

Tropical context for the Faculty of Medicine Health and Molecular Sciences (FMHMS).

Today's reality of "tropical" in the health context incorporating the past present and future.

James Cook University has renewed its strategic intent to be Australia's University of the Tropics- "the brighter future for life in the tropics worldwide". As a base for curriculum renewal to meet that aim, it is reasonable to explore what is meant by tropical in the medical and health sciences setting here at JCU as a basis for future strategies. The presence of the Anton Breinl Centre in the Faculty is one facility with links to the past that set the scene for the tropical context in the faculty for the future (Douglas 1977, Harloe 1987, Leggat & Smith 2010).

Tropics in the health faculty context is perhaps easier to conceptualize than for other faculties, since the environment of heat, humidity, high UV exposure, and the presence of disease bearing vectors prevalent in the geographic place between the tropic of Capricorn and Cancer where we live, clearly has the potential to impact on wellbeing and threaten homeostasis to a point where the human body might succumb to ill health and disease. This paper will identify areas where a Health Faculty in Australia's tropical university might have or already has a "tropical" focus.

1. Medicine

There are still echoes in the term "tropical medicine" of the colonialist times of the late 19th century. In addition there are historical indicators that exalted the temperate world over the tropical where those occupying the tropical world were a negative "other" implying, ignorance, weakness and epidemic disease (Said 1979, Weinstein & Ravi 2009). In those times, the parasitic infections and insect-borne diseases such as malaria, dengue fever and filariasis decimated soldiers and settlers in the tropical zones. This created a military influence in tropical medicine during the imperialist campaigns in Africa and India by the British. The mortality rates for military were so high in these places in the mid 1800s that the government had to institute measures to reduce this non-campaign loss of life through "tropical" hygiene measures together with other design and location changes. In addition once the 'germ' theory and mosquitoes as vectors of disease were also recognized, loss of life decreased further, unfortunately allowing campaigns and colonization to progress. (Curtin 1996).

Interestingly "modern tropical medicine" may no longer be the specific discipline it once was. In "Googling" that term, articles highlighted were dated in the 1920s and 30s-hardly modern! Despite that, many of the conditions that spawned the then new specialty of "tropical Medicine" are still unconquered and still highly relevant problems in our own tropics as well as internationally in our near neighbours so despite, some disagreements, tropical medicine still exists although one suggestion is that the name should change to "health in developing countries" (McLarty 1996). In fact, a number of professional and research initiatives here and overseas including the development of the Australasian College of Tropical Medicine within the faculty already encompass some of these changes in this broader view of tropical medicine today (Leggat2005).

Despite the problems still posed by the specific diseases of the tropical regions mentioned above, the narrow view of tropical medicine may be an outdated concept in the 21st century and a broader new definition beyond medicine alone is necessary to provide a purpose for education and research at Australia's tropical university and its health faculty. Even the military facet of tropical has implications for James Cook to this day in this region with a large military base as neighbour and troops that are deploying in geographic areas of the tropics or places of overwhelming heat

The constitution of the International Federation of Tropical Medicine defines the discipline broadly

“Within the past decade developing countries and international organizations have redefined the health problems and priorities much more broadly to address additional major causes of death, disability and diseases in vulnerable groups. These problems (enteric diseases, respiratory diseases, nutrition, and family planning) have resulted in national health policies and programs committed to primary health care and a demand for the participation of health planners, demographers, social scientists and health service researchers”.

Susan Heydon the Australasian College of Tropical Medicine archivist, at last year’s Centenary of Tropical Medicine celebration here at James Cook University also outlined a modern view of the direction that “tropical “medicine should take for the future :

“The journey from tropical medicine and empire to medicine in the tropics, diseases of poverty and the health of indigenous peoples has been long, complex, and (*needs to*) continue today. (*The end is not yet in sight*). We must, however, be aware of future challenges that may arise and which could determine the direction of medicine in the tropics over the years to come”.

2. Sustainable Health

For sustainable health in tropical and underserved regions both here at home and abroad, health interventions alone may not be able to prevent or eradicate diseases nor provide the skills for surveillance and monitoring outbreaks to give early global warnings. There is a need to build more bridges for example, to engineering, veterinary medicine, governments, international trade, banks, corporations and non-government organisations (*using the many advanced technologies of today*)(Singer and de Castro 2007).

3. Basic Science

Indeed, work towards understanding the pathophysiology and genetics underlying many tropical diseases and their future treatment also require an advanced understanding of basic science especially but not exclusively genetics and technology (Weatherall 1996).). Climate change could well determine the future epidemiology, prevalence and distribution of a number of significant infectious diseases, especially vector-borne and soil-borne infections and so the science associated with this phenomenon needs to link to health in the tropics (Heydon 2010).

4. Health care systems and policy development

Inadequacies of health care systems continue, especially in developing countries. The primary health care model, and research about how it can be supported and improved remain important issues and might reasonably be included in the tropical agenda (WHO 2008).

Developed and developing countries in South-East Asia and the Western Pacific are becoming receptive to integrating a “patient at the centre of care” approach with developments and reforms in health systems. There is growing community awareness of and demand for better quality of health care and the capacity to examine the quality of care from the patient’s perspective (WHO 2006).

“Tropical” should also include the need for a focus on the support and health care for populations who are in transition and emerging from poverty where the influence of western lifestyle infiltrates

without the necessary public health, and illness prevention infrastructure to decrease the inevitable risk of cardiovascular disease and diabetes. The patterns of these diseases may differ from that in Western countries and collaborative studies of these differences can benefit both partners (Weatherall 1996).

5. Collaborations and partnerships for research with like minded institutions

Medical colleagues from the developing world might reasonably argue that the “academic hegemony” (Cowan 1999) of tropical medicine are unreasonably based in the northern hemisphere distant from the geographic tropics and grounded in the colonialist times, although there are many arguments that the famous institutions for Tropical Medicine in the United Kingdom and Europe have doffed the colonialist hat and moved to form partnerships and collaborations with developing countries (De Cock et al 1996). However, there is concern that more recent data show still that

“there is serious under-representation of editorial and advisory board members from countries with a low human development index in the leading peer reviewed literature on tropical medicine”

and that there is a need to convert collaborations to research partnerships to support research-building capacity in the developing world-much of which is in the geographic tropics. (Keiser et al 2004). Focussing on and connecting to and supporting regional programmes where developing countries help each other in training and conduct research to meet their own needs is one way of forming partnerships (Watters & Kaul 1996) . Trusts or foundations which foster collaboration and provide training for health professionals in tropical regions are another (Parry 1996).

6. Education and training

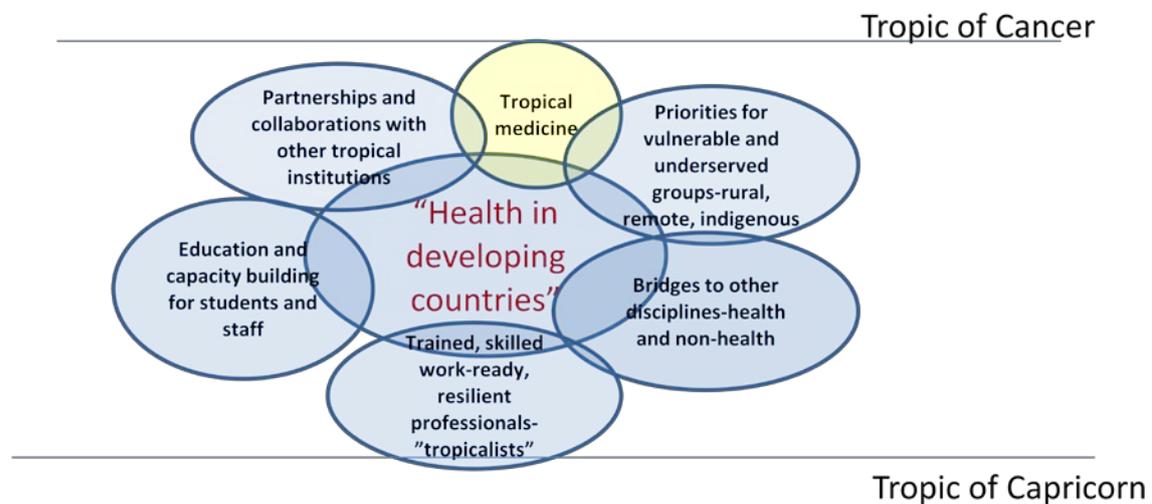
To support the mission of JCU to be Australia’s tropical University in more than just its geographic position is to consider how this University can produce “tropicalists”(Bryceson 1996) and what would be the shape of a “tropicalist” and how it can become a “tropicalist” institution to provide a base for work in the tropics in the health area. (I use that term in a way that the suffix “-ist-” is added to roots to express the profession, trade or occupation connected with the idea in the root). There are many disciplines and programs which can contribute to the broader view of the tropics and health outlined previously in terms of training and skill development.

The tropicalists who are the product of this faculty will not only have the knowledge and skills to work in any generalist or specialist setting of their choosing, but will also need to have the attributes to work in environments and contexts which are rural, and remote, in settings where there are poor resources and underserved populations. Local research by allied health professionals identified some of these attributes as being organized but flexible, capable of cooperation and mediation, culturally aware and accepting communicators, knowing the community, having resourcefulness and resilience and being capable of reflection. These are important personal attributes not necessarily valued to the same extent in metropolitan settings and facilitating their development in trainees to work in the tropical environment are essential aims for a tropical university (Thomas & Clark 2007).

In summary, (outlined in the figure below) The Faculty of Medicine Health and Molecular Sciences is in a pre-eminent position for a significant role in the future because we are located in the tropics and in an institution and country with good infrastructure. Tropics in the health context, includes the original view of the specialty discipline requiring research and management of neglected tropical diseases that are associated with the geographic tropical regions but should also incorporate the

broader view of all that might be included in maintaining good national, international and global health. It also incorporates an important role for a tropical institution to show leadership in training students with the required attributes to provide services, to educate to undertake research to help develop policies for change, to support and build bridges to numerous other disciplines by thinking broadly about sustainability in rural, remote indigenous and tropical communities—the underserved populations, whether they be the hotspots here in Australia or in nearby tropical areas.

Tropical in the Health context



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