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1 Feb 2021

**Expert witness statement: Radiation health impacts of proposed
Fingerboards Mineral Sands Mine Project, Glenaladale, Victoria**

Summary of Conclusions and Recommendations on Radiation and Health

1. New evidence shows that radiation risks to health are greater than previously thought and are not adequately reflected in regulatory limits. Health risk exists below the maximum permissible doses for the public and for workers. Radiation health risks associated with chronic diseases approximately double the risks associated with cancer.
2. Radiation health risks are 4 - 5 times greater for children than adults and 40% greater for women and girls than for men and boys at all ages. Young adults are more susceptible than older adults.
3. I found no mention in any project documentation I reviewed regarding monitoring or radiation protection measures for sites particularly relevant to children, such as schools, kindergartens, child care centres, playgrounds or sports facilities.
4. All aspects of project management should aim for radiation exposures for workers and the public which are as low as practicable and well below regulatory limits, and set action levels that would trigger prompt evaluation and response, with involvement of DHHS. I would recommend that the latter levels (including all exposure pathways) be set at around 1-2 mSv per year for workers and 0.1 - 0.2 mSv/yr for the public.
5. Radiation protection measures should be informed by age and gender differences in radiation health risks, and should address settings particularly relevant for children.

6. A major project which will run over more than two decades must consider the implications of global heating and factor them into its mine management.
7. To minimise the public health and environmental impacts of both routine and accidental releases of HMC during handling and transport, every effort should be made to minimise multiple handling and especially dust generating loading of HMC onto and off trucks, and onto ships from wharves, and open storage of HMC at the mine or on wharves or anywhere else. Every effort should also be made to minimise the number and distance of truck movements required to transport the HMC, and preferably to eliminate them altogether. The ideal would be for the HMC to be loaded via as closed a system as possible (eg a closed conveyor or pipe) directly into train-borne containers at or immediately adjacent to the mine site, containers which are then sealed and transported by rail to be shipped offshore.
8. As recommended by Dr Joyner and DHHS, all possible exposure pathways of workers and the public should be assessed and monitored, including through farm work and other types of prevalent local employment or other activities, and sampling of all agricultural products downwind and downstream of the planned mine, including not only vegetables and grain, but fish, and animal products in the form of both meat and dairy products. If any Aboriginal people harvest bush foods in areas potentially affected by the project, associated exposures should also be assessed.
9. All mine personnel should wear appropriate personal radiation dosimeters at all times on site.
10. All environmental and health relevant monitoring data during every phase of the mine's operation and rehabilitation should promptly be made publicly available.
11. All consultative bodies established in relation to the mine should include representatives of community organisations.
12. An adequate rehabilitation bond should be established to enable timely completion of remediation and rehabilitation to occur without substantial call on the taxpayer to foot the bill if the operating company is unable to complete this task in a timely and adequate way.
13. Project documentation currently uses the large and cumbersome unit of the Sievert (SV) for ionising radiation equivalent dose, for reasons that are not apparent. It would be clearer if this were changed to usual units which are much more clear, comprehensible and less error-prone in this context - milliSv or when appropriate microSv.

Other recommendations

14. The proposed project's possible international nuclear safeguards implications should be addressed before any approvals are granted.
15. The implications of the Victorian Nuclear Activities (Prohibitions) Act 1983 for the proposed project should be addressed before any approvals are granted.

Background and expert report instructions

I am a physician with specialist training in infectious diseases and have worked, written and taught in the fields of immunisation and the public health impacts of nuclear technology for almost 40 years. I attach my CV to this report.

I provide my full instructions and brief from Environmental Justice Australia ('EJA'), dated 29 January 2021, as an attachment to this report. The relevant section is:

"We request that you undertake a review of the health aspects of the Radiation Assessment Report (Technical Study, Appendix A011) (**Tab 2.2.2**) and prepare an expert witness statement providing your opinion on:

- a. the level and nature of health risk associated with radiation from the project;
- b. whether the actual or likely effects of the project (in relation to health risks from radiation) are identified and or appropriately assessed;
- c. the adequacy of the proposed management measures (in relation to health risks from radiation), including those set out in the Environmental Management Framework (**Tab 2.1.5**);
- d. any other matters related to the Radiation Assessment Report you identify which you consider relevant within the limits of your expertise; and
- e. any appropriate qualifications or conditions that should be attached to findings or conclusions, such as uncertainties or gravity of threats or impacts.

In preparing your expert witness statement, please have regard to Dr Ken Joyner's Review of the Radiation Assessment Report (**Tab 3.2**), the Department of Health and Human Services (DHHS) Review (**Tab 3.3**) and Associate Professor Gavin Mudd's Expert Witness Statement (**Tab 3.4**) as appropriate."

Other materials I have consulted are cited in this report, which is my own work.

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

I defer to the assessments of A/Prof Mudd in relation to the environmental and engineering aspects of mining, especially in relation to radiology and groundwater; and to the reports of Dr Joyner and DHHS in relation to health physics and regulatory aspects. I have not previously been directly involved with mineral sands mining projects. Previous experience with mineral sands mining especially in Victoria may help to address a number of the questions and concerns I raise.

Comments in relation to other reports provided

Dr KH Joyner

I support the recommendation of Dr Joyner and DHHS that impact on downstream animal products like dairy and animal meat for human consumption should be considered in the risk assessment and form part of the Radiation Environment Plan.

I also support Dr Joyner's recommendation (para 54) that "the Emergency Preparedness and Response Plan should take into account extremes of weather and include procedures for managing water over the project site, extreme drought and dust storms all or some of which will occur over the proposed 20-year life of the project." In para 46 of his report he mentions bushfires in the same context.

DHHS

I strongly support the recommendation by DHHS (p4) that "Radiation monitoring will be required for the life of the mining project." I would add that comprehensive monitoring should continue at least through the rehabilitation phase as well.

The Department having significant previous experience in the management of mineral sands mines is positive given the Department's key regulatory and monitoring role in the proposed project.

The DHHS statement (p.21) that "In essence, Kalbar would be required to leave the rehabilitated mine site with no significant increased risk of radiation exposure compared with the radiation exposures that existed prior to mining." is welcome and appropriate.

A/Prof Gavin Mudd

Prof Mudd is well-known and has globally-recognised expertise in the environmental assessment and managing of mining, especially groundwater and radiological aspects. I note his concerns that in a number of areas he regards the EES as being deficient in adequate baseline data and details of a number of aspects of project management. Adequate baseline information is key to rehabilitation if the proposed mining operations proceed, especially on such a large site.

He notes in particular that given the documented variability of soil radionuclide levels by a factor of almost 100 between 10 samples, a much larger number of soil samples should have been collected for testing (paras 20 and 24); that the need to assess radionuclides in vegetables in Lindenow should already have been completed and presented through the EES process (para 27); and that the detailed radon surveys noted in the EES future workplan should also already have been completed as part of the EES process (para 31).

Prof Mudd notes that a number of plans for managing radiological risks are still to be finalised, and expresses concern about lack of detail provided for the radiation monitoring plan and radioactive waste management plan (para 32).

Prof Mudd expresses concern that the EES contains insufficient data to properly define and quantify baseline radiological conditions, important for establishing criteria and processes plans for site remediation and rehabilitation, and further expresses concern that there is no recognition or delineation of the substantial length of time - potentially decades - required to actively monitor and maintain the site to ensure that the numerous rehabilitation targets and associated criteria are achieved (para 38).

Nuclear safeguards matters

Not mentioned in any of the project documentation I have been able to review, Prof Mudd raises a substantial issue in relation to Australia's nuclear non-proliferation obligations under International Atomic Energy Agency (IAEA) safeguards. These apply:

“on all source or special fissionable material in all peaceful nuclear activities within the territory of the State, under its jurisdiction or carried out under its control anywhere, for the exclusive purpose of verifying that such material is not diverted to nuclear weapons or other nuclear explosive devices.”¹

The IAEA defines source material as follows, stating that this term “shall not be interpreted as applying to ore or residue”, but that “ore concentrate is considered to be source material”.²

4.4. Source material

“uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate; any other material containing one or more of the foregoing in such concentration as the Board of Governors shall from time to time determine; and such other material as the Board of Governors shall from time to time determine” [ST, Article XX.3]. According to para. 112 of [153], “the term source material shall not be interpreted as applying to ore or ore residue. Any determination by the Board under Article XX of the Statute of the Agency after the entry into force of this Agreement which adds to the materials considered to be source material or special fissionable material shall have effect under this Agreement only upon acceptance by the State”; see also [540, Article 18.h]. However, ore concentrate is considered to be source material. (See also No. 2.11.)

INFCIRC/153 (corrected) in relation to when nuclear safeguards become applicable to nuclear material, states³:

STARTING POINT OF SAFEGUARDS

¹ IAEA. The structure and content of agreements between the agency and states required in connection with the Treaty on the non-proliferation of nuclear weapons. INFCIRC/153(Corrected), June 1972. This document is usually known as INFCIRC/153 (corrected), p1.

² IAEA Safeguards Glossary. 2001 edition. International Nuclear Verification Series No. 3. Vienna, IAEA. https://www-pub.iaea.org/MTCD/publications/PDF/nvs-3-cd/PDF/NVS3_scr.pdf p25.

³ INFCIRC/153 (Corrected). p10.

33. The Agreement should provide that safeguards shall not apply there-under to material in mining or ore processing activities.

34. The Agreement should provide that:

(a) When any material containing uranium or thorium which has not reached the stage of the nuclear fuel cycle described in sub-paragraph (c) below is directly or indirectly exported to a non-nuclear-weapon State, the State shall inform the Agency of its quantity, composition and destination, unless the material is exported for specifically non-nuclear purposes;

(b) When any material containing uranium or thorium which has not reached the stage of the nuclear fuel cycle described in sub-paragraph (c) below is imported, the State shall inform the Agency of its quantity and composition, unless the material is imported for specifically non-nuclear purposes; and

(c) When any *nuclear material* of a composition and purity **suitable** for fuel fabrication or **for being isotopically enriched** leaves the plant or the process stage in which it has been produced, or when such *nuclear material*, or any other *nuclear material* produced at a later stage in the nuclear fuel cycle, is imported into the State, the *nuclear material* shall become subject to the other safeguards procedures specified in the Agreement. [*emphasis added*].

The IAEA Glossary further adds⁴:

2.11. Starting point of IAEA safeguards

The expression often used to refer to the point in a nuclear fuel cycle from which full safeguards requirements specified in comprehensive safeguards agreements start to apply to nuclear material. Under para. 34(c) of [153], the application of full safeguards requirements specified in the agreement begins when any nuclear material of a composition and purity **suitable** for fuel fabrication or **for being isotopically enriched** leaves the plant or the process stage in which it has been produced, or when such nuclear material, or any other nuclear material produced at a later stage in the nuclear fuel cycle, is imported into a State. However, under paras 34(a) and 34(b) of [153], when the State exports to a non-nuclear-weapon State, or imports, any material containing uranium or thorium which has not reached the stage of the nuclear fuel cycle described in para. 34(c) of [153], the State is required to report such exports and imports to the IAEA, unless the material is transferred for specifically non-nuclear purposes. **Furthermore, under Article 2.a.(vi) of [540], the State is required to provide the IAEA with information on source material which has not reached the composition and purity described in [153, para. 34(c)]. That information is to be provided both on such material present in the State, whether in nuclear or non-nuclear use, and on exports and imports of such material for specifically non-nuclear purposes.** [*emphasis added*].

⁴ *ibid*, p13-14.

The international nuclear safeguards implications and obligations associated with the proposed project thus should be properly considered and addressed.

Consistency of proposed project with Victorian Nuclear Activities (Prohibitions) Act 1983

The comparison of uranium and thorium concentrations estimated in Fingerboards heavy mineral concentrate (HMC) outlined in Table 1 of Prof Mudd's report (p7) with projected production of 185 t of uranium and 1050 t of thorium, in a total volume of ore projected at 700,800 t, constitutes average concentrations of 0.026% for uranium and 0.149% for thorium, above the levels which are exempt under the Victorian Nuclear Activities (Prohibitions) Act 1983. This potential lack of compliance with Victorian law also needs to be addressed before any approvals for the project are granted. Prof Mudd further notes (para 35) that the HMC "is expected to be processed in a manner (i.e. acid leaching to extract the rare earths) whereby the uranium and thorium might be readily recovered", suggesting that this might fit the IAEA definition noted above of "application of full safeguards requirements ... begins when any nuclear material of a composition and purity suitable ... for being isotopically enriched leaves the plant or the process stage in which it has been produced".⁴

The implications of the Victorian Nuclear Activities (Prohibitions) Act 1983 for the proposed project should clearly be addressed before any approvals are granted.

Evolving understanding of the effects of ionising radiation on health

Any consideration of protecting workers and the public from the health risks of exposure to ionising radiation should consider not only regulatory requirements, but also the evolving current evidence regarding of those risks. Significant evidence has been accumulating in recent years which extends our understanding of radiation health risks and indicates that those risks are greater than previously assumed. The current regulatory standards for radiation protection – essentially 20 mSv maximum average annual permissible additional occupational exposure for workers and 1 mSv additional human origin non-medical exposure for members of the public - were established over 2 decades ago, before much of the current evidence became available. These standards are now arguably inadequate. They are not standards associated with no or with negligible risk.

Any and all levels of ionising radiation exposure, including doses far too low to cause any short-term effects or symptoms, are associated with increased risks of long-term genetic damage, a variety of chronic diseases, and increases in almost all types of cancer, proportional to the dose. There is no dose of radiation below which there is no incremental health risk. These excess risks persist for the lifetime of those exposed.

Much of the data on which radiation protection standards for both occupationally exposed workers and the public are based are derived from the experience of the survivors of the atomic bombings of Hiroshima and Nagasaki (*hibakusha*).

The most recent published data from ongoing studies of Hiroshima and Nagasaki survivors demonstrate a linear dose-response relationship between radiation dose and overall cancer risk,

with no threshold.⁵ These studies have however been shown to have a range of methodological flaws which all lead to underestimation of radiation risk.⁶

Arguably the most authoritative and rigorous periodic assessments of radiation health risks are the Biological Effects of Ionizing Radiation (BEIR) reports produced by the US National Academy of Sciences. However, substantial new evidence has accumulated since the most recent report, BEIR VII, was published in 2006.⁷ BEIR VII estimates that the overall increase in risk of solid cancer incidence across a population is about one in 10,000 (and about half that for cancer deaths) for each 1 mSv of additional radiation exposure. The increased risk for leukaemia (cancer of the blood) is about 10% of this.

The maximum permitted dose limit recommended by the International Commission on Radiological Protection (ICRP) and most national radiation protection agencies for any additional non-medical exposures for members of the public is 1 mSv per year,⁸ (corresponding to about 0.11 microSv per hour, a common unit of radiation measurement). This applies in Australia and Victoria.

A consistent and continuing trend in our understanding of radiation health effects has been that the more we know, the greater the risks are shown to be. New evidence continues to emerge of radiation health effects beyond those expected. Powerful new epidemiological studies over the past decade have provided estimates both more accurate and generally demonstrating greater radiation-related health risks than previously estimated. For example, a greater than doubling of leukaemia risk has been identified for children living within 5 km of a normally operating nuclear power plant, not expected on the basis of prevailing estimates of the radiation exposures involved and their predicted effects.⁹ International radiation protection standards over time have always been strengthened; never lowered.

New data are from 3 main sources:

- large international studies of nuclear industry workers under the INWORKS project, coordinated by the International Agency for Research on Cancer;

⁵ Ozasa, K., Y. Shimizu, A. Suyama, F. Kasagi, M. Soda, E. J. Grant, R. Sakata, H. Sugiyama, K. Kodama. Studies of the Mortality of Atomic Bomb Survivors, Report 14, 1950–2003: An Overview of Cancer and Non-cancer Diseases. *Radiation Research* 2012;177(3):229–43.

⁶ For example, see David Richardson, Steve Wing, Stephen R. Cole, Missing Doses in the Lifespan Study of Japanese Atomic Bomb Survivors, *American Journal of Epidemiology*, 2013; 177(6):562-568; and John Mathews, Anna Forsythe, Zoe Brady, Martin Butler, Stacy Goergen, Graham Byrnes, Graham Giles, Anthony Wallace, Philip Anderson, Tenniel Guiver, Paul McGale, Timothy Cain, James Dowty, Adrian Bickerstaffe, Sarah Darby. Cancer Risk in 680,000 People Exposed to Computed Tomography Scans in Childhood or Adolescence: Data Linkage Study of 11 Million Australians. *British Medical Journal*, 2013;346:f2360. These are also detailed in my book chapter: Ruff TA. Health implications of ionising radiation; (Chapter 8) In: van Ness P, Gurtov M (eds.). Learning from Fukushima. Nuclear power in East Asia. Acton; ANU Press, 2017: 221-60. Available for free download at: <https://press.anu.edu.au/node/3873/download>

⁷ US National Academy of Sciences, Committee to Assess Health Risks from Exposure to Low Levels of Ionizing Radiation, *Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII, Phase 2*, Washington, DC, 2006. Washington, DC, 2006.

⁸ Anthony D. Wrixon, New ICRP recommendations, *Journal of Radiological Protection*, 2008;28:161–8; and ICRP (International Commission on Radiological Protection). Application of the Commission's Recommendations to the Protection of People Living in Long-term Contaminated Areas After a Nuclear Accident or a Radiation Emergency. ICRP Publication 111. *Annals of the ICRP*, 2009;39(3).

⁹ Peter Kaatsch, Claudia Spix, Renate Schulze-Rath, Sven Schmiedel, Maria Blettner, Leukaemia in Young Children Living in the Vicinity of German Nuclear Power Plants, *International Journal of Cancer*, 2008;1220:721-6.

- studies of the effects of medical radiation exposure, particularly from computerised tomography (CT) scans, on children's cancer risk; and
- population studies correlating cancer/leukemia incidence in children with proximity of residence to operating nuclear power plants and variations in natural background radiation.

Occupational studies

New findings of large long-term ongoing studies of several hundred thousand nuclear industry workers under the INWORKS Project, coordinated by the International Agency for Research on Cancer (IARC), have demonstrated greater than previously estimated risks for leukaemia¹⁰ and cancer.^{11,12} The mean dose rate for the workers involved was only 1.1mGy/year, with average and median *cumulative* doses well within the current most widely recommended *annual* dose limit for nuclear industry workers of an average of no more than 20 mSv per year.

These large and powerful studies show a risk even at very low dose rates and doses well within recommended occupational limits. They further do not support a reduction of risk for the same total dose if the dose is delivered over a longer time (low radiation dose rates compared with high dose rates), as assumed by BEIR VII and a number of radiation protection bodies such as the ICRP.¹³

These studies also confirm that the increase in a variety of other non-cancer chronic diseases, including cardiovascular and respiratory diseases, which had previously been clearly demonstrated at high and moderate radiation doses, also occurs at low doses and dose rates. The median individual cumulative dose for the workers in this cohort in the INWORKS study was only 3.5 mSv.¹⁴ Both all non-cancer causes of death and circulatory disease, mainly ischemic heart disease, were shown to be associated with cumulative external radiation dose, with the estimated excess cancer deaths related to radiation being quite similar to the number of predicted extra circulatory disease deaths. This means that the total extra risk of dying because of exposure to radiation is likely to be at least double the increased risk of death from cancer alone.¹⁵ These data have not been factored in to radiation protection standards.

Medical radiation exposure and cancer risk in children

A growing number of studies in different countries have consistently shown that medical diagnostic radiation in children is associated with clear evidence of increased cancer risk. For

¹⁰ Klervi Leuraud, David Richardson, Elisabeth Cardis, Robert Daniels, Michael Gillies, Jacqueline O'Hagan, Ghassan Hamra, Richard Haylock, Dominique Laurier, Monika Moissonnier, Mary Schubauer-Berrigan, Isabelle Thierry-Chef, Ausrele Kesminiene, Ionising Radiation and Risk of Death from Leukemia and Lymphoma in Radiation-Monitored Workers (INWORKS): An International Cohort Study. *Lancet Haematology* 2015;1:e276-281.

¹¹ David Richardson, Elisabeth Cardis, Robert Daniels, Michael Gillies, Jacqueline O'Hagan, Ghassan Hamra, Richard Haylock, Dominique Laurier, Klervi Leuraud, Monika Moissonnier, Mary Schubauer-Berrigan, Isabelle Thierry-Chef and Ausrele Kesminiene. Risk from Occupational Exposure to Ionizing Radiation: Retrospective Cohort Study of Workers in France, the United Kingdom, and the United States (INWORKS). *British Medical Journal* 2015;351:h5359.

¹² Richardson DB, Cardis E, Daniels RD, et al. Site-specific solid cancer mortality after exposure to ionising radiation. *Epidemiology* 2018;29(1):31-40.

¹³ Anthony D. Wrixon, New ICRP Recommendations, *Journal of Radiological Protection* 2008;28:161-8.

¹⁴ Gillies M, Richardson DB, Cardis E, et al. Mortality from circulatory diseases and other non-cancer outcomes among nuclear workers in France, the United Kingdom and the United States (INWORKS). *Radiation Research* 2017;188:276-90.

¹⁵ Little, M. P., T. V. Azizova, D. Bazyka, et al. Systematic Review and Meta-analysis of Circulatory Disease from Exposure to Low-level Ionizing Radiation and Estimates of Potential Population Mortality Risks. *Environmental Health Perspectives* 2012;120(11):1503-11.

example, a large Australian study of cancer risk after computerised tomography (CT) scans in 680,000 young people (aged less than 20 years) compared with 10.8 million young Australians who did not have CT scans and acted as a control group.¹⁶ This study involved more than ten times the number of people exposed and four times the total radiation dose than the Japanese survivor data for low doses of radiation (less than 100 mSv), meaning that it has much greater statistical power and precision for low dose radiation risks than the studies in Japanese *hibakusha*.

It demonstrated a 24% increase in cancer in the decade following one CT scan delivering an average effective dose of only 4.5 mSv, and 16% greater cancer risk for each additional scan. Cancers occurred as early as two years after exposure. While new cancers will continue to occur through the life of exposed individuals, the risk for leukaemia related to CT radiation was similar to that among *hibakusha* over several decades, and the risk of solid cancer over the first decade of follow-up alone in the more powerful CT study was 3.5 to nine times higher than in the *hibakusha* studies to date. For brain cancer, the risk is around 14 times higher.¹⁷

A recent large study in Korea using national health insurance system data showed among more than 2.3 million young people 0-19 years old that having had any diagnostic ionising radiation was associated with a greater than 60% increase in subsequent cancer diagnosis. As with the Australian study, cancers were more likely to occur on the side and site of the body which had been imaged with x-rays.¹⁸

These findings suggest that the linear, no-threshold model of long-term cancer risk related to radiation, which is the basis for radiation protection standards world-wide, might in fact underestimate the risk at low doses – ie that the cancer risk per unit of radiation dose may well in fact be greater in the lower than in the high dose range. Modern understanding of radiobiology, including cell killing at high doses, bystander and genomic instability effects, would tend to support this.

Together, the CT scan and worker studies definitively demonstrate the absence of a threshold for ionising radiation-related cancer risk, and measurable increases in cancer risk evident with exposures of very few mSv.

Children and women and girls are at increased risk from radiation

A further consideration in radiation risk is age and gender. The relationship between overall cancer risk, ~~and~~ age and gender is depicted in the Figure below. It can be seen that the cancer risk is much greater for exposures early in life, and that females are at greater risk at all ages than males. Women and girls overall show 40% greater risk of cancer for the same radiation exposure as males do.¹⁹

¹⁶ John Mathews, Anna Forsythe, Zoe Brady, Martin Butler, Stacy Goergen, Graham Byrnes, Graham Giles, Anthony Wallace, Philip Anderson, Tenniel Guiver, Paul McGale, Timothy Cain, James Dowty, Adrian Bickerstaffe, Sarah Darby. Cancer Risk in 680,000 People Exposed to Computed Tomography Scans in Childhood or Adolescence: Data Linkage Study of 11 Million Australians. *British Medical Journal*, 2013;346:f2360.

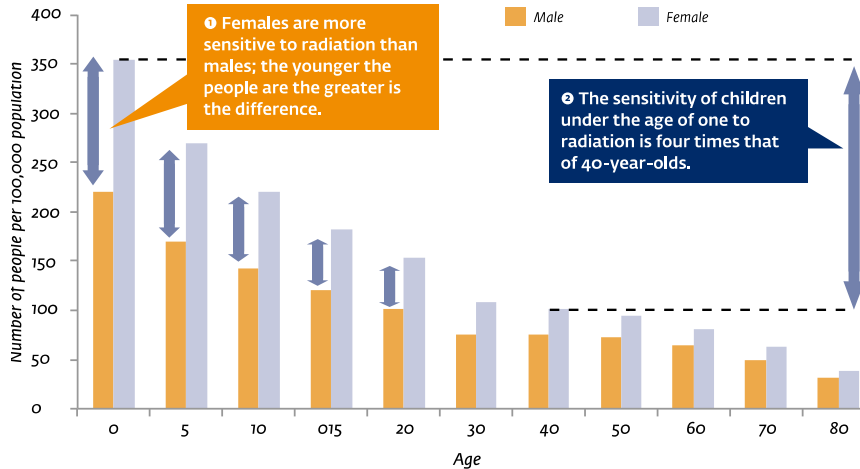
¹⁷ Smoll NR, Brady Z, Scurrah K, Mathews J. Exposure to ionizing radiation and brain cancer incidence: The Life Span Study cohort. *Cancer Epidemiology* 2016;42:60-5.

¹⁸ Hong J-Y, Han K, Jung J-H, Kim JS. Association of exposure to diagnostic low-dose ionizing radiation with risk of cancer among youths in South Korea. *JAMA Network Open* 2019;2(9):e1910584.

¹⁹ These data derived from the BEIR VII report p470-99 are also accessibly compiled and discussed in: Olson M. Disproportionate impact of radiation and radiation regulation. *Interdisciplinary Science Review*, 2019;44 (2):131-9. <https://www.tandfonline.com/doi/full/10.1080/03080188.2019.1603864> Available for free download here:

This means that radiation protection standards based on risks and protection for adults (and often largely males) involve significantly greater risk for the most radiation-vulnerable segment of the population – children (and fetuses), those in greatest need of society’s protection. The differential risk with age extends to circulatory disease as well as cancer.²⁰ These data, based largely on hibakusha experience over 60+ years, also highlight the gendered nature of radiation risk.

Figure: Cancer risk by age and gender



Source: Nuclear Accident Independent Investigation Commission, 2012, based on data from US National Academy of Sciences BEIR VII report, 2006.

Association of childhood cancer/leukemia with proximity of residence to an operating nuclear power plant and to variations in natural background radiation

Apparent excesses of leukemia occurring in children living near nuclear power plants caused concern and controversy over decades. Perhaps the most prominent was an excess of leukemia and lymphoma cases around the Sellafield nuclear plant in England in the 1980s, which was the location of the Windscale accident and fire in 1957 and before the 1986 Chernobyl disaster, the most radioactively polluting nuclear facility in Europe. An investigation recommended by a government-commissioned committee unexpectedly found that the risks for leukemia and lymphoma were higher in children born within 5 km of Sellafield, and in children with fathers employed at the plant, particularly those recording high radiation doses before their child’s conception.²¹ A 2007 meta-analysis supported by the US Department of Energy examined all of the

<https://www.genderandradiation.org/success-stories>

²⁰ Little 2102 op cit.

²¹ Gardner, Martin J., Michael P. Snee, Andrew J. Hall, Caroline A. Powell, Susan Downes and John D. Terrell. 1990. “Results of a Case-Control Study of Leukaemia and Lymphoma among Young People Near Sellafield Nuclear Plant in West Cumbria,” *British Medical Journal*, vol. 300, pp. 423-429.

reliable data available worldwide, confirming a statistically significant increase in leukemia for children living near nuclear power plants.²²

The most definitive findings came soon after from a large national German study, which examined leukemia among children living near any of Germany's 16 operating nuclear plants over a 25 year period. It showed a highly statistically significant more than doubling in leukemia risk for children living within 5 km of a nuclear plant, with elevated risk extending beyond 50 km from a plant.²³ A subsequent but less powerful study in France found a similar increase. These findings were not expected based on the estimated exposure and the associated level of risk.

An extensive review of biological effects of natural variation in levels of background radioactivity has demonstrated effects of such variation in a wide variety of organisms, including humans.²⁴ These include increased risks of long-term genetic damage, chronic disease, and increases in almost all types of cancer, proportional to the dose.

Several studies of childhood cancer demonstrate clear effects from relatively small variations in background radiation. A study examining UK National Registry of Childhood Tumours data for 1980-2006 demonstrates excess relative risk for childhood leukaemia of 12% per mSv red bone marrow dose and 9% per mGy increased risk for cumulative indoor gamma radiation exposure since birth.²⁵

A Swiss study compared cancer rates among children living in alpine areas with those living in sedimentary northern areas of Switzerland. In alpine areas, background radiation levels are higher.²⁶ Statistically significant 64% increases in all cancer incidence and 104% increase in leukemia incidence were found in children who lived in areas with external background radiation more than 0.2 microSv per hour compared with areas where the levels were less than 0.1 microSv per hour. The difference between 0.1 and 0.2 microSv per hour amounts to about 1mSv per year.

A Finnish national case-control study of childhood leukemia between 1990 – 2011 showed 27% increase in leukemia risk for children aged 2-7 years per 1 mSv increase in cumulative gamma radiation exposure (from both background radiation and Chernobyl fallout).²⁷

Taken together these studies confirm biological and health effects of even very small differences in radiation exposure, of the order of 1 mSv or less.

²² Baker P. J., and D. G. Hoel. 2007. "Meta analysis of standardised incidence and mortality rates of childhood leukaemia in proximity to nuclear facilities." *European Journal of Cancer Care*. vol. 16, pp. 355-363.

²³ Kaatsch, Peter, Claudia Spix, Renate Schulze-Rath, Sven Schmiedel, and Maria Blettner. 2008. "Leukaemia in Young Children Living in the Vicinity of German Nuclear Power Plants," *International Journal of Cancer*, vol. 1220, pp. 721-726.

²⁴ Moller AP, Mousseau TA. The effects of natural variation in background radioactivity on humans, animals and other organisms. *Biological Reviews* 2013;88:226-54.

²⁵ Kendall GM, Little MP, Wakeford R, et al. A record-based case-control study of natural background radiation and the incidence of childhood leukemia and other cancers in Great Britain during 1980-2006. *Leukemia* 2013; 27:3-9

²⁶ Spycher BD, Lupatsch JE, Zwahlen M, et al. Background ionising radiation and the risk of childhood cancer: a census-based nationwide cohort study. *Environmental Health Perspectives* 2015; 123(6):622-8.

²⁷ Nikkila A, Erme S, Arvela H, Holmgren O, Raitanen J, Auvinen A. Background radiation and childhood leukemia: A nationwide register-based case-control study. *Int J Cancer* 2016;139:1975-82. <https://onlinelibrary.wiley.com/doi/full/10.1002/ijc.30264>

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Finally, I cite three examples which indicate recognition by responsible authorities of an actionable link between cancer and occupational radiation exposures in the range of a few mSv, well below the permitted occupational exposure limit of 20 mSv/yr, and of the same order as the estimated possible exposure for workers on the proposed Fingerboards project.

Firstly, the Australian government in 2006 announced provision of free care for all cancers occurring among all participants (military, public service and civilian) in British nuclear tests in Australia. This is despite the assessment (in my view implausible) that the mean radiation dose received as a result of participation in the tests was only 2.8 mSv.²⁸ In the 2017 Federal budget, it was announced that a DVA Gold Card would be provided to participants in the British nuclear test program in Australia and veterans of the British Commonwealth Occupation Force, deployed in or near Hiroshima after the nuclear bombing.²⁹ While accurate radiation dose estimates are not available for the latter group, they have been considered to be quite low, no more than a few mSv.

Secondly, the US Radiation Exposure Compensation Act “provides partial restitution to individuals who developed serious illnesses after exposure to radiation released during atmospheric nuclear tests or after employment in the uranium industry”.³⁰ It does not require claimants to establish causation, or provide an individual assessment of likely radiation exposure, which is rarely available. It applies to both onsite participants in atmospheric nuclear tests, and people who lived in downwinder areas contaminated by test fallout.

Thirdly, the level of radiation exposure required to claim related workers’ compensation in Japan is 5 mSv/yr.³¹

Conclusions regarding radiation and health

New evidence shows that radiation risks to health are greater than previously thought and are not adequately reflected in regulatory limits. Health risk exists below the maximum permissible doses for the public and for workers. Radiation health risks associated with chronic diseases approximately double the risks associated with cancer.

Radiation health risks are 4 - 5 times greater for children than adults and 40% greater for women and girls than for men and boys at all ages. Young adults are more susceptible than older adults.

I found no mention in any project documentation I reviewed regarding monitoring or radiation protection measures for sites particularly relevant to children, such as schools, kindergartens, child care centres, playgrounds or sports facilities.

²⁸ Richard Gun, Jacqueline Parsons, Philip Ryan, Philip Crouch, Janet Hiller, *Australian Participants in British Nuclear Tests in Australia, Vol 2: Mortality and cancer incidence*, Department of Veterans Affairs, Canberra, 2006.

²⁹ <https://www.dva.gov.au/recognition/aboriginal-and-torres-strait-islander-veterans/british-nuclear-testing>

³⁰ US Department of Justice. Radiation Exposure Compensation Act. <https://www.justice.gov/civil/common/reca>, accessed 1 Feb 2021.

³¹ Soble J. Japan to pay cancer bills for Fukushima worker, New York Times, 20 October 2015.

<https://www.nytimes.com/2015/10/21/world/asia/japan-cancer-fukushima-nuclear-plant-compensation.html>

Some key aspects of the project relevant to radiation exposures

Should the proposed project proceed, a few aspects stand out as warranting particular attention to minimise health and environmental risks associated with the project.

The accelerating impacts of global heating will increase over the next decades. With the exception of Dr Joyner's report, nowhere in the project documentation available to me did I note any discussion of the impacts of climate change. Indirect acknowledgement of their importance lies in a statement in EES 9.7.5.2 that wharf loading of HMC would not occur under wet or windy conditions.

As the catastrophic bushfires in Gippsland in 2019/20 made plain, a range of possible impacts on the very large 1675 ha project site, made more frequent and/or severe by global heating, could significantly impact the mine and exacerbate offsite releases of windborne dust and contaminated water. These events include increased frequency and severity of drought, catastrophic bushfires, intense rainfall events and stronger storm events and winds. Prolonged and/or severe drought may exacerbate the impacts of planned surface and groundwater use by the mine. Drought, higher temperatures and high winds may make it much more difficult to keep HMC moist at all times and reduce dust generation, and high rainfall events may also make HMC more difficult to contain, particularly during storage at the mine or at wharves. As noted in the EES Executive Summary (p xxi), a tailings storage facility failure – more likely in a warming world, would be “extreme”.

The largest estimated radiation exposures associated with the proposed project are associated with transport of the heavy mineral concentrate produced at the mine.

No mention is made in the documentation available to me indicating that workers at the proposed project, including workers transporting the HMC, will have personal radiation exposure dosimetry performed through appropriate personal dosimeters worn at all times on site. This should be standard for all people working with radioactive materials.

Apart from Prof Mudd's report, I saw in the project documentation no consideration of the possibility of mine operations being unexpectedly interrupted, or abandoned, temporarily or permanently. This could occur because of operating company issues, economic recession, the current trade 'war' with China escalating to affect mine viability, ~~economic recession~~, armed conflict, another pandemic, among other possibilities. One outcome bad for public health would be an operating mine abandoned prematurely, leaving the site prone to off-site releases of dust and contaminated water, inadequately managed and the Victorian government needing to foot a substantial remediation and rehabilitation bill not adequately covered by a rehabilitation bond.

Recommendations re radiation and health

All aspects of project management should aim for radiation exposures for workers and the public which are as low as practicable and well below regulatory limits, and set action levels that would trigger prompt evaluation and response, with involvement of DHHS. I would recommend that the

latter levels (including all exposure pathways) be set at around 1-2 mSv per year for workers and 0.1 - 0.2 mSv/yr for the public.

Radiation protection measures should be informed by age and gender differences in radiation health risks, and should address settings particularly relevant for children.

A major project which will run over more than two decades must consider the implications of global heating and factor them into its mine management.

To minimise the public health and environmental impacts of both routine and accidental releases of HMC during handling and transport, every effort should be made to minimise multiple handling and especially dust generating loading of HMC onto and off trucks, and onto ships from wharves, and open storage of HMC at the mine or on wharves or anywhere else. Every effort should also be made to minimise the number and distance of truck movements required to transport the HMC, and preferably to eliminate them altogether. The ideal would be for the HMC to be loaded via as closed a system as possible (eg a closed conveyor or pipe) directly into train-borne containers at or immediately adjacent to the mine site, containers which are then sealed and transported by rail to be shipped offshore.

As recommended by Dr Joyner and DHHS, all possible exposure pathways of workers and the public should be assessed and monitored, including through farm work and other types of prevalent local employment or other activities, and sampling of all agricultural products downwind and downstream of the planned mine, including not only vegetables and grain, but fish, and animal products in the form of both meat and dairy products. If any Aboriginal people harvest bush foods in areas potentially affected by the project, associated exposures should also be assessed.

All mine personnel should wear appropriate personal radiation dosimeters at all times on site.

All environmental and health relevant monitoring data during every phase of the mine's operation and rehabilitation should promptly be made publicly available.

All consultative bodies established in relation to the mine should include representatives of community organisations.

An adequate rehabilitation bond should be established to enable timely completion of remediation and rehabilitation to occur without substantial call on the taxpayer to foot the bill if the operating company is unable to complete this task in a timely and adequate way.

Project documentation currently uses the large and cumbersome unit of the Sievert (SV) for ionising radiation equivalent dose, for reasons that are not apparent. It would be clearer if this were changed to usual units which are much more clear, comprehensible and less error-prone in this context - milliSv or when appropriate microSv.

Other recommendations

The proposed project's possible international nuclear safeguards implications should be addressed before any approvals are granted.

The implications of the Victorian Nuclear Activities (Prohibitions) Act 1983 for the proposed project should be addressed before any approvals are granted.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tilman Ruff', with a stylized flourish at the end.

Tilman Ruff

Attachments:

Letter of instruction
CV



29 January 2021

Assoc. Prof. Tilman Ruff
Melbourne School of Population and Global Health
University of Melbourne

By email only: tar@unimelb.edu.au

Dear Associate Professor Ruff

Fingerboards Mineral Sands Mine Project, Glenaladale, Victoria – radiation health impacts

We act on behalf of [REDACTED] a not-for-profit community group formed in response to the proposed Fingerboards mineral sands mine project (the **project**).

We write to you as a public health physician, and an expert in the public health dimensions of nuclear technology. The purpose of this letter is to seek your expert opinion on the radiation health impacts of the project.

We request your expert opinion be provided as an expert witness statement to be submitted to the Fingerboards Mineral Sands Project Inquiry and Advisory Committee. We request that your expert report be provided by **COB 1 February 2021**.

References to Tab numbers in bold in this letter are to the documents in an electronic brief which we provide to you via DropBox : [REDACTED]

Background

1. Kalbar Operations Pty Ltd (**Kalbar**) propose to develop an open pit mineral sands mine covering an approximate area of 1,675 hectares within the eastern part of the Glenaladale mineral sands deposit in East Gippsland, Victoria. The site is located near the Mitchell River and approximately 2km south of Glenaladale, 4km south-west of Mitchell River National Park and 20km north-west of Bairnsdale.

2. The proposal includes the development of an open pit mineral sands mine, two mining unit plants, wet concentrator plant, water supply infrastructure and additional site facilities (i.e. site office, warehouse, workshop, loading facilities and fuel storage). The proposed mining methods involve open pit mining to extract approximately 170 million tonnes (Mt) of ore over a projected mine life of 20 years to produce 8 Mt of mineral concentrate. Heavy mineral concentrate, separated into magnetic and non-magnetic concentrates, are proposed to be transported via road, rail or a combination of both for export overseas (**Tab 2.1.2 / Project Description**).
3. On 18 December 2016, the Minister for Planning issued a decision determining that an Environment Effects Statement (**EES**) was required for the project due to the potential for a range of significant environmental effects. The purpose of the EES is to provide a sufficiently detailed description of the proposed project, assess its potential effects on the environment and assess alternative project layouts, designs and approaches to avoid and mitigate effects (**Tab 1.1 / Scoping Requirements**).
4. An Inquiry and Advisory Committee (**IAC**) has been appointed to review the EES and public submissions (**Tab 1.2 / Terms of Reference**). The IAC will hold public hearings for 8 weeks, after which it will produce a report for the Minister for Planning. Following receipt of the IAC's report, the Minister for Planning will then make an assessment as to whether the likely environmental effects of the project are acceptable (**Minister's Assessment**).
5. All EES documents are available online at: <https://ees.fingerboardsproject.com.au/download>.

Instructions

6. We request that you undertake a review of the health aspects of the Radiation Assessment Report (Technical Study, Appendix A011) (**Tab 2.2.2**) and prepare an expert witness statement providing your opinion on:
 - a. the level and nature of health risk associated with radiation from the project;
 - b. whether the actual or likely effects of the project (in relation to health risks from radiation) are identified and or appropriately assessed;
 - c. the adequacy of the proposed management measures (in relation to health risks from radiation), including those set out in the Environmental Management Framework (**Tab 2.1.5**);

- d. any other matters related to the Radiation Assessment Report you identify which you consider relevant within the limits of your expertise; and
 - e. any appropriate qualifications or conditions that should be attached to findings or conclusions, such as uncertainties or gravity of threats or impacts.
7. In preparing your expert witness statement, please have regard to Dr Ken Joyner’s Review of the Radiation Assessment Report (**Tab 3.2**), the Department of Health and Human Services (DHHS) Review (**Tab 3.3**) and Associate Professor Gavin Mudd’s Expert Witness Statement (**Tab 3.4**) as appropriate.
8. As an expert you are able to consider any such material you consider relevant to your enquiry. Please identify in your report any further materials you consult outside of the briefed materials.

Expert Witness Code of Conduct

9. We have enclosed a copy of the *Guide to Expert Evidence provided by Planning Panels Victoria*, which is the relevant guidance for hearings before the IAC (**Tab 3.1**).
10. In preparing your final expert witness statement, please ensure that you include:
- a. an up front summary of key issues, opinions and recommendations
 - b. your name, address, qualifications, experience and area of expertise (i.e. please include as an attachment your CV)
 - c. all instructions that define the scope of the statement (i.e. please include as an attachment a copy of this letter of instruction)
 - d. details of any other significant contributors to the report (if there are any) and their expertise
 - e. details and qualifications of any person who carried out any tests or experiments upon which the expert has relied in preparing the statement
 - f. the following declaration:

‘I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.’

Important dates

11. We request your expert witness report be provided by **COB Monday 1 February 2021**.

12. The IAC will conduct public hearings over a period of 8 weeks, commencing on **15 February 2021**. We anticipate [REDACTED] will make their case in the first week of March 2021. Accordingly, please advise of the days on which you will **not** be available to give evidence before the Inquiry and Advisory Committee in the first week of March 2021.

13. We further advise that the IAC may direct experts to get together to confer as part of an 'expert conclave' in early February. An expert conclave usually involves experts on the same topic convening for a half day in an attempt to clarify the matters which are agreed and or disagreed and generally narrow the issues in dispute.

Confidentiality

14. This request for an expert opinion and the subsequent expert witness statement, as well as any correspondence relating to this request, is for the purposes of the Fingerboards mineral sands mine project EES process, including the public hearings before the IAC. It is therefore confidential and is protected by legal professional privilege.

Fees

[REDACTED]

Please contact Virginia Trescowthick if you have any questions or require further information.

Yours faithfully

Virginia Trescowthick
Lawyer

CURRICULUM VITAE

Tilman Alfred Ruff AO
MB, BS (HONS), FRACP

1 FEB 2021

I am a physician working to safeguard life and health through the abolition of nuclear weapons, identified by the World Health Organisation as the most urgent global health imperative; and through immunisation. I am Honorary (Principal Fellow) in the Melbourne School of Population and Global Health, University of Melbourne, after 15 years as Associate Professor in the University's Nossal Institute for Global Health.

On 6 October 2017, the Norwegian Nobel Committee awarded the 2017 Nobel Peace Prize to the International Campaign to Abolish Nuclear Weapons, of which I was a co-founder and the founding international and Australian Chair. The Committee stated:

"The organisation is receiving the award for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons".

In 2019, I was appointed an Officer of the Order of Australia (AO) *"For distinguished service to the global community as an advocate for nuclear non-proliferation and disarmament, and to medicine."*

Infectious diseases and immunisation

Trained in internal medicine and infectious diseases at Prince Henry's Hospital and Fairfield Infectious Diseases Hospital in Melbourne, I became founding Director of Travel Medicine at Fairfield Hospital and then Head of Travel Medicine in the Victorian Infectious Diseases Service at the Royal Melbourne Hospital. I was international medical advisor for Australian Red Cross from 1996 till 2019.

Between 1988 and 1998, I worked on immunisation and maternal and child health in several provinces in eastern Indonesia, as project physician and then director for a number of Australian government funded health projects, in collaboration with the Indonesian Ministry of Health. These include the Lombok Hepatitis B Immunisation Project, which first introduced and evaluated mass infant hepatitis B immunisation in Indonesia, and involved initiating home visits to deliver the first dose to newborns. These projects included large population-based studies and evaluation of novel means of delivering vaccine in the home using a non-reusable injection device, outside the cold chain. They demonstrated the importance of early administration of the first vaccine dose. A number of interventions first implemented and evaluated in projects in which I played a leadership role have since been adopted as national policy in Indonesia, including at birth administration of the first hepatitis B vaccine dose, visits by health workers in the first week and again in the first month to all post-partum mothers, and use of a prefilled non-reusable injection device for hepatitis B vaccine and tetanus toxoid, including outside the cold chain.

I was Design Team Leader and subsequently Project Director for the AusAID supported Healthy Mothers, Healthy Babies Project covering 2 eastern Indonesian provinces. I served as Technical Advisor to the Australian Government on the 5 year 'Control of Hepatitis B Infection in Pacific Island Countries Project' managed by UNICEF. This included serological surveys which demonstrated the effectiveness of hepatitis B immunisation programs in Fiji, Kiribati,

Tonga and Vanuatu; and which provided pioneering demonstration in a multi-country population-based study of the absence of hepatitis B escape mutant viruses as a threat to current immunisation programs. In early 2004, I was invited by UNICEF to lead a review of the Australian and New Zealand government supported regional Pacific immunisation project; in late 2004 the government of Samoa invited me to lead a UNICEF/WHO review of their national EPI program; and each year 2005-9 was invited to serve as an advisor on immunisation in Pacific island countries, and in 2008 on hepatitis B control, for the Western Pacific Office of WHO. In 2009, I was invited to become an inaugural member of the Western Pacific WHO Hepatitis B Expert Resource Panel for Certification of Hepatitis B Control Goal, a role I continued till late 2019. I was requested by AusAID to serve as the immunisation expert on an international team evaluating AusAID's 5 year program of support for child protection and immunisation in Pacific island countries. From 2006-13, I was the Melbourne University co-ordinator for annual Southeast Asia Mekong Region Immunisation Forums for senior national immunisation program managers of Cambodia, Laos, Myanmar, Thailand and Vietnam.

I have undertaken clinical and epidemiological research on ciguatera fish poisoning, hepatitis A and Japanese encephalitis vaccines, and hepatitis E, and directed research collaborations on a broad range of pediatric, adolescent and adult vaccines and vaccine-related disease epidemiology. I am a member of the RV3 Rotavirus Vaccine Scientific Advisory Board; and served as chair of the Australian Advisory Board and was a member of the Asia-Pacific Advisory Board for GSK's pneumococcal conjugate vaccine, PHiD-CV.

From 1998-2003 I was Director of Clinical R&D and Medical Affairs, Australia/New Zealand/Oceania, for GlaxoSmithKline Biologicals, and a member of GSK Biologicals' global Clinical Advisory Board. I subsequently have consulted on immunisation research and policy for GSK Biologicals in Australia and Asia, Novartis Vaccines and Diagnostics, bioCSL and Crucell.

I was among the first physicians in Australia to draw attention to the major and diverse health implications of climate change, and was first invited to present on this topic to the Greenhouse 88 Conference sponsored by CSIRO and the Commission for the Future.

Human rights and nuclear weapons eradication

A founding member of the first secondary student group of Amnesty International, I have been a member of that organisation since 1970. Since 1982 I have been active in the Medical Association for Prevention of War (Australia) of which I am a past president; and the Nobel Peace Prize winning International Physicians for the Prevention of Nuclear War (IPPNW), including terms as Asia-Pacific Vice-President, Consultant on Policy and Programs, based in Boston, Southeast Asia-Pacific Vice-President, and since August 2012 Co-President.

My work has particularly addressed the health and environmental consequences of nuclear weapons testing, and the urgent public health imperative for nuclear weapons abolition. I documented links between military activities in general, and nuclear weapons tests in particular, and outbreaks of ciguatera fish poisoning in the Pacific, and was a member of an international physician delegation to France in 1995 to urge the non-resumption of French nuclear test explosions. From 2006-2012, I chaired the Australian Board of the International Campaign to Abolish Nuclear Weapons (ICAN), which I helped found, supported initially by the Poola Foundation (Tom Kantor Fund). As of June 2016, 440 organisations in 98 countries have become ICAN partners, as have over 50 diverse Australian civil society organisations including the Australian Conservation Foundation, the Uniting Church in Australia, Baptist Union of Australia, Oxfam, Mayors for Peace and the Victorian Trades Hall Council. I also chaired the ICAN International Core Group, and chaired and then co-chaired the ICAN International Steering Group till 2014. In April 2008, I was invited as one of the first ever two civil society representatives on the official Australian delegation to the nuclear Non-Proliferation Treaty

second Preparatory Committee in Geneva, and again joined the official Australian delegation at the 2009 PrepCom in New York.

I contributed substantively to the book containing the 2007 updated model Nuclear Weapons Convention, which has been submitted by the governments of Costa Rica and Malaysia as a formal NPT and United Nations General Assembly document, and was commended by UN Secretary-General Ban Ki-moon on 24 Oct 2008 in the first element of his five-point plan for nuclear disarmament.

In June 2008, I was invited to serve as an expert witness on radiation and health to the NSW Legislative Council Inquiry into the former uranium smelter site at Hunter's Hill, Sydney. In October/November 2008 I was invited by Gareth Evans, former Australian Foreign Minister, and Yoriko Kawaguchi, former Japanese Foreign and Environment Minister, to serve as one of two NGO advisors in their roles as Co-chairs of the International Commission on Nuclear Non-proliferation and Disarmament established by the governments of Australia and Japan.

In March 2009 I was invited by former Prime Minister Malcolm Fraser, along with former ALP President Barry Jones, medical scientist Sir Gustav Nossal, former Australian Defence Force head General Peter Gration, and former WA Governor and Australian Army Chief General John Sanderson, to call for Australian leadership towards the abolition of nuclear weapons in simultaneous op-ed pieces published in *The Age* and *Sydney Morning Herald* in April and December 2009. In Nov 2009 I was invited to serve as an expert advisor on nuclear disarmament to the Interaction Council, an organisation including over 30 former heads of state.

In 2016, I participated through IPPNW and ICAN in the UN Working Group on nuclear disarmament which recommended the negotiation of a new legal instrument to prohibit nuclear weapons and provide for their elimination, and the UN General Assembly First Committee adoption on 27 October 2016 of a historic resolution mandating negotiations commence in March 2017 on a new treaty to ban nuclear weapons. Influential in this process was an unprecedented call by the world's peak international health professional federations for prohibiting and eliminating nuclear weapons as an urgent global health imperative. This collaboration, organised by my IPPNW colleagues John Loretz, Dr Ira Helfand and I, took the form of Working Papers submitted to the UN Working Group in 2016 and ban treaty negotiating conference in March 2017, and successive op-eds in *Kyodo News* and *The Guardian*. These involved IPPNW, the World Medical Association, World Federation of Public Health Associations and International Council of Nurses.

In March and June-July 2017, I led the IPPNW delegation to the UN conference in New York negotiating a treaty to prohibit nuclear weapons, adopted on 7 July 2017 by a vote of 122 to 1, with 1 abstention.

Awards

"Heiwa", the home I built with my wife Charlotte Laemmle at the Moonee Creek Cooperative in the Strathbogie Ranges won the 2001 Australian Timber Design Awards for Environmental Commitment, Best Victorian Entrant, Best Interior, and Overall Runner-up. In Oct 2008 I was invited to join the Strategic Council of the Climate Institute.

In June 2012, I was appointed a Member of the Order of Australia "for service to the promotion of peace as an advocate for the abolition of nuclear weapons, and to public health through the promotion of immunisation programs in the South-East Asia – Pacific region".

On 6 October 2017, the Norwegian Nobel Committee awarded the 2017 Nobel Peace Prize to ICAN, of which I was the founding international and Australian Chair. The Committee stated:

"The organisation is receiving the award for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons".

In 2017, I was awarded Honorary Life Membership of the Australasian Society for Infectious Diseases, and in 2018 the Distinguished Alumni Award, Monash University Faculty of Medicine, Nursing and Health Sciences.

In 2019, I was appointed an Officer of the Order of Australia (AO) "For distinguished service to the global community as an advocate for nuclear non-proliferation and disarmament, and to medicine."

Selected publications

- Ruff TA. Ciguatera in the Pacific: a link with military activities. *Lancet* 1989;i:201-5.
- Ruff TA, Gertig DM, Otto BF, Gust ID, Sutanto A, Soewarso TI, Kandun N, Marschner IC, Maynard JE. Lombok Hepatitis B Model Immunization Project: towards universal infant hepatitis B immunization in Indonesia. *J Infect Dis* 1995;171(2):290-6.
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- Otto BF, Suarnawa IM, Stewart T, Nelson C, Ruff TA, Widjaya A, Maynard JE. At-birth immunisation against hepatitis B using a novel prefilled immunisation device stored outside the cold chain. *Vaccine* 2000;18:498-502.
- Wilson N, Ruff TA, Rana BJ, Leydon J, Locarnini S. The effectiveness of the infant hepatitis B immunisation program in Fiji, Kiribati, Tonga and Vanuatu. *Vaccine* 2000;18:3059-66.
- Whitby M, Ruff TA, Street AC, Fenner FJ, Marmion B. Biological agents as weapons 2: anthrax and plague. *Med J Aust* 2002;176:605-8.
- Torresi J, McGuinness S, Leder K, O'Brien D, Ruff T, Starr M, Gibney K. Manual of travel medicine. 4th ed. Singapore: Springer, 2019 (previous editions 1999, 2004, 2011).
- International Association of Lawyers Against Nuclear Arms, International Network of Scientists and Engineers Against Proliferation, International Physicians for the Prevention of Nuclear War. Datan M, Hill F, Scheffran J, Ware A, Kalinowski M, Sidel V. ed: Ruff TA, Loretz J. Securing our survival (SOS). The case for a Nuclear Weapons Convention. IPPNW, Cambridge MA; 2007.
- Williams B, Ruff TA. Getting nuclear-bomb fuel out of radiopharmaceutical production. *Lancet* 2008;371(9615):795-7.
- Ruff TA, Bravo L, Gatchalian SR, Bock HL. Priorities and challenges for hepatitis B control in the Philippines and the importance of a vaccine dose at birth. *SouthEast Asian Journal of Tropical Medicine and Public Health* 2009;40(5):972-90.
- Ruff TA. The humanitarian impact and implications of nuclear test explosions in the Pacific region. *International Review of the Red Cross* 2016, 97(899):775-813. (online 11 May 2016, doi:10.1017/S1816383116000163).
- Helfand I, Haines A, Ruff T, Kristensen H, Lewis P, Mian Z. The growing threat of nuclear war and the role of the health community. *World Medical Journal* 2016;62(3):86-94.
- Ruff TA. Health implications of ionising radiation. (Chapter 8) in: van Ness P, Gurtov M (eds.). Learning from Fukushima. Nuclear power in East Asia. Acton; ANU Press, 2017: 221-60.
- Forrow L, Ruff T, Thurlow S. The 2017 Nobel Peace Prize and the Doomsday Clock – The End of Nuclear Weapons or the End of Us? (Perspective) *New Engl J Med* 2018;378:2258-61.

Main professional achievements

Nuclear disarmament

- Co-founding ICAN, and contributing through IPPNW and ICAN to the negotiation and adoption of the historic UN Treaty on the Prohibition of Nuclear Weapons in New York on 7 July 2017, which entered into legal force on 22 Jan 2021.
- ICAN being awarded the Nobel Peace Prize for 2017, the first to an entity born in Australia.

- Contributing nationally and internationally to medical research, education and advocacy for the abolition of nuclear weapons as the only feasible way to prevent nuclear war, the most urgent and serious threat to global health.
- Joint submissions to the UN Working Group on Nuclear Disarmament in 2016 and the 2017 negotiations to ban nuclear weapons, with continuing collaboration, involving IPPNW, the World Medical Association, International Council of Nurses, and World Federation of Public Health Associations.
- Helping found the International Campaign to Abolish Nuclear Weapons, which in Jan 2021 had 607 partner organisations in 106 countries and was invited to coordinate civil society input to each of the 3 international Conferences on the Humanitarian Impacts of Nuclear Weapons in 2013 and 2014; was the principal civil society campaign contributing to the negotiation of a treaty to prohibit nuclear weapons. ICAN initially coordinated the development of an updated model Nuclear Weapons Convention which was adopted as a formal document by both the 2007 nuclear Non-Proliferation Treaty Preparatory Committee and in 2008 by the UN General Assembly.
- Helping to convince the Australian Labor Party 2018 National Conference to unanimously adopt a resolution committing Labor in government to join the Treaty on the Prohibition of Nuclear Weapons. In 2007, help convince Labor to support a Nuclear Weapons Convention, and oppose sales of Australian uranium to India, prior to the Australian national election of November 2007.
- Helping to convince the Australian Joint Sanding Committee on Treaties to support a Nuclear Weapons Convention, in its unanimous Sept 2009 report on Nuclear Non-proliferation and Disarmament.
- Being invited to serve as one of two civil society advisors to the Co-chairs of the International Commission on Nuclear Non-Proliferation and Disarmament; by Malcolm Fraser to join a high-level Australian group advocating nuclear weapons abolition, and as an expert advisor to the Interaction Council.
- Documenting the link between ciguatera fish poisoning and military activities in the Pacific, at a time when the French government claimed its nuclear tests caused no adverse health or environmental effects.

Immunisation, hepatitis B control and travel medicine

- Demonstrating the importance of a timely birth dose of hepatitis B vaccine.
- Assisting and evaluating introduction of universal infant hepatitis B immunisation in Indonesia and Pacific island countries.
- Contributing to Indonesian national policies of hepatitis B immunisation, including a birth dose and beyond the cold chain, use of pre-filled non-reusable injection devices (Uniject), and home visits by village midwives for all newborns.
- Providing advocacy, leadership, and technical support for Australia and New Zealand's continuing engagement with and contribution to immunisation in Pacific island countries 1999-2015.
- Facilitating the first population-based demonstration in the Pacific region of lack of a threat to hepatitis B immunisation programs from mutant hepatitis B viruses.
- Contributing to the establishment and academic base of travel medicine in Australia, being founding head of travel medicine services at Fairfield Infectious Diseases Hospital and then Royal Melbourne Hospital; and developing programs keeping Australian Volunteers Abroad and Australian Red Cross delegates, staff and volunteers working abroad healthy over a 34 year period.
- Developing and directing the largest industry-supported vaccine research program in Australia 1998-2003 and contributing to national vaccine and immunisation policy, especially universal hepatitis B immunisation commencing at birth.

University

- Coordinating the Monash University MPH program.
- Contributing to the establishment of the Nossal Institute for Global Health at the University of Melbourne.
- Founding the MPH subject *Global Health and Human Rights*, co-founding the MPH subject *Planetary and Global Health* and undergraduate breadth subject *Global Health, Security and Sustainability*.
- Extensive teaching, writing and public media comment on the public health dimensions of nuclear technology, particularly the global health imperative, evidence base and pathways for eradication of nuclear weapons.

Profile pieces

Jo Chandler, Nuclear nemesis, *The Age*, 10 April 2010
<http://www.theage.com.au/world/nuclear-nemesis-20100409-ryqr.html>

The world says no to nuclear weapons. *RACP Quarterly* September/October 2017: 24-6. Royal Australasian College of Physicians.
<https://www.racp.edu.au/docs/default-source/racp-news/racp-quarterly-sept-oct-2017.pdf?sfvrsn=2>

Professor Tilman Ruff, the man behind the 2017 Nobel Peace prize
 ABC Radio Nightlife, 17 Jan 2018
<http://www.abc.net.au/radio/programs/nightlife/tillman/9341454>

The Sacred and the political, ABC Radio National Breakfast, 0740 30 March 2018
http://mpegmedia.abc.net.au/rn/podcast/2018/03/bst_20180330_0710.mp3

Brad Collis. A Nobel cause. *Monash Life*, 2018
<https://lens.monash.edu/@monash-life/2018/09/01/1358811/a-nobel-cause>

Tilman Ruff, 2019
 By Nikki Toole
 Photographic portrait acquired by National Portrait Gallery 2019 and included in NPG and touring exhibition "The Look" <https://www.portrait.gov.au/exhibitions/the-look-2019>;
 associated filmed interview: <https://www.portrait.gov.au/stories/tilman-ruff>
 Selected for inclusion in Taylor Wessing Photographic Portrait Prize 2020 Exhibition, National Portrait Gallery London:
<https://www.npg.org.uk/whatson/taylor-wessing-photographic-portrait-prize-2020/exhibition/>

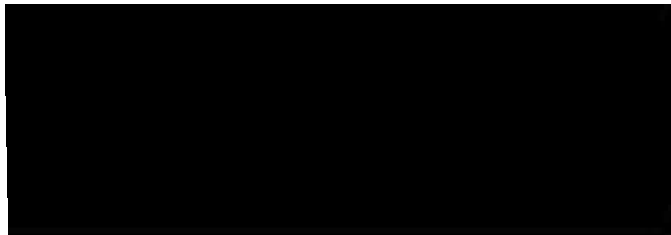
Tilman Ruff 22 Sep 2020
[Better Place: Talking International Law interview series](#)
 and <https://youtu.be/O71oGXeio6A>
 With Dr Jonathan Kolieb, RMIT University

PERSONAL DETAILS

Date of birth:
Citizenship:
Immediate family:

Postal:

Telephone:
Email:
Languages:



CURRENT POSITIONS (UNPAID)

- 2007- Member, RV3 Rotavirus Vaccine Development Scientific Advisory Board; Murdoch Children's Research Institute/Royal Children's Hospital
- 2012- Co-President, International Physicians for the Prevention of Nuclear War, re-elected 2014, 2017
- 2012- Member, Committee, International Campaign to Abolish Nuclear Weapons Australia
- 2018- Internet Peace Prize Award Committee member (South Korea)
- 2019- Medical member, Victorian International Humanitarian Law Advisory Committee, Australian Red Cross
- 2021- Honorary (Principal Fellow), Melbourne School of Population and Global Health, University of Melbourne

EDUCATIONAL

Secondary: Glen Waverley High School, Melbourne

Undergraduate:

1980 MB, BS First Class Honours, Monash University

Postgraduate:

- 1981 Intern, Prince Henry's Hospital, Melbourne
- 1982 JRMO (Medical), Prince Henry's Hospital, Melbourne
- 1983 SRMO (Medical), Prince Henry's Hospital, Melbourne
- 1984 Registrar (Medical), Prince Henry's Hospital, Melbourne
- 1985 Clinical Supervisor, Clinical School, Prince Henry's Hospital, Monash University
Clinical Assistant Physician in General Medicine and Oncology, Prince Henry's Hospital
- 1985 FRACP Part 1
- 1986-1987 Medical Registrar, Fairfield Infectious Diseases Hospital, Melbourne
- 1988 Fellowship, Royal Australasian College of Physicians
- 2002 Third Advanced Vaccinology Course, Foundation Merieux, 3-14 June 2002
Annecy, France

SCHOLARSHIPS, HONOURS AND AWARDS

- 1967-1971 Dux of Glen Waverley High School years 1-5
- 1972 Victorian Higher School Certificate - Special Distinctions in Chemistry and English
- 1973 Commonwealth University Scholarship
- 1974 Ramsay Surgical Prize in Zoology, Monash University
- 2001 Australian Timber Design Awards (for Heiwa, Moonee Creek Cooperative, Lima East, Strathbogie Ranges, Victoria; shared with architect Paul Haar, builder Steve

- Graves and partner Charlotte Laemmle): Best Victorian Entry, Environmental Commitment, Best Interior, General Excellence (runner-up to Supreme Award)
- 2012, June Member of the Order of Australia (AM) *"for service to the promotion of peace as an advocate for the abolition of nuclear weapons, and to public health through the promotion of immunisation programs in the South-East Asia – Pacific region."*
- 2017 Hepatitis Victoria, Hepatitis Hero
- 2017 On 6 October 2017, the Norwegian Nobel Committee awarded the 2017 Nobel Peace Prize to ICAN, of which I was the founding international and Australian Chair. The Committee stated: *"The organisation is receiving the award for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its ground-breaking efforts to achieve a treaty-based prohibition of such weapons."* Speaker at official press conference, Norwegian Nobel Institute, 9 Dec 2017
- 2017 Honorary Life Membership, Australasian Society for Infectious Diseases
- 2018-21 Honorary Member, Melbourne Rotary Club
- 2018 Deakin Orator, Parliament of Victoria
- 2018 2018 Distinguished Alumni Award, Monash University Faculty of Medicine, Nursing and Health Sciences
- 2019 Rubbo Orator, Australian Society for Microbiology
- 2019 Philanthropy Australia 2019 International Philanthropy Award to the International Campaign to Abolish Nuclear Weapons (ICAN) Australia supported by Eve Kantor and Mark Wootton and the Kantor family through the Poola and Dara Foundations
- 2019 Officer of the Order of Australia (AO) *"For distinguished service to the global community as an advocate for nuclear non-proliferation and disarmament, and to medicine."*

PAST POSITIONS (PAID)

- 1995-1998 Head, Travel Medicine, Victorian Infectious Diseases Service, Royal Melbourne Hospital
- 1990-1995 Director of Travel Health, Fairfield Infectious Diseases Hospital
- 1989-1998 Infectious Diseases Physician and Project Director, International Health Unit, Macfarlane Burnet Centre for Medical Research
- 1988-1996 Medical Advisor, Overseas Service Bureau
- Senior Lecturer, Department of Epidemiology and Preventive Medicine, Monash Medical School, Alfred Hospital
- 1996-2008 Technical Advisor, joint Australian Agency for International Development (AusAID)–UNICEF Pacific Immunisation Programs
- 1998-2004 Director, Clinical R&D and Medical Affairs, Australia/New Zealand/Oceania, GlaxoSmithKline Biologicals; and member GSK Biological Clinical Advisory Board 1999-2003
- 1996-2019 International Medical Advisor, Australian Red Cross
- 2005-2020 Associate Professor, Nossal Institute for Global Health, School of Population and Global Health, Faculty of Medicine Dentistry and Health Sciences, University of Melbourne

PAST POSITIONS (UNPAID)

- 1972-1973 Member, Victorian Committee, Amnesty International
- 1974 President, Monash University Amnesty International Group
- 1978 Student representative, Faculty of Medicine Board, Monash University
- 1984-86, 94-06 Member, Victorian Committee, Medical Association for Prevention of War (MAPW Australia)

1986-1987 Deputy International Councillor for Australia, International Physicians for the Prevention of Nuclear War (IPPNW)

1987-1989 National editor, MAPW

1987-1989 International Councillor for Australia (IPPNW)

1986-1988 Member, IPPNW Planning and Development Subcommittee

1986 Co-organiser, Save Life on Earth International Art Exhibition, Melbourne tour, St Paul's Cathedral

1986 Member, Victorian International Year of Peace Consultative Committee

1988-1989 Member, Victorian State Committee, Royal Australasian College of Physicians

1989-1993 Director, MUMUS Co-operative Bookshop Ltd.

1989-1993, 2010-2012 Vice-President for South-East Asia and the South Pacific, International Physicians for the Prevention of Nuclear War

1993 Chair, Scientific Programme Committee, XI World Congress of International Physicians for the Prevention of Nuclear War, Mexico City, 30 Sep-3 October 1993

1990-1993 Member, South Pacific Hepatitis Advisory Group

1991-97, 2000-5 Vice-President, Medical Association for the Prevention of War, (Australia)

1993 Locum member, Monash Medical Centre Ethics Committee

1995 Member, Scientific Program Committee, 4th Conference on International Travel Medicine, Acapulco, Mexico, 23-27 April 1995

1997 Member, Scientific Program Committee, 5th International Conference on Travel Medicine, Geneva, Switzerland, 24-7 March 1997

1997 Convenor, 29th Annual Conference 1997 "Rights to Health", Public Health Association of Australia, Melbourne, 6-9 October 1997

1997-8 Program Committee international liaison, XIII World Congress of International Physicians for the Prevention of Nuclear War, University of Melbourne, 4-8 December 1998

1998-2002 Hon Associate Physician, Victorian Infectious Diseases Service, Royal Melbourne Hospital

2003-2005 Member, Australian Society for Infectious Diseases Bioterrorism Response Advisory Group

2006-10 Member, Board of Directors, International Physicians for the Prevention of Nuclear War and Chair, IPPNW ICAN Working Group

2006 Member, Australian Scientific Advisory Committee, 5th International Symposium on Pneumococci and Pneumococcal Diseases, Alice Springs, 2-6 April 2006

2006-9 Reference Group Member, NHMRC Centre for Clinical Research Excellence in Child and Adolescent Immunisation at the Royal Children's Hospital, Melbourne

2006-12 Chair, Australian Committee, International Campaign to Abolish Nuclear Weapons (ICAN)

2006-12 Member, EnergyScience Coalition, www.energyscience.org.au

2005-07 President, Medical Association for Prevention of War (Australia)

2007-09 Vice-President, Medical Association for Prevention of War (Australia)

2007-12 Chair, International Core Group, International Campaign to Abolish Nuclear Weapons

2008-11 Chair, Australian Advisory Board, GSK PHiD-CV pneumococcal conjugate vaccine

2008-09 Member, Asia-Pacific Advisory Board, GSK PHiD-CV pneumococcal conjugate vaccine

2008-10 NGO Advisor to the Co-chairs, International Commission on Nuclear Non-proliferation and Disarmament

2009-19 Inaugural Member, WHO Western Pacific Region Expert Resource Panel on Hepatitis B Control Through Immunisation (ERP-HEP B) – re-appointed June 2015 for another 4 year term

Member of evaluation team for Hong Kong 2011; chair of evaluation team for New Zealand 2012; Chair of WHO Western Pacific Region Consultation on Improving and Monitoring Hepatitis B Birth Dose Vaccination, Manila, 13-15 June 2012; representative of ERP-HEPB at WHO WPRO Workshop on Improving and Monitoring Hepatitis B Birth Dose Vaccination, Vientiane, Laos, 10-12 March 2015; member of evaluation teams for Hong Kong 2011, New Zealand 2012, Palau 2013, Tokelau 2015, French Polynesia 2016, Niue 2016-7, Marshall Islands 2018-9.

WHO Western Pacific Region ERP-HEP B representative at China CDC National Immunization Program experts meeting on the results of the 2014 national serological survey on hepatitis B virus infection, Beijing, 17 July 2015.

- 2010 High-level Expert, 28th Annual Plenary Meeting, Interaction Council, Hiroshima, 18-20 April 2010; and Interaction Council High-level Expert Group Meeting, "Achieving a world free of nuclear weapons", 15-6 April 2010, Hiroshima
- 2010-11 Member, Geneva Management Committee, International Campaign to Abolish Nuclear Weapons, Europe/Middle East/Africa
- 2010-11 Advisor to Nossal Institute for Global Health studies on "Climate change and children in the Pacific Islands" (report for UNICEF Suva, April 2010) and "A scoping study on the impacts of climate change on nutrition and migration affecting children in Indonesia" (report for UNICEF East Asia and Pacific Regional Office, Bangkok, July 2011)
- 2010-7 Member, Strategic Council, The Climate Institute
- 2012-7 Member, Data Safety and Monitoring Board, Combating *H. influenzae* related respiratory pathology (CHiRRP) clinical trial, Queensland Children's Medical Research Institute, (NHMRC)
- 2011- Member, Influenza Specialist Group (Australia)
- 2011-7 Member, IPPNW Nuclear Power Working Group
- 2010-12 Southeast Asia-Pacific Vice-President, International Physicians for the Prevention of Nuclear War (IPPNW)
- 2011-13 International Councillor, Medical Association for Prevention of War (Aust)
- 2013-4 Co-convenor (with Prof Richard Tanter, Dr Anna Hood), Nuclear Weapons Study Circle, University of Melbourne
- 2012-14 Co-Chair, International Steering Group, International Campaign to Abolish Nuclear Weapons
- 2012-7 Member, Data Safety and Monitoring Board, Combating *H. influenzae* related respiratory pathology (CHiRRP) clinical trial, Queensland Children's Medical Research Institute, (NHMRC)
- 2014-18 Representative of IPPNW, International Steering Group, International Campaign to Abolish Nuclear Weapons

ORGANISATION MEMBERSHIPS

Royal Australasian College of Physicians (Fellow)
 Australasian Society for Infectious Diseases (Honorary Life Member 2017)
 Medical Association for Prevention of War (Australia)
 International Physicians for the Prevention of Nuclear War
 Public Health Association of Australia
 Doctors for the Environment
 Amnesty International (since 1970)
 Rotary Club of Melbourne (Honorary Member, 2018-2021)

Past:
 International Society of Travel Medicine 1991-2017
 Australian Conservation Foundation
 Wilderness Society

RESEARCH AND DEVELOPMENT PROJECTS

- 1997-98 Project Director, Healthy Mothers, Healthy Babies Project 1997-2002 Sulawesi Tenggara and Maluku Provinces, Indonesia, Macfarlane Burnet Centre, International Development Support Services, Ministry of Health, Republic of Indonesia, (A\$12.8 million, Australian Agency for International Development, Government of Indonesia).
- 1993-97 Project Director, Indonesian Healthy Start for Child Survival Project, a collaborative project in Lombok and Bali involving the Macfarlane Burnet Centre for Medical Research, Indonesian Ministry of Health and Program for Appropriate Technology in Health (funding: Australian Agency for International Development, \$A2.9 million)
- 1987-92 Physician, Lombok Hepatitis B Immunization Model Project; a collaborative project of the Macfarlane Burnet Centre for Medical Research, Indonesian Ministry of Health, International Task Force on Hepatitis B Immunization, and Program for Appropriate Technology in Health (funding: James S McDonnell Foundation, Australian Agency for International Development)
- 1992-93 Principal investigator, HAV 050 hepatitis A vaccine trial (funding: SmithKline Beecham, completed 1993)
- 1993-94 Principal investigator, Australian case-control study of allergic reactions associated with Japanese encephalitis vaccine (funding: CSL Limited, completed 1994)
- 1993 Principal investigator, Overseas Service Bureau Volunteer Health Study (funding: Overseas Service Bureau)
- 1993-94 Principal investigator, Sero-epidemiology of hepatitis E in Indonesia study (funding: SmithKline Beecham)
- 1993-97 Co-investigator: Sero-epidemiology of hepatitis E in Kathmandu Valley, Nepal (funding: SmithKline Beecham)
- 1997-98 Co-Principal Investigator, Australasian-European study of hepatitis E in travellers to Nepal, (funding - SmithKline Beecham)
- 1980 Survey of blood pressure, obesity and glycosuria among adult patients attending the Victorian Aboriginal Health Service (voluntary)

CONSULTANT POSITIONS

- 2015 China CDC, World Health Organization. China CDC National Immunization Program experts meeting on the results of the 2014 national serological survey on hepatitis B virus infection Consultation, (representing WHO Western Pacific Regional Expert Resource Panel on Hepatitis B Control through Immunization), Beijing, 17 July 2015
- 2015 Temporary Advisor, Workshop on Improving and Monitoring Hepatitis B Birth Dose Vaccination, WHO Regional Office for the Western Pacific, Vientiane, Laos, 10-12 March 2015
- 2014 Hepatitis B vaccination for diabetics Advisory Board, GlaxoSmithKline, Boston, USA, 5-6 Nov 2014
- 2012 FinIP, 053 and other PHiD-CV impact data communication Advisory Board, GlaxoSmithKline Biologicals, Helsinki, Finland, 24-25 October 2012
- 2012 Travel Vaccines Advisory Board Chair, CSL Limited, Melbourne, 19 October 2012
- 2012 Temporary Advisor and Chair, Consultation on Improving and Monitoring Hepatitis B Birth Dose Vaccination, WHO Western Pacific Regional Office, Manila, 13-15 June 2012.
- 2010 Nossal Institute Report to UNICEF Pacific: "Climate change and children in the Pacific Islands", April 2010

- 2009 Invited immunisation specialist, Independent Progress Report, AUSAID/ UNICEF Pacific Multi-Country Program 2005-2010, August-November 2009
- 2008- Chair, Australian Advisory Board, and member, Asia-Pacific Advisory Board, PHiD-CV conjugate pneumococcal vaccine, GlaxoSmithKline
- 2007 UNICEF Consultant, WHO/UNICEF Review of national immunization program for Samoan Ministry of Health, Oct-Nov 2004 and follow-up March 2007
- 2005-08, 2011 WHO short-term consultant, annual Pacific Immunisation Program Strengthening Workshops
- 2004-05 Consultant in global health to Dean, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, August 2004-February 2005
- 2007-11 Medical consultant, Novartis Vaccines and Diagnostics
- 2003-05 Vaccines medical consultant, GlaxoSmithKline Biologicals, Australia and Asia-Pacific
- 2004 Team Leader, Review of AusAID/NZAID supported 'Strengthening the EPI in Pacific Island Countries Project', UNICEF Pacific, Feb 2004
- 2001-05 Australian Technical Advisor, Strengthening the Expanded Programme on Immunisation in Pacific Island Countries Project involving UNICEF and WHO, Australian Agency for International Development
- 1995-2000 Australian Technical Advisor, Control of Hepatitis B Infection in Pacific Island Countries Project, UNICEF, Australian Agency for International Development and New Zealand Ministry of Foreign Affairs and Trade
- 1998 Medical advisor to English translation (King J, Tanaka Y). Nasu M, Nishimura S. Hiroshima - tragedy never to be repeated. Tokyo; Fukuinkan Shoten Publishers
- 1997-98 Consultant on Policy and Programs, International Physicians for the Prevention of Nuclear War, Boston, USA, October 1997-January 1998
- 1996-97 Consultant, Review of Q fever immunisation, Arthur Robinson & Hedderwicks, November 1996-March 1997
- 1995 Consultant, Review of CSL Staff Immunisation and Screening Policy, CSL Limited, October-December 1995
- 1994 Team leader, Eastern Indonesia Child Survival Project Feasibility Design Study, Australian International Development Assistance Bureau, 17 November - 9 December 1994

The Sunday Age (Melbourne), Travel Section (Travel Health)
 CRA Limited (Travel Health)
 CRA Exploration Pty Ltd (Travel Health)
 Hill and Knowlton, International Public Affairs Counsel (Travel Health)

INTERNATIONAL DELEGATIONS

- 2017 Member of Nobel Peace Laureates delegation to South Korea (representing IPPNW), hosted by Korean National Assembly Member Min Byung-doo; Governor of Gangwon Province, Choi Moon-soon; Sunfull Foundation Chair Prof Min Byoung-chul, 17-20 Dec 2017; including presentation of PyeongChang Joint Statement for Peace at the Demilitarized Zone, 19 Dec 2017; addresses to Korean press at Korean National Assembly and to Seoul Foreign Correspondents' Club of Seoul; and participation in PyeongChang Winter Olympics Torch relay.
- 2017 Member of ICAN delegation meeting with President of Finland, Mr Sauli Niinistö, 14 Dec 2017.
- 2017 Leader of IPPNW delegation to United Nations Conference to negotiate a legally binding instrument to prohibit nuclear weapons, New York, 27-31 March and 15 June - 7 July 2017.
- 2016 Delegate for IPPNW to the United Nations General Assembly First Committee, New York, 24 Oct - 3 Nov 2016.

- 2016 Delegate for International Physicians for the Prevention of Nuclear War to United Nations General Assembly Open-Ended Working Group on Nuclear Disarmament, Palais des Nations, Geneva, 2-13 May 2016.
- 2014 Member of IPPNW delegation to 14th World Summit of Nobel Peace Laureates, Rome, 12-14 December 2014.
- 2014 Member of civil society delegation to Third International Conference on the Humanitarian Impacts of Nuclear Weapons, Vienna, Austria, 8-9 December 2014.
- 2014 Member of civil society delegation to Second International Conference on the Humanitarian Impacts of Nuclear Weapons, Nayarit, Mexico, 13-14 February 2014.
- 2013 Member of civil society delegation to Norwegian Ministry of Foreign Affairs conference: Humanitarian impact of nuclear weapons, Oslo, 4-5 March 2013.
- 2012 Co-organiser, International medical delegation to Fukushima hosted by Physicians Against Nuclear War (Japan), 28 August 2012 (30 participants, 10 countries).
- 2008-2009 Non-government Member, Australian government delegation, nuclear Non-Proliferation Treaty Preparatory Committee, Palais des Nations, Geneva, April-May 2008, and United Nations, New York, May 2009.
- 2009 Japanese NGO delegation meetings with Diet members from all major political parties responsible for security and foreign policy at their respective parties, including Taro Kono of the Liberal Democratic Party, Katsuya Okada of the Democratic Party of Japan, Masao Akamatsu of New Komeito, Satoshi Inoue of the Japanese Communist Party, and Mizuho Fukushima of the Social Democratic Party; and with ICNND advisor Ambassador Nobuyasu Abe, March 2009.
- 2006 Invited delegate of Vice-president, Government of French Polynesia; Conference of health scientists, parliamentarians and Pacific Non-governmental organizations, Commemoration of the 40th anniversary of the first nuclear test in French Polynesia, 29 June–2 July 2006, Tahiti, French Polynesia.
- 1995 Member, International Physicians for the Prevention of Nuclear War, International Physician Delegation to Paris, France for meetings with senior Foreign Ministry and Presidential staff re France's resumption of nuclear testing, 22-25 August 1995.

PARLIAMENTARY SUBMISSIONS AND INVITED TESTIMONY

- 2020 Invited oral testimony, Legislative Council of the Parliament of Victoria Environment and Planning Committee Inquiry into potential benefits to Victoria in removing prohibitions enacted by the Nuclear Activities (Prohibitions) Act 1983, Parliament House Melbourne, 26 June 2020.
- 2019 Invited oral testimony on behalf of ICAN Australia, Inquiry into the prerequisites for nuclear energy in Australia, House of Representatives Standing Committee on the Environment and Energy, Melbourne, 1 Oct 2019.
- 2018 Oral briefing on the Treaty on the Prohibition of Nuclear Weapons to Foreign Affairs Subcommittee of the parliamentary Joint Standing Committee on Foreign Affairs, Defence and Trade, Parliament House Canberra, 23 Aug 2018.
- 2015 Invited oral testimony, Australian Parliament Joint Standing Committee on Treaties public hearings on proposed Australia-India nuclear co-operation agreement, Commonwealth Parliamentary Offices, Melbourne 18 May 2015.
- 2013 Invited presentation on the humanitarian imperative to ban and eliminate nuclear weapons, Parliamentary Foreign Affairs Select Committee, Wellington, New Zealand 5 Dec 2013.
- 2012 Invited oral testimony on behalf of International Campaign to Abolish Nuclear Weapons (Australia), Senate Standing Committee on Finance and Public Administration Inquiry into the Government Investment Funds Amendment (Ethical Investments) Bill 2011, Melbourne 8 August 2012.
- 2012 Written submission on behalf of International Campaign to Abolish Nuclear Weapons (Australia) re Fifth Agreement to extend the 1987 Regional Cooperative Agreement for

- Research, Development and Training related to nuclear science and technology.
 Australian Parliament Joint Standing Committee on Treaties, 22 June 2012.
- 2009 Invited presentation (with Akira Kawasaki) by NGO advisors to the Co-chairs to Meeting III of International Commission for Nuclear Non-proliferation and Disarmament (ICNND), Moscow, 21 June 2009; co-chair of first ICNND-civil society dialogue Forum, Hiroshima, 17 October 2009.
- 2009 Written submission, invited oral testimony, responses to questions on notice and supplementary submissions, Australian Parliament Joint Standing Committee on Treaties Inquiry into Nuclear Disarmament and Non-proliferation, Feb-March 2009.
- 2008 Invited expert on radiation and health for NSW Legislative Council Inquiry into the former uranium smelter site at Hunter's Hill, Sydney, July 2008 (invited expert testimony and report review; particularly Chapter 3:
<http://www.parliament.nsw.gov.au/prod/PARLMENT/committee.nsf/0/777A61455D514C0BCA2574D400106F9E>
- 2008 Written submission, invited oral testimony and responses to questions on notice to Australian Parliament Joint Standing Committee on Treaties hearings on proposed Australia-Russia nuclear cooperation agreement, June-August 2008
- 2006 Written submission and invited oral testimony to Australian Parliament Joint Standing Committee on Treaties hearings on proposed Australia-China transfer of nuclear material and safeguards agreements, September-October 2006.
- 2005 Written submission, invited oral testimony and responses to questions on notice, representing Medical Association for Prevention of War, House of Representatives Standing Committee on Industry and Resources Inquiry into developing Australia's non-fossil fuel energy industry; Case study of the strategic importance of Australia's uranium resources, Parliament House, Melbourne July-August 2005.

GRANT REVIEWS

National Health and Medical Research Council
 Poola Foundation

EDITORSHIP AND EDITORIAL ADVISORY BOARDS

- 1987-1989 Editor, Pulse, Journal of Medical Association for Prevention of War (Australia)
 1993 Editorial Advisory Board, Travel Medicine News, International Society of Travel Medicine
 1993-2000 Editorial Advisory Board, Journal of Travel Medicine
 1995 Editor, The Fairfield Echo, 1995 (May), number 5
 2015 Guest Editor, Asian Perspective, Special Issue: Nuclear power in East Asia. 2015, vol 39, no 4

JOURNAL AND HANDBOOK REVIEWER

Medical Journal of Australia
 Vaccine
 Australian Immunisation Handbook 9th edition (2008) – chapters on hepatitis A and B, Japanese encephalitis, rabies, cholera, typhoid, advice for travellers; 10th edition (2013) – chapters on cholera, Japanese encephalitis, typhoid, yellow fever, immunisation of travellers
 Australian and New Zealand Journal of Public Health
 Clinical Immunotherapeutics
 Journal of Travel Medicine
 The Medical Letter
 Australian Family Physician
 Pediatric Infectious Diseases Journal

Journal of Medical Virology
Epidemiology and Infection
PLoS One
Communicable Diseases Intelligence
Asian Journal of Peacebuilding
Internal Medicine Journal
New journal on non-traditional weaponry proposal review for Taylor and Francis (2014)
BMJ Open
International Journal of Epidemiology (2017)

PUBLICATIONS:

1. Maddocks IM and **Ruff TA**. Cooperation not Confrontation: International Physicians for the Prevention of Nuclear War, Fifth Congress (Conference Report). *Med J Aust* 1985;143(12/13): 613-15.
2. **Ruff TA**. Maintain Life on Earth: Realities and Visions: International Physicians for the Prevention of Nuclear War, Sixth Congress (Conference Report). *Med J Aust* 1986; 145(6):274-76.
3. **Ruff TA**. Ciguatera in the Pacific. In: Andrews JT. Nuclear Testing in the Pacific: The biological consequences. In: Bonhoeffer K, Gerecke D (eds.) Maintain Life on Earth. Documentation of the Sixth World Congress of the International Physicians for the Prevention of Nuclear War in Cologne, May 29 - June 1, 1986. Jungjohann Verlagsgesellschaft, Neckarsulm und Muenchen, 1986: 250-1.
4. **Ruff TA**. Medical implications of nuclear war and its threat. In: Connell H (ed.), Challenges for peace education. World Education Fellowship (Australia), Geelong, 1987: 16-22.
5. **Ruff TA**. Travelling. (Letter) *Aust Fam Physician* 1988; 17(9): 234-36.
6. **Ruff TA**. Healing Our Planet: A Global Prescription (Conference Report). *Med J Aust* 1988; 14 : 689-91.
7. **Ruff TA**. Ciguatera in the Pacific: A Link with Military Activities. *The Lancet* 1989; 1: 201-5.
8. **Ruff TA**. Fish poisoning in the Pacific: the military connection. Working Paper No. 63, Peace Research Centre, Research School of Pacific Studies, Australian National University, February 1989.
9. Pearn JH, Lewis RJ, **Ruff TA**, Tait M, Quinn J, Murtha W, King G, Mallet A, Gillespie NC. Ciguatera and mannitol. Experience with a new treatment regimen. *Med J Aust* 1989; 151(2): 77-80.
10. **Ruff TA**. Radiation hazards and victims: a bitter legacy. *Aust Nurses J* 1989; 18(10): 20-3.
11. **Ruff TA**. An uncertain future: human conflict and environmental disruption. In: McNeil J, King R, Jennings G, Powles J (eds.). A Textbook of Preventive Medicine. Royal Australasian College of Physicians. Melbourne, Edward Arnold, 1990: 327-40.
12. **Ruff TA**, Lucas CR. Control of viral hepatitis. In: McNeil J, King R, Jennings G, Powles J (eds.). A Textbook of Preventive Medicine. Royal Australasian College of Physicians. Melbourne, Edward Arnold, 1990: 98-107.
13. **Ruff TA**. Bomb tests attack the food chain. *Bulletin of Atomic Scientists*, 1990; 46(2): 32-4.
14. **Ruff TA**. Prevention of viral hepatitis. *Aust Fam Physician* 1990; 19(2): 167-176.
15. **Ruff TA**, Gust ID. Hepatitis, viral (acute and chronic). In: Speight TM (ed). MIMS disease index. Sydney, IMS Publishing, 1990: 230, 232-5, and Tuckwell KR (ed.). 2nd Edition. Sydney; MIMS Australia 1996;226-30.
16. **Ruff TA**, Ward JA. The Middle East War - a medical perspective. *Med J Aust* 1991; 155(1): 39-42.

17. Contributor to: Robbins A, Makhijani A, Yih K. Radioactive heaven and earth. The health and environmental effects of nuclear weapons testing in, on and above the earth (Report of the IPPNW International Commission to Investigate the Health and Environmental Effects of Nuclear Weapons Production and Institute for Energy and Environmental Research). New York, The Apex Press/London, Zed Books;1991.
18. **Ruff T.** Increasing nuclear-capable nations. In: Padilla M, Parong A A, Nachura Y (eds). Proceedings. Second International Physicians for the Prevention of Nuclear War Asia-Pacific Regional Conference. Manila; Philippine Physicians for the Prevention of Nuclear War; 1991:38-41.
19. **Ruff TA.** Environmental effects of nuclear tests. In: Padilla M, Parong A A, Nachura Y (eds). Proceedings. Second International Physicians for the Prevention of Nuclear War Asia-Pacific Regional Conference. Manila; Philippine Physicians for the Prevention of Nuclear War; 1991:64-82.
20. **Ruff TA.** Obstacles to ecological sustainability and health: armed conflict and environmental disruption. In: Brown V, Barnes F (eds). Future health: Towards a sustainable Australia. Fundamental Questions Paper No.10. Canberra; Centre for Resource and Environmental Studies, Australian National University, 1991:40-50.
21. **Ruff TA, Eisen D, Fuller A, Kass R.** Adverse reactions to Japanese encephalitis vaccine. (letter) *Lancet* 1991; 338: 881-2.
22. Gust ID, **Ruff TA, Sutanto A et al.** Obstacles influencing delivery of hepatitis B vaccine in developing countries - the Lombok experience. In: Hollinger FB, Lemon SM, Margolis HS, eds. Viral hepatitis and liver disease. Baltimore; Williams and Wilkins, 1991: 708-12.
23. **Ruff TA, Gust ID, Sutanto A, Maynard JE, Widjaya A, Indijati T, Otto B.** Hepatitis B immunization in Lombok: Forerunner to national hepatitis B immunization in Indonesia. (Abstract) In: Immunization: the old and the new. Proceedings of the Second National Immunization Conference: Canberra, Public Health Association of Australia, 1992; 92.
24. **Ruff TA.** The environmental effects of military activities. Global Security Summer 1992 (Special Briefing). Medical Action for Global Security (UK).
25. **Ruff TA.** The environmental effects of military activities. Briefing Paper. Boston; International Physicians for the Prevention of Nuclear War, 1992.
26. **Ruff TA, Sherwen SJ, Donnan GA.** Seizure associated with mefloquine for malaria prophylaxis (Letter). *Med J Aust* 1994; 161:453.
27. **Ruff TA.** Japanese B encephalitis vaccine. Time for a reappraisal? (Letter). *Med J Aust* 1994; 161:511.
28. **Ruff TA, Gertig DM, Otto BF, Gust ID, Sutanto A, Soewarso TI, Kandun N, Marschner IC, Maynard JE.** Lombok Hepatitis B Model Immunization Project: Toward Universal Infant Hepatitis B Immunization in Indonesia. *J Infect Dis* 1995; 171(2):290-6.
29. **Ruff TA.** Travel Health Advice. Continuing Medical Education insert, *Medical Observer*, Part 1; 3 Feb, 1995: 6-8. Part 2; 17 Feb, 1995:6-8.
30. Robinson P, **Ruff TA, Kass R.** Australian case-control study of adverse reactions to Japanese encephalitis vaccine. *J Travel Med* 1995; 2: 159-164.
31. Howden LM, **Ruff TA, Forbes A.** Travel health advice received by Australian residents departing for southeast Asia [Abstract]. First Asia Pacific Travel Health Congress, Hong Kong, 4-8 March 1996, Abstract S 3.2.
32. **Ruff TA.** Malaria vaccine (letter). *Lancet* 1996; 348(9038): 1378-9.
33. Oman KM, Carnie J, **Ruff TA.** Hepatitis B immunisation coverage of infants born to chronic carrier mothers in Victoria. *Aust NZ J Public Health* 1997; 21(7): 731-4.
34. Oman KM, Carnie J, **Ruff TA.** Hepatitis B immunisation rates among infants in ethnic groups with high prevalence of hepatitis B surface antigen carriers. *Aust NZ J Public Health* 1997; 21(3): 293-6.
35. Korman TM, **Ruff TA.** Traveller's diarrhea. *Modern Medicine* 1997; 40(5): 66-74.
36. Thomson SC, Le Leu LA (on behalf of Viral Hepatitis Prevention Board). Don't forget the hepatitis A vaccine [Letter]. *Med J Aust* 1997; 167: 228-9.

37. Macfarlane Burnet Centre for Medical Research. Contributor to and coordinator of: A Healthy Start for Indonesian Children. Melbourne; MBC, 1997.
38. **Ruff T.** Working for Peace: Some personal reflections. In: Wareham S (ed). Visions and Actions for Peace. Proceedings of the 1997 Conference of the SE Asia Pacific region of International Physicians for the Prevention of Nuclear War and the Medical Association for Prevention of War (Australia). Canberra; Panther; 1997: 300-1.
39. Consortium for Health and Human Rights. Health and human rights. *JAMA* 1998; 280(5):462-4.
40. Yung AP, **Ruff TA.** Manual of travel medicine. Melbourne; Victorian Infectious Diseases Service/Royal Melbourne Hospital; 1999.
41. **Ruff TA.** Immunisation strategies for viral diseases in developing countries. *Rev Med Virol* 1999;9:121-138.
42. Pellegrini, M. **Ruff TA.** Malaria: The latest in advice for travellers. *Aust Fam Physician* 1999;28(7):683-688.
43. **Ruff TA.** Efficacy of acellular pertussis vaccines. *Modern Medicine of Australia, Correspondence*; April 1999:9.
44. **Ruff TA.** Combined hepatitis A and B vaccination: the choice beyond infancy. *Vaccines Today – Protecting the Future*; Macclesfield (UK); Gardiner-Caldwell Communications, 1998:28 – 9.
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Trust us

Tilman Ruff

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Trust us

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Danger: nuke cover-up

Richard Broinowski and Tilman Ruff

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Who's watching the nuclear watchdog?

Richard Broinowski and Tilman Ruff

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Eradicating infectious diseases from a global village

David Heymann and Tilman Ruff

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Let's ban all nuclear weapons — now

Tilman Ruff

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Tilman Ruff

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Tilman Ruff

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Malcolm Fraser, Barry Jones, Gus Nossal, Peter Gration, John Sanderson, Tilman Ruff

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Seeking nuclear protection from another state is deceptive

Tilman Ruff & John Loretz

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We must lead on nukes

Malcolm Fraser, Barry Jones, Gus Nossal, Peter Gration, John Sanderson, Tilman Ruff

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Our nuclear stance must go beyond deterrence

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Australia falling short on disarmament promises

Tilman Ruff

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Just in case you missed it here's why radiation is a health hazard

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Children of Fukushima need our protection

Tilman Ruff
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To prevent another Hiroshima, nuclear weapons must be banned

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The humanitarian dimensions of nuclear weapons

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OPINION: Don't let Australia trash everyone's World Heritage

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A day to demand that the world wake up and avert nuclear doom

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2015 is the year to ban nuclear weapons

Malcolm Fraser and Tilman Ruff

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Malcolm Fraser fought to abolish nuclear weapons

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Ban the bomb: 70 years on, the nuclear threat looms as large as ever

Tilman Ruff

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If we can't stop an impoverished nation like North Korea making nuclear weapons, our tactics are clearly wrong

Tilman Ruff

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Open Letter to world leaders: No new coal mines

61 prominent Australians, Sydney Morning Herald, 27 October 2015

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On our small spinning planet

Associate Professor Tilman Ruff AM

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We need one law for all

Professor Tilman Ruff

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Fukushima: The misery piles up [Photoessay]

A/Prof Tilman Ruff

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Opinion: Banning and eliminating nuclear weapons urgent priority

Tilman Ruff, Ira Helfand, Sir Michael Marmot, Michael Moore and Frances Hughes

Kyodo News, 3 May 2016

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Banning and eliminating nuclear weapons is the only way to secure planetary health

Tilman Ruff
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The more we know, the worse it looks

Tilman Ruff
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The Doomsday Clock – is our time running out?

Tilman Ruff
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Banning nuclear weapons is crucial for global health

Ira Helfand, Tilman Ruff, Michael Marmot, Frances Hughes, Michael Moore
The Guardian, 28 Sep 2016
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Vale Dr Bill Williams: tireless worker & campaigner for peace, justice, health & equity

Tilman Ruff
Croakey.org, 18 October 2016
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Selected passages from Professor Tilman Ruff's speech, delivered at the Australian launch of *The human cost of nuclear weapons*, Melbourne, 10 October 2016

Tilman Ruff
ICRC Humanitarian Law and Policy blog, 20 October 2016
<http://blogs.icrc.org/law-and-policy/2016/10/20/contamination-nuclear-test-explosions/>

As the world pushes for a ban on nuclear weapons, Australia votes to stay on the wrong side of history

Tilman Ruff
The Conversation, 16 November 2016
<http://theconversation.com/as-the-world-pushes-for-a-ban-on-nuclear-weapons-australia-votes-to-stay-on-the-wrong-side-of-history-68337>

Doomsday Clock reset closer to midnight, but still reason for hope

ABC Radio National Breakfast 27 Jan 2017
<http://www.abc.net.au/radionational/programs/breakfast/doomsday-clock-reset-closer-to-midnight/8216792>
http://mpegmedia.abc.net.au/rn/podcast/2017/01/bst_20170127_0806.mp3

Opinion: A moment of truth arrives

Tilman Ruff
Kyodo News, 21 February 2017
<http://english.kyodonews.jp/news/2017/02/459836.html>

Ban treaty here we come

Tilman Ruff
IPPNW peace and health blog, 31 March 2017
<https://peaceandhealthblog.com/2017/04/03/ban-treaty-here-we-come/>

re-published by Pressenza international press agency:
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It's time to ban nuclear weapons for good

Helen Szoke, Claire Mallinson, Tilman Ruff AM
Huffpost, Australia, 26 June 2017
http://www.huffingtonpost.com.au/helen-szoke/its-time-to-ban-nuclear-weapons-for-good_a_22583640/

Round the home turn towards adoption of a strong ban treaty on 7 July

Tilman Ruff
IPPNW Peace and Health blog, 1 July 2017
<https://peaceandhealthblog.com/2017/07/01/strong-ban-treaty/>

Why the new UN nuclear weapons ban is important, including for social, health and environmental policy

Tilman Ruff
The power to persuade blog, 28 July 2017
<http://www.powertopersuade.org.au/blog/why-the-new-un-nuclear-weapons-ban-is-important-including-for-social-health-environmental-policy/28/7/2017>

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<https://www.commonspace.scot/articles/11741/whats-your-alternative-commonspace-talks-anti-nuclear-expert-dr-tilman-ruff>

Australia must sign the prohibition on nuclear weapons: here's why

Tilman Ruff
The Conversation, 20 Sep 2017
<http://theconversation.com/australia-must-sign-the-prohibition-on-nuclear-weapons-heres-why-83951>

Why the new ban treaty is important and how it can be used - Part 2

Tilman Ruff
The power to persuade blog, 26 September 2017
<http://www.powertopersuade.org.au/blog/why-the-new-treaty-banning-nuclear-weapons-is-important-and-how-it-can-be-used-part-2/26/9/2017>.

How Melbourne activists launched a campaign for nuclear disarmament and won a Nobel prize

Tilman Ruff and Dimity Hawkins
The Conversation, 9 Oct 2017
<https://theconversation.com/how-melbourne-activists-launched-a-campaign-for-nuclear-disarmament-and-won-a-nobel-prize-85386>

Historic treaty banning nuclear weapons opens for signature: Australia where are you?

Tilman Ruff
Greenpeace Australia Blog, 9 Oct 2017
<http://www.greenpeace.org.au/blog/historic-treaty-banning-nuclear-weapons-opens-signature-australia/#.WecRHZOB1Bw>

OPINION: Banning nuclear weapons: the moment of truth has arrived

Tilman Ruff

Kyodo News, 17 Oct 2017

<https://english.kyodonews.net/news/2017/10/d658a657f680-opinion-banning-nuclear-weapons-the-moment-of-truth-has-arrived.html>

Podcast: HepHero Tilman Ruff talks about how we can conquer hepatitis and end the threat of nuclear war

Hepatitis Victoria, 26 October 2017

<https://soundcloud.com/hepatitis-victoria/hephero-tilman-ruff-talks-about-how-we-can-conquer-hepatitis-and-end-the-threat-of-nuclear-war>

Interview – Tilman Ruff

Parliament of Victoria, 16 Nov 2017

Short version: <https://www.facebook.com/VicParliament/videos/1984885651769262/>

Full interview: <https://youtu.be/dvI4kR2NPvQ>

Winning the Nobel Peace Prize confirms my life’s mission to help end nuclear weapons

Tilman Ruff

The Guardian, 11 Dec 2017

<https://www.theguardian.com/commentisfree/2017/dec/11/winning-the-nobel-peace-prize-confirms-my-lifes-mission-to-help-end-nuclear-weapons>

Professor Tilman Ruff, the man behind the 2017 Nobel Peace prize

ABC Radio Nightlife, 17 Jan 2018

<http://www.abc.net.au/radio/programs/nightlife/tillman/9341454>

Nuclear weapons – Australia stands on the wrong side of history

Tilman Ruff

Right Now, 29 Jan 2018

<http://rightnow.org.au/opinion-3/nuclear-weapons-australia-stands-wrong-side-history/>

Peace Boat sails into Hobart with anti-nuclear message.

ABC Radio Hobart Mornings with Leon Compton, 2 Feb 2018

<http://www.abc.net.au/radio/hobart/programs/mornings/tilman-ruff/9390554>

Partnerships between universities and arms manufacturers raise thorny ethical questions

Alex Edney-Browne, Tilman Ruff

The Conversation, 16 March 2018

<https://theconversation.com/partnerships-between-universities-and-arms-manufacturers-raise-thorny-ethical-questions-93005>

The treaty banning nuclear weapons one year on: history made, a solid start, here to stay, and miles to go before we sleep

Tilman Ruff

John Menadue – Pearls and Irritations, 12 July 2018

<https://johnmenadue.com/tilman-ruff-the-treaty-banning-nuclear-weapons-one-year-on-history-made-a-solid-start-here-to-stay-and-miles-to-go-before-we-sleep/>

Also published as: **The Nuclear Weapons Ban Treaty One Year On**, Tilman Ruff, Australian Outlook, Australian Institute for International Affairs, 12 July 2018

<http://www.internationalaffairs.org.au/australianoutlook/the-treaty-on-the-prohibition-of-nuclear-weapons-one-year-on/>

The cold war is back. Labor is right to support a nuclear ban treaty

Tilman Ruff

The Guardian, 28 Dec 2018

<https://www.theguardian.com/commentisfree/2018/dec/28/the-cold-war-is-back-labor-is-right-to-support-a-nuclear-ban-treaty>

Therefore choose life

Tilman Ruff

Templer Reflections, Dec 2018, Issue 780: 15-20

<https://templesociety.org.au/pdf/TR%20December%202018%20WEB.pdf>

The Fukushima nuclear disaster: 8 years on

Tilman Ruff

IPPNW Peace & Health Blog, 11 March 2019

<https://peaceandhealthblog.com/2019/03/11/the-fukushima-nuclear-disaster-8-years-on/#more-4820>

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au.mimecast.com/s/IofYC6X1Pys9qXRyTpCnsv?domain=chikyuza.net

Getting Australia on the right side of history

Tilman Ruff

Australian Nursing and Midwifery Journal, 1 May 2019

<https://anmj.org.au/getting-australia-on-the-right-side-of-history/>

Nuclear weapons pose the greatest acute danger to Earth's climate

Tilman Ruff

Croakey, 23 September 2019

<https://croakey.org/nuclear-weapons-pose-the-greatest-acute-danger-to-earths-climate/>

Nuclear promises

Tilman Ruff

Arena Magazine no. 162, Oct-Nov 2019

<https://arena.org.au/nuclear-promises-by-tilman-ruff/>

Global doctors on COVID-19 and nuclear war

Jans Fromow Guerra, Ira Helfand, Åsa Lindström, Ruth Mitchell, Arun Mitra, Sally Ndung'u,

David Onazi, Tilman Ruff, Carlos Umana

ICAN Campaign News, 26 March 2020

https://www.icanw.org/global_doctors_on_covid_19_and_nuclear_war

Will COVID-19 save the world?

Ira Helfand, Arun Mitra and Tilman Ruff

CNN Opinion 17 April 2020

<http://www.cnn.com/2020/04/17/opinions/covid-19-save-world-helfand-mitra-ruff/index.html>

COVID-19 and nuclear weapons

Tilman Ruff

Croakey, 15 May 2020

<https://croakey.org/covid-19-and-nuclear-weapons/>

re-published as "The most useless of arsenals" in Beyond Nuclear International, 30 August 2020

<https://beyondnuclearinternational.org/2020/08/30/the-most-useless-of-arsenals/>

Australia must stem our major military ally's rush to nuclear weapon free-for-all

Tilman Ruff

John Menadue – Pearls and Irritations, 9 June 2020

<https://johnmenadue.com/danger-of-nuclear-war-by-tilman-ruff/>

No-one hypoxic or hospitalised with COVID-19 should have the power to launch nuclear weapons

Tilman Ruff

John Menadue – Pearls and Irritations, 8 October 2020

<https://johnmenadue.com/no-one-hypoxic-or-hospitalised-with-covid-19-should-have-the-power-to-launch-nuclear-weapons/>

Japan plans to dump a million tonnes of radioactive water into the Pacific. But Australia has nuclear waste problems, too

Tilman Ruff and Margaret Beavis

The Conversation, 22 October 2020

<https://theconversation.com/japan-plans-to-dump-a-million-tonnes-of-radioactive-water-into-the-pacific-but-australia-has-nuclear-waste-problems-too-148337>

(over 235,000 reads in the first 4 days, the most read article in the month)

Nuclear weapons: always inhumane and unacceptable – now illegal

Tilman Ruff

The Australian Independent Media Network, 30 Oct 2020

<https://theaimn.com/nuclear-weapons-always-inhumane-and-unacceptable-now-illegal/>

The most consequential election

Tilman Ruff

IPPNW Peace and Health blog, 2 Nov 2020

<https://peaceandhealthblog.com/2020/11/01/most-consequential-election/>

315 nuclear bombs and ongoing suffering: the shameful history of nuclear testing in Australia and the Pacific

Tilman Ruff and Dimity Hawkins

The Conversation, 3 Nov 2020

<https://theconversation.com/315-nuclear-bombs-and-ongoing-suffering-the-shameful-history-of-nuclear-testing-in-australia-and-the-pacific-148909>

Nuclear weapons – always inhumane and unacceptable, now illegal

Tilman Ruff

Intouch Public Health, Public Health Association of Australia, 4 Nov 2020

<https://intouchpublichealth.net.au/2020/11/04/nuclear-weapons-always-inhumane-and-unacceptable-now-illegal/>

Divisive campaign on SA facility highlights urgent need for long term nuclear waste management plan

Tilman Ruff

Croakey, 5 Nov 2020

<https://www.croakey.org/divisive-campaign-on-sa-facility-highlights-urgent-need-for-long-term-nuclear-waste-management-plan/>

Nuclear weapons have always been inhumane and unacceptable, soon they will be illegal

Tilman Ruff

International Law Association Reporter, 7 Nov 2020

<http://ilareporter.org.au/2020/11/nuclear-weapons-have-always-been-inhumane-and-unacceptable-soon-they-will-be-illegal-tilman-ruff/>

The nuclear weapons ban treaty is groundbreaking, even if the nuclear powers haven't signed

Tilman Ruff

The Conversation, 22 Jan 2021

<https://theconversation.com/the-nuclear-weapons-ban-treaty-is-groundbreaking-even-if-the-nuclear-powers-havent-signed-153197>

PROFILE PIECES, PORTRAITS

Jo Chandler. **Nuclear nemesis**

The Age, 10 April 2010

<http://www.theage.com.au/world/nuclear-nemesis-20100409-ryqr.html>

The world says no to nuclear weapons

Australia's must stem our major military ally's rush to nuclear weapon free-for-all
RACP Quarterly September/October 2017: 24-6. The Royal Australasian College of Physicians.

<https://www.racp.edu.au/docs/default-source/racp-news/racp-quarterly-sept-oct-2017.pdf?sfvrsn=2>

Hep Heroes: Associate Professor Tilman Ruff

Hepatitis Victoria, October 2017

<http://www.hepvic.org.au/page/1250/hep-heroes-tilman-ruff>

Features: Tilman Ruff, Founding chair, ICAN

Hiroshima Peace Media Center/ Chugoku Shimbun, 1 Dec 2017

<http://www.hiroshimapeacemedia.jp/?p=78786>

Professor Tilman Ruff, the man behind the 2017 Nobel Peace prize

ABC Radio Nightlife, 17 Jan 2018

<http://www.abc.net.au/radio/programs/nightlife/tillman/9341454>

Two of Us: the Melbourne co-founders of a Nobel Prize-winning movement

The Age, The Sydney Morning Herald and Brisbane Times, Good Weekend, 3 March 2018

<https://www.smh.com.au/national/two-of-us-the-melbourne-co-founders-of-a-nobel-prize-winning-movement-20180227-p4z1zv.html>

https://www.brisbanetimes.com.au/national/two-of-us-the-melbourne-co-founders-of-a-nobel-prize-winning-movement-20180227-p4z1zv.html?utm_medium=rss&utm_source=rss_feed

The Sacred and the political

ABC Radio National Breakfast with David Rutledge, 0740 30 March 2018

http://mpegmedia.abc.net.au/rn/podcast/2018/03/bst_20180330_0710.mp3

Brad Collis. **A Nobel cause**. Monash Life, 2018

<https://lens.monash.edu/@monash-life/2018/09/01/1358811/a-nobel-cause>

Tilman Ruff, 2019

By Nikki Toole

Photographic portrait acquired by National Portrait Gallery 2019 and included in NPG and touring exhibition "The Look" <https://www.portrait.gov.au/exhibitions/the-look-2019>

Associated filmed interview: <https://www.portrait.gov.au/stories/tilman-ruff>

This portrait was one of 54 selected out of 5531 submitted to be included in the UK National Portrait Gallery's annual exhibition for the [Taylor Wessing Photographic Portrait Prize](#), launched

on 24 Nov 2020. The portrait is here: <https://www.npg.org.uk/whatson/taylor-wessing-photographic-portrait-prize-2020/exhibition/exhibitor-pages/tilman-ruff-ao-nobel-peace-laureate>

Steve Evans. **The Look at the National Portrait Gallery: Doctor sees another side of himself in exhibition portrait.** The Canberra Times, 20 September 2019
<https://www.canberratimes.com.au/story/6395459/its-a-wonder-what-an-old-red-jumper-can-do-for-a-picture/?cs=14225>

Tilman Ruff 22 Sep 2020
[Better Place: Talking International Law interview series](#)
and <https://youtu.be/Q71oGXeio6A>
With Dr Jonathan Kolieb, RMIT University

CONFERENCE, TEACHING & MEDIA PRESENTATIONS (SELECTED)

Presentations on medical aspects of nuclear weapons, war and disarmament

- 1985 Australian and New Zealand Association for the Advancement of Science Festival of Science, Monash University, August 1985.
- 1986 World Education Fellowship Public Forum: Challenges for Peace Education, Geelong, August 1986.
- 1986-92 Monash University medical students, 1986-1992.
- 1987-94 Monash University Master of Public Health students, 1987- 1994.
- 1990 Tripartite symposium: Organising for an ecologically sustainable Australia, Fundamental Questions Program, Centre for Resource and Environmental Studies, Australian National University, Canberra, May 1990; 'Obstacles to ecological sustainability and health: armed conflict and environmental disruption'.
- 1990 International Physicians for the Prevention of Nuclear War. Second Asia-Pacific Regional Conference, Quezon City, Philippines, August 1990.
- 1990 Fiji Medical Association Western Branch 33rd seminar, Yanuca Island, Fiji 1-2 December 90. Guest Speaker: Environmental and health effects of nuclear test explosions in the Pacific.
- 1990-1 Contributions on health issues in relation to Persian Gulf War, 1990/91 for: ABC TV News; ABC Radio News, ABC PM programme, The Age newspaper, Channel 7 TV current affairs.
- 1992 ECO-ED. A World Congress for Education and Communication on Environment and Development (UNESCO, International Chamber of Commerce, United Nations Environment Program). Toronto, Canada, 16-21 October 92. Speaker: Militarism, Environment and Development Presentation.
- 1993 XI World Congress, International Physicians for the Prevention of Nuclear War. Colloquium moderator: The legacy of nuclear weapons production. Mexico City, 3 October 1993.
- 1994 Public Health Association of Australia Annual Conference 'Australia's role in public health in Asia and the Pacific region', plenary chair, "War and public health", Adelaide, 27 September 1994.
- 1995 Towards Beijing - Women, Environment and Development in the Asian and Pacific Regions Conference. Plenary session: Women and the Arms Race in the Region. "The World Court Project". Victoria University of Technology, 10 February 1995.
- 1997 Public Health Association of Australia Annual Conference, Forum on Armed Conflict and Public Health. 'Nuclear weapons abolition: a critical public health priority'; 'Landmines - a continuing scourge.' Grand Hyatt, Melbourne, 7 October 1997.

- 1997 Physicians for Social Responsibility and Austrian Study Center for Peace and Conflict Resolution; Seminar and Panel Discussion. Towards the Abolition of Nuclear Weapons: Steps to Break the Impasse. Carnegie Endowment for International Peace, Washington DC, 5 December 1997.
- 1997 Enviro Close-up television documentary. Nuclear Developments in Asia and Australia, (with Dr RV Ramana, Center for International Studies, MIT). Boston/New York, 6 December 1997.
- 2002 Victorian Peace Network. Hiroshima and Nagasaki commemoration speaker. City Square, Melbourne, 8 August 2002.
- 2004 IPNNW 16th World Congress, workshop chair 'Medical implications of military use of depleted uranium', Beijing, China September 2004.
- 2006 Myer Foundation and Sidney Myer Fund, Sustainability and Environment Leaders' Forum, invited participant, Melbourne 22 May 2006.
- 2006 "Health study of Australian nuclear test veterans"; Conference of health scientists, parliamentarians and Pacific Non-governmental organizations, Commemoration of the 40th anniversary of the first nuclear test in French Polynesia, Government of French Polynesia, 29 June–2 July 2006, Tahiti, French Polynesia.
- 2006 United Nations Association of Australia invited lecture, 'Nuclear terror: preventing global meltdown' in Peace and Disarmament Session, UNAA 2006 National Conference 'We the peoples', University of Sydney, 26 August 2006.
- 2006 17th World Congress of International Physicians for the Prevention of Nuclear War, workshop facilitator and speaker: 'Communications strategies for IPPNW: developing and sharing affiliate resources', Helsinki, Finland, 9 September 2006.
- 2006 Beyond Nuclear Initiative Symposium, invited lecture: 'Nuclear terror: preventing global meltdown', Museum of Victoria, Melbourne, 15 September 2006.
- 2007 Address: "Nuclear Australia?", Public Meeting, Palm Sunday Alliance for a Peaceful and Nuclear-free Australia, Fitzroy Town Hall, 1 March 2007.
- 2007 Ockham's Razor invited address, "Abolishing weapons of terror", ABC Radio National, 5 Aug 2007.
- 2008 Co-Chair, Model negotiations on a Nuclear Weapons Convention, INESAP/ Technische Hochschule Darmstadt/University of Hamburg, 3 May 2008, Geneva International School, Geneva.
- 2008 Keynote speaker, *Workshop on Eliminating HEU from Medical Isotope Production and Other Civilian Uses* hosted by Physicians for Social Responsibility and The James Martin Center for Non-proliferation Studies, Washington DC, 5 June 2008
- 2008 Lecture: *Uranium, Medical Radioisotopes and Nuclear Weapons*, Philadelphia Physicians for Social Responsibility and Masters of Public Health Program – Thomas Jefferson University, Thomas Jefferson University, Philadelphia, 6 June 2008.
- 2008 Facilitation of Workshop on effects of small arms violence with case study of Solomon Islands, AMSA Global Health Conference, University of Melbourne, July 2008
- 2008 Keynote speaker, NZ National Consultative Committee on Disarmament workshop 'Eliminating nuclear weapons: exploring next steps' Wellington 19 October 2008.
- 2008 Indian tour at the invitation of Indian Doctors for Peace and Development for Peace Week 8-14 November 2008 commemorating the contribution of Pandit Jawaharlal Nehru to peace and disarmament. Addresses on abolishing nuclear weapons to Indian Medical Association in Amritsar, Ludhiana and Kolkata; medical schools in Ludhiana and Pune; several civil society organisations in Delhi; and on the health risks associated with uranium mining to village heads in communities surrounding the Jadugoda uranium mines in Jharkhand.
- 2008 Invited lecture 'How can the Australia-Japan initiative be a true driving force toward nuclear disarmament?' Peace Boat, Tokyo, 28 November 2008.
- 2009 Public Seminar presentation: 'The International Commission on Nuclear Non-proliferation and Disarmament and citizen involvement', Japanese ICNND NGO Network, Shibuya, Tokyo 2 March 2009.

- 2009 Invited lecture, 'Health, security and armed conflict', Victorian Student's Aid Program Global Health Short Course, University of Melbourne, 24 March 2009.
- 2009 Lecture: 'Nuclear disarmament: the time is now', Public meeting, Hobart Town Hall hosted by Lord Mayor Rob Vallentine, Medical Association for Prevention of War (Tasmania), 1 June 2009.
- 2009 Presentation by NGO Advisors to the Co-chairs, International Commission on Nuclear Non-proliferation and Disarmament Third Meeting, Moscow, 21 June 2009.
- 2009 Invited keynote lecture, 'Abolishing nuclear weapons: the most urgent global health task', International Symposium "Human Security and International Health", 24th Conference of the Japan Association for International Health, Tohoku University, Sendai, Japan, 6 August 2009.
- 2009 Invited address, "Imagine there's no bomb", Closing Plenary, World Congress Against Atomic and Hydrogen Bombs, Nagasaki, 9 August 2009.
- 2009 Invited presentation: "Science, health and nuclear weapons", Nautilus Institute Research Workshop on Australia-Japan Civil Society Cooperation for Nuclear Disarmament 18-19 Sep 2009; and invited address: "New climate science and the urgency of zero", Nautilus Institute Public Forum: Who will stop nuclear next use?, 20 September 2009, RMIT University, Melbourne.
- 2009 Invited lecture: "New science and the fierce urgency of zero" in Symposium: Towards a world without nuclear weapons – Now is the time to act! - From Hiroshima to New York 2010; ICNND Japan NGO Network, ICNND Hiroshima Committee and Hiroshima Peace Culture Foundation, Hiroshima World Peace Memorial Cathedral, 18 October 2009.
- 2010 Invited address, Medical Association for Prevention of War, Geelong Branch, Geelong, 25 Feb 2010.
- 2010 Invited address: "Danger, opportunity and responsibility: addressing our nuclear crisis", Melbourne Unitarian Peace Memorial Church, 14 March 2010.
- 2010 Invited presentation: "Priorities for the NPT Review Conference between Australia and Japan", Australian-Japan Peace Forum, Japanese for Peace/Victorian Multicultural Commission, Melbourne City Conference Centre, 20 March 2010.
- 2010 Invited lecture: "Physical, health and environmental consequences of nuclear weapons"; in Master's subject: Nuclear weapons and disarmament; University of Melbourne School of Social and Political Sciences, 22 March 2010, 2011, 6 March 2012, 20 March 2013, 19 March 2014, 17 March 2015, 22 March 2016, 6 March 2017, 5 March 2018.
- 2010 Invited speaker: "The urgent imperative to abolish nuclear weapons: prospects and challenges", Netzer Nuclear Weapons Workshop, Temple Beth Israel, Melbourne 28 March 2010.
- 2010 Invited speaker: "Nuclear disarmament – prospects and priorities", United Nations Youth Association of Australia Victorian Division conference, Parliament House Melbourne, 9 April 2010.
- 2010 Invited lecture: "Effects of nuclear weapons and ionising radiation: current evidence", Interaction Council, High-level Expert Meeting: Achieving a world free of nuclear weapons, Hiroshima 15 April 2010.
- 2010 Invited keynote presentation: "Nuclear disarmament: is the Holy Grail within reach?"; United Nations Association of Australia, ACT Branch, Canberra, 28 April 2010.
- 2010- Lecture, 3rd year undergraduate Breadth Subject; Global Health, Security and Sustainability; "Global health in a nuclear-armed world", University of Melbourne, 19

- May 2010, 2011, 2012, 2013, 28 April 2014, 27 April 2015, 20 April 2016, 15 May 2017, 14 May 2018, 8 April 2019.
- 2011 Invited expert contributor, The human and societal costs of nuclear weapons, Red Cross National Society Consultation on Nuclear Weapons hosted by ICRC, Australian, Japanese and Norwegian Red Cross, Oslo, 13-14 May 2011.
- 2011- Lecture: "Nuclear weapons", Environmental Challenges and Global Health subject, Master of Public Health, University of Melbourne, 2011, 2012, 5 June 2013, 4 June 2014, 22 July 2015, 20 July 2016, 19 July 2017.
- 2011 Invited speaker: "Humanitarian consequences of nuclear weapons". Ending the Nuclear Weapons Era Public Forum on 15th anniversary of the International Court of Justice Advisory Opinion on nuclear weapons, Melbourne Town Hall, 5 July 2011.
- 2011 Invited panelist, International Symposium for Peace 2011, City of Hiroshima, Hiroshima Peace Culture Foundation, Asahi Shimbun Company: The Road to abolition, Hiroshima, 31 July 2011. See: <http://www.asahi.com/english/TKY201108060220.html>
- 2011 Invited expert, presentation on "Humanitarian Imperatives for Nuclear Disarmament", Seminar on "Humanitarian Approaches to Nuclear Disarmament: Strategies, Pathways and Prospects", Swiss Ministry of Foreign Affairs and Acronym Institute for Disarmament Diplomacy, Glion, Switzerland, 25-7 September 2011.
- 2011 Invited presentation: "Humanitarian and medical implications of nuclear weapons", Make Nuclear Weapons the Target Australian Red Cross Campaign Queensland Launch, Supreme Court Brisbane, 26 Oct 2011.
- 2011 Invited speaker: "The humanitarian and environmental consequences of nuclear weapons" in session on Contemporary Challenges in International Humanitarian Law – Red Cross Nuclear Weapon Campaign, Australian Red Cross National Conference 2011, Hobart, 10 Dec 2011.
- 2012 Invited participant, Nuclear experts working group meeting, Toda Institute and National Centre for Peace and Conflict Studies, University of Otago; Tokyo, Japan 10-12 March 2012.
- 2012 Presenter, civil society presentations to the Preparatory Committee for the 2015 nuclear Non-Proliferation Treaty Review Conference. Risks and consequences of nuclear weapons and nuclear energy. Vienna, Austria, 2 May 2012.
- 2012 Invited presenter, Swiss Federal Dept of Foreign Affairs and Norwegian Ministry of Foreign Affairs side event: Nuclear famine – Unacceptable humanitarian consequences of nuclear weapons; "Humanitarian imperative for nuclear disarmament – health", Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, Vienna, Austria, 7 May 2012.
- 2012 Inaugural guest speaker, Carlton Conversations War and Peace series, Church of All Nations, Carlton Melbourne, 21 June 2012.
- 2012 Guest speaker: Peace through service: a public health perspective. Glen Eira Rotary Club President's change-over dinner, Melbourne 3 July 2012.
- 2012 Invited speaker, 20th World Congress of IPPNW, Plenary 1: World without nuclear weapons, Hiroshima, 24 Aug 2012.

- 2012 Session 1 Plenary presentation: "The global climate effects and famine following regional nuclear war", Towards Eliminating Nuclear Weapons Conference, Australian Red Cross and Flinders University Law School, Bob Hawke Prime Ministerial Centre at The University of South Australia, Adelaide 3 Nov 2012.
- 2013 Invited lecture: "Seizing the opportunity of the Oslo conference on the humanitarian impact of nuclear weapons", International Peace Research Institute, Meiji Gakuin University, Tokyo, 12 Jan 2013.
- 2013 Invited lectures: "Seizing the opportunity of the Oslo conference on the humanitarian impact of nuclear weapons", 24th UN Conference on Disarmament Issues: 'Creating a Peaceful and Safe Future: Pressing Issues and Potential Solutions', Shizuoka, 31 Jan 2013; and Japan Association for Disarmament Studies Annual Conference, Hotobashi University Tokyo, 2 Feb 2013.
- 2013 Inaugural seminar: Nuclear Weapons Study Circle. The humanitarian impact of nuclear weapons: the Oslo initiative. University of Melbourne, 8 April 2013.
- 2013 Seminar, invited presentation: "From Oslo to Mexico - ICAN's strategy". Japan NGO Network for Nuclear Weapons Abolition and Meijigakuin University Peace Research Institute (PRIME): "Towards Nuclear Weapons Ban - The World and Japan-NPT Geneva meeting and beyond", Meijigakuin University Tokyo, 12 May 2013.
- 2013 Seminar, Democratic Party of Japan, Nuclear-Weapon-Free World Group: "Recent international developments on the humanitarian aspects of nuclear weapons". Diet Upper House Members' Building, Tokyo, 14 May 2013.
- 2013 Plenary speaker: "Planning global medical citizenship" and Q&A Panel speaker. Australian Medical Students Association, Global Health Conference 2013, Hobart, 13 Sep 2013.
- 2013 Invited presentation: "Nuclear exit decisions: Australia", Nuclear Exits: Countries Foregoing the Nuclear Option International Congress; International Peace Bureau and Physicians for Social Responsibility Finland; Paasitorni Congress Centre, Helsinki, Finland 19 October 2013.
- 2013 Invited speaker: workshop III: Towards the establishment of a legal framework to ban nuclear weapons; Final plenary: Towards the Mexico conference on the humanitarian impacts of nuclear weapons; The 5th Nagasaki Global Citizens' Assembly for the Elimination of Nuclear Weapons", Nagasaki City and Prefecture, Nagasaki Atomic Bomb Museum and Nagasaki City Peace Hall, 2-3 Nov 2013.
- 2013 Invited speaker: "Humanitarian consequences of nuclear weapons: from Oslo to Mexico and beyond"; Dr Paul Hutchison MP, Wellington Branch United Nations of NZ, International Physicians for the Prevention of Nuclear War (NZ), Peace and Disarmament Trust. Banquet Hall, Parliament's Beehive, Wellington, New Zealand, 5 Dec 2013.
- 2013 Invited lecture: "The humanitarian imperative to ban nuclear weapons", with Tim Wright, New Zealand Institute of International Affairs, University of Auckland, 5 Dec 2013.
- 2014 Invited lecture (online): "Public health dimensions of nuclear weapons", Hiroshima Jogakuin University Summer Seminar, Hiroshima, 4 March 2014.

- 2014 Invited speaker: "Building on Nayarit – towards a global treaty to ban nuclear weapons", NGO Strategy Meeting "Ways to Ban Nuclear Weapons", Hiroshima City Citizens' Plaza, Hiroshima; and invited speech "Ban nuclear weapons now" at Motoyasu River Water Terrace, Peace Memorial Park, Hiroshima, 12 April 2014
<https://www.youtube.com/watch?v=JQEhuKbIZp8> (at 2:07:00).
- 2014 Invited speaker: "Global health and eradicating nuclear weapons", Scientific Forum Festschrift for Prof Graham Brown, University of Melbourne, 7 Aug 2014.
- 2014 Invited plenary speaker: "ICAN developments and plans", Medical Student Congress, IPPNW 21st World Congress, Astana Medical University, Astana, Kazakhstan, 25 Aug 2014.
- 2014 Invited speaker: Plenary presentation: "Towards nuclear weapons eradication" in plenary 5: Defining a political and diplomatic process for nuclear abolition, IPPNW 21st World Congress, Palace of Independence, Astana, Kazakhstan, 29 Aug 2014.
- 2014 Invited panelist "The challenges ahead: Distinguished Australians in Conversation", Pax Christi Australia 40th anniversary celebration, Kildara Centre, Melbourne, 16 Sep 2014.
- 2014 Invited speaker: "Developments in the humanitarian imperative to eradicate nuclear weapons", lunchtime talk to staff, Oxfam Australia, Melbourne, 8 Oct 2014.
- 2014 Invited speaker: The medical imperative to eliminate nuclear weapons. MAPW Forum for medical students, Melbourne, 8 Oct 2014.
- 2014 Contributor to Australian Red Cross/ICAN Roundtable: "Humanitarian impacts of nuclear weapons". Australian Red Cross National Office, Melbourne, 28 Oct 2014.
- 2014 Invited speaker: "The humanitarian imperative to eliminate nuclear weapons", International Humanitarian Law Workshop: *Wars Laws and the Red Cross: 100 years of weapons and the law* Australian Red Cross Centenary Summit, Melbourne, 22 Nov 2014.
- 2015 Invited lecture: "What's new about the humanitarian impacts of nuclear weapons?" ICAN Norway partner meeting, Oslo, 9 Jan 2015.
- 2015 Panellist: "Filling the gap: A report-back on the Vienna Conference on the Humanitarian Impact of Nuclear Weapons", Australian Red Cross/ ICAN Australia, Melbourne, 12 Feb 2015; and Parliament House Canberra, 24 March 2015.
- 2015 Essay reading: "Stumbling in the dark, reaching for the light", Radioactive Show, Community Radio 3CR, 21 May 2015 and community radio stations around Australia
<http://www.3cr.org.au/radioactive/episode-201503211000/stumbling-dark-reaching-light>
- 2015 Lecture: "Nuclear weapons", Environmental Challenges in Global Health Subject, Master of Public Health, University of Melbourne, 21 July 2015.
- 2015 Lecture: "Public health and scientific contributions to reducing nuclear dangers – lessons and opportunities", Environmental Challenges in Global Health Subject, Master of Public Health, University of Melbourne, 22 July 2015.
- 2015 Introduction to 1953 film "Hiroshima", Hiroshima and Nagasaki nuclear bombings 70th commemoration, ICAN, Kaleide Theatre, RMIT Melbourne, 6 Aug 2015.

- 2015 Keynote Address: "A world without nuclear weapons: Australia's responsibility", Pax Christi Australia National Conference, Melbourne, 29 August 2015.
- 2015 Panel member, comment and Q&A (with Dr Sue Wareham), "The Man Who Saved the World" film screening, Contemporary China Centre, ANU, Canberra 19 Nov 2015.
- 2015 Invited contributor, Re-imagine Time: "How might we engage health and humanitarian organisations to collaborate and link in a decisive effort to ban and eliminate nuclear weapons?" Global Ideas Forum, Melbourne Convention and Exhibition Centre, 23-25 October 2015.
- 2015 Invited speaker, "Current and historical perspectives on the role of the health community in nuclear disarmament" Session A1 Health Professionals and Nuclear Disarmament, Peace Through Health Conference, Medact, London 13-14 November 2015.
- 2015 Invited keynote lecture 1: "We can: a healthy sustainable future can only be nuclear-free"; presentation "Campaign to ban nuclear weapons"; and member of Drafting Committee, World Charter of Nuclear Victim's Rights, World Nuclear Victims Forum, Hanwa/Peaceboat/ICBUW-Japan/Nagasaki Chikyushimin, Hiroshima, 21-23 November 2015.
- 2015 Invited speaker: "Banning nuclear weapons", with Karina Lester and Akira Kawasaki, Japan NGO Network for Nuclear Weapons Abolition, Shibuya, Tokyo, 26 November 2015.
- 2016 United Nations General Assembly Open-Ended Working Group on Nuclear Disarmament, Palais des Nations, Geneva, verbal interventions on behalf of IPPNW, 4 May 2016 text: "Banning and eliminating nuclear weapons is the only way to secure planetary health", IPPNW Peace and Health Blog, 4 May 2016 <https://peaceandhealthblog.com/2016/05/04/planetary-health/>; video: <<https://www.youtube.com/watch?v=Adt6wsa18VU>>; 13 May 2016 text: "The more we know, the worse it looks", IPPNW Peace and Health Blog, 18 May 2016 <https://peaceandhealthblog.com/2016/05/18/more-we-know/>
- 2016 Invited lecture: "The greatest immediate threat to health and welfare and the greatest opportunity to do good for planetary health", Melbourne Medical Students Conference, Melbourne Convention Centre, 28 July 2016.
- 2016 Invited lecture: "Nuclear Insecurity and Public Health: Global challenges at the interface of security and health", Law Enforcement and Public Health MPH course, Melbourne School of Population and Global Health, 28 June 2016.
- 2016 Invited lecture: "Achieving nuclear peace: Challenges and a pathway forward" University of Notre Dame Medical School, Perth, 29 July 2016.
- 2016 Invited lecture: Nuclear disarmament is possible: a public health physician provides a way forward", School of Population Health, University of Western Australia, Perth, 29 July 2016.
- 2016 Invited speech: "Nuclear weapons: The greatest immediate threat to health and welfare and the greatest opportunity to do good for planetary health", Medical Association for Prevention of War (WA Branch) AGM, 29 July 2016.

- 2016 Invited speech: "A ban on nuclear weapons is coming", Collisions, Kidogo Art Institute, fundraising event for Australian Nuclear Free Alliance, Fremantle, 30 July 2016.
- 2016 Invited presentation at Launch of the Special Issue of the International Review of the Red Cross on "The human costs of nuclear weapons", Australian Red Cross national office, Melbourne, 10 Oct 2016.
- 2016 Panellist: "One step closer: new international initiatives to prohibit nuclear weapons" Expert Panel, Black Mist Burnt Country public Program event, Burrinja Cultural Centre and Nossal Institute for Global Health, University of Melbourne, 30 Nov 2016.
- 2017 Invited lecture: "Planetary health and human rights in the nuclear era", Foundations of Public Health core subject, Master of Public Health, University of Melbourne, 16 March 2017.
- 2017 Lecture: "Nuclear weapons and planetary health", Foundations of Biomedical Sciences, MD first year, University of Melbourne, 17 March 2017.
- 2017 Statement to United Nations Conference to negotiate a legally binding instrument to prohibit nuclear weapons, on behalf of International Physicians for the Prevention of Nuclear War, United Nations, New York, 29 March 2017.
http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/nuclear-weapon-ban/statements/29March_IPPNW.pdf and
<http://statements.unmeetings.org/media2/14683368/ippnw.pdf>
- 2017 Invited discussant: "Negotiating a treaty to ban nuclear weapons", a conversation with Treasa Dunworth and Tilman Ruff, Program on the Regulation of Emerging Military Technologies, Asia Pacific Centre for Military Law, Melbourne Law School, Melbourne, 23 May 2017.
- 2017 News Briefing with nuclear experts on nuclear weapons ban treaty, with Hans Kristensen, Matthew McKinzie, Arjun Makhijani, Mary Olson and Tilman Ruff. UN Correspondents Association, UN New York, 21 June 2017.
- 2017 Invited speaker, side event: "The road back to the nuclear brink", with Hans Kristensen, Matthew McKinzie, Arjun Makhijani, Mary Olson and Tilman Ruff. Sponsored by Permanent Mission of Austria, Federation of American Scientists, Institute for Energy and Environmental Research, Natural Resources Defense Council, Nuclear Information & Resource Service, Physicians for Social Responsibility New York and Western North Carolina, UN New York, 21 June 2017.
- 2017 Lecture: "The mixed past and vital future contributions of scientists and health professionals to preventing nuclear war", with Dr Margaret Beavis, Environmental Challenges and Global Health subject, Master of Public Health, University of Melbourne, 19 July 2017.
- 2017 Lecture: "The Treaty on the Prohibition of Nuclear Weapons", The United Nations: Review and Reform subject, Master of International Relations, University of Melbourne, 31 July and 2 Aug 2017.
- 2017 Lecture: "The planetary health imperative to ban and eliminate nuclear weapons", Foundations of International Health subject, Master of Public Health, Monash University, Melbourne, 11 Aug 2017.

- 2017 Lecture: "Human rights and global health - nuclear technology", Human Rights and Global Justice, Faculty of Law undergraduate breadth subject, University of Melbourne, 16 Aug 2017.
- 2017 Chair, Opening Plenary: The Humanitarian Initiative and the Nuclear Weapons Ban Treaty. 22nd World Congress of International Physicians for the prevention of Nuclear War, University of York, 4 Sep 2017.
- 2017 Lecture: "The Treaty on the Prohibition of Nuclear Weapons: Why we need it, what is it, how does it help us? Scottish CND, Quaker Meeting House, Edinburgh, Scotland, 8 Sep 2017.
- 2017 Presentation: "Nuclear arms control and disarmament: the treaty banning nuclear weapons" in: High-level Meeting on Cooperative Security, Arms Control and Disarmament; Toda Peace Institute, Norwegian Institute of International Affairs, Conflict Research Society and National Centre for Peace and Conflict Studies, University of Otago; The Royal Society, London, 8-10 Nov 2017.
- 2017 Presentation: "ICAN – the first Nobel Peace laureate born in Australia", Victorian Parliamentary Breakfast briefing hosted by Legislative Council President Bruce Atkinson MLC, Parliament House, Melbourne, 16 Nov 2017.
- 2017 MTalks: Nobel Peace Prize 2017: ICAN in discussion. Fred Mendelsohn, Tilman Ruff and Tim Wright. MPavilion Melbourne, 25 Nov 2017.
- 2017 Nobel Peace Prize Official Press Conference with 2017 Laureate, representing ICAN together with Setsuko Thurlow and Beatrice Fihn, with Norwegian Nobel Nobel Committee Chair Berit Reiss-Andersen and Norwegian Nobel Institute Director Prof Olav Njølstad; Norwegian Nobel Institute, Oslo, 9 Dec 2017.
- 2017 Presentation on nuclear weapons ban treaty, "Nuclear Café", ICAN Finland, Helsinki, 13 Dec 2017.
- 2017 Presentation: "The planetary health imperative to eradicate nuclear weapons: Why we need the ban treaty", Special lecture by Nobel Peace Prize Laureates, Korea Future Foundation and Sunfull Foundation, Coex Intercontinental Hotel, Seoul, 20 Dec 2017.
- 2017 Invited discussant: Orizuru Project Event: "ICAN and the treaty banning nuclear weapons", Peaceboat 96th Oceania Voyage, Sunday 4 Feb 2018.
- 2018 Invited presentation: "The planetary health imperative to ban and eradicate nuclear weapons", Doherty Institute Seminar, Melbourne, 8 March 2018.
- 2018 Invited speaker with Gem Romuld: "Seeking to Avert a Nuclear Catastrophe: Developing a Treaty to Ban Nuclear Weapons", Beecroft Forum, Major Issues and Theology Foundation, Sydney, 8 March 2018.
- 2018 Invited presentation: "The Treaty on the Prohibition of Nuclear Weapons: our best hope", Foreign Correspondents Association, Sydney, 9 March 2018.
- 2018 Invited presentation: "ICAN, the ban treaty and nuclear testing in Australia" for Information Evening, 2018 Radioactive Exposure Tour, Friends of the Earth, Melbourne, 21 March 2018.
- 2018 Invited address: "The Treaty banning nuclear weapons: Our best hope", International Seminar on "The Landmark Treaty Prohibiting Nuclear Weapons:

Opportunities and Challenges”, Indian Doctors for Peace and Development (IDPD), Coalition for Nuclear Disarmament and Peace, and All India Peace and Solidarity Organisation. Constitution Club, New Delhi, 24 March 2018.

- 2018 Dean’s Lecture: “Safeguarding planetary health, banning nuclear weapons and the first Nobel Peace Prize born in Australia”, University of Melbourne, 17 April 2018.
<https://vimeo.com/266232012>
- 2018 Guest Conversation Leader: “Why and how did a campaign born in Melbourne help ban nuclear weapons and win the first Nobel Peace Prize born in Australia?” Melbourne Forum, Members Lunch, Collins Quarter, Melbourne 27 April 2018.
- 2018 Special Seminar: “A world without nukes”, with Dimity Hawkins and Dr Margaret Beavis, Melbourne Free University, 3 May 2018.
- 2018 Invited speaker: “The growing threat of nuclear war and why Australia should join the Treaty on the Prohibition of Nuclear Weapons”, Melbourne May Day Rally, Trades Hall, 6 May 2018.
- 2018 Invited speaker: “Ending nuclear weapons, the new ban treaty, and the first Nobel Peace Prize born in Australia”, Harvard Club of Australia, Sydney, 7 May 2018.
- 2018 Invited speaker: “The planetary health imperative to eradicate nuclear weapons, the work of IPPNW and ICAN, and the first Nobel Peace Prize to an Australian-born organisation”, Conference Dinner Address, Annual Scientific Meeting, Australasian Society for Infectious Diseases, Gold Coast, 11 May 2018.
- 2018 Invited speaker and panelist: “Planetary health requires eradicating nuclear weapons”, in Public Health: Disasters and Mental Health session, Annual Congress, Royal Australasian College of Physicians, International Convention Centre, Sydney, 15 May 2018.
- 2018 Invited speaker: Keynote Address, Leadership Development Dinner, National Conference, Australian Medical Association, National Portrait Gallery, Canberra, 25 May 2018.
- 2018 Keynote speaker: “Planetary health requires eradicating nuclear weapons”, Dinner, Faculty of Medicine, Dentistry and Health Sciences Leadership Conference, Werribee Park Mansion Hotel, 31 May 2018.
- 2018 Invited speaker: “Banning and eradicating nuclear weapons: a planetary health imperative ... and the first Nobel Peace Prize born in Australia”, David Danks “Leaders in Science” Seminar Series, Murdoch Children’s Research Institute, 12 June 2018.
- 2018 Speaker: “The nuclear weapon ban treaty and the Nobel Peace Prize”, with Ambassador Dr Bernhard Zimburg (Austria) and Ms Tara Gutman, Australian Red Cross; parliamentary briefing, Parliament House, Canberra, 19 June 2018.
- 2018 Invited speaker: “Tribute to Rev Richard F Wootton”, Celebration of Rev Richard Wootton and Heather Corry. Campaign for International Cooperation and Disarmament, Melbourne Unitarian Peace Memorial Church, 24 June 2018.
- 2018, 19 Invited lecture: “Nuclear insecurity and implications for public health and public health actors”, Law Enforcement and Public Health subject, Master of Public Health, Nossal Institute for Global Health, University of Melbourne, 5 July 2018, 11 July 2019.

- 2018 Invited lecture: "Banning and eradicating nuclear weapons: a planetary health imperative", The Practice of Health Research Leadership, a Special Course for Early Career Researchers, Melbourne School of Population and Global Health, University of Melbourne, 12 July 2018.
- 2018- Lectures: "Radiation and health overview", "Radiation effects on non-human biota", "Nuclear power and public health overview", "The ongoing nuclear disaster in Fukushima: public health needs and responses", "Nuclear weapons", "The role of health professionals and scientists in preventing nuclear war", Environmental challenges in global health, Master of Public Health subject, Nossal Institute, University of Melbourne, 18-9 July 2018, 24-5 July 2019.
- 2018- Invited lecture: "The Treaty on the Prohibition of Nuclear Weapons", The UN: Review and Reform subject, Master of International Relations, University of Melbourne, 1 Aug 2018, 19 Aug 2019, 27 Aug 2020.
- 2018 Invited presentation: "The planetary health imperative to eradicate nuclear weapons, and the new Treaty on the Prohibition of Nuclear Weapons", Main Ridge Probus Club, Main Ridge, 3 Aug 2018.
- 2018 Invited lecture: "The planetary health imperative to eradicate nuclear weapons, and the new Treaty on the Prohibition of Nuclear Weapons", Foundations of International Health, MPH subject, Monash University, 6 Aug 2018.
- 2018 Invited presentation: "It's time to ban the bomb – sign the UN nuclear ban treaty", Hiroshima and Nagasaki Commemoration, public rally, Sydney Town Hall, 11 Aug 2018.
- 2018 Invited address: "The International Campaign to Abolish Nuclear Weapons", Unitarian Church, Melbourne, 12 Aug 2018.
- 2018 Invited speaker: "Banning nuclear weapons? Australia must act!", Atomic bombing of Hiroshima anniversary event, Cardinal Knox Centre, Melbourne, 6 Aug 2018.
- 2018 Invited speaker: "The planetary health imperative to eradicate nuclear weapons, and the new Treaty on the Prohibition of Nuclear Weapons", International Relations Year 11 Student Summit, Social Education Victoria, Graduate House, University of Melbourne, 13 Aug 2018.
- 2018 Deakin Oration 2018: "The planetary health imperative to eradicate nuclear weapons, the new UN Treaty on the Prohibition of Nuclear Weapons, and the first Nobel Peace Prize born in Australia (Melbourne)". Queens Hall, Parliament of Victoria, 17 Aug 2018.
- 2018 Invited TEDx presentation: "The planetary health imperative to eradicate nuclear weapons, the new UN Treaty on the Prohibition of Nuclear Weapons, and the first Nobel Peace Prize born in Australia", Lauriston Girls School, Melbourne, 18 August 2018.
- 2018 Invited keynote lecture: "The planetary health imperative to eradicate nuclear weapons and the UN Treaty on the Prohibition of Nuclear Weapons", Global Health Conference, Australian Medical Students Association, Melbourne Town Hall, 21 Aug 2018.
- 2018 Parliamentary briefing: "The Treaty on the Prohibition of Nuclear Weapons", Joint Standing Committee on Foreign Affairs, Defence and Trade; Subcommittee on Foreign Affairs, Parliament House Canberra, 23 Aug 2018.

- 2018 Invited briefing: "The planetary health imperative to eradicate nuclear weapons, and the new Treaty on the Prohibition of Nuclear Weapons", National Council Meeting, Medical Association for Prevention of War, Melbourne 25 Aug 2018.
- 2018 Invited briefing: "The planetary health imperative to eradicate nuclear weapons, and the new Treaty on the Prohibition of Nuclear Weapons", Federal Executive, Australian Nurses and Midwives Federation, Melbourne, 28 Aug 2018.
- 2018 Invited speaker: Nobel Peace Ride Event, Benalla Performing Arts and Convention Centre, 7 Sep 2018.
- 2018 Invited speaker: "Safeguarding planetary health and banning nuclear weapons", South Australia's Nuclear Past, Present and Future Symposium, Burrinja Cultural Centre, Allan Scott Auditorium UniSA, Adelaide, 8 Sep 2018.
- 2018 Invited briefing (via Skype): "ICAN and the Treaty on the Prohibition of Nuclear Weapons", Tasmanian Greens 2018 Conference, Hobart, 9 Sep 2018.
- 2018 Invited keynote: "The UN Treaty on the Prohibition of Nuclear Weapons and prospects for a nuclear-free world", 10th IPPNW North Asia Regional Conference and 3rd North & South Asian IPPNW Meeting, Ministry of Health, Ulanbaatar, Mongolia, 13 Sep 2018.
- 2018 Invited address: "Why safeguarding planetary health requires eliminating nuclear weapons", World Knowledge Forum, Seoul, 10 Oct 2018.
- 2018 Invited address: "Why safeguarding planetary health requires eliminating nuclear weapons", Hanyang University, Seoul, 11 Oct 2018.
- 2018 Invited lecture: "ICAN and the Treaty on the prohibition of Nuclear Weapons. A planetary good of the highest order", Doing Politics second year subject, Latrobe University, Melbourne, 15 Oct 2018.
- 2018 Invited lecture: "Why safeguarding planetary health requires eliminating nuclear weapons: evidence and progress", MD Foundations of Biomedical Science, University of Melbourne, 15 October 2018.
- 2018 Invited lectures: "The planetary health imperative to eradicate nuclear weapons":
 Norwegian Medical Association, Norske Leger mot Atomvapen, Oslo, 22 Oct 2018;
 9th Global Health Day, Faculty of Medicine and Health Sciences, National University of Science and Technology (NTNU), Trondheim Norway, 24 Oct 2018;
 "The planetary health imperative to eradicate nuclear weapons: prospects and progress", Grand Round, Boston Medical Centre, Boston USA, 26 Oct 2018;
 "Before They End Us: The global movement to end nuclear weapons and protect planetary health", Massachusetts Peace Action, Cambridge Public Library, 29 Oct 2018;
 "Nuclear weapons and ICAN", Beverley Glen Junior Public School Year 6 students, Toronto, 29 Oct 2018;
 "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Public meeting with Setsuko Thurlow, Physicians for Global Survival, North York Civic Centre, Toronto, 29 Oct 2018;

"The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Grade 10 High school students, Victoria, BC, Canada, 31 Oct 2018;

"The planetary health imperative to eradicate nuclear weapons: prospects and progress", Royal Jubilee Hospital, Victoria, BC, Canada, 31 Oct 2018;

Keynote address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Annual Conference, Physicians Against Nuclear War, Nagasaki Atomic Bomb Museum Hall, Nagasaki, 4 Nov 2018;

"The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Faculty of Health Sciences, Simon Fraser University, Vancouver, 7 Nov 2018;

"The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Washington Physicians for Social Responsibility, UW Department of Global Health, Henry M. Jackson International School, Swedish Medical Center, and Washington Permanente Medical Group; William H. Foege Hall, University of Washington, 8 Nov 2018;

Invited lectures: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Prof James DeShaw Rae class on International Organisations; Dr Sahar Razavi class on World Politics, California State University, Sacramento, faculty and students lecture, Davis Medical Centre, University of California, Davis, 9 Nov 18; and keynote address, Sacramento Physicians for Social Responsibility Annual Dinner, Sacramento, 10 Nov 2018;

Invited presentation: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", in "Honouring the Legacy of Dr Victor W. Sidel: Peace, Justice and Public Health", with keynote address by Daniel Ellsberg, American Public Health Association Annual Meeting, San Diego Convention Center, 11 Nov 2018;

Invited presentation: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", in Threats to Equity and Health: Protecting Vulnerable Populations (Part II), #3119.0), American Public Health Association Annual Meeting, San Diego Convention Center, 12 Nov 2018;

Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Portland Physicians for Social Responsibility, First Congregational Church, Portland Oregon, 13 Nov 2018;

Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Los Angeles Physicians for Social Responsibility, Immanuel Presbyterian Church, Los Angeles, 14 Nov 2018; interviews with CBS News on the Woolsey fire at the Santa Susana Field Laboratory, 14 Nov 2018.

2018 Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Psychologists for Peace and Australian Psychological Society College of Community Psychologists, Melbourne, 21 Nov 2018.

- 2018 Special Talk: "ICAN and the Treaty on the Prohibition of Nuclear Weapons", Conference: Civil Society in Asia: 2nd International Conference, University of Melbourne, 7 Dec 2018.
- 2018 Graduation Address, Monash University Graduation MB, BS Ceremony, Robert Blackwood Hall, Monash University, 11 Dec 2018.
- 2018 Invited address, "The 2017 nuclear ban treaty" book launch (with Judge Michael Kirby et al), Zelman Cowen Centre, Victoria University, 13 Dec 2018.
- 2018 Graduation Address: Senior School Presentation Night, Treseder Hall, Glen Waverley Secondary College, Melbourne, 19 Dec 2018.
- 2019 Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Peace Through Service Rotary Multidistrict Conference, Melbourne Convention Centre, 15 Feb 2019.
- 2019 Invited Oration: "The humanitarian imperative to eliminate nuclear weapons", 2019 Angus Mitchell Oration. Rotary Club of Melbourne, 20 Feb 2019.
- 2019 Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Northeast Goulburn Valley Order of Australia Association, Wangaratta, 24 Feb 2019.
- 2019 Invited address: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Social Education Victoria VCE Teachers' Conference, Melbourne Business School, 24 Feb 2019.
- 2019 Invited lecture: "The planetary health imperative to eradicate nuclear weapons and the Treaty on the Prohibition of Nuclear Weapons", Public Health leadership and Management subject, Master of Public Health, University of Melbourne, 21 Mar 2019.
- 2019 Invited lecture: "The Humanitarian Initiative: progress and prospects in the imperative to eliminate nuclear weapons", Prof Akihiro Ogawa's subject Asian Century: Meaning and Impact, University of Melbourne, 26 Mar 2019.
- 2019 Invited panel presentation: Sustainable Development goal 3: good health and well-being. Jean Monnet Sustainable Development Goals Seminar Series, RMIT University, Melbourne, 26 March 2019.
- 2019 Invited Address: "Why Australia should sign the treaty banning nuclear weapons", hosted by Hobart Lord Mayor Anna Reynolds, Tasmanian Global Issues Group, Hobart Town Hall, 12 April 2019.
- 2019 Sir John Monash Lecture: "The humanitarian imperative to eradicate nuclear weapons", Monash University Malaysia, Kuala Lumpur, 25 April 2019.
- 2019 Presentation to Benalla Rural City Council Planning Development Committee making the case to endorse the ICAN Cities Appeal, Benalla, 8 June 2019; which Council did on 22 May 2019.
- 2019 Invited keynote address: "The humanitarian imperative to prohibit and eliminate nuclear weapons", 2019 Sophia Symposium: "Peace, Denuclearisation and the Future of Our Society: A Religious-Academic Dialogue", Sophia University, Tokyo, 18 May 2019.

(Proceedings of this symposium were published as a book in Japanese in Nov 2020 by prominent Japanese publisher Iwanami Shoten)

- 2019 Invited public address: "The planetary health imperative to prohibit and eradicate nuclear weapons ... and how we can help make it happen", Physicians Against Nuclear War, Wakayama, Japan, 23 May 2019.
- 2019 Invited guest speaker: "The humanitarian imperative to eliminate nuclear weapons", Swanpool Environmental Film Festival 2019, Swanpool, Victoria, 15 June 2019.
- 2019 Rubbo Oration: "The planetary health imperative to eliminate nuclear weapons: progress and prospects", Annual Scientific Meeting, Australian Society for Microbiology, Adelaide, 2 July 2019.
- 2019 Invited presentation: "Nuclear weapons and the Doomsday Clock – Australia's role in turning back the Clock" and panel discussion, Session on Preventing Nuclear War, Dept of Surgery, St Vincent's Hospital, University of Melbourne Surgical Forum 2019, Melbourne, 15 July 2019.
- 2019 Invited presentation: "The humanitarian imperative to eradicate nuclear weapons: progress and prospects", Probus Club of Kew, Kew Library, Melbourne, 25 July 2019.
- 2019 Address: "An update on the state of nuclear weapons, disarmament and the Treaty on the Prohibition of Nuclear Weapons", briefing for Canberra diplomatic Corps hosted by Austrian Embassy and South African High Commission, Canberra, 31 July 2019.
- 2019 Perth visit 5-9 Aug 2019:
Invited lectures "The humanitarian imperative to eliminate nuclear weapons", Year 10, Sphinx Society and Year 11 and 12 students, Perth Modern School, Perth, 5 Aug 2019.
Update on ICAN and the Treaty on the Prohibition of Nuclear Weapons, MAPW WA, Perth 5 Aug 2019.
Hiroshima commemorative tree-planting ceremony, Radonich Park, Beeliar and address at Council Chambers, City of Cockburn, Spearwood, Perth, 6 Aug 2019.
Invited address: "The humanitarian imperative to eliminate nuclear weapons", Mayors/Presidents Policy Forum, WA Local Government Association Annual Conference, Perth Convention and Exhibition Centre, 6 Aug 2019.
Invited lecture: "The planetary health imperative to eliminate nuclear weapons: progress and prospects", Australian Society for Microbiology, Charles Gairdner Hospital, Perth, 7 Aug 2019.
Invited speaker: "Nukes 4 Australia?" Politics in the Pub, 43 Below, Perth, 7 Aug 2019.
Invited address: Launch of ICAN Report "Choosing Humanity. Why Australia must join the Treaty on the Prohibition of Nuclear Weapons", Fremantle Library Theatre, Fremantle, 8 Aug 2019.
Invited address: "The humanitarian imperative to eliminate nuclear weapons: progress and prospects", Friday Forum, John Curtin Institute of Public Policy, Curtin University, Perth, 9 Aug 2019.

- 2019 Invited interview, Speaking Dynamics and Academic Speaking and Listening students, ILSC Language Schools, Melbourne, 20 Aug 2019.
- 2019 Presentation to Hume City Council making the case to endorse the ICAN Cities Appeal, Broadmeadows, 26 Aug 2019, which Council did that day.
- 2019 Invited presentation: "The planetary health imperative to eliminate nuclear weapons", Ignite Global Health student organisation, Monash University Melbourne 7 Sept 2019.
- 2019 Briefing for ALP parliamentarians and launch of ICAN Australia report: "Choosing Humanity: Why Australia must join the Treaty on the Prohibition of Nuclear Weapons", Parliament House Canberra, 18 Sep 2019.
- 2019 Invited briefing, "The planetary health imperative to eradicate nuclear weapons", MAPW medical student group, Carlton, 25 Sep 2019.
- 2019 Invited presentation: "The planetary health imperative to eliminate nuclear weapons", International Society for Social Pediatrics and Social Health, American University of Beirut, 2019 Annual Meeting, Children in Armed Conflict: Rights, Health, and Wellbeing. Beirut 27 Sep 2019.
- 2019 Invited panel and keynote presentations: "The imperative to eliminate nuclear weapons", Effective Altruism Australia Conference, University of Sydney, Sydney, 27-8 Sep 2019. Video recording: <https://www.youtube.com/watch?v=BzmBGEIvS1s>
- 2019 Invited presentations: "Nuclear technology and health security", "The planetary health imperative to eliminate nuclear weapons", Security and Health Executive Leadership Institute (SAHELI) – University of Melbourne and Australian Institute of Police Management, Sydney, 30 Sep 2019.
- 2019 Invited public lecture; "The planetary health imperative to eliminate nuclear weapons: danger and opportunity", Australian Society for Microbiology/University of Tasmania, Hobart, 11 Oct 2019.
- 2019- Invited lecture: "The planetary health imperative to eliminate nuclear weapons", MD Foundations of Biomedical Science, University of Melbourne, 21 October 2019, 19 October 2020.
- 2019 Keynote Lecture: "The planetary health imperative to eliminate nuclear weapons", World Business Conference for World Peace, Prefecture of Hiroshima, Hiroshima, 23 Oct 2019.
- 2019 Invited presentation: The nuclear arsenal also affects future generations; together with Ms Keiko Ogura, in International Cooperation session, Positive Economy Forum, World Business Conference for World Peace, Hiroshima, 24 Oct 2019.
- 2019 Invited discussion with *Kakuwaka Hiroshima* youth organisation, Hiroshima, 25 Oct 2019.
- 2019 Invited presentation and conversation: "Two Nobel Peace Prize Laureates in Conversation", Dr Denis Mukwege and A/Prof Tilman Ruff, Melbourne Mothers, Melbourne Medical School, Melbourne School of Population and Global Health, Trinity College, St Vincent's Private Hospital, Victorian Medical Benevolent Association, Trinity College Melbourne 3 Nov 2019.

- 2019 Invited interview with international students, Kaplan International Languages, Melbourne, 20 Nov 2019.
- 2019 Invited presentations, Seoul, Korea 26-30 Nov 2019:
- Guest lecture: "ICAN and the planetary health imperative to eliminate nuclear weapons", School of Public Health, Seoul National University, 26 Nov 2019.
- Invited discussant with Mr Wooksik Cheong: "The nuclear free world and the Korean Peninsula", People's Solidarity for Participatory Democracy, Seoul, 28 Nov 2019.
- Keynote lecture: "Health justice in the era of peace and disarmament: The planetary health imperative to eliminate nuclear weapons", "Peace and Health Justice" – Annual Conference of Korean Society for Equity in Health, Seoul National University Dental Hospital, Seoul, 29 Nov 2019.
- Associated media coverage:
Pressian: <http://www.pressian.com/news/article?no=268030>
- Discussion meeting with Bargn Nuri community regarding nuclear weapons and ICAN, Hanshin University, Seoul, 1 Dec 2019.
- 2019 Invited presentation: "A journey in the planetary health imperative to eradicate nuclear weapons", Melbourne Medical School Research Symposium 2019: Translating Innovation into Impact, Melbourne, 5 Dec 2019.
- 2020 Invited address: "The planetary health imperative to eradicate nuclear weapons: danger and opportunity", AGM, Victorian Branch Australian Society for Anesthetists, Melbourne, 9 Feb 2020.
- 2020 Invited contributor, "Current evidence on the consequences of nuclear war", in closing panel: "One hundred seconds to midnight – perspectives from monks and activists", Rethinking Peace, Conflict and Governance Conference, University of New England, Sydney, 14 Feb 2020.
- 2020 Invited speaker: "100 seconds to midnight: nuclear risks and abolition", Australian Institute of International Affairs, Sydney, 14 Feb 2020.
- 2020 Invited Grand Round lecture: "Eradicating nuclear weapons and the role of health evidence-based advocacy", Northern Hospital, Melbourne, 19 Feb 2020.
- 2020 Opening remarks: "Can art stop a bullet? William Kelly's big picture" Australian film premiere, Cinema Nova, Melbourne, 27 Feb 2020.
- 2020 Invited lecture: "Physical and health consequences of nuclear weapons", Nuclear Weapons and Disarmament subject, Master of International Relations, University of Melbourne, 9 March 2020.
- 2020 Invited guest: Fireside Chat, Trinity College, University of Melbourne, 10 March 2020.
- 2020 Invited speaker, inaugural session, International Seminar on Peace, Health and Development, Indian Doctors for Peace and Development, Coalition for Nuclear Disarmament and Peace, Delhi, 14-5 March 2020 (by video).
- 2020 Invited panellist, MD Students Conference 2020, Leadership, University of Melbourne, 22 June 2020.

- 2020 Lectures: "Radiation and health overview", "Radiation effects on non-human biota", "Nuclear power and public health overview", "The ongoing nuclear disaster in Fukushima", "Nuclear weapons", "Health evidence based advocacy", Planetary and Global Health subject, Master of Public Health, Nossal Institute, University of Melbourne, 29 July 2020.
- 2020 Invited speaker, Commemoration of 75th anniversary of Hiroshima and Nagasaki, Australian Red Cross online event, 2 Aug 2020.
- 2020 Invited plenary session speaker (online): "The Future of Earth and Humanity after the Global Pandemic", JeongSeon Forum 2020, JeongSeon, Gangwon Province, Korea, 20 Aug 2020.
- 2020 Invited lecture: "The humanitarian initiative on nuclear weapons and the role of ICAN", Prof Akihiro Ogawa's subject: Asian Century: Meaning and Impact, University of Melbourne, 25 Aug 2020.
- 2020 Introduction to International Day of Peace lecture (delivered by Asst UN Secretary General Prof Gillian Triggs), St John's Cathedral, Brisbane, 21 Sep 2020.
<https://youtu.be/vALYZ5QIaWE>
- 2020 Invited lecture: "Freeing the world from the worst weapons" for Hiroshima high school students, Hiroshima National Peace Memorial Hall, 15 Oct 2020.
- 2020 Invited lecture: "75 Years Since Hiroshima and Nagasaki", 2020 webinar series, Academy of Child and Adolescent Health, 22 Oct 2020.
- 2020 Invited lecture: "The planetary health imperative to eradicate nuclear weapons", Our Planet Our Health undergraduate breadth subject, University of Melbourne, 28 Oct 2020.
- 2020 Invited presentation: "One hundred seconds to midnight", Medical Association for Prevention of War SA webinar, 24 Nov 2020.
- 2020 Invited panellist with Dr Helen Durham (ICRC), Tara Gutman (Australian Red Cross), Natasja Suhadolnik (CorrsChambersWestgarth): "Human Rights Day event: In Conversation: The UN Treaty on the Prohibition of Nuclear Weapons", CorrsChambersWestgarth online event, 10 Dec 2020.
- 2021 Moderator, Global Health Webinar: "Entry into force of the UN nuclear weapons ban treaty and the role of health professionals", co-sponsored by the International Committee of the Red Cross, International Council of Nurses, International Federation of Medical Students' Associations, International Physicians for the Prevention of Nuclear War, World Federation of Public Health Associations, and World Medical Association, 21/22 Jan 2021.
- 2021 Invited keynote speaker: "Let's Talk Peace Forum" (online), WILPF Ballarat, Compassionate Ballarat, ICAN, 22 Jan 2021.
- 2021 Invited address, "Music to celebrate the UN's Treaty on the Prohibition of Nuclear Weapons", Musicians for Peace and Disarmament (UK) online concert, 23 Jan 2021.

Presentations on radiation and health, nuclear power and security aspects of energy

- 2006 Victorian Cross Campus Environment Network, invited speaker '20 years of Chernobyl' and hypothetical discussant 'Hypothetical: A nuclear disaster in Australia', University of Melbourne, 26 April 2006.
- 2006 Australian Democrats National Conference, Sunday Debate: Climate change and the nuclear option. Melbourne, 21 May 2006.
- 2006 Uniting Church in Australia Justice and International Mission Convention, Hypothetical speaker and invited leader: Workshop on nuclear power, Melbourne, 29 July 2006.
- 2007 Lecture: 'Nuclear power', Trinity Uniting Church, Altona, Melbourne 6 March 2007.
- 2011 Podcast: Up Close, University of Melbourne: Episode 144, "Waiter, there's cesium in my soup: The health implications of radioactivity. 27 May 2011.
<http://www.upclose.unimelb.edu.au/episode/144-waiter-there-s-cesium-my-soup-health-implications-radioactivity>
- 2011- Panel member: "The nuclear disaster in Fukushima: public health needs and responses", Environmental Challenges and Global Health subject, Master of Public Health, University of Melbourne, 2011, 2012, 2013, 2014, 2015, 20 July 2016, 19 July 2017.
- 2011 Keynote address: "Fukushima's lessons and the public health impacts of nuclear power", Public Health Association of Australia NSW Branch Annual General Meeting, University of Sydney, 27 July 2011.
- 2011,2 Physics and medical relevance of ionising radiation, tutorial for Ormond College University of Melbourne students, with Dr Roger Rassool, Aug 2011, 13 Aug 2012.
- 2012 Invited presentation: "The role of the IAEA and nuclear power after Fukushima Symposium: Mosaic of Fukushima – a public health perspective. Forum Wissenschaft & Umwelt, International Association of Lawyers Against Nuclear Arms, City Council for Environment, Vienna, Vienna City Hall, Austria, 3 May 2012.
- 2012 Invited presentations on ionising radiation and health and public health aspects of the Fukushima nuclear disaster; workshop and public symposium, "Public education in nuclear disaster response – the need to know", Australian National University and Tohoku Fukushi University, Sendai Japan, 10-12 May 2012.
- 2012 Invited presentation: Poka Poka Project public meeting: Ionising radiation and health. Fukushima, Japan, 13 May 2012.
- 2012 Co-organiser and co-moderator, Public Symposium: "Fukushima Nuclear Disaster Public Health Lessons and Challenges", co-sponsored by MAPW (Australia), IPPNW-Germany, Indian Doctors for Peace and Development, PSR/IPPNW-Switzerland, Medact (UK), and Physicians for Social Responsibility (USA), with Japanese co-hosts Green Action, Greenpeace Japan, and Peace Boat. Hibiya Toshokan Hall, Hibiya Park, Tokyo, 27 Aug 2012.
- 2012 Invited presentation: "The Fukushima nuclear disaster: the public health response and lessons for governance", Major Session 13, The First International Conference on Law Enforcement and Public Health, Centre for Law Enforcement and Public Health, University of Melbourne, 14 Nov 2012.
- 2012 Presentation: "Global health, security and governance lessons of the Fukushima nuclear disaster", Nossal Institute for Global Health Annual Global Health Forum, Bio21 Melbourne, 15 Nov 2012.

- 2013 Invited Lectures supported by Australia-Japan Foundation: "Radiation and health", "A public health perspective on the Fukushima nuclear disaster", Keio University Tokyo, 9 Jan 2013; Fukushima University 10 January 2013; Soka Gakkai International Women's Peace Committee, Tokyo 12 Jan 2013.
- 2013 Invited lecture: "The Fukushima nuclear disaster: a public health perspective", Lyceum Club Melbourne, 26 Aug 2013.
- 2013 Invited speaker: "The Fukushima nuclear disaster: an international public health perspective"; public meeting on UNSCEAR Report on Fukushima nuclear disaster, Friends of the Earth Japan, Human Rights Now, Peaceboat; Second Diet Members Building, Tokyo, 6 Nov 2013.
- 2014 Invited speaker: "A public health perspective on the Fukushima nuclear disaster", inaugural Social Issue Forum, Temple Society Australia, Melbourne, 28 March 2014.
- 2014 Invited speaker: "The Fukushima nuclear disaster, rights and health. An international public health perspective", Symposium: From Military-centred to Human-centred: Rethinking Security; Peace Boat, Global Article 9 Campaign, Global Day of Action on Military Spending Tokyo Action Organising Committee; House of Councilors Diet Members Building, Tokyo, 14 April 2014.
- 2014 Invited lecture: "Public health aspects of the Fukushima nuclear disaster", in Masters of International Relations Nuclear Weapons and Disarmament subject, School of Political and Social Sciences, University of Melbourne, 21 May 2014.
- 2014 Lecture: "Nuclear technology and human rights", Global Health and Human Rights subject, Master of Public Health, University of Melbourne, 22 July 2014, 2015, 2016, 2017, 30 May 2018.
- 2014 Invited speaker: "Nuclear power and health: a public health perspective", Workshop on nuclear power, Australian National University Canberra, 12-14 Aug 2014.
- 2014 Invited lecture: "Nuclear technology and human security: A public health perspective", Law Enforcement and Public Health subject, Master of Public Health, University of Melbourne, 23 Aug 2014.
- 2015 Presentation: "Radiation and health", 2015 National Nuclear Free Strategy Meeting, Melbourne 20 Feb 2015.
- 2015 Invited speaker, "The global health imperative to phase out nuclear power and eliminate fissile materials"; National workshop on nuclear energy for Australia; Cooperative Research Centre for Contamination Assessment and Remediation of the Environment, University of South Australia, Adelaide, 16 June 2015.
- 2015 Invited speaker: "Nuclear power – public health risks"; Alternative Energy Sources – Risks vs benefits Seminar, Royal Australian Chemical Institute and Risk Engineering Society, Melbourne, 4 August 2015.
- 2015 Guest presentation: "Radiation and health"; Nuclear Fuel Cycle Issues and Challenges; Aboriginal Congress of South Australia, Port Augusta, 10 Aug 2015.
- 2015 Invited lecture: "Public security, energy security and public health", Law Enforcement Public Health subject, Master of Public health, University of Melbourne, Melbourne, 29 August 2015.

- 2016 Invited Public Lecture: "Five years on – living with the ongoing and emerging consequences for health of the Fukushima nuclear disaster", Asia Institute, University of Melbourne, 11 March 2016.
- 2017 Lectures: "Radiation and health overview", and "Radiation effects on non-human biota", Environmental challenges and global health, Master of Public Health, University of Melbourne, 19 July 2017.
- 2017 Lecture: "Nuclear power and public health overview", Environmental challenges and global health, Master of Public Health, University of Melbourne, 19 July 2017.
- 2017 Invited lecture: "Radiation exposure risks associated with medical imaging." General Practice Education Day, Healthed, Melbourne, 14 Oct 2017.
Associated webcasts:
Radiation and disease. <https://player.vimeo.com/video/246921466>
Radiation and Imaging. <https://player.vimeo.com/video/246921773>
- 2018 Invited keynote address: "Radiation and health: new evidence and implications for medical practice", Sonic Clinical Services National Travel Medicine Conference, Melbourne 16 Nov 2018.
- 2019 Invited keynote address: "Learning from the Fukushima nuclear disaster: 8 years on", launch of Japanese edition of van Ness P and Gurtov M (eds). Learning from Fukushima (Fukushima no Kyokun). Tokyo, Ronsosha, 2019. Iwasaki Koyata Memorial Hall, International House of Japan, Tokyo, 20 May 2019.
- 2019 Invited presentation: "Nuclear power and public health" Public meeting: Is nuclear power a solution to climate change? Friends of the Earth, Melbourne, 28 Aug 2019.
- 2019 Keynote address: "The Fukushima nuclear disaster and the 2020 Olympic Games", Seminar on Tokyo Olympics and Radiation Risk, Korean National Assembly, 28 Nov 2019.
Associated media coverage:
JoongAng Ilbo: <https://news.joins.com/article/23644191?fbclid=IwAR0r9lOTImzsgswZrNJUYRTf3-hZhqrHnu57KtLlZnjRMd85CzQnb-JXdgw>
tbs News Factory: <https://youtu.be/bXLvMjl7Ujs>
<http://www.pressian.com/news/article?no=268030>
Donga Science: <https://news.naver.com/main/read.nhn?mode=LPOD&mid=sec&oid=584&aid=0000006827>

Presentations on health consequences of nuclear testing in the Pacific

- 1989 Guest speaker, First Tahitian Conference for Peace and Development, Papeete, Tahiti, 6 August 1989.
- 1995-6 Media presentations in relation to health and environmental consequences of French nuclear test explosions in the Pacific, May 1995 - January 1996 including ABC Radio News, PM, Couchman, Earthbeat; ABC TV 7.30 Report; Channel 7 Today Tonight; Radio Australia (Network Asia); Herald-Sun, Australian, Age newspapers; BBC Horizons; Sydney Morning Herald; AAP; AFP; public radio and TV Cologne, Germany; radio 3CR Melbourne; various media in France and Germany.

- 1996 Medical Action for Global Security (MEDACT) UK. "Public health aspects of French nuclear tests". London School of Hygiene and Tropical Medicine, 4 January 1996.
- 2006 Invited lecture: 'Health consequences of UK nuclear test explosions for Australian participants', 40th Anniversary Commemorations, French Pacific nuclear test program, Government of French Polynesia/Moruroa e Tatou, Papeete, Tahiti, 29 June 2006.
- 2007 Lecture: 'Dealing with the persistent health and environmental legacy of nuclear test explosions in the Pacific', Royal Society of Medicine/International Physicians for the Prevention of Nuclear War, Conflict and Catastrophes Forum, Royal Society of Medicine London, 3 October 2007.
- 2012 Invited speaker: "Health and environmental consequences of nuclear test explosions", UN Human Rights Council Side Event, with Women's International League for Peace and Freedom, and International Campaign to Abolish Nuclear Weapons, Palais des Nations, Geneva, 14 September 2012.
- 2016 Invited speaker: "Health and Environmental Impacts of Nuclear Testing", Chatham House and Latrobe University Workshop: Humanitarian Approach to Nuclear Weapons Detonations and Nuclear Testing in the Pacific Region, 21-22 April 2016, Melbourne.
- 2017 Presentation: "The health and environmental impacts of nuclear testing in the Pacific and Australia". Side event, Prohibiting nuclear weapons: "Pacific and Southeast Asian perspectives", IPPNW and ICAN, United Nations Conference to negotiate a legally binding instrument to prohibit nuclear weapons, United Nations, New York, 28 March 2017.
- 2018 Invited presentation: "Long-term health and environmental impacts and needs resulting from British nuclear tests in Australia", 10th IPPNW North Asia Regional Conference and 3rd North & South Asian IPPNW Meeting, Ministry of Health, Ulanbaatar, Mongolia, 13 Sep 2018.
- 2019 Invited panel presentation: Sustainable Development Goal 3: good health and well-being. Jean Monnet Sustainable Development Goals Network Seminar Series. RMIT University, Melbourne, 26 March 2019.
- 2019 Invited address: "The Pacific's nuclear legacy", book launch: Tom Bamforth, "The Rising Tide" (Hardie Grant Books) Readings Carlton, 5 Sep 2019.

Presentations on ciguatera in the Pacific

- 1986 Discussion Group: Biological Effects of Nuclear Weapons Tests in the Pacific, Sixth World Congress of IPPNW, Cologne, West Germany, June 1986.
- 1987 Plenary Session IV: Nuclear Testing and Pacific People, First Asian - Pacific Regional Symposium of IPPNW, Auckland, New Zealand, February 1987.
- 1987 Research Symposium, Seventh World Congress of IPPNW, Moscow, USSR, May 1987.
- 1987 ABC Radio Science Show, Indian - Pacific 1987.
- 1987 Tahiti Witness - TV South (London) and TV New Zealand 1987.
- 1988 Radio Australia, Radio National 1989.
- Clinical meetings at Christchurch Hospital (NZ), Royal Melbourne Hospital, Fairfield Hospital 1986 - 87, 1990 Prince Henry's Hospital, Alfred Hospital 1989.
- 1989 International Physicians for the Prevention of Nuclear War Ninth World Congress (Hiroshima, Japan, 9 October 1989): Symposium: The nuclear legacy in the Pacific; Presentation: Environmental effects of nuclear test explosions in the Pacific.
- 1993 International Workshop on Ciguatera Management, Bribie Island, Queensland, 13-16 April 1993. Invited speaker: Clinical aspects of ciguatera: an overview.
- 1998 National Institute of Neurology and Neurosurgery, Mexico, Special Symposium. Ciguatera and the Nervous System. Mexico City, 20 Jan 1998.

Presentations on health advice for international travel (selection)

- 1988-96 Overseas Service Bureau pre-departure briefings for Australian Volunteers Abroad and other program participants, 1988-96.
- 1989 Thomas Cook Regional Management Group, April 1989.
- 1988 Royal Australian College of General Practitioners, August 1988.
- 1988 Monash University medical students, fourth, fifth and sixth years, 1988-
- 1996-7 Melbourne University fifth year medical students, 1991- 6, sixth year medical students, 1996-7.
- 1989 Australian International Development Assistance Bureau, Health Risks Awareness Week, 30 October - 3 November 1989, Canberra.
- 1990 "Meet the Expert" session on "travel medicine". Royal Australasian College of Physicians Annual Scientific Meeting, 2-3 May 1990, Melbourne.
- 1991 Australian Government Health Service meeting, Melbourne, 25 March 1991.
- 1991-3 Royal Australasian College of Physicians - First Part candidates lecture 'Infections in Travelers' Melbourne, 1991, 92, 93, 96.
- 1992-5 Victorian Medical Postgraduate Foundation, seminars on Travel Health, 29 February 1992, September 92, 11 August 1993, 28 May 1994, 24 June 1995, chair and speaker on 'Principles of travel medicine', 'Immunizations' and 'Common destinations'.
- 1993 Third National Immunisation Conference, Melbourne 21-23 April 1993. Invited speaker: 'Immunisation for Australians travelling overseas'.
- 1993 Third Conference on International Travel Medicine, Paris, 25-29 April 1993. , Invited panel member, Controversy and Consensus Plenary Session on 'Health issues in long-term travelers and expatriates' and co-chair, special workshop on 'Health care issues for overseas workers: various approaches.' Poster presentations: 'The health of Australian volunteer development workers' and 'Australian case-control study of adverse events associated with Japanese encephalitis vaccine'.
- 1993 RAAF Aviation Medicine course lecture, Institute of Aviation Medicine, Point Cook, "Immunizations and malaria prophylaxis for aviators", 19 August 1993.
- 1993 Travel and Health in the Pacific Region Conference, Pacific Asia Travel Association; Brisbane, key note speech "Tourism and health: the regional situation", 23-25 June 1993.
- 1993 Victorian Medical Postgraduate Foundation Country Education Programme, Gippsland Base Hospital, Sale. "Travel vaccinations", 11 November 1993.
- 1995 Commonwealth Dept of Health and Human Services, Drivetime Medical Special Edition. (Audiotape) "Travel medicine: vector-borne diseases" 21 June 1994, distribution January, 1995. "Travel Safe Campaign".
- 1994 Australian Army, Health Services Eastern Region 1994 Clinical Update Conference, Sydney, lecture "The malaria conundrum", 5 November 1994.
- 1995 Save the Children Fund (Australia). Pre-departure health briefing. Melbourne, 17 January 1995.
- 1995 Royal Australian College of General Practitioners "Update on Infectious Diseases and Travel Medicine", Trawalla, Melbourne, 21 and 28 March 1995.
- 1995 Australian Agency for International Development, Pre-posting Health Briefing, Canberra, 4 April 1995.
- 1995 Fourth International Conference on Travel Medicine, Co-chair session, "Temporary residents/medical evacuation", Workshop 'Longstay Volunteers'. Acapulco, Mexico, 23-27 April 1995.
- 1995 Australian Society of Infectious Diseases 1995 Annual Conference, Symposium: "Travel Medicine - State of the Art". Moderator. Darwin, 21 May 1995.
- 1995 Health and Community Services (Victoria): Risk Assessment Program short course. "Imported infections in Victoria: Future issues?" Caulfield General Medical Centre, 27 July 1995.
- 1995 Australian Military Medicine Association 1995 Conference. Invited lecture: Vaccines. Manly, Sydney, 2 September 1995.

- 1996 Combined Monash University Health Services meeting. Travel medicine review. Caulfield campus, Monash University, 14 May 1996.
- 1996 Combined Master of Public Health (Deakin, Latrobe, Melbourne, Monash Universities). "How may we travel well?" Toorak campus, Deakin University 16 May 1996.
- 1996 Royal Australasian College of Physicians, Update. "What's new in travel medicine?" Royal Australasian College of Surgeons, Melbourne, 20 July 1996.
- 1996 World Vision Australia - Course facilitator. Traveller's Health. Burwood, Melbourne, 8 August 1996.
- 1996 Victorian Medical Postgraduate Foundation and Fairfield Travel Health. Seminar on Travel Health. Speaker: Principles of travel medicine; Common destinations; Case studies; Discussion. Walter and Eliza Hall Institute, 26 October 1996.
- 1996-8 Final year medical student lectures, University of Melbourne, Royal Melbourne Hospital. Pretravel dilemmas 1996-1998.
- 1997-8 Final year medical student lectures, Diarrhea, University of Melbourne, Royal Melbourne Hospital, 1997-1998.
- 1996-2015 Australian Red Cross Basic Training Courses/International Mobilisation and Preparation for Action Courses; International Humanitarian Action Training; Health issues presentations. 1996-2015.
- 1996 Fifth National Immunisation Conference - Proffered Paper: Howden L, Ruff TA, Forbes A. Vaccine advice received by Australian residents travelling to South East Asia. Brighton Beach, Sydney, 26 November 1996.
- 1997 Monash University 4th Year medicine integrative lecture programme 1997, infectious diseases. Travel Medicine. Monash Medical Centre, 12 May 1997.
- 1998 Victorian Medical Postgraduate Foundation, Victorian Infectious Diseases Service, Fairfield Travel Health, Travellers Medical and Vaccination Centre; Travel Medicine Seminar. Information sources; Immunisation; Case discussions. Parkville, 21 June 1997. Diarrhoea; Case discussions. Parkville 21 February 1998.
- 1997 Department of Human Services (Victoria), Acute Health Forum. 'Updating Travel Medicine'. Melbourne, 22 September 1997.
- 1997 Royal Australian College of General Practitioners Annual Conference. Plenary lecture: What the GP needs to know before the patient goes overseas. Hobart, 1 October 1997.
- 1998 Provincial Fellows Teleconference series speaker, Royal Australian College of Obstetricians and Gynaecologists. 'Travel and the pregnant woman' 27 October 1998.
- 1998 6th National Immunisation Conference, Public Health Association. 'Travelling well'. [Invited plenary address] Melbourne, 5 November 1998.
- 1998 Royal Melbourne Hospital Dept of Emergency Medicine Training and CME Infectious Disease Topics seminar "Lyssavirus, rabies vaccination", 8 July 1998.
- 1999 Sixth Conference of the International Society of Travel Medicine, 'Meet the Professor' session, Montreal, 10 June 99.
- 2001 Department of Public Health, students of Tropical and Travel Medicine, "Vaccination: Past, Present and Future", University of Sydney, 26 October 2001.
- 2002 8th National Immunisation Conference, Public Health Association of Australia. Invited Breakfast Session: Travel medicine. Hilton on the Park, Melbourne, 17 May 2002.
- 2002 Various travel medicine presentations to general practitioners supported by GlaxoSmithKline, including: Perth 23 April 2002, Adelaide 23 May 2002, Mildura Victoria 10 Dec 2002.
- 2005 Monash and Central Bayside Divisions of General Practice, 'Travel medicine update', Melbourne 26 October 2005.
- 2005 Joint Universities Centre for Education and Training in General Practice, Weekend Education Workshop Program: 'What to advise patients travelling? How do I manage diarrhea and fever post travel? What are the most reliable resources in that field?' Box Hill Hospital, Melbourne 12 November 2005.
- 2006 Royal Australian College of Physicians, Update on obesity, travel medicine/ID and neurology', Continuing Education Workshops 2006. ANZCA, Melbourne, 17 June 2006.

- 2006 Inner Eastern Melbourne Division of General Practice, 'Travel medicine update', Melbourne University Private, 11 October 2006.
- 2008 University of Melbourne, Advanced Medical Science global health students. Travel health lectures, 2008-.
- 2009 Wyeth Australia GP Education Day: 'Travel vaccines – what's new?', Bugs, Brains, Joints and Cells, Bayview on the Park, Melbourne 19 July 2009.
- 2009 Burwood Health Care/GlaxoSmithKline, Travel medicine Update, Melbourne, 11 August 2009.
- 2009 Monash Division of General Practice, Travel Medicine Update, Yarra Yarra Golf Course, Melbourne, 13 August 2009.
- 2009 Melbourne General Practice Network & Impetus (North West Melbourne Division), What's new in travel medicine, Melbourne 7 Oct 2009.
- 2012 Speaker: "Travel medicine – an update – what's new?" in "An update on travel medicine" medical education meetings sponsored by CSL Biotherapies, Melbourne 6 June 2012, Sydney 7 June 2012, Brisbane 11 July 2012, Adelaide 12 July 2012, Perth 8 Aug 2012.
- 2013 Speaker: "Setting forth safely: Travel health before, during, and after the journey" Up Close, University of Melbourne, podcast #257, 26 July 2013.
<http://upclose.unimelb.edu.au/episode/257-setting-forth-safely-travel-health-during-and-after-journey>
- 2013- "Infections in travellers" lecture, Foundations of Biomedical Sciences, first year MD course, Univ of Melbourne, 18 Sep 2013, 18 Sep 2014, 17 Sep 2015, 15 Sep 2016, 12 Oct 2017, 20 Aug 2018, 19 Aug 2019.
- 2014 Australian Defence Force health staff, Invited lecture: "Travel medicine update", Canberra, 27 May 2014.
- 2014 "Ebola essentials", presentation to Australian Red Cross staff, Melbourne, 16 Oct 2014.
- 2016 "Zika virus essentials", presentation to Australian Red Cross national staff, Melbourne 13 Sep 2016.

Presentations on public health, primary health care and health in developing countries

- 1993 Public Health Unit, Final year medical students, Monash University. "Working in developing communities", "Health issues for refugee and displaced populations", 1993.
- 1994 Master of Public Health, International health elective, "Investing in health: The World Development Report", Monash University, 21 July 1994.
- 1994 Primary Health Care course, World Vision Australia, "Immunisation", Melbourne, 26 July 1994.
- 1994 Public Health Association of Australia, Annual Conference, "Australia's role in public health in Asia and the Pacific region", "The Healthy Start for Child Survival Projects in Indonesia", Adelaide, 25 - 28 September 1994.
- 1995 Monash University Obstetrics and Gynaecology and Pediatrics Medicine 5 program, "International Child Health", Monash Medical Centre, 14 February 1995; 18 July 1995.
- 1995 Monash Master of Public Health, International Health Elective. "Project planning and management", 3 August 1995; "Preventing childhood disease through immunisation - has it worked?" 31 August 1995, Alfred Hospital.
- 1997 Communicable Disease Control in Developing Countries Unit, Masters of Public Health, combined universities program. Overview, Alfred Hospital, 6 March 1997. Emerging infections, Alfred Hospital, 22 May 1997.
- 2013 Interview subject, Public health leadership short course for Pacific Island country Red Cross Blood Transfusion Service staff, Nossal Institute for Global Health, University of Melbourne, 10 Oct 2013.

- 2016 Panellist, final lecture, 3rd year University of Melbourne undergraduate Breadth subject Global Health, Security and Sustainability, 2014, 2015, 25 May 2016, 24 May 2017, 23 May 2018.

Presentations on occupational infections

- 1991-7 Monash Master of Public Health/Graduate Diploma of Occupational Health lectures, "Zoonoses", "Occupational infections", "Introduction to microbiology", "Travel Health", 1991 - 7.

Presentations on health implications of global warming and ozone depletion

- 1988 Patterns of health risks for Melbourne. Opening paper in Options for a healthy city workshop, Urban Systems and health-working for a healthy city theme, Greenhouse 88 Conference, CSIRO/Commission for the Future, Melbourne, November 1988.
- 1990 Environmental Medical Association Inaugural Meeting, Melbourne, October 1990 (health implications of greenhouse warming).
- 1990 Repatriation General Hospital, Heidelberg, Senior Medical Staff Association Annual Dinner, guest speaker, 'Health in the Greenhouse', October 1990.
- 1990 CWM Hospital, Suva, Fiji and Lautoka Hospital, Fiji, Guest speaker, December 1990.
- 1991 Victorian Medical Postgraduate Foundation lecture, Warrnambool Base Hospital, Victoria March 1991: 'Environmental Medicine'.
- 1991 Thoracic Society of Australia Annual Conference, Lorne, Victoria, April 1991, Symposium speaker: 'Health in the Greenhouse'.
- 1994 Master of Public Health, Environmental and communicable hazards core unit, "Climate change and health", with Dr Barrie Pittock, Head, Climate Impact Group, CSIRO Division of Atmospheric Research, Monash University, 31 May 1994.

Presentations on viral hepatitis

- 1989 Paper presentation: Integration of hepatitis B immunization into the Expanded Programme for Immunization in Lombok (Indonesia). Public Health Association of Australia Annual Conference (Melbourne 26 September 1989).
- 1990 Fiji Medical Association Western Branch 33rd Seminar, Yanuca Island, Fiji, 1-2 December 1990. Guest speaker: Control of hepatitis B - the role of the International Task Force on Hepatitis B Immunisation.
- 1990 *Opening plenary session speaker*: control of hepatitis B. Vaccines 90 Conference, Lorne, Victoria, December 1990:
- 1991 Ruff TA, Gust ID, *et al.* The Lombok project: forerunner to national hepatitis B immunization in Indonesia. Paper to: Second National Immunization Conference, Canberra, 27-29 May 1991.
- 1991 Ruff TA, Hepatitis B regional perspectives: Asia and Oceania. Presentation at International Conference on the Control of Hepatitis B in the Developing World, 8 October 1991, Yaounde, Cameroon (World Health Organization/International Task Force on Hepatitis B Immunisation Ministry of Health, Republic of Cameroon/University of Yaounde).
- 1993 *Resource person*, Community Education Development and Health Summer School: Seminar in management of health care in developing communities and emergency populations. Melbourne, 16-17 January, 1993.
- 1993 *Proffered paper*: The Lombok hepatitis B model immunisation project: final results and further developments. Third National Immunisation Conference, Melbourne, 21-23 April 1993.

- 1996 *Invited speaker*: "Hepatitis B control in SE Asia". Society for General Microbiology (UK), 133rd Conference, Clinical Virology Group. Symposium on Monitoring the Control of Viral Disease. City University, London, 3 January 1996.
- 1996 *Invited speaker*, World Health Organisation Workshop. "Control of Hepatitis B in Asia and the Pacific Basin". IX Triennial International Symposium on Viral Hepatitis and Liver Disease. Rome, Italy, 23 April 1996.
- 1996 Indonesian Ministry of Health, 1996 National Immunisation Conference. "Global trends in hepatitis B control and EPI". Ciloto, Java, Indonesia, 1 June 1996.
- 1996 Sixth International Education and Cultural Convention, Indonesia Culture and Educational Institute. "Changing status of health and illness: Indonesia-Australia implications. Melbourne Exhibition Centre, 17 June 1996.
- 1996 Melbourne Sexual Health Centre. Vaccination update. Carlton, 8 Nov 1996.
- 1996 *Preferred paper*: Ruff TA, Rana BJ, O'Leary M, Maher C. The control of Hepatitis B infection in Pacific Island Countries Project. Fifth National Immunisation Conference Brighton, Sydney, 26 Nov 1996.
- 1998 *Special Lecture*. Hepatitis B. Hospital Juarez de Mexico, Surgical Society, Mexico City, 21 January 1998.
- 1998 Hepatitis B immunisation and prevention of cirrhosis and hepatocellular carcinoma in sub-Saharan Africa (WHO/IARC/Government of The Gambia/MRC conference). *Invited speaker*: Lessons from hepatitis B immunisation in Indonesia, Thailand and the Pacific Islands - strengthening EPI and primary health care. Serrekunda, The Gambia, 11-14 March 1998.
- 1998 Persian Gulf Cooperation Council, Vaccines Workshop. *Invited speaker*: WHO position. Kuala Lumpur, Malaysia, 16 March 1998.
- 1998 Vaccines Today - Protecting the Future (International Vaccines Conference, SmithKline Beecham). *Invited speaker*: Combined hepatitis A and B vaccinations: the choice beyond infancy. Participant: Press briefing. Kuala Lumpur, 18-19 March 1998.
- 1998 Hepatitis E investigators' meeting (supported by SmithKline Beecham). Results of a population-based seroepidemiological survey of hepatitis E in the Kathmandu Valley, Nepal. Washington DC, 17 October 1998.
- 2002 Malaysian Medical Association, et al. Update for primary care physicians. Hepatology. Kuching, Sarawak, 15 Sep 2002.
- 2004 Philippine Foundation for Vaccination, 5th Philippine National Immunisation Conference, invited lecture: 'Hepatitis B: burden of disease', Manila, 12 November 2004.
- 2005 Hepatitis B Vaccination at Birth, GSK Philippines Program Launch, invited lecture 'Hepatitis B: burden of disease', 'Rationale for giving hepatitis B vaccine at birth', Manila, 1 April 2005.
- 2005 Sixth Liver Update, invited lecture 'Hepatitis B immunisation update', Kuala Lumpur Malaysia, 23 July 2005.
- 2006 Twinrix Launch meetings, GlaxoSmithKline Vietnam. *Invited keynote speaker* 'A unique combined hepatitis A and hepatitis B vaccine', Hanoi 17 Feb 2006, Ho Chi Minh City 18 February 2006.
- 2008 *Invited member*, International Expert Meeting on Hepatitis B Control in the Western Pacific, Korean CDC and WHO WPRO, Seoul 24-5 November 2008.
- 2011 *Invited member*, Western Pacific Regional Office of the World Health Organisation, Expert Resource Panel on Hepatitis B inaugural meeting, Manila, 21-23 Feb 2011.
- 2008,9,11 Pacific Immunisation Program Strengthening WHO/UNICEF Pacific Island Countries National Immunisation Program managers workshops; presentations on hepatitis B control. Nadi, Fiji and other regional centres.
- 2012 Chair, Consultation on improving and monitoring hepatitis B birth dose vaccination, World Health Organization, Regional Office for the Western Pacific, Manila, 13-15 June 2012.
- 2012 Presentation: "Hepatitis B control status and plans, Western Pacific Region", Southeast Asia Mekong Region Immunisation Forum for Senior Managers, Vientiane, Lao PDR, 9 Nov 2012.

- 2013 Invited speaker: "Immunisation issues for migrant and refugee groups: hepatitis B", NHMRC Centre of Research Excellence in Population Health Research stakeholder workshop: Immunisation policy for migrants, refugees and travellers. University of NSW, Sydney, 9 Aug 2013.
- 2013 Speaker: "Do you know your ABCs? An update on hepatitis A, B, C and E in travellers". Medical educational webinar for bioCSL, 8 Oct 2013.
- 2014 Speaker: "Hepatitis B control in your practice", medical educational webinar with A/Prof Ben Cowie, bioCSL, 22 Oct 2014.
- 2017 Invited speaker: "Hepatitis B update". World Hepatitis Day Symposium – from vaccine to cure: the road to viral hepatitis elimination. International Coalition to Eliminate HBV / Doherty Institute, Melbourne 28 July 2017.

Presentations on health and human rights

- 1994 Macfarlane Burnet Centre for Medical Research, seminar on "Health and Human Rights", Co-organiser, 3 December 1994.
- 2014- Lecture: "Nuclear technology and human rights", Global Health and Human Rights subject, Master of Public Health, University of Melbourne, 22 July 2014, 2 June 2015, 2 June 2016, 25 May 2017, 30 May 2018, 24 June 2020.
- 2019 Lecture: "Nuclear technology, ionising radiation, global health and human rights", Global Health and Human Rights subject, Master of Public Health, University of Melbourne, 5 June 2019.
- 2015 Lecture: "Global health and human rights implications of nuclear technology", Human Rights and Global Justice undergraduate Breadth Subject, University of Melbourne, 23 Sep 2015.

Presentations on vaccines and immunisation

- 1995 Fourth National Immunisation Conference, Public Health Association of Australia. Preferred papers: "Uniject®, a sterile prefilled non-reuseable injection device for outreach immunisation services". "Use of 'verbal autopsy' for monitoring deaths from vaccine preventable diseases in Indonesia". Sydney, 8-10 March 1995.
- 1996 Fifth National Immunisation Conference. Preferred paper: Stewart T, Otto B, Ruff TA, Sutanto A, Suarnawa IM. Experience with Uniject, a safe and practical injection technology in EPI programs. Brighton Beach, Sydney, 26 November 1996.
- 1997 20th International Congress on Chemotherapy; Viral vaccines into the future symposium. Vaccination Strategies for Developing Countries. Sydney, 30 June 1997.
- 1999 Annual Project Coordinating Committee meeting, Control of Hepatitis B Infection in Pacific Island Countries Project, 'New immunisation developments including combination vaccines', CWM Hospital, Suva, Fiji, 7 May 1999.
- 1999 Pacific Science Congress, University of NSW, 'Lessons from the field: hepatitis B immunisation in Indonesia and Pacific Island countries', Sydney, 8 July 1999.
- 1999 Australian Technical Advisory Group on Immunisation, 'Infanrix-HB', Sydney, 5 March 1999.
- 1999 Second Australasian Hep C Conference, invited plenary presentation: 'Hepatitis A and B immunisation in chronic hepatitis C', Christchurch NZ, 18 August 1999.
- 1999 Annual WHO/UNICEF Workshop on EPI and control of vaccine-preventable diseases in Pacific Island Countries and Areas, 'New and Combination Vaccines', Nadi, Fiji, 4-8 October 1999.
- 1999 Macquarie Bank, 'New vaccines and vaccine development in Australia', Sydney, 19 June 1999.

- 1999 Therapeutic Goods Administration/National Centre for Disease Control, 'Proposed pneumococcal conjugate vaccine efficacy trial', Canberra, 20 August 1999.
- 1999 Annual WHO/UNICEF Workshop on EPI and control of vaccine-preventable diseases in Pacific Island Countries and Areas, 'New and Combination Vaccines', Nadi, Fiji, 4-8 October 1999.
- 1999 NZ Immunisation Program Advisory Committee on SmithKline Beecham's vaccines relevant to review of NZ pediatric immunisation schedule, Auckland, 20-1 October 1999.
- 1999 Seventh National Symposium on Hepatitis B and C, invited lecture: 'Hepatitis B immunisation policy and implementation – still gaps?', St. Vincent's Hospital, Melbourne, 20 November 1999.
- 1999 National Immunisation Committee, 'Proposed invasive pneumococcal disease vaccine efficacy trial', Canberra, 15 December 1999.
- 2000 New Zealand Ministry of Health, 'Hib interference, Priorix, DTPa and ESPID Hib surveillance update, birth dose of hepatitis B. Current recommendations to change the schedule in NZ from OPV to IPV and DTPw to DTPa', Wellington, New Zealand, 19 April 2000.
- 2000 Department of Defence senior medical personnel, 'Varilrix and dTpa (Boostrix)', Canberra, 18 August 2000.
- 2000 Australian Technical and Advisory Group on Immunisation (ATAGI), 'OPV and IPV in polio eradication as well as a clinical overview of IPV-containing combinations especially DTPa-HB-IPV', Sydney, 1 September 2000.
- 2001 International Health/MPH Monash University students, Macfarlane Burnet Centre for Medical Research, extended lecture: 'Vaccines and vaccine preventable diseases in developing countries', 23 August 2000, 2001.
- 2001 Dept. of Public Health, Uni of Sydney, 'Immunisation', invited extended lecture to students in Master of International Public Health and Short Course on Travel and Tropical Medicine, Sydney, 3 November 2000, 26 October 2001.
- 2001 Second Practice Update in Infectious Diseases, Singapore International Convention & Exhibition Centre, 'Adult and adolescent vaccination – what's new', GlaxoSmithKline symposium: New vaccines in the pipeline, 13 January 2001.
- 2001 Australian Society for Infectious Diseases Annual Conference, 'Vaccine R&D' in New Vaccine Initiatives Symposium, Melbourne, 9 April 2001.
- 2001 Alcohol & Drug Foundation's Winter School in the Sun Conference, "Hepatitis A/B in alcohol and drug users", Brisbane, 2 July 2001.
- 2001 National Centre for Immunisation Research and Surveillance Symposium, "Boostrix", Sydney 27 July 2001.
- 2001 Macfarlane Burnet Centre, MPH students invited lecture, "Control of vaccine preventable diseases", Melbourne 8 August 2001.
- 2001 NZ Pediatric Society Infection and Immunisation Committee Annual Conference, 'Rotavirus vaccine development and intussusception surveillance', Christchurch, 7 September 2001.
- 2001 Infection Control Association of NSW, Infection Control Conference, 'What's new and where we are heading with vaccines?', Sydney, 2 November 2001.
- 2001 Vic Dept. of Human Services. 'DTPa based combination vaccines and DTPa efficacy and reactogenicity', Melbourne, 6 December 2001.
- 2001 NSW Dept. of Health. 'Infanrix penta/hexa and DTPa efficacy and reactogenicity', Sydney, 10 December 2001.
- 2001 Queensland Dept. of Health. "Boostrix and forthcoming combinations", Brisbane, 11 December 2001.
- 2002 National Institute of Pediatrics, Vietnam / GSK Launch Symposium Combined vaccines for children: invited lecture 'Clinical development of MMR vaccine', Ho Chi Minh City, 11 May 2002.
- 2002 GP Immunisation Advisory Panel to GSK. Regular presentations from 1999- on various new vaccines and Immunology Update, 26 June 2002.

- 2002 Defence Health Services. Defence Health Symposium 2002. Invited lecture: Immunisations of military importance. Sydney, 28 July 2002.
- 2002 Microbiology and Infectious Diseases Annual Conference. Invited lectures: 'Pertussis control in childhood and beyond.' 'Vaccine development – science of magic?' Waiheke Island, Auckland, 16-17 August 2002.
- 2002 Infection and Immunisation Subcommittee, New Zealand Paediatric Society. 'Pertussis control in childhood and beyond – effective use of dTpa vaccine.' 'Varicella immunisation – a review'. Auckland, 7 October 2002.
- 2001-2 Various presentation on combination pediatric vaccines to state Dept of Health staff and immunisation program managers supported by GlaxoSmithKline, including: Melbourne 6 Dec 2001; Brisbane 22 July 2002
- 2004 St Marianna University School of Medicine. Invited lectures: 'Controlling hepatitis B' and 'How can we prevent pertussis in early infancy?' Kawasaki, Japan 22 Sep 2004.
- 2004 GlaxoSmithKline Philippines, Infanrix-hexa launch meetings, 'Six diseases, one vaccine: understanding Infanrix-Hexa', Manila, 24-5 Sep 2004.
- 2005 Indian Academy of Pediatrics, 42nd National Conference, invited Symposium lecture: 'Cervical cancer vaccine'; invited Symposium panel member: 'Future vaccines we are waiting for', Kolkata 7-8 Jan 2005.
- 2005 Malaysian Medical Association / GlaxoSmithKline, invited lecture 'Vaccination for travellers: which is the priority?', Kuala Lumpur, 22 July 2005.
- 2006 Malaysian Ministry of Health / Malaysian Pediatric Association / GlaxoSmithKline Malaysia, Vaccinology workshop: Clinical review of DTPw-HB/Hib combination. Invited chair. Kuala Lumpur, 27 August 2005; Workshop: DTP-HB/Hib: Implementation into childhood immunisation. Invited chair and invited presentation 'Considerations for successful EPI implementation', Kuala Lumpur 15 Feb 2006.
- 2005 Japanese Society for Vaccinology 9th Annual Meeting, invited lecture: 'Clinical experience with rotavirus vaccines and global strategies for prevention of rotavirus disease', Osaka Japan 15 October 2005.
- 2005 Rotavirus vaccine implementation project meeting, GlaxoSmithKline, independent advisor, Manila, Philippines 14 November 2005.
- 2005 Mekong Countries National Immunisation Program Managers Workshop, presentations: 'Global Immunisation partners', 'Immunisation program planning', 'New Vaccines', 'SWOT analysis', Ho Chi Minh City, Vietnam 21-4 November 2005.
- 2005 Meeting for future view of 10-valent pneumococcal pediatric vaccine, GlaxoSmithKline Japan. Invited presentations 'Preventing pneumococcal disease: the unmet medical need', 'An 11-valent pneumococcal protein D conjugate vaccine (11Pn-PD) protects against otitis media caused by both pneumococci and Haemophilus influenzae', Tokyo 11 December 2005.
- 2006 UNICEF/WHO Second Pacific Immunisation Programme Strengthening Workshop, invited presentation 'Hib vaccine for Pacific Island countries' Nadi, Fiji 9 May 2006.
- 2006 Pharmaceutical Benefits Advisory Committee hearing presentation on clinical aspects of Human rotavirus vaccine Rotarix – GSK, Adelaide 6 July 2006.
- 2006 GlaxoSmithKline Taiwan with Taiwan Pediatric Association, invited lectures 'Clinical experience with DTPa combination vaccines' in 'The value of Vaccines' symposia – Taichung 18 Aug, Taipei and Kaohsiung, Taiwan 19 August 2006.
- 2006 Indonesian Pediatric Association, Jakarta Branch and GlaxoSmithKline Indonesia, 'Clinical experience with DTPa-based combination vaccines', invited lecture, Jakarta, 27 August 2006.
- 2007 Invited Lectures on Hepatitis B control and Hepatitis A control, 7th Federated States of Micronesia Annual Immunisation Conference 4-6 December 2007, Chuuk, FSM.
- 2007 Co-organiser and speaker, Southeast Asia Mekong Regional Immunisation Forum for senior immunisation program managers, Vientiane 17-19 December 2007
- 2008 Co-organiser and speaker (rubella, and pneumococcal disease burden and vaccines), Southeast Asia Mekong Regional Immunisation Forum for senior immunisation program managers, Phnom Penh, 4-6 November 2008.

- 2009 GlaxoSmithKline Australia GP Immunisation Advisory Panel, 'PHiD-CV pneumococcal conjugate vaccine', Airport Hilton Melbourne 26 March 2009.
- 2009 Meeting chair, presentations by Prof Stephen Pelton, Boston Medical Centre and Dr Kelvin Kong, John Hunter Hospital Newcastle, on 'Pneumococcal disease, the burden of otitis media and the effects of pneumococcal conjugate vaccines', Old Parliament House Canberra 20 May 2009; and Prof Pelton and Prof Chris Del Mar, Bond University, Royal Children's Hospital Melbourne, 22 May 2009.
- 2009 Dept of Human Services Victoria, 'PHiD-CV: new pneumococcal conjugate vaccine', Melbourne 12 August 2009.
- 2009 Royal Children's Hospital, 'PHiD-CV: new pneumococcal conjugate vaccine', Melbourne 30 October 2009.
- 2009- Co-organiser, Southeast Asia Mekong Regional Immunisation Forum for senior immunisation program managers, Bangkok, 10-12 November 2009;
- 2009- University of Melbourne MPH/International Child Health Short Course invited lecture: 'Childhood Immunisation: Routine and Emerging Vaccines', 16 November 2009, 2010, 2011, 2012, 2014, 26 Oct 2015.
- 2009 South Australia Health Dept, 'PHiD-CV: new pneumococcal conjugate vaccine', Adelaide 26 November 2009.
- 2010 Chair, Recent Advances in Immunisation Symposium, Bio21 Melbourne, GlaxoSmithKline 26 Feb 2010.
- 2010- Lecture: "Technologies for health: Immunisation"; in Third year Undergraduate Breadth subject "Global health, security and sustainability", University of Melbourne, 12 April 2010, 2011, 2012, 2013, 2014, 22 April 2015, 18 April 2016, 1 May 2017, 30 April 2018, 3 April 2019.
- 2010 Invited lecture: Menveo in Focus launch meeting: "Preventing meningococcal disease – current and future vaccines." CSL Limited, Melbourne 15 Oct 2010.
- 2010 Co-organiser Clinical Oncology Society of Australia 2010 Annual Scientific Meeting, invited presentation 'The worldwide impact of vaccination on cancer prevention', Melbourne 10 Nov 2010.
- 2011- Co-organiser, Southeast Asia Mekong Regional Immunisation Forum for Senior Managers, Nossal Institute/World Vision, Yangon, Myanmar 23-25 Nov 2011; Vientiane, Lao PDR, 7-9 Nov 2012.
- 2014 Invited speaker: "The prevention of meningococcal disease and the role of Bexsero vaccine", Medical educational lecture, Novartis Vaccines and Diagnostics, Pullman Albert Park Hotel 3 May 2014; Crown Promenade Hotel 13 Sep 2014.

Presentations on Bovine Spongiform Encephalopathy

- 2001 NZ Pediatric Society Infection and Immunisation Committee Annual Conference, "BSE and vaccines", Christchurch, 7 September 2001.

Presentations on biological weapons

- 2001 Victorian Department of Human Services, Medical Officers' of Health Annual Conference, "Biological and Toxin weapons and Bioterrorism", Repatriation Medical Centre, Melbourne, 13 October 2001.
- 2001 Department of Human Services, Melbourne Infectious Diseases Physicians' meeting, "Bioterrorism", RMH, 17 October 2001.
- 2001 Austin Hospital/Repatriation Medical Centre Grand Round. Biological weapons; an overview. Austin Hospital, Melbourne, 7 November 2001.
- 2001 Monash Infectious Diseases Society / Dept of Clinical Microbiology and Infectious Diseases, Alfred Hospital. Invited lecture: 'Bioweapons and bioterrorism: an update and longer view'. Alfred Hospital. Melbourne, 14 December 2001.

Presentations on medical ethics

- 2003 Dean's Lecture Series 2003, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne. Ethics Seminar contributor 'Who pays for lunch? Ethics committees and conflicts of interest', July 2003.
- 2005 Cabrini Human Research Ethics Committee Twilight Seminar 'Who profits from research?' Cabrini Hospital, Melbourne 2 June 2005.

Presentations on epidemiology

- 2016 First year MD Foundations of Biomedical Sciences, "Introduction to epidemiology and evidence-based medicine", University of Melbourne, 26 Feb 2016.

Presentations on planetary health and pandemics

- 2020 Invited presentation in "Re-considering Global Health" panel, Session 9, 3 July 2020, Les Rencontres Economiques d'Aix-en-Provence/TV France, Aix-en-Provence, France, 3-5 July 2020.
- 2020 Invited presentation: "Learning from COVID-19 to save our world", Lyceum Club, Melbourne 22 Sep 2020.
- 2020 Invited panellist: "Global health—Scenario planning for the future", Our Planet Our Health undergraduate breadth subject, University of Melbourne, 28 Oct 2020.

Listed expert for comment, University of Melbourne daily media briefings

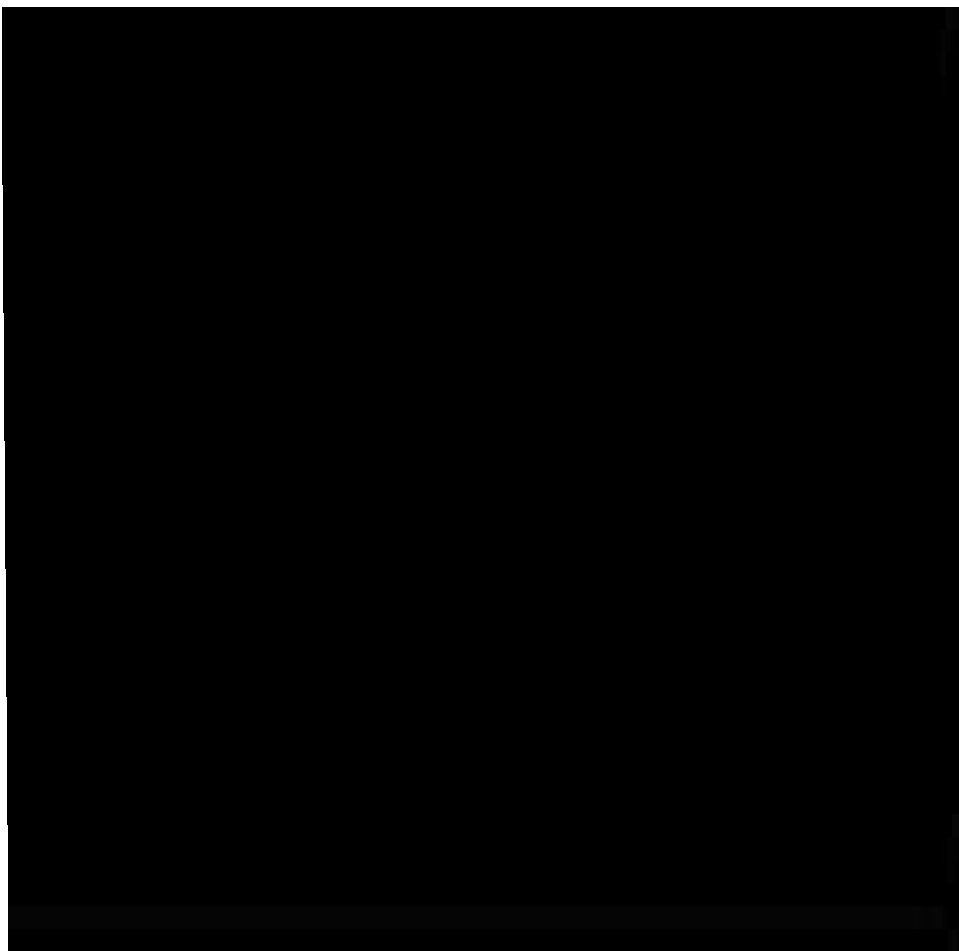
- 2011- ongoing; in relation to various topics eg: polio immunisation, Iran nuclear agreement, proposed India-Australia nuclear co-operation agreement, North Korea nuclear developments, health consequences and needs as a result of the Fukushima nuclear disaster, radiation health effects.

TEACHING UNIT COORDINATION

Co-ordinator, Master of Public Health, Monash University, 1993.
Masters of Public Health, Infectious Disease Epidemiology Elective (years 2/3, Monash University), 1991, 93.
Masters of Public Health, Environmental and Communicable Hazards (year 2 core unit, Monash University), 1992-4.
Masters of Public Health, combined universities program. Communicable Disease Control in Developing Countries, elective unit, 1997.
Behavioural sciences 181 - Society and Medicine (first year undergraduate medical course, Monash University) 1989 - 90.
Medical student electives: health and conflict (year 3, 1989-90), health and climatic change, hepatitis B immunisation (year 4, 1990-91), health promotion: safeguarding the health of overseas development workers (year 3, 1993-).
Departmental Chief Examiner, Final MBBS examinations, Monash University, 1992,3.
Monash Final year medicine: Public health aspects of infectious diseases, 1995-6.
Academic co-coordinator, Third year undergraduate Breadth Subject: Global Health, security and sustainability; University of Melbourne, 2010-5.
Academic co-coordinator, MPH Subject: Environmental challenges and Global Health, becoming Planetary and Global Health from 2019; coordinator of public health aspects of nuclear technology section, School of Population and Global Health, University of Melbourne, 2011- .

Academic co-founder/coordinator/co-coordinator, 2014-18, 2020 MPH Subject: Global health and human rights. School of Population and Global Health, University of Melbourne.
Coordinator for Population and Global Health, MD Foundations of Biomedical Sciences, University of Melbourne, 2016.
Coordinator for MD-MPH students, School of Population and Global Health, University of Melbourne, 2016 -18.

POSTGRADUATE SUPERVISION / MENTORING



EXTERNAL THESIS EXAMINATION

1993 University of WA (MMed Sci)
1996 University of Adelaide (MMed Sci)
2010 University of NSW (PhD)

