

**Third Meeting
Geneva, 5-9 December 2005**

**Meeting of Experts
Geneva, 13-24 June 2005**

Item 5 of the agenda

**Consideration of the content, promulgation, and
adoption of codes of conduct for scientists**

RAISING AWARENESS: APPROACHES AND OPPORTUNITIES FOR OUTREACH

Prepared by Australia

1. Amongst the Australian scientific community, there is a low level of awareness of the risk of misuse of the biological sciences to assist in the development of biological or chemical weapons. Many scientists working in 'dual-use' areas simply do not consider the possibility that their work could inadvertently assist in a biological or chemical weapons programme. For most of these researchers, biological weapons issues may seem irrelevant and therefore strong advocacy is required to overcome natural resistance or ignorance. Introducing Codes of Conduct that highlight these issues is an important step in raising awareness. However, it is not enough simply to put such Codes in place. Without effective measures to educate scientists about the existence and importance of such Codes, attitudes and awareness will remain largely unchanged.
2. In the context of this year's discussions, Australia has been exploring promotional issues associated with publicising various Codes, which should form an important element of Code development. We present the following comments for consideration.

Reaching Scientists: The Disparate Nature of the Scientific Community

3. In educating scientists about the existence of codes governing their work, one of the major difficulties is the diverse and disparate nature of the scientific community. Scientists work in many fields from academic research through to clinical pathology laboratories and industry. We need to reach chemists, pharmaceutical researchers, medical and veterinary microbiologists, toxicologists, physicists, research scientists and administrators in many fields who may be working on projects that could be relevant to biological weapons development. Universities, hospitals, government laboratories, commercial laboratories, small and large biotechnology companies will all need to be targeted for effective penetration of the message relevant to a

scientific Code. Many people working in these industries will be difficult to reach because they will not think of themselves as biological scientists or as doing work that could be relevant to biological weapons. Reaching scientists and administrators in diverse fields presents a major challenge and requires a concerted and comprehensive campaign.

4. In addition, the scientific population is a fluid one, with new people entering the field on a continuous basis, as graduate students in research laboratories or new researchers in commercial areas. Therefore, any education campaign has to be a continuous process. The information needs to be presented regularly and through multiple channels involving both bottom-up and top-down approaches.

Beginning Early: Targeting Secondary School Students

5. Given the diverse nature of the scientific population, targeting high school or secondary school students may constitute an effective method of reaching the whole scientific community with a general message outlining the key issues. Incorporating the message into school curricula will provide coverage of a broad cross section of the community, including those who will one day become the scientists dealing with the issues. Such messages could be incorporated into a larger component of the curriculum, covering discussions on ethics and values.

Reaching Relevant Industries Today

6. While targeting secondary schools would have clear long term benefits, there is also an immediate need to reach those already practicing biological sciences, and to ensure that early messages are reinforced at every stage of the journey from secondary to tertiary and university education, and into the work place. In considering ways to achieve this, Australia has examined methods by which other messages have been disseminated effectively to similar audiences. Examples of this have included raising awareness of quarantine issues to the Australian public at large, the targeting of the biotechnology community to provide education concerning gene technology regulations. We note that in both cases it took many years to achieve sound or high levels of awareness

7. Identifying target audiences will be a key step in raising awareness of Codes of Conduct. Beginning in 1996, Australia embarked on a public education campaign to raise awareness of the quarantine legislation and of the public's responsibilities in relation to quarantine. While the population at large was exposed to the advertising campaign, key sub groups were identified and specifically targeted for education. These groups included importers, shipping companies and first time travellers. The campaign used a diverse mix of communication devices to ensure that the quarantine message effectively reached all target audiences.

8. To assist in the dissemination of information, Australia is considering outreach to the following types of institutions:

- (i) professional societies and industry bodies;
- (ii) institutional biosafety committees (IBCs), noting that Australia has a comprehensive network of IBCs, established as a requirement of the Gene Technology Act, for institutions involved in work with genetically manipulated organisms;

- (iii) animal experimental ethics committees, human ethics committees, and scientific review bodies; and
- (iv) direct targeting of institutions, including university vice chancellors, faculty heads, and the heads of institutions or companies.

An Integrated Communications Strategy

9. The principle of an integrated communications strategy using multiple, credible sources of information should also be used to disseminate a message on Codes of Conduct to scientists. Possible channels for communication might include:

- (i) print media, including scientific journals and newsletters of professional societies;
- (ii) public relations activities, including a presence at events such as scientific conferences and industry conventions, distribution of brochures, stickers and posters, as well as poster or oral presentations or video displays;
- (iii) collaborative promotions that encourage companies, professional societies or other relevant bodies to become involved in disseminating the message; and
- (iv) web links and shared internet resources, which are a powerful tool in the provision of educational material accessible to teachers in high schools, or safety officers in research and commercial establishments.

Key Concepts: Distilling the Message

10. An important technique in encouraging widespread awareness is to distil the message into one or a few key concepts that can be transmitted in a few words and in a manner that will attract people's attention. While making available detailed information on any Code is obviously important, a one line statement that encapsulates the key message in an easy to recall format would achieve widespread awareness of the existence of the Code and its basic principles.

Conclusion

11. Raising awareness of Codes of Conduct among the disparate arms of the scientific community is an important task that has to accompany the development of any Code. By targeting scientific groups early and then continuously throughout their careers, from secondary through tertiary educations and the work place, with an integrated communications strategy and distilled key concepts, we should be able to achieve sound levels of awareness of Codes of Conduct throughout this varied professional group. However, without effective measures to educate scientists about the existence and importance of Codes, attitudes and awareness will remain largely unchanged.
