

An Introduction to HOT NORTH

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Improving Health Outcomes in the Tropical North: A Multidisciplinary Collaboration (HOT NORTH)

**OUR NORTH, OUR FUTURE: WHITE PAPER ON DEVELOPING
NORTHERN AUSTRALIA**, released on *18 June 2015*
<http://northernaustralia.gov.au/files/files/NAWP-FullReport.pdf>

Call for applications under the NHMRC Northern
Australia Tropical Disease Collaborative Research
Programme (NATDCRP): February 2016

Menzies' successful application: *Improving Health
Outcomes in the Tropical North: A Multidisciplinary
Collaboration (HOT NORTH)*:

4 years funding awarded November 21st 2016
Commenced January 1st 2017

Overseen by NHMRC Scientific Advisory Panel,
comprising scientific experts, health policy officials,
health practitioners and consumers



NHMRC Terms of Reference for HOT NORTH

The Northern Australia Tropical Disease Collaborative Research Programme

Undertake research into the prevention, diagnosis, and treatment of tropical disease that will translate research findings into outcomes for health in Australia and the region.

The Programme will build strong collaborations, new research capability and capacity in the health and medical research workforce, and promote effective translation of this research into health policy and practice.

NHMRC Terms of Reference for HOT NORTH

Submission & Assessment Criteria

1. Generate new knowledge that leads to improved health outcomes (20%)
2. Promote effective transfer of research outcomes into health policy and/or practice (20%)
3. Develop the health and medical research workforce by providing opportunities to advance the training of new researchers, particularly those with a capacity for independent research and future leadership roles (20%)
4. Facilitate collaboration (20%)
5. Record of Research and Translation Achievement - relative to opportunity (20%)

NHMRC Terms of Reference for HOT NORTH

Submission & Assessment Criteria

3. Develop the health and medical research workforce by providing opportunities to advance the training of new researchers, particularly those with a capacity for independent research and future leadership roles (20%)

Health workforce development/professional advancement

HOT NORTH will sponsor three *teaching meetings per year* for education, career development and mentoring of regional and remote health professionals. Discussion will include career aspirations and what they see from their own practice as priority areas for locally-relevant future research.

HOT NORTH Themes and Structure

Skin Health:

- Scabies
- Gp A Strep
- Staph

Respiratory Health:

- Child & adult infections
- Bronchiectasis
- Melioidosis

Antimicrobial Resistance:

- TB
- Malaria
- Gram – ve bacteria
- MRSA
- Fungi

Chronic Diseases:

- Diabetes
- Kidney Disease
- Childhood antecedents
- Rheumatic Heart Disease

Vector Borne and Emerging Diseases:

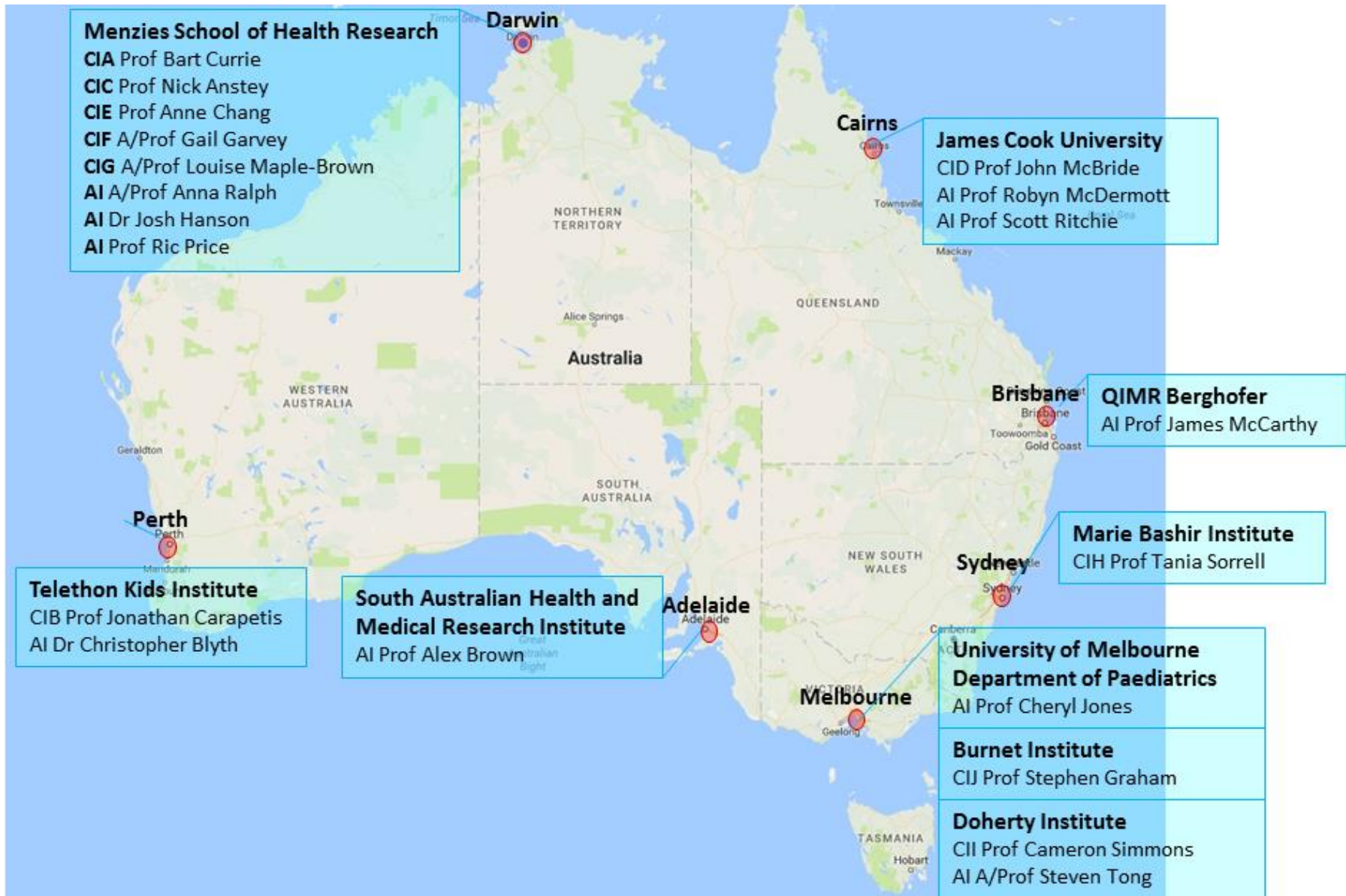
- Dengue
- Other arboviruses
- Encephalitides

Surveillance: Epidemiology, Microbiology, Molecular, Entomology

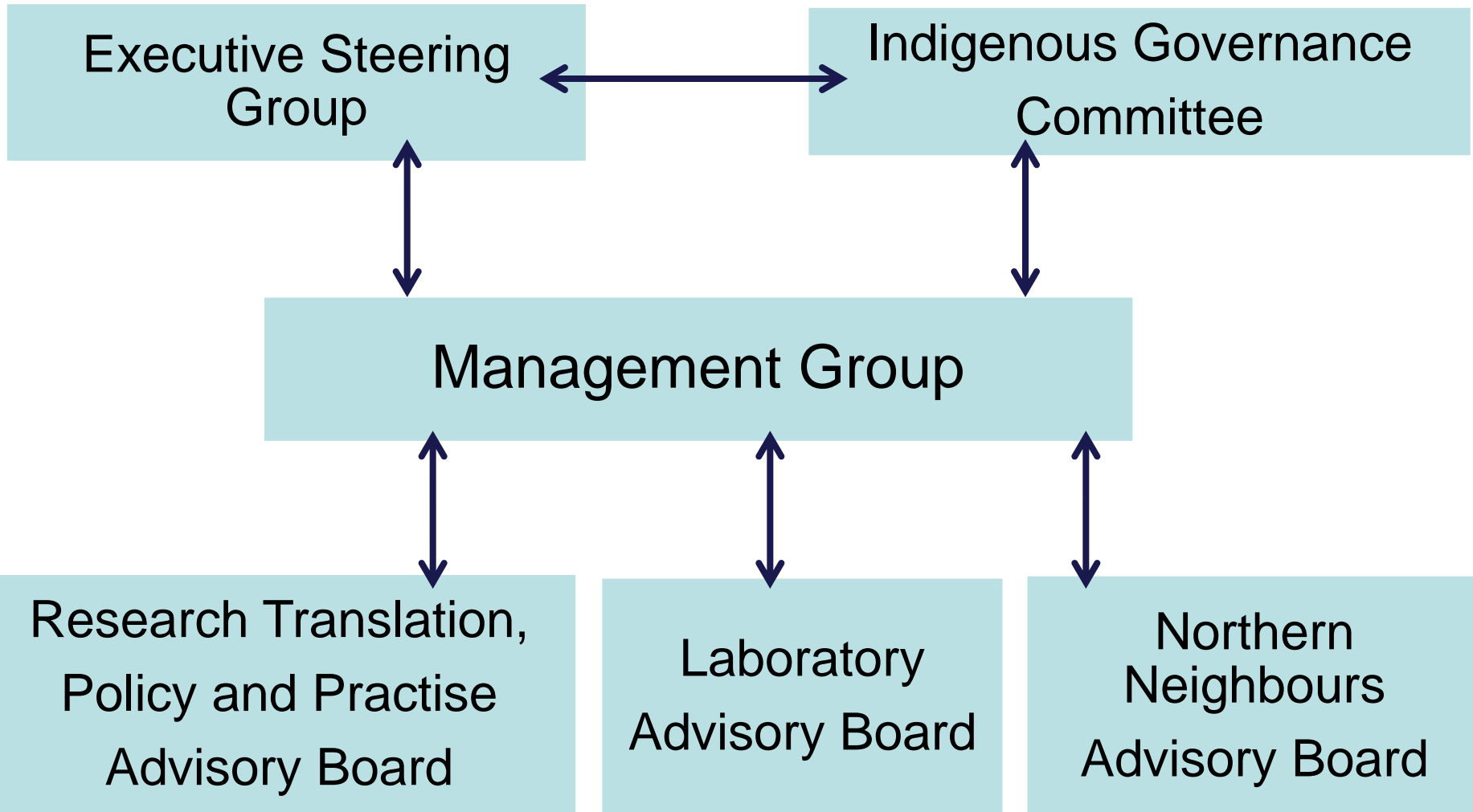
Case management and prevention: Prevention, Diagnostics, Therapeutics

Policy and Practice: Health informatics, Health Systems Strengthening

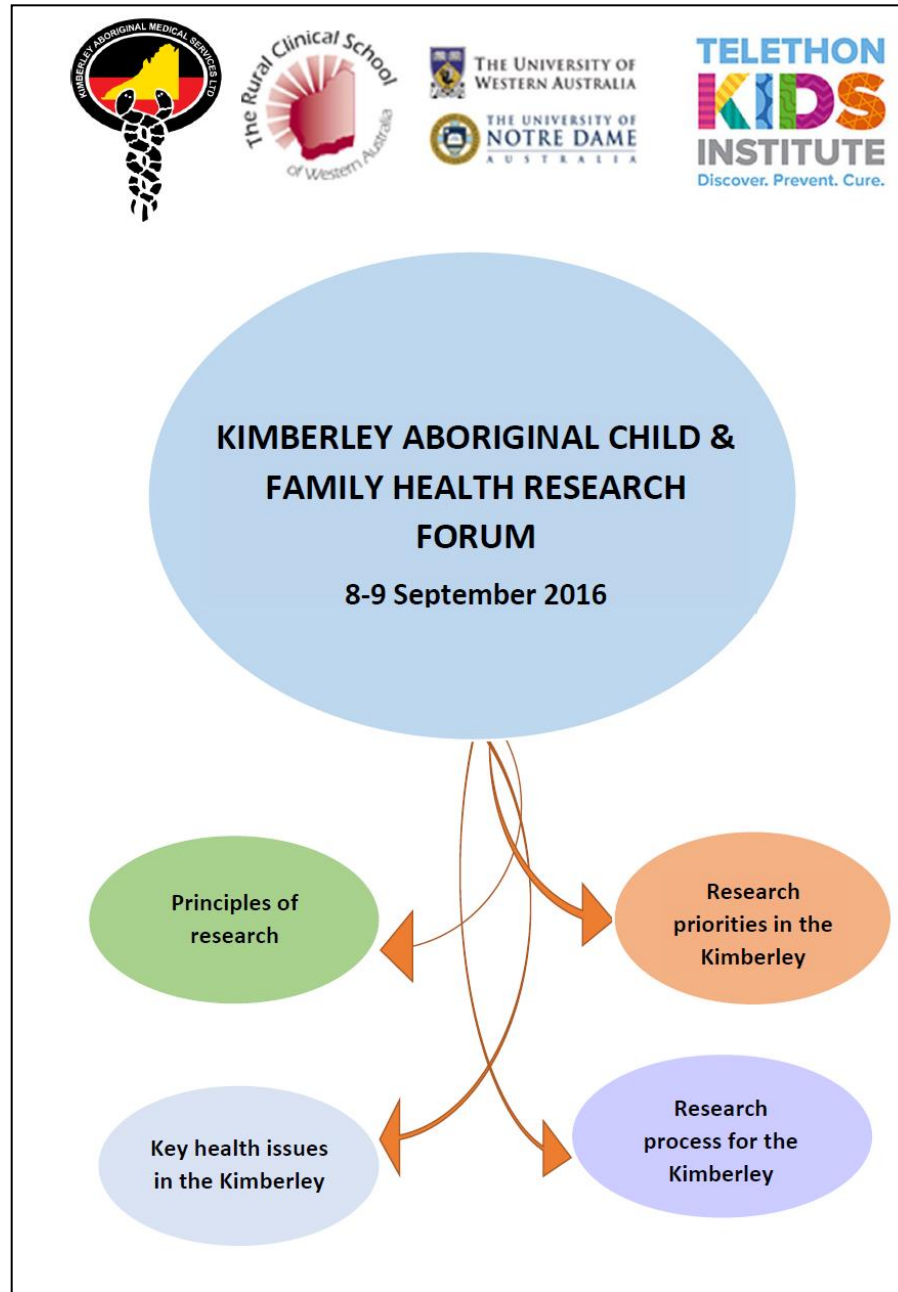
HOT NORTH: Investigators



HOT NORTH Governance Structure



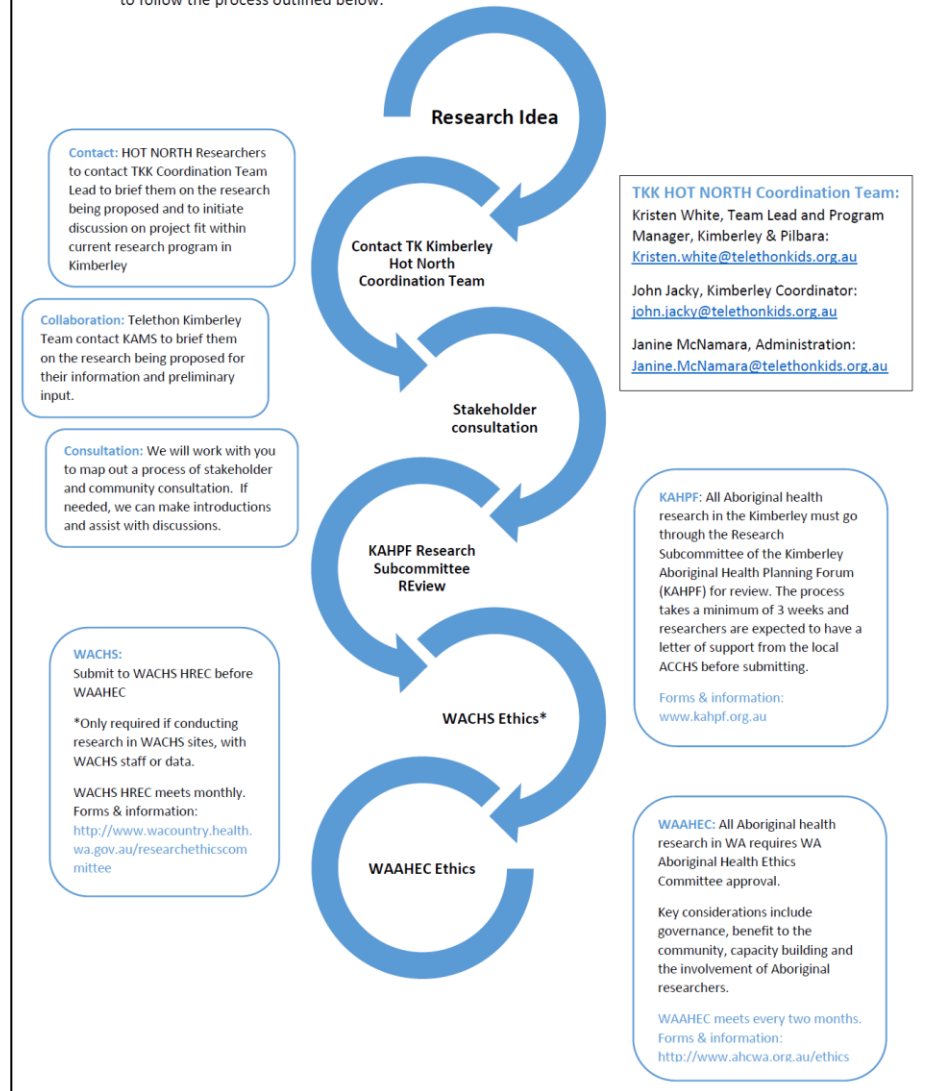
HOT NORTH Kimberley processes



HOT NORTH Kimberley processes

HOT NORTH Kimberley Research Development Process – Stage One

The Telethon Kids Institute has a Research Collaboration Agreement with the Kimberley Aboriginal Medical Service (KAMS) and Aboriginal Community-controlled health services (ACCHSs). Consistent with this Agreement, all HOT North Research will need to follow the process outlined below.



HOT NORTH Post-Doctoral Fellowships

2017:

- 5 Fellowships awarded in January 2017
- 3 Early Career (PSP3) and 2 Career Development (PSP4) Fellowships
- Equal spread across the five themes
- Conditions of award:
 - Fellowships provide 12-month salary support
 - Fellows to be located in the North fully or at least for half of the year
 - Supervisor must be HOT NORTH investigator
 - Project must align with HOT NORTH research themes
 - During their Fellowship, Fellows must apply for external personal support funding such as NHMRC Fellowship for the following year

2018, 2019, 2020:

- Applications open in October of the previous year
- Selection process at the end of the year for early January start

HOT NORTH: 2017 Fellows (n=5)

Vector Borne and Emerging Infectious Diseases theme:

Can mosquito excreta be used to enhance detection of Australian vector-borne diseases?

Dr Dagmar Meyer ECF

Supervisor: Prof Scott Ritchie, JCU



Dagmar mosquito trapping in Saibai

HOT NORTH: 2017 Fellows

Chronic Diseases theme:

Torres Strait Healthy Young Women's Project

Dr Karla Canuto ECF

Supervisor: Prof Robyn McDermott, JCU



HOT NORTH: 2017 Fellows

Antimicrobial Resistance theme:

*Epidemiology and treatment of malaria in Sabah, Malaysia:
longitudinal patterns of disease, acquisition risk factors,
antimalarial drug resistance, and adjunctive therapy for acute
kidney injury*

Dr Matthew Grigg ECF

Supervisor: Prof Nick Anstey, Menzies



**Matt travelling down the river in
Kota Marudu district, Sabah, to
follow-up a malaria case**

HOT NORTH: 2017 Fellows

Skin Health theme:

Do Group A Streptococcus isolates causing skin infections in remote WA encode genes that correlate with disease severity, antibiotic resistance, or adverse immunological outcomes?

Dr Timothy Barnett CDF

Supervisor: Prof Jonathan Carapetis, TKI



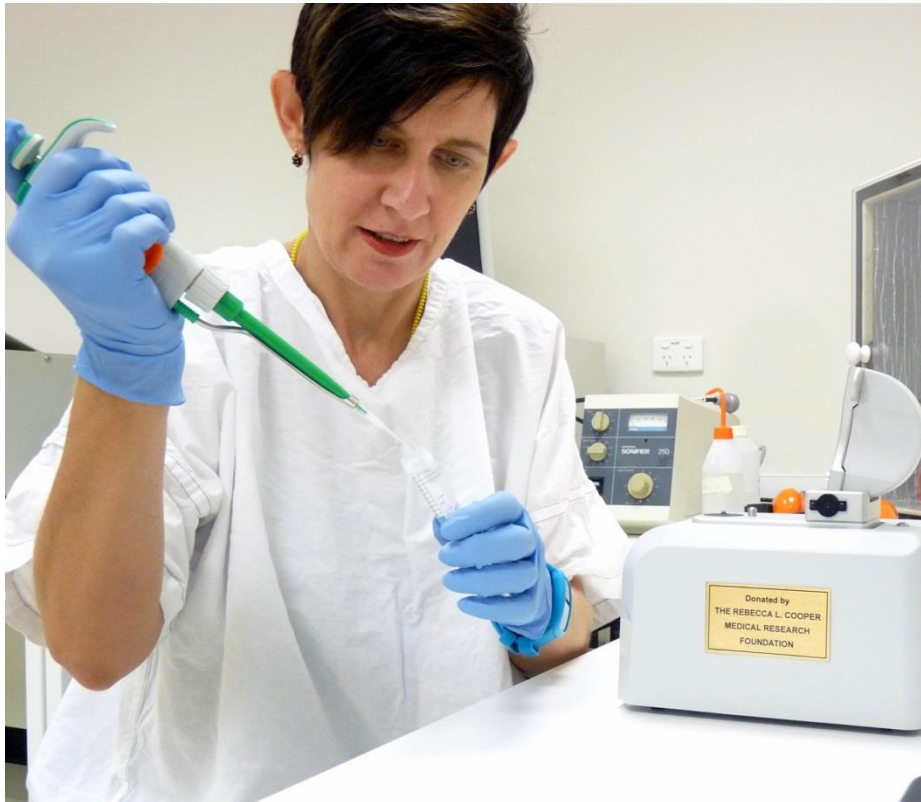
HOT NORTH: 2017 Fellows

Respiratory Health theme:

Genomic Public Health in Australian Indigenous Communities and Developing Countries

A/Prof Heidi Smith-Vaughan CDF

Supervisor: Prof Anne Chang, Menzies



HOT NORTH Pilot Projects & Early Career Research Projects (12 each year)

Round 1, 2017:

- Round 1 opened 1st January 2017, closed 31st January 2017
- 16 applications submitted
- 6 awarded in March

Subsequent rounds (2 rounds per year = 8 rounds over the 4 years):

- Round 2 opened April 21st for July start – 6 awarded in June (from 12)
- One round to open in October for January 2018 start
- 6 pilot projects awarded in each round
- Equity of distribution across the 5 research themes ensured as follows:
 - In any one round of 6, no more than 2 projects will be awarded to any one theme
 - Within a 12-month period, no more than 3 projects will be awarded to any one theme

Conditions of award:

- Projects must focus on one or several HOT NORTH research theme(s)
- Funding awarded for 6-12 months
- Pilot projects must demonstrate potential to attract further funding
- Project outcomes must benefit the North and be of direct relevance to the health of the North

HOT NORTH: 2017 Pilot Projects (Round 1 = 6)

Chronic Diseases theme:

Exploration of child feeding practices in Indigenous Australians

Athira Rohit

Menzies

Antimicrobial Resistance theme:

*Enhanced screening and preventive therapy for TB
in Daru, South Fly District, Papua New Guinea*

ESCAPE-TB (Study 1)

Suman Majumdar

Burnet Institute

HOT NORTH: 2017 Pilot Projects (Round 2 = 6)

Respiratory Health theme:

What causes pneumonia in children and adults living in tropical Australia

Simon Smith, Josh Hanson, Chris Blyth, Anne Chang
JCU

Prevalence of chronic moist cough in Kimberley Aboriginal children

Andre Schultz
TKI

Antimicrobial Resistance theme:

Understanding current antimicrobial prescribing practice in remote Aboriginal PHC clinics across northern Australia

Jodie McVernon & Steve Tong
Doherty Institute (Uni Melb)

HOT NORTH: 2017 PhD Scholars

Pamela D'Sylva
TKI

Improving the management and clinical outcomes of chronic suppurative lung disease in Aboriginal children in Western Australia

Anna Wood
Menzies

Diabetes and cardiovascular risk among Indigenous women after pregnancy complicated by hyperglycaemia

Aaron Weinman
Doherty Institute (Uni Melb)
The epidemiology of influenza in Northern Australia

HOT NORTH Academy & Indigenous Support

- Support for students - PhD and Honours Scholarships, Professional Development, Mentoring – regional & remote
 - RMPs, AHWs, RANs, Allied Health, Scientists
- Certificate II Community Health Research
- Support for offshore hubs (Papua Indonesia and Malaysia); reinforces linkages between HOT NORTH and the Tropical Disease Research Regional Collaboration Initiative funded through DFAT
- First HOT NORTH meeting - Broome, 8th-10th August 2017
- Second HOT NORTH meeting - Katherine November 2017
- Future meetings – Torres Strait, Mt Isa, Kununurra.....
- First HOT NORTH Annual Scientific and Academy meeting – Darwin early 2018

Supporting & Developing the Future Health & Research Workforce for Northern Australia

Linking HOT NORTH with NHMRC CRE Academies for Students and Early Career Fellows

