How the media work

1. Although the media sometimes follow agendas (e.g. opposition to GM food) most journalists, most of the time, are simply doing their best to report developments clearly and accurately.
2. While there is some sensationalism and doom-mongering, reporters are primarily seeking interesting stories to entice their readers/listeners.
3. What is "interesting" is not determined solely by journalists but by gatekeepers (eg. news editors) who largely decide what wc all want to read/hear/see in the media.
4. Journalists work far more quickly than scientist writing research papers. This is partley dictated by the need to handle "news" (e.g. a disease outbreak) but is also integral to the media culture. A journalist contacting a scientist is almost always in a hurry.

Popularising science

1. The key rule is to consider very carefully the audience and what people can reasonably be expected to understand already (e.g. word such as protein, molecule, enzyme, gene). Most audiences are more mixed than one might imagine, so aim for those who know least.
2. Few of us (even scientist outside our own field) are inherently interested in learning unfamiliar detail of fundamental science. You need to build bridges with your readers/listeners by beginning with the familiar world (e.g. driving a car, listening to music, growing old).
3. Focus on relevance (e.g. possible practical applications or implications), than explain the underlying science, not the other way round. Some science (e.g. the world found to be spinning more slowly on its axis then we believed) is however intrinsically interesting, curious or counter-intuitive.
4. Use imagery to help people to grasp unfamiliar ideas – e.g. the myelin sheath of a neuron as isolation round an electrical conductor.
5. Try to help your audience to ask the right questions about scientific claims (whether from Greenpeace or a multinational company). This may involve concepts such as causality and probability.

Risk communication

1. Consider carefully your purpose when describing risks. For example, are you simply providing objective information or seeking to influence people behaviour? One way of expressing risk may be more powerful then another (e.g. one in ten of us, rather then 10% of population).
2. Think about using concrete, graphic comparisons (e.g. the population of a small town rather then 25 000 people). Risks may be compared with, for example, those of winning the lottery or being a victim of car crash.
3. If you are discussing a comparatively uncommon medical condition, you may need to inform readers/listeners about absolute as well as relative risks.
4. Distinguish between risks taken consciously (e.g. smoking) and those over which we have no control (e.g. emergence of a new, virulent recombinant influenza virus).

5. When dealing with the media and public, you rarely if ever need the precision appropriate in a research paper. Thus 23,85% means "about a quarter" (or every fourth person in this room).
6. Variance may be important (e.g. "we believe about a half of people carry this virus, but it could be as low as a quarter or as high as a three quarter"). Likewise it can be essential to explain carefully the idea of false positives and false negatives (e.g. PSA screening for prostate cancer).

Being proactive

1. In addition to responding to enquiries from journalists, scientists can take positive steps to inform the media and public about their work. Failure to do so is one reason why GM foods whose potential advantages were not publicised at any early stage, have been demonised by the media in many countries.
2. One opportunity often overlooked is to offer feature articles to newspapers. These can help to set the tone for public discussion of controversial issues such as stem cell research.
3. There are similar opportunities on national and local radio and television. As with newspapers, every day is a new day in broadcasting, whose editors are always hungry for new, relevant, timely information. Authoring a feature article gives you more control than being interviewed by a journalist.
4. Press releases (nom placed on web sites as well as being distributed as hard copies) and press conferences are the two principal means of reaching journalists.
5. Think also of possibilities for offering talks on your work and associated issues to audiences such as schools, local societies and science festival.
6. Do not be unreasonably inhibited by your speciality or by concerns that you will be judged by criteria appropriate to a scientific journal or meeting. For a general audience it may be perfectly acceptable for a bacteriologist to focus on virus infections.
7. Even after giving statistical data of this sort, you <u>are</u> likely to face questions about your own personal judgement (e.g. "Fine, professor, but can I finally ask whether you yourself ear beef?"). Be prepared for such questions, even if you consider them to be inappropriate.

GMOs – A critical review of the UK experience

Although the UK dealt well initially with public aspects of genetic modification, with for example public interest representatives on the first Genetic Modification Advisory Group, mistakes have been made in more recent years. While GMAG and its successors, including the Advisory Committee on Releases to the Environment, have been comparatively transparent and interactive with the media, their very existence has not been widely known. This has permitted opponents to argue that genetic technology has been "out of control". Another problem has been that plant breeders did not, at the right time, argue publicly the positive case for GM crops – that they could mean less use of pesticides and other agrochemicals, for example. The media and public agenda on this issue was therefore determined by lobbyists opposed to GM foods. Initial claims were that such foods were dangerous to eat, these allegations being replaced later by warnings of the risks in cultivating transgenic plants – hazards linked with unintended gene flow, for instance. In the public mind, however, "GM" is now considered simply inherently hazardous, for no specific reason. Both, scientists and journalists (as well as politicians and regulators) should be aiming to combat this irrationality. There are genuine risks associated with genetic modification, some of whose proponents have also exaggerated the likely benefits. However, these questions need to be addressed in an objective rather than hysterical way.