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Security and defence: security sensitivity, publication and warfare



Box 16.2 Activity: Personal reflection

Is there any point to developing international treaties if they are not signed by every state, if they are not backed by effective procedures to verify compliance and if organisations below state level cannot be covered at all?



Box 16.6 Activity: Web-wandering

Put 'biopunk' into an online search engine and see what you can find out about the goings-on in the biohacking community.

Bring your results back to the group and contribute to a group discussion on this issue.



Box 16.7 Activity: Group discussion

Publication is the life blood of science, no journal should refuse to publish any findings for security reasons.

Participants should be allowed to choose their own sides unless there is reason to think that only one side is adequately represented. In this case sides can be allocated.



Box 16.9 Activity: Brainstorm

How many examples of 'dual use' research can participants list?



Box 16.10 Activity: Paired discussion

Let us imagine that it would be possible effectively to police an international ban on certain types of research. Would it ever be justifiable?



Box 16.11 Activity: Scrutinising proposals for self-regulation

Despite the risks of self-regulation a new regime of self-regulation was proposed as recently as 2006 at the Second International Conference on Synthetic Biology. The proposal argued that four steps should be taken with respect to self-governance in synthetic biology:⁵⁴

1. the improvement of screening software for oligonucleotide orders and 'a community pledge' no longer to buy from companies that do not properly screen orders for oligonucleotides, together with liaison between companies to ensure that dangerous sequences cannot be split over several orders;
2. the development of an ethics advisory committee and a hotline set up to provide free and confidential advice on ethics;
3. a website where scientists can report potential accidents and biosecurity threats, together with the creation of a professional society responsible for convening an advisory board and a code of conduct;
4. scientists should develop only 'inherently safe' organisms that cannot survive or propagate in nature, and that embody a barcode that identifies their creator.

Participants should be divided into four groups, representing:

- the public;
- science;
- the government;
- commercial interests.

Each group should be asked to read and reflect on these proposals and then report to the group as a whole their responses to them. The whole group should then be asked to discuss whether the implementation of these proposals, supplemented by institutional oversight, is likely to avoid a repeat of the response of the European public to GM.

It should be noted that those putting forward the proposals claimed that adopting them did not preclude additional, more formal, regulations.

**Box 16.12 Activity: Small group discussion**

Participants should be put in groups of four and asked to brainstorm on:

- (i) the importance of professional awareness of biosecurity issues;
- (ii) possible ways of engaging the profession in debate on such issues;
- (iii) the barriers to engaging the profession;
- (iv) ways in which these barriers might be overcome

Each group should appoint a spokesperson to report back to the group as a whole, which should then discuss the questions as a whole group.