

Online Course in Science Journalism
Created by the WFSJ and SciDev.Net

Lesson 2
Finding and judging science stories
by Julie Clayton



Welcome to the world’s first online course in science journalism, developed by the World Federation of Science Journalists in close cooperation with the Science and Development Network SciDev.Net.

2.1 Introduction	3
2.2 What are good sources?	4
2.3 Ideas from everyday life?.....	5
2.4 Turn a crisis into an advantage	6
2.5 Reporting at the boundaries of science	7
2.6 Signing up for email alerts	8
2.7 Meet a scientist	9
2.8 But how can you find a scientist to interview?	10
2.9 Using the internet to search for scientific information	11
2.10 Covering a conference	12
2.11 Ethical dilemmas	15
2.12 Stories from publications	16
2.13 Judging the quality of your source – is it "bad science"?	18
2.14 Self-teaching question (1).....	23
2.15 Self-teaching question (2).....	24
2.16 Self-teaching question (3).....	25
2.17 Self-teaching question (4).....	26
2.18 Assignment (1)	28
2.19 Assignment (2)	29
2.20 Assignment (3)	30

This project is Funded by:

International Development Research Centre (Canada) [<http://www.idrc.ca/>]
 Department for International Development (UK) [<http://www.dfid.gov.uk/>]
 Swedish International Development Agency (Sweden) [<http://www.sida.se/>]

See this Course online at
www.wfsj.org/course/

2.1 Introduction

As a science journalist, you are faced with two options: wait for stories to come to you, or go out and find some.

If you wait for stories to come to you, perhaps via press releases, you may have a good selection to choose from, but it is also likely that the rest of the science media pack have the same story.

Going out to find your own stories requires more work, but ultimately can be more satisfying if it means you can find something more unusual – an exclusive, perhaps. And especially for journalists working in developing countries, this may be the only way to find out what research is going on in your region.

Also if you are working for a certain news outlet for the first time, it certainly is a good idea to come up with a story that nobody else has. It does not have to be a big scoop – a small but sound story can be enough to get started.

This online lesson is aimed at journalists, particularly in developing countries, who wish to enhance their skills for finding and judging the sources of science stories.

By the end of the lesson, you will be more familiar with a wide range of story sources, including internet sources, and will have considered key criteria in judging the importance of a story, the validity of a claim, and the credibility of a scientist.

2.2 What are good sources?

Ideas for science news stories can come from many different sources, and the extent to which a journalist is able to use each source will depend upon available resources, including internet access.

Primary sources are the people who tell you, in person, about something that they are directly part of, so they may be the researcher doing the work, or the patient involved in a clinical trial. They are giving their own account of what's happened.

Secondary sources are one step away from this - they are the electronic or other media in between the journalist and the primary source. They are not exclusive to the journalist.

Possible sources for science stories

Primary sources:

- Non-scientists: politicians, neighbours, other journalists, etc.
- One-to-one interviews with scientists or other scientific experts
- Press conferences

Secondary sources:

- Other media
- Press releases
- Electronic bulletins
- Discussion forums
- Websites of scientific organisations or companies
- Publications e.g. primary research papers

A journalist may wish to pursue certain sources more than others, depending on the kind of story he or she is after.

2.3 Ideas from everyday life?

Science journalists should not overlook the value of opinions from everyday life as a starting point for a good scientific story. These could come from friends, family, neighbours, people in the marketplace, or other journalists.

Talking about everyday matters such as nutrition for children could lead to investigative features about the safety and value of breast milk versus that of formula feed for babies, or about giving children food containing sugar, hydrogenated fats, flavourings and other additives.

When questions originate from people's everyday concerns, a journalist automatically has a way to relate science to the lives of their readers or audiences.

2.4 Turn a crisis into an advantage

News stories in other media can spark follow-up stories for your own news outlet.

For example, Wanzala Justus wrote this piece on "bio-latrines" [http://www.islamonline.net/servlet/Satellite?c=Article_C&cid=1157962459731&pagename=Zone-English-HealthScience%2FHSELayout] – a new solution to the problem of human waste disposal – as a follow-up to a television report by a colleague at the Kenyan Broadcasting Corporation.

A crisis or controversy covered by political or social affairs reporters may have a scientific angle. Science reporting could bring an important new dimension to the media coverage.

A good example is a feature on the SciDev.Net website by Nadia El-Awady [<http://www.scidev.net/en/features/israelipalestinian-research-walking-on-eggshells.html>] about unexpected collaborations between scientists in Israel and Palestine, despite the great political divide between the two countries.

2.5 Reporting at the boundaries of science

The interface between science and other cultural and social aspects of society is a fertile area for finding story ideas. Journalists can explore the new perspective that scientific research can bring to a debate over deeply held convictions.

This may be with regard to science-based medicine versus traditional medicine, for example, such as in this story

[http://www.islamonline.net/servlet/Satellite?c=Article_C&cid=1164545906466&pagename=Zone-English-HealthScience%2FHSELayout] about claims of a cure for HIV from a herbal medicine originally identified through religious documents. The author, Tamer El-Maghraby, took care to create balance by asking other scientists for their comments about the claim. He also described the study's limitations in terms of its small sample size and its lack of validation through publication in a peer-reviewed scientific journal.

In another example, Wanzala Justus reports on a renaissance of interest in traditional medicines that is occurring in Kenya owing to HIV, and studies into their validity according to scientific standards of proof.

[http://www.islamonline.net/servlet/Satellite?c=Article_C&cid=1157365890516&pagename=Zone-English-HealthScience%2FHSELayout] The idea for the story came from a talk delivered by a herbal medicine practitioner during an International Congress on Health and Herbal Medicine workshop in Nairobi.

Religion and science form another intriguing boundary area. Science reporters can add a new dimension, for example, to discussions about whether prayer has the power to heal or whether religious beliefs have a biological basis.

2.6 Signing up for email alerts

Many science journalists with good internet access use regular email alerts to be informed quickly about new developments and to receive press releases. Deciding which ones to sign up for is a question of personal strategy. You may find it useful to look at the most commonly used ones, but it is also worth looking for lesser-known sources.

However, it is best not to rely exclusively on email alert-driven stories: they are not exclusive to you and will appear in other media outlets.

To give the stories a more original slant, try developing a local angle – for example, by interviewing local experts for their views about a discovery overseas.

Often it is also useful to combine the information from an email alert with other recent news. So if there is an email alert on a new geothermal power plant being built, try to find more information on geothermal energy from other sources.

Watch out for dates in the future. If you find an announcement for a press conference in a month's time or the announcement of a new study that should give data a year from now, try to work towards that date. Try to collect additional material for your research in readiness. Editors just love reporters who have already done their research when a topic arises.

2.7 Meet a scientist

Journalists have the great advantage of being able to talk directly to people, even very powerful or famous ones. Other professions do not always have this privilege, so journalists need to make best use of this unique access. It is a rule of thumb that a reporter, even a science reporter, should get to know three new people per day.

The great benefit of meeting scientists individually rather than hearing them speak at a public event such as a press conference is that a private meeting is more likely to reveal what's really going on behind the veil of public relations. Wherever you meet a scientist – at a conference, in a lab, in the field, or in any other setting – they may be at liberty to talk to the press. As in any interview, they may indicate that some of what they are telling is off-the-record. If they have preliminary research results that are not yet ready for publicity, they may agree to divulge more details at a later date.

A science journalist who respects these concerns can build up a relationship of trust with scientists, keep in contact, and revisit the subject again in future, when the scientist may be happy to be quoted by the media. Maintaining a good rapport with scientists is a very worthwhile investment!

2.8 But how can you find a scientist to interview?

Journalists in developing countries may have little information about what research is going on in their region because researchers often have no resources with which to promote their research. Others may be hampered by ties with foreign institutions that oblige them to publicise their research in foreign rather than local publications.

But with a little extra effort, a journalist can find out who is doing research locally.

There are a variety of routes. **Try visiting colleges of medicine, hospitals and research institutes. Look out for banners or posters advertising conferences and seminars. Take notes and call the organisers – they are usually happy if journalists attend. This way you can make new contacts whom you may need to call in a hurry for a comment on breaking news.**

If you have an appointment for an interview, always try to find out what others in the same department or institution are doing. People will often tell you about projects they have just started – write down their names and contact them a year later.

Alternatively, you may wish to consult funding agencies, government departments, international research organisations, and conference programmes, which is made easier by the internet.

2.9 Using the internet to search for scientific information

The advantage of the internet over other information sources is its speed, the potential for finding regularly updated information sources, and the sheer quantity of information that is now available.

If you wish to dig deeper to find out more about a medical scientist's work, you can use the internet to search **online literature databases** such as PubMed, produced by the US National Library of Medicine

[<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed>].

You can also try the search engine Google Scholar, which can link to the research findings of different scientists as well as provide the scientists' contact details, profiles and areas of specialization.

You can find links to science news and free images on the Science and Development Network's website:

SciDev.Net science news links

[<http://www.scidev.net/en/science-communication/links/>]

SciDev.Net science communication resources:

[<http://www.scidev.net/en/news/>]

SciDev.Net links to free sources of images

[<http://www.scidev.net/en/content/image-link-archive/>]

However, it is worth remembering that there are several limitations to using the internet:

- It is not always easy to judge the credibility of information found on the internet, and it is important to check facts with more than one source.
- Especially in developing countries, not all scientists and their institutions or scientific societies have the resources to promote themselves and their work via the internet; and so being unable to locate information about local scientists, say, in Nigeria, does not mean that they are not there doing interesting work.
- Remember that the internet is just a tool and you should not depend upon it totally. Too often, journalists stop using other methods that may be more effective locally, like getting out of the office and going to meet people at universities and research centres.

For an extensive account of the resourcefulness that developing country journalists need in the absence of internet access, see the personal testimony by Patrick Luganda (section 2.22).

2.10 Covering a conference

Scientific conferences are very fruitful venues for meeting many scientists and finding ideas efficiently.

Conferences are a great excuse for putting science onto the news pages. They are significant scientific events because they bring together many renowned experts of a particular field who may meet only once a year or biannually. The experts present and discuss new ideas, results and conclusions, and sometimes also make new recommendations with implications for wider society. This they may do with the express intention of exploiting media interest.

But attending a conference as a reporter can be quite stressful or even frustrating if you are not prepared, and if you don't dare to talk to people directly.

It's worth doing some homework before attending a conference – with a little background reading on the conference topic you will be in a better position to judge which scientists are presenting something new and you will be better informed for an interview.

If the specialist presentations are still difficult to understand, do not be discouraged. As long as the presentation helps you to ask questions, that's fine. And always listen carefully to the discussions that follow. In the interview you can ask questions beyond just the presentation.

One question that always works is: "What important trend is emerging from this conference?"

Another useful question always is: "Who else do you think I should I talk to?"

For further suggestions on useful questions to ask during an interview, see Online Course Chapter 3: The Interview.

Conferences may also enable journalists to get an idea of a scientist's status in the scientific community – if a scientist is chairing a symposium or invited to give a formal presentation, that may mean he or she is well-respected by other scientists in the field.

2.10 Covering a conference (continued)

Engaging scientists in conversation rather than simply reporting on their presentation may lead to unexpected gains, such as a story not yet presented in public or new suggestions for contacts or places to visit. Rather than report immediately from a conference, a journalist might instead store up ideas for future and revisit the topic with phone calls or emails.

EXAMPLE:

This award-winning story

[<http://www.islamonline.net/English/Science/2004/05/article09.shtml>] on water pollution took two years of gradual development before the author, Nadia El-Awady, found the right angle. The initial contact was through conversation with representatives of NGOs and governments attending the World Water Forum. Through follow up conversations and attending workshops, the journalist then heard about a project that she felt would form the basis of a suitable story. But it was only after a field visit and establishing good rapport with the scientists that El-Awady had access to information that other journalists did not – and this formed the basis of her report.

Journalists can make use of conferences to find experts willing to provide independent comment – either at the conference or at some time in future. And, of course, scientists can also be interviewed about subjects other than those they are presenting at the conference. If they tell you something is not their field of expertise, say that you only need a rough idea first so that you can put good questions to the experts in later interviews.

It's also worth remembering that if a scientist is speaking publicly to an audience, their words are in the public domain, and journalists have the right to report them.

Developing country-based journalists may lack the funds to travel to international conferences, unless those are being held in their home town. But this need not stop journalists from getting a story that uses the conference as its news peg.

If you cannot attend a conference, you can often find details about the conference topics and speakers on the internet. You can conduct interviews in advance or during the conference by telephone or email, if the organisers help to make the speaker available.

2.10 Covering a conference (continued)

For many science journalists much of the time, conference programmes appear too daunting and technical for them to judge which speakers are worth contacting. In this case, try contacting the conference organisers – whose email and other contact details are often provided on the conference website – to ask them which presentations they might recommend for a journalist to cover.

Furthermore, if the conference is large and well sponsored, there may be a PR team that has already selected newsworthy presentations, prepared press releases, and arranged press conferences. The PR team can put you on their mailing list or can personally provide you with press releases.

Some science journalists base their entire conference coverage on news that is pre-selected by conference PR teams. The stories can be excellent and may cover important developments. But remember – there may be other good stories to be found elsewhere at a conference, outside of the press room, which are not the subject of a press release. These may be your exclusives!

2.11 Ethical dilemmas

Often in developing countries, journalists may only have the opportunity to cover a conference because they have been sponsored to attend. This can lead to an ethical dilemma for the journalists if the sponsors then put pressure on them to report favourably on the conference. The same can be true of press conferences where businesses may offer travel expenses and an attendance fee to journalists, and may in return demand positive coverage.

It is important that journalists remember to retain their editorial independence and not be swayed by bribes to suspend their critical judgement. If it means losing that sponsorship in future, this can be a difficult decision, particularly if the journalist is not well paid by their media house. But to maintain their professional reputation for being a 'seeker of the truth,' independence is a must.

Of course, these ethical issues are not always easy to solve and depending on the country, culture and newsroom, certain problems are dealt with in different ways.

In general, transparency is a very good rule. If someone pays for your trip you should let your editor know and, if possible, also your audience e.g. with a little box at the bottom of an article that reads: "The trip for this report has been sponsored by..." Also, it helps to discuss ethical problems and experiences with colleagues in order to learn for the future.

2.12 Stories from publications

Some journalists may come across new work that has just been published in a scientific journal (or about to be). They may have access to the scientific report itself – either directly from the scientists who have done the work, through scanning journal contents, or through a press release. Another type of literature a journalist may come across is review papers, which take a broader perspective on scientific findings that mostly have already been published.

It is worth bearing in mind that although such papers are aimed at a scientific readership, there can be useful story ideas contained within. But journalists will often find themselves wading through enormous amounts of very technical language and jargon. It is therefore important to know where to look for the most useful information in a scientific paper.

EXAMPLE 1:

Take, for example, a recent finding by scientists in California that brown clouds of pollution occurring over India are likely to account for poorer rice harvests because they block some of the bright sunlight that rice plants need. The findings appeared in the U.S.-based journal the Proceedings of the National Academy of Sciences (PNAS), in an "open access" paper that does not require a subscription. Click on this link to see the original paper [<http://www.pnas.org/cgi/content/full/103/52/19668>].

The title, "Integrated model shows that atmospheric brown clouds and greenhouse gases have reduced rice harvests in India," like the rest of the paper, may not necessarily appeal very strongly to many journalists. No wonder – it is written for a scientific audience familiar with the field of study.

In contrast, a press release [http://www.eurekalert.org/pub_releases/2006-12/uoc--rap120106.php] describing the same paper, "Reducing air pollution could increase rice harvests in India," presents the scientists' message more in terms that a journalist could use.

You can see a sample of resulting news stories by clicking on these links:

[<http://news.bbc.co.uk/2/hi/science/nature/6206766.stm>]

[<http://environment.newscientist.com/channel/earth/climate-change/dn10722-brown-haze-over-india-harming-rice-harvest.html>]

[<http://www.thehindubusinessline.com/2006/12/06/stories/2006120602951200.htm>]

But how can journalists best get the information they need from the original paper?

Luckily, papers in PNAS are written for a broad interdisciplinary readership, in a more accessible style than papers in many other more specialised journals.

This paper is written according to a fairly standard convention, and the quickest route for a journalist to glean useful information is to read the very first paragraph – usually called the **abstract** or **summary** – and then the **discussion** or **conclusions** towards the end.

Journalists with stamina (and perhaps a textbook) may wish to wade their way steadily through the methods and results sections and glean some extra details. These could be useful for helping you prepare to interview scientists or for adding facts and figures to your report. But it's better, on the whole, to ask the scientist for a verbal account of their methods and results, which hopefully should be more comprehensible and less technical.

EXAMPLE 2:

Another example from PNAS is this report

[<http://www.pnas.org/cgi/content/full/103/36/13463>] about the discovery of a gene that may be partly responsible the high rates of premature birth among people of the African-American group. A journalist could easily have overlooked its significance because of its very technically worded title: "A functional SNP in the promoter of the SERPINH1 gene increases risk of preterm premature rupture of membranes in African Americans."

The abstract is also very technical. The introduction, however, provides some useful background information. But it is in the discussion that the scientists allow themselves to be a little more assertive about the possible significance of their work, particularly with the phrase "...represents a significant risk factor for preterm birth in African Americans." A journalist can pick up on this and push further with an interview.

You can see examples of the subsequent news coverage at the following links:

[<http://www.newscientist.com/article/dn9802-race-difference-in-us-miscarriage-rates-illuminated.html>]

[<http://www.foxnews.com/story/0,2933,209685,00.html?sPage=fnc.health/pregnancy>]

2.13 Judging the quality of your source – is it "bad science"?

Finding stories is but the first step in journalism. Next is the important step of judging the reliability of the source.

How does it help a news outlet to have an exclusive on "Hitler's diary" and sell millions of copies in one week (as did the German magazine "Stern" in the '80s) only to lose most of its readers, plus its reputation, a week after the fraud becomes clear?

Likewise, science reporting requires special criteria need to be applied to enable you to judge "good science" from "bad science."

Even in science, you may even be dealing with a fraudster!

The question is: How can you tell?

Your reputation may depend upon your ability to do so, particularly if you are reporting on something that the scientist claims is a major breakthrough.

2.13 Judging the quality of your source – is it "bad science"? (continued)

Most scientists are honest. Others, however, will try to exaggerate their claims, encouraged by having perhaps a little supportive evidence. Still others may try to gain publicity for a claim that has little or no evidence, or which depends upon anecdotal observation rather than a rigorously conducted study.

And non-scientists may also try to hoodwink the media by exaggerating or falsely claiming to have scientific evidence.

EXAMPLE:

Click on the following link to see a recent example of research fraud in South Africa, involving unproven claims for a type of herbal treatment for HIV.

Bolognesi, N., "Bad Medicine," *Nature Medicine* 12: 723-724 (2006)
[<http://www.nature.com/nm/journal/v12/n7/full/nm0706-723.html>]

2.13 Judging the quality of your source – is it "bad science"? (continued)

It can be helpful to use the following questions to find out if the person you are interviewing is likely to be giving you an honest and reliable account of their work or whether they may be exaggerating its importance and significance:

1. **Is the scientist recommended by a trusted source?** This may be another scientist, or a scientific society or another organisation such as a disease charity.
2. **Who does the scientist work for?** (A reputable company or university?)
3. **How is the study funded?** Check whether this is through public or private money by looking in annual reports, in scientific papers, and on websites. A publicly funded study, for example, will have had its protocol scrutinized by experts in order to compete against others for funding.
4. **What has the scientist published previously?** Check research publications e.g. via PubMed or Google Scholar. Bear in mind, however, that not all scientists have all their work or other professional information on the internet. This is particularly true for scientists in developing countries where internet access remains limited and scientific research may be published in journals that lack the resources needed to become accessible online.
5. **Is the scientist likely to profit from the sale of any products relating to the work?** Many journals require authors to declare competing financial interest. Less scrupulous scientists fail to disclose these in their publications. A journalist may therefore have to investigate further – for example, by talking to contacts of the scientist to ask why they are making a certain claim, and about the timing of the claim – Is it intended to coincide with a stock market flotation of company shares, for example?
6. **Is the scientist's claim published in a peer-reviewed journal?** Scientific claims made directly to the media without first passing the scrutiny of peer review should be treated with caution, as the quality of the research has not been validated.

2.13 Judging the quality of your source – is it "bad science"? (continued)

Do not worry if, to begin with, you find yourself going round in circles, trying to ascertain a scientist's reputation, but finding it difficult to judge their papers or know whom to contact for advice. Over time, you will get to know a particular field and its practitioners, and will find it easier to judge the significance and importance of a particular scientist's claim, whom to speak to for advice, and whom to trust.

Another difficulty is trying to be objective about the claim of scientist with whom you may be personally acquainted. There is the danger that your judgement maybe swayed, and in this case it is worth checking with a colleague who does not know the scientist.

You may not spot every trickster, as some disguise themselves exceedingly well. But you can at least avoid giving the wrong kind of publicity to someone whose work is not worth reporting. Sometimes, you may have an opportunity to expose a case of research fraud.

2.13 Judging the quality of your source – is it "bad science"? (continued)

If you suspect sloppy science or even research fraud, it is up to you whether or not to report on the work. Your reputation is at stake, so it may be best to report only on scientifically solid (evidence-based) claims. On the other hand, reporting the failings of a claim can make a good story in itself.

EXAMPLE:

See the "Bad Science" column of the UK newspaper The Guardian for some examples of how journalists can produce a good story by exposing the flaws in some scientists' claims.

[<http://www.guardian.co.uk/life/badscience/>]

For further tips on how to judge the quality of research, and even to spot research fraud, see the SciDev.Net E-guide to science communication

[<http://www.scidev.net/en/science-communication/practical-guides/>]

2.14 Self-teaching question (1)

In the following table, click on the links to see examples of different types of science news stories and complete the table to indicate which type of source the journalist was likely to have used to find each story – a primary or secondary source.

News story link	Primary or Secondary Source?
Southern Africa listed as site of huge square kilometre array telescope [http://www.scienceinafrica.co.za/2006/october/ska.htm]	
Poor could benefit from simpler TB vaccine [http://www.mg.co.za/articlePage.aspx?articleid=287524&area=/insight/insight_africa/]	
Ghana's malaria problem gets boost from vaccine trials [http://voanews.com/english/2006-10-10-voa26.cfm]	
Africa begins malaria vaccine trial [http://news.bbc.co.uk/1/hi/health/6047836.stm]	
About 60,000 gold miners to participate in TB research [http://www.buanews.gov.za/view.php?ID=06102008151005&coll=buanew06]	
New findings super-size our tsunami threat [http://seattlepi.nwsourc.com/local/211012_tsunamiscience07.html]	
Nigerian scientists allay fears of West African tsunami [http://www.scidev.net/content/news/eng/nigerian-scientists-allay-fears-of-west-african-tsunami.cfm]	
"A shocking lack of evidence" [http://www.nature.com/nature/journal/v443/n7114/full/443888a.html]	
Bottlenecks slow Ethiopia's fight against malaria [http://www.scidev.net/content/features/eng/bottlenecks-slow-ethiopias-fight-against-malaria.cfm]	

2.15 Self-teaching question (2)

Click on the following links to press releases announcing scientific advances:

Moderate drinking may boost memory, study suggests

[http://www.eurekalert.org/pub_releases/2006-10/osu-mdm102506.php]

Rapid diagnosis tests for meningococcal meningitis

[<http://www.wfsj.org/course/en/L2/Press01.html>]

IDRC announces new research program on communicable diseases in Latin America and the Caribbean

[<http://www.wfsj.org/course/en/L2/Press03.html>]

Answer the following questions:

1. Who has issued the press release?
2. What is the agenda of the publicity team? (e.g. do they work for a university, a private company, the government?)
3. What is the reputation of the scientists whose work is being announced?
4. What contact information is provided? (Is it for the scientists, the organisation or PR team?)
5. Have the scientists published articles previously in peer-reviewed scientific journals?
6. Are quotes or contact details provided by independent experts?

2.16 Self-teaching question (3)

You can search PubMed, [<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed>] produced by the U.S. National Library of Medicine, with, for example, a topic or the name of a place and/or person, to reveal relevant research publications. The result will provide the names, addresses, and some email addresses for the scientists involved, as well as relevant publications by other authors.

QUESTION 3:

a) Search PubMed [<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed>], produced by the U.S. National Library of Medicine for **climate change and Africa and rainfall and drainage**. This will produce a list of articles, including one titled, "Changes in surface water supply across Africa with predicted climate change," with the first author **M de Wit** from the **Africa Earth Observatory Network (AEON)** and Department of Geological Sciences, University of Cape Town, South Africa.

Clicking on the name of this author will bring up other publications by the same author, and links on the right-hand side to "related articles" by different research groups. This is one way to track down the names of different research teams working on a similar topic, providing you with a range of options if you are looking for experts to comment on this area of research.

b) With regard to clinical trials for new drugs or vaccines, try consulting an international clinical trials database, such as that provided by the U.S. National Institutes of Health [<http://www.clinicaltrials.gov/>] or one listed in the free access electronic journal PloS Clinical Trials [<http://journals.plos.org/plosclinicaltrials/resources.php>]

2.17 Self-teaching question (4)

In some cases, particularly with regard to treatment for disease, you may be able to spot the warning signs of questionable research just by checking the website of the company that markets the treatment.

Look at the website for Secomet [<http://www.secomet.com>], a company that markets the unproven herbal remedy for HIV mentioned in section 2.13.

In some cases, particularly with regard to treatment for disease, you may be able to spot the warning signs of questionable research just by checking the website of the company that markets the treatment.

Ask the questions in the table below, and compare the answers for each company.

Question	Secomet	Amgen
Does the company claim a "cure" or "reversal" of the target disease?		
Is there scientific evidence for the claims published in peer-reviewed journals?		
Are all the ingredients identified in precise biochemical terms and quantities?		
Is the treatment only available privately, or from only one source?		
Is there full disclosure of product safety information		
Has the product been tested in controlled clinical trials?		
Is the product registered with the medicine control council (if one exists) in the country in which it is marketed?		

2.17 Self-teaching question (4) (continued)

When investigating a claim such as for a new disease treatment, you may also wish to perform the following steps (adapted from SciDev.Net training materials available online at [<http://www.itrainonline.org/itrainonline/mmtk/hiv aids.shtml>]):

- Look for further information around the claim, scientist or company, using a general search engine such as Google. This will produce articles written previously about the company and its claims, and may locate the company's own website, with press releases and information about key staff members. You can check their credentials and affiliations.
- Go to the New Mexico AIDS Info Net fact sheet 206 titled "How to spot HIV/AIDS Fraud" for tips on what to look for. [<http://www.aidsinfo.net/articles.php?articleID=206>]
- See also some examples of "AIDS related Quackery and Fraud" cited at Quackwatch. [<http://www.quackwatch.org/01QuackeryRelatedTopics/aids.html>]
- Search for independent experts who can provide outside comment on the claims. Local universities, research institutes, funding agencies, hospitals, government departments or NGOs may be able to recommend scientific experts who are willing to talk to the media.
- Alternatively, you may find experts via their publications on a similar topic, on PubMed [<http://ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=PubMed>] or through a clinical trials database (for example at the HIV Prevention Trials Network [<http://www.hptn.org>], the HIV Vaccine Trials Network [<http://www.hvtn.org>], or AIDS Info [<http://www.aidsinfo.nih.gov>]).
- Another route would be to visit websites of conferences covering the topic concerned, and see who has chaired or spoken at symposia on the topic. Their abstracts may be available online.

2.18 Assignment (1)

Sign up and begin receiving email alerts from the sources listed in the following table (or search their online archive). Discuss with your mentor how useful these sources are likely to be for your readers/audience compared with your usual sources.

Email Alert Source	News focus
EurekAlert! [http://www.eurekalert.org/]	All areas of science and technology
Global Health Reporting [http://www.globalhealthreporting.org/]	Health issues, particularly HIV, TB and malaria
Science and Development Network [http://www.scidev.net]	Science and technology in developing countries
Science in Africa [http://www.scienceinafrica.co.za]	African scientific research
ProMed-Mail [http://www.promedmail.org/pls/promed/f?p=2400:1000]	Infectious diseases
Nature Press Release [http://press.nature.com/press/servlet/Content]	All areas of science and technology

2.19 Assignment (2)

To find scientists in your region via the internet, try these steps:

1. Use search engines such as Google, Yahoo, msn, using terms appropriate to your chosen topic and locality, for example: **malaria research centre and Africa**.
2. Browse the links that appear and see which organisations carry contact information for researchers in your area.
3. You may find the organisation AMANET (the African Malaria Network Trust), and a database of malaria researchers preparing for clinical trials of malaria vaccines in Africa. [<http://www.amanet-trust.org/ext/database.htm>] Click on the link to AMANET's research directory, listing further details of research partners in Africa. [http://www.amanet-trust.org/ext/database/amanet_directory.pdf]
4. See if the organisations highlighted in your internet search also list events and meetings. These may provide useful information and ideas for science stories. AMANET, for example, links to a workshop on leadership skills. [<http://www.amanet-trust.org/ext/workshops/2006/management.htm>] The topic of this workshop indicates that the scientists who participated are likely to be top researchers and so would be worth contacting to get an overview of current progress in their field. They may also be willing to be the subject of a personal profile type of feature story.
5. These same steps can be repeated for many different topic areas to reveal research organisations that have websites and contact details.

Please note: Many research centres in Africa do not yet have their own websites, and you may only find them listed as collaborators of other organisations. Bear in mind too, that many websites might be completely out of date. Also, if someone has a boring website this does not mean he or she does boring research.

2.20 Assignment (3)

Try the following steps using the internet:

1. Use a search engine such as Google to find links to scientific conferences on a particular topic, for example using the search terms **HIV conference and Africa** or **climate change conference and Africa**.
2. Alternatively, use a web-based conference directory such as Conference Alerts, [<http://www.conferencealerts.com/>], or the Science and Development Network's Events calendar [<http://www.scidev.net/events/>]. These will provide you with links to various conference listings.
3. Explore these further to find the scientific programmes of individual conferences, including the list of speakers, their topics, and abstracts or summaries of their presentations.

From these, you can find scientists and topics that may be of interest to your readers. If you already know some background about the subject, you may feel confident to judge which scientist is likely to report an important advance in the field.

With your mentor, build up a plan for which conferences you might like to cover over the next six months, either by attending in person or remotely. Together you can begin selecting interesting topics and speakers and deciding how you might make use of the material, for example for news stories versus features, a special page or programme, and so on.