Isolated Cases?
100 years of Australian medical research
RPA Hospital, Sydney, 21 February 2010
Prisoners’ Bodies: Methods and Advances in Convict Medicine in the Transportation Era
Ms Angeline Brasier, Doctoral Candidate, School of Historical Studies, University of Melbourne

When most people consider Australia’s convict heritage, thoughts emerge of poor wretches enduring cruel punishments and laborious back-breaking work, under the constant threat of the lash. Indeed, our nation’s foundations were largely a result of the toil of criminals sentenced to a punishing servitude. Recent historical research, however, looks upon the plight of these convicts not as victims of a harsh penal system, but as workers whose health had to be judiciously maintained, and questions the very idea that convicts suffered at all. What then can be said for the medical treatments provided for convict patients during the transportation era? Did convicts receive medical treatments with the same measure of importance and urgency as the free populace, or were prisoners’ bodies considered so insignificant that they provided opportune material for advances in medicine? This is certainly true when one considered researches of Dennis Considen, a ‘medical pioneer’, who used convicts from the first fleet to experiment with indigenous plants in a desperate attempt to find a cure for scurvy. But what happened once the penal colony was properly established? This paper will provide an insight into prison medicine as it was applied to convict patients in Australia during the transportation era. It will also place the medical practices into a wider global context by considering experimental practices involving convict patients in establishments across the Empire, from Woolwich to Bermuda.
9:30–10:10 **An Australian Anatomy? Anthropology and Race in Imperial Settings**  
*Dr Ross Jones, Australian Research Council Postdoctoral Fellow, Department of History, University of Sydney*

The place of Australian medical science in the history of the science of race in the late nineteenth and early twentieth centuries is more problematic than is frequently argued. A network of Australian and British anatomists working across the British Empire developed a model of humanity that has failed to be adequately recognised in mainstream historical descriptions of the development of racism in the West. This ‘Australian’ influence provided a departure from the hardline social-Darwinist description of irreversible racial inequality proposed by many in Europe and the United States of America, and had a profound influence on the development of public attitudes to race throughout the British Empire. This lecture concerns the possible reasons for the disappearance of this model from the historical discourse.

10:10–10:25 **Question and answer session**  
*Speaker Panel*

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10:25–10:50 **Morning tea**

10:50–12:45 **Session 2: National identity and local challenges**  
*Chair: Mr Peter Hobbins, Doctoral Candidate, Department of History, University of Sydney*

10:50–11:15 **Prisoner-of-War Experience in Tropical Medicine and Medical Research During World War II**  
*Dr Robert Pearce, Associate Professor of Surgery and Pathology, University of Western Australia, Perth*

In the context of prisoner-of-war experience in Changi and the Burma Railway, and the Australian Army deployed in Papua and New Guinea during World War Two, the practice of tropical medicine during wartime is examined. Particular reference is given to research and innovation in the management of conditions known to have a significant mortality under these circumstances. Post-war reviews of residual and long-term physical and mental effects of tropical deployment are examined, and associated research programmes and their impact on clinical practice are reviewed. This presentation will focus on the extreme nutritional deficiencies as experienced by prisoners of war and its subsequent investigation; wartime malarial research and its outcomes; and the impact of rapid developments in antibiotic and transfusion therapies during the war.

11:15–11:40 **Health in Paradise: Cultures of Epidemiology in Papua and New Guinea**  
*Professor Roy Scrapp, Retired Epidemiologist, Glenelg*

European invaders of Papua and New Guinea (PNG) brought with them 19th century western ideas and government – along with communicable diseases that decimated local populations. They received in exchange the virulent diseases endemic to the country. The abortive 1881 Marquis de Ray settlers in New Ireland were followed in 1884 by Australian and German administrators, with all settlers suffering severely from contagious illnesses. The eminent bacteriologist Robert Koch contributed to researching tropical diseases that affected the German colonies, while concerns over disease in PNG contributed to the creation of the Australian Institute of Tropical Medicine. However, there is little archival evidence remaining from this era as records were not retained and knowledge of all medical encounters was lost on discharge or death. As pre-war medicines had little impact and the sick cannot attend school, 60 years of pre-war medical services and education had little impact on epidemic diseases. The challenges after 1945 were for health services to reduce the high morbidity and mortality to ensure healthy children. This allowed educators in turn to prepare local children for the training necessary to maintain national self sufficiency. Medical researchers defined the disease patterns and identified epidemiology, management and prevention of significant diseases.

An epidemiological culture blossomed within the PNG Public Health Department, responding to unstudied diseases in a cooperative sick community that sought answers. This paper covers the history of the origins, growth, maturation and international impact of this epidemiological culture.
11:40–12:05  
**Maternal Rubella, Birth Defects and Their Prevention**  
*Associate Professor Paul Lancaster, Menzies Centre for Health Policy, University of Sydney*

In the early 1940s, the possibility that maternal infection during pregnancy could cause birth defects and other serious consequences had occasionally been considered but this hypothesis was lacking in evidence. Following a widespread epidemic of rubella in eastern Australia in 1940–41, Norman Gregg obtained evidence from his own practice and from other ophthalmologists in eastern Australia that maternal rubella infection caused atypical congenital cataracts, other eye abnormalities, and heart and other birth defects. Deafness in young children was soon recognized by other Australian researchers as another feature of maternal rubella. In the 1950s, analysis of institutional records and census data from previous decades in several countries showed that epidemics of deafness had coincided with known epidemics of rubella, indicating that the rubella epidemic of the early 1940s was not due to a novel and more virulent maternal infection. Gregg’s astute clinical observations were confirmed much later when the expanded congenital rubella syndrome was described after the major epidemic in the United States in the mid-1960s. His findings had major implications for clinical medicine, scientific research and public health. His studies showed that rubella, previously regarded as a mild infectious disease, could cause cataracts and other significant birth defects if susceptible pregnant women became infected in the first few months of pregnancy. His work stimulated laboratory research scientists to eventually isolate the rubella virus two decades after his initial observations. Primary prevention of birth defects due to rubella later became possible when a vaccine was developed. Gregg’s discovery also stimulated rapid development of the fledgling field of teratology, the study of birth defects and their causes.

12:05–12:30  
**Iatrogenic Concerns: From Postvaccinal Encephalitis to Spongiform Encephalopathies**  
*Dr Chris Wilson, Independent Researcher, Warrimoo*

Iatrogenesis or medically acquired disease is a major public health concern of international interest. This presentation will focus attention on one aspect of the problem of iatrogenesis, namely reactions to vaccines and medicines. Structured by two case studies, the paper begins by examining events during the first half of the 20th century, associated with post-vaccinal encephalitis. It then moves on to events during the second half of the century, associated with two iatrogenically transmitted spongiform encephalopathies: Scrapie and Creutzfeldt-Jakob disease (CJD). The New Guinea disease Kuru – which is thought to be neither iatrogenically caused nor transmitted – will also be discussed as an ‘isolated’ comparator. The paper will be supported by archival research and evidence presented in 1993–94 to an Australian inquiry into the use of pituitary hormone with respect to iatrogenically transmitted CJD.

12:30–12:45  
**Question and answer session**  
*Speaker Panel*

12:45–1:30  
**Lunch**

1:30–3:25  
**Session 3: Social engagement and artefacts**  
*Chair: Dr Kathryn Hillier, Curator, Royal Prince Alfred Hospital Museum and Archives, Sydney*

1:30–1:55  
**The Funnel of Death: Public Fear and Disgust Responses to the Sydney Funnel-Web Spider in Antivenom Research**  
*Dr Nancy Cushing, Lecturer in History, School of Humanities and Social Science, University of Newcastle  
Associate Professor Kevin Markwell, Lecturer, School of Tourism and Hospitality Management, Southern Cross University, Lismore*

In 1958, *People* magazine featured a story entitled “The Funnel of Death”, outlining the research being done on the Sydney funnel-web spider (*Atrax robustus*) at the Commonwealth Serum Laboratories (CSL) in Melbourne. The article’s title captured the popular perception of this arthropod, whose large size, intimidating defensive stance and deadly venom make it the most notorious of Australian spiders, despite its limited geographical distribution. Research into the funnel-web aimed at developing an antivenom began in the late 1920s after a spate of five deaths was attributed to bites by this species. Drawing upon contemporary media coverage, private correspondence and scientific papers, this paper will trace public receptions of this research process. Two threads examined in detail are responses to calls from the 1960s by the Australian Reptile Park on the NSW Central Coast for spiders to milk for venom research, plus reactions to the 1980 announcement that an antivenom had been developed by Struan Sutherland at CSL. An assessment will be made of the degree to which disgust responses to spiders in general – and fear of this species in particular – impacted upon the public reception of this scientific research.
Dr Glenn Mitchell, Senior Lecturer & Convenor, History Program, School of History and Politics, University of Wollongong

This paper examines how the NSW Department of Public Health, the NSW Health Commission, the Illawarra Public Health Unit and NSW Health responded to calls for health-related research by Port Kembla residents. The paper looks at long-term research into industrial contaminants and a major investigation into a leukaemia cluster. The paper has three sections. The first traces briefly the history of research into public health and medical problems at Port Kembla, while the second looks at the consequences of this research. Finally, the paper argues that residents succeeded in part in enlisting health agencies to investigate their claims about perceived relationships between industrial contaminants and ill-health. However, the researchers and the community had different agendas. Researchers were concerned with collecting and interpreting the scientific and medical data about Port Kembla; residents however, were interested in the results but perhaps more importantly, they were vitally interested in locating their concerns and the research within a broader context framed by power and class. The research gaze of one did not match the contextual gaze of the other. And when the State processed the results, medical research was mediated through a political lens – a lens which was often a variance with both the researchers and the community.

2:20–2:45 International Travel as Medical Research: Architecture and the Modern Hospital
Dr Cameron Logan, Research Fellow, Faculty of Architecture, Building and Planning, University of Melbourne
Associate Professor Julie Willis, Associate Dean (Research), Faculty of Architecture, Building and Planning, University of Melbourne

In recent years architectural historians have asserted that far from being a passive container for medical practice and medical technology, the 20th century hospital was a powerful social and medical technology in its own right. As a piece of healing equipment, however, the modern hospital did not simply reflect the advance of 20th century medical science. Rather, hospital planning and design were subject to a range of cultural assumptions, political priorities and social conventions that went far beyond the explicit needs of medical practitioners and administrators. The modern hospital nevertheless had a profound impact on medical practice and research. Motivated by Australia’s geographic isolation, hospital architects, administrators and politicians travelled widely from the 1930s to the 1950s in order to review the latest international developments in hospital design and administration. While not ‘medical research’ in the conventional sense of the term, this travel was a powerful generator of medical development in Australia and has left a rich archival legacy. This paper draws on that archive to demonstrate the ways in which architectural research and international networks of hospital specialists profoundly shaped the practice of medicine in Australia.

2:45–3:10 Museum Collections and Australian Medical Research
Dr Nurin Veis, Senior Curator of Human Biology and Medicine, Museum Victoria, Melbourne

Museum collections specific to medicine and medical research are located all over the world. They are often patchy, ad hoc and idiosyncratic in nature. They are rarely collected systematically and analytically. Instead they convey to some degree the erratic and passionate nature of medical research itself. The ‘Medicine in Society’ Collection at Museum Victoria gathers objects specific to Australian and Victorian medical research. Objects are collected not only for the purposes of display, but also for historical research. Some are collected for their ‘blockbuster’ potential – telling Australian medical research stories such as the cochlear implant, scaling up of penicillin production or in vitro fertilisation. Other artefacts, photographs and trade literature are collected as they are the mainstay of medical research processes in general. These include laboratory glassware, microscopes, water-baths, tissue culture media, laboratory furniture, mounted laboratory mice, DNA sequencers and a magnetic resonance imaging scanner. Objects of particular value are those which represent change – whether that is in technology, materials, process or in public attitudes. This presentation will highlight examples from the collection and discuss debates about their significance and their potential to engage or alienate museum audiences when exhibited.

3:10–3:25 Question and answer session
Speaker Panel
3:25–3:50  Afternoon tea

3:50–5:15  Session 4: Reflections and directions
Chair: Dr Claire Hooker, Director, Centre for Medical Humanities, University of Sydney

3:50–3:55  Introduction for Donald Metcalf
Professor John Rasko, Director, Cell and Molecular Therapies, Royal Prince Alfred Hospital

3:55–4:35  A Life in Australian Medical Research
Emeritus Professor Donald Metcalf AC FRS, Senior Investigator, Walter and Eliza Hall Institute for Medical Research, Melbourne
Invited presentation.

4:35–5:05  Commentary and Reflections
Emeritus Professor Rod Home FAHA, Historian, Department of History and Philosophy of Science, University of Melbourne
Invited presentation.

5:05–5:15  Closing remarks
Dr Claire Hooker, Director, Centre for Medical Humanities, University of Sydney

Notes
Notes
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