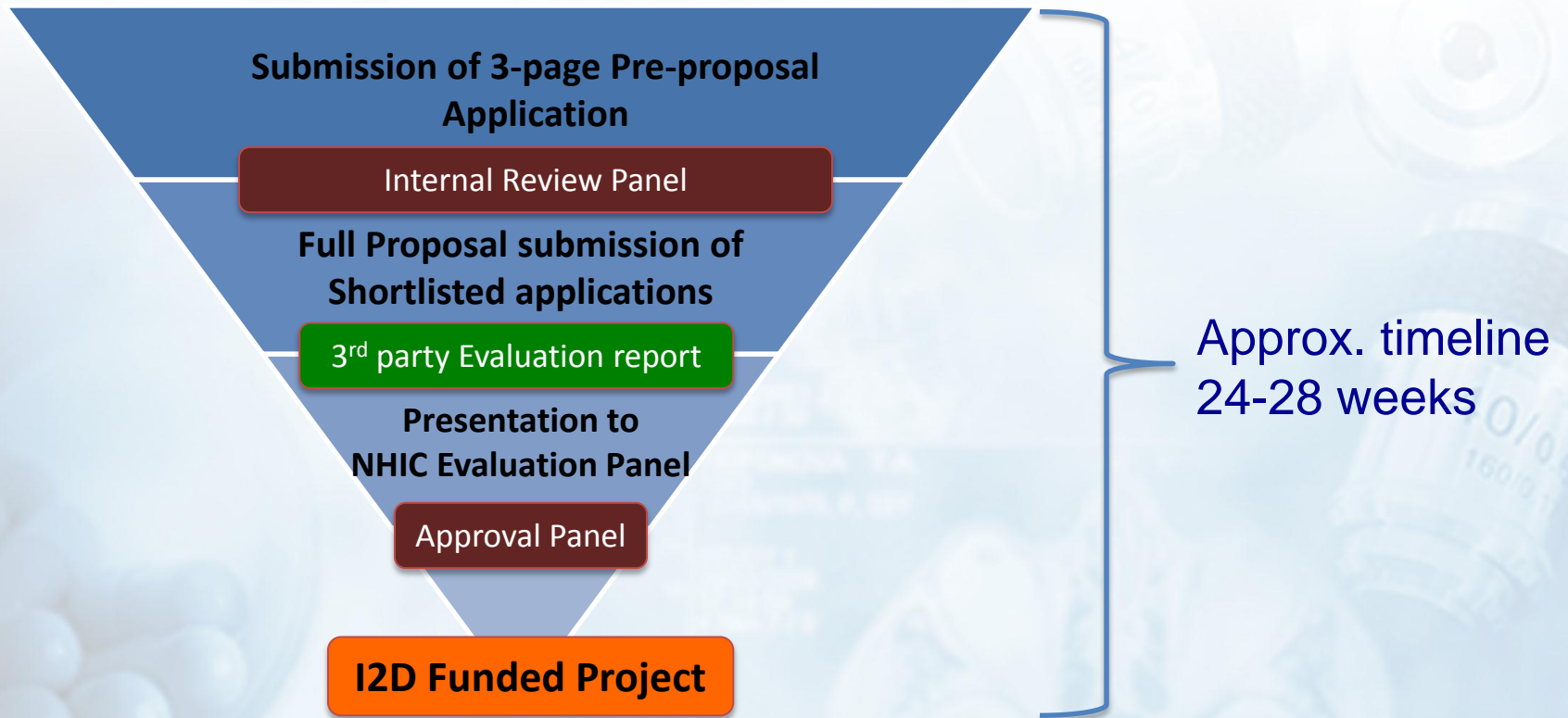
- **Funding Quantum, Duration, Frequency:**

- Capped at S\$250,000 (inclusive of max. 20% indirect costs) over a period of up to 12 months
- Pre-proposal submission cut-off dates: **18th Dec 2015**, 24th Mar 2016

- **Submission Mode:**

- Supported by your Research Office of your Institution or Cluster
- Email to: grant@nhic.sg

I2D Grant Process Flow



NHIC Objectives - Partnering



- **Portfolio Managers for each Healthcare Cluster**
- **Partnering in ecosystem: MOUs with DxD Hub, SERI, IPI, AstraZeneca, Duke-NUS CTeD (tbc)**

Partnering in Ecosystem for Accelerating Innovation

Research/Concept

Development

Commercialisation

- Focus on Ophthalmic Technologies
- Funding: \$50K/project



MOU

MOU

- Focus on Ophthalmic Technologies
- Funding: \$750K/project



MOU

- Focus on Diagnostics Devices
- Funding: \$2M/project



Project Agmt

- Focus on Therapeutics
- One I2D-funded project agreed for follow-on funding



- Focus on BioTech/Therapeutics
- Funding: \$50K/project



MOU



- Focus on Drug Development
- Provide “in-kind” AZ clinical compounds and protocols expertise



MOU

Cost Saving to Funders
Time Saving to Innovators
Leverage the best capabilities and expertise

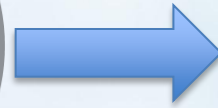
NHIC-AstraZeneca Open Innovation



- **Clinical Compound Bank**
- 'Patient-ready' compounds with evidence of human target coverage and manageable tolerability are being offered for novel clinical and translational research



- **Pharmacology Toolbox**
- Compounds with optimised pharmacological properties are available for preclinical research to explore novel disease biology and advance scientific knowledge

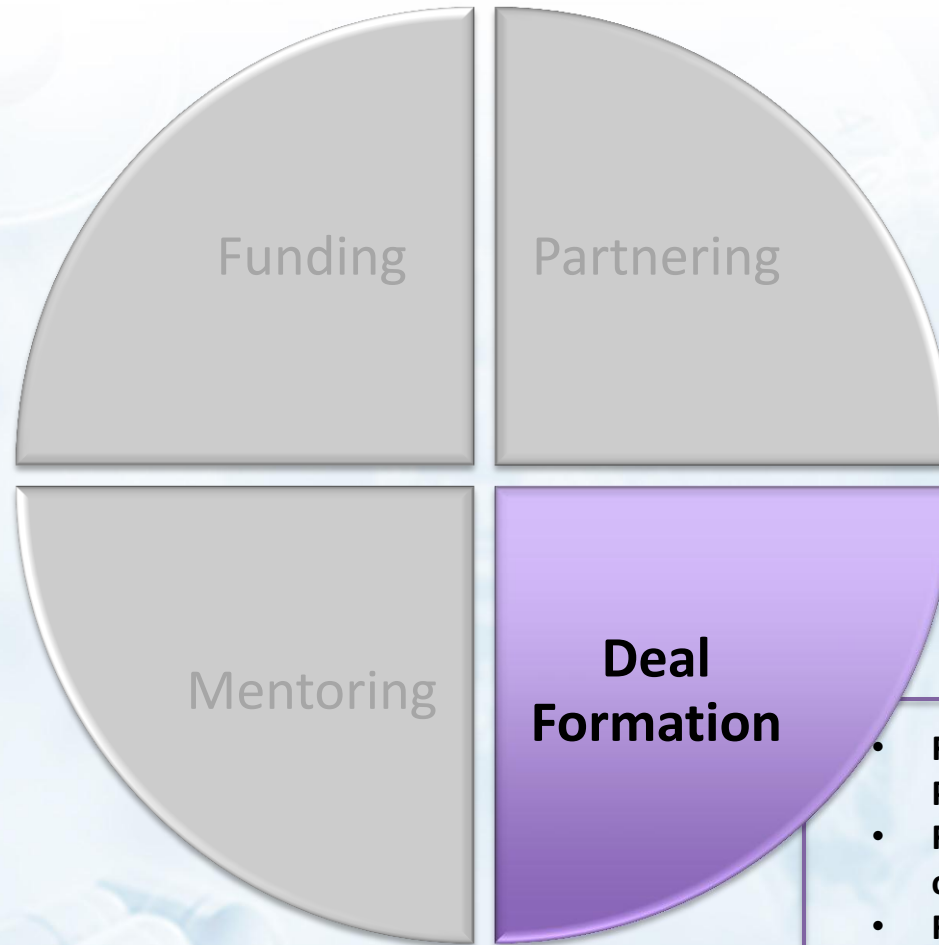


NHIC Objectives - Mentoring



- IP Strategy & Triage – **10** ideas facilitated
- Project Management – **12** I2D projects
- Regulatory & Quality consultancy

NHIC Objectives – Deal Formation



- Facilitated **2** Industry Projects
- Facilitated **2** Follow-on Funded Projects
- Facilitated **1** Licence Execution

IP Ownership and Commercialisation

- NHIC will **NOT** take ownership of any IP.
- Ownership remains with the respective Healthcare Clusters and Institutions.
- NHIC will **NOT** recover revenue generated from commercialising the IP or any incurred IP/Project expenses.

NHIC website

Launch 19th May 2015



National Health Innovation Centre

The National Health Innovation Centre provides the publicly-funded clinical research sector of Singapore with translational funding and strategic guidance to accelerate healthcare innovation. Established in 2014, we support the development of innovative technologies and services to improve healthcare delivery and patient care. NHIC funding aims to expedite the translation of an innovation towards a market-ready product (see [How we work](#)).

NHIC funding schemes

Our three funding streams are for projects which address an unmet healthcare need and have demonstrated 'proof-of-principle' supported by experimental data. Each scheme targets different stages of the innovation development pipeline and all proposals for our funding must address intellectual property management, the commercialisation strategy and public health impact of the innovation. Collaborations with industry are encouraged if they strengthen the proposal.



Innovation to Protect



Innovation to Develop



Innovation to Nurture

- Funding schemes
- Application documents
- How we work
- Funded projects
- News
- Our team and partners



Innovation to Develop (I2D)

Funding the development of an innovation to

Aim

This funding is for an ambitious, deliverable development plan to take must clearly illustrate the technical feasibility of the project and demo would be attractive to an industry partner or follow-on funder.

Funding criteria

Funding is considered if the application satisfies the following criteria:

- Strong intellectual property position
- Preliminary proof-of-concept data in *in vitro* and/or *in vivo* research
- Detailed development plan highlighting future project work, milestones
- Clear and achievable commercial plan outlining the unmet health potential industry partners
- Would result in significant healthcare or services cost savings

Funding quantum

This category will provide a funding quantum capped at S\$250,000 (which will be responsible for reimbursing costs incurred by collaborating instit

Funding Duration

The funding support is up to 1 year.

Eligibility

The Principal Investigator must hold a primary appointment in a public



HOW WE WORK

How we work

The NHIC team members have strong track records in the commercialization of intellectual property from academic fields (see [Our Team](#)). The depth and breadth of this expertise each NHIC award, where their expertise and resources will be used to support and nurturing of innovations along the commercial

NHIC will add value by adopting an active role in the mentoring of their respective teams at all stages, from early stage discovery to the funding of the application and post-award management progress against milestones and commercialization).

NHIC is able to bring in specialist consultants as required (awarded to the projects) to assist with regulatory information etc as necessitated by the individual projects.

Through this committed involvement, NHIC aims to deliver care impact desired under the schemes.

I2P Applications

For details on I2P submission, please see [I2P](#).

The I2P applications will be reviewed by the NHIC team and selected external experts, before final approval by the NHIC.

The target review periods are as follows:



MEDTECH SHOWCASE

MedTech Showcase



An In-office Tracheoesophageal Puncture, Prosthesis Sizing and Insertion Device

[Read more](#)



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

[Read more](#)



Automated Continuous Post-surgical Monitoring of Vascularized Grafts

[Read more](#)



A Force Sensor to Deliver Optimal Cricoid Pressure for Airway Protection

[Read more](#)

www.nhic.sg



Thank you

For further enquiries, please contact:

Mr Naga Modukuru

Naga_modukuru@nhic.sg



Thank you

For further enquiries, please contact:

Dr Sharron Bennett

Sharron_Bennett@nhic.sg