

# THIS WEEK

## EDITORIALS

**PLUTO** The planetary dance at the edge of the Solar System **p.6**

**WORLD VIEW** Cheer up chemists, the public is on your side **p.7**

**INCOGNITO** Female songbirds dressed down for travel **p.9**



## Health plan

*Proposals to improve the international emergency response to disease outbreaks in the wake of the Ebola epidemic should be implemented — but local solutions are the best defence.*

As West Africa starts to recover from the worst of the Ebola epidemic, how can scientists, health experts and politicians ensure that the world is better prepared next time? The global failure to respond quickly and effectively to the epidemic has prompted much soul searching, and already ideas about what needs to change are emerging. The danger is that the political will to realize such solutions — including better-tailored research agendas and streamlined clinical-trials regulation — will be harder to find as Ebola fades from the headlines and public concern moves on.

It is good news, then, that plans to improve global disease response are in the pipeline, and could be announced as soon as this weekend. Prepared under the leadership of Germany's Chancellor Angela Merkel, the proposals are expected to be presented at the annual summit of the G7 group of leading industrialized countries, due to take place in Elmau, Germany, on 7–8 June. The package of measures is a promising sign that politicians at the highest level take the threat of infectious disease seriously, and it lays out some sensible suggestions.

Surveillance is key. Ebola first emerged in West Africa in December 2013, but was not identified until the following March, a delay that allowed it to spread out of control. The new proposals aim to boost surveillance systems by providing low- and middle-income countries with US\$12 million to \$15 million annually. That might not sound much, but experience in poorer countries shows that a little money can go a long way in building capacity, such as a trained workforce. In many countries, new investments can also piggyback on existing networks.

Another lesson of Ebola is the dire need for modern tools such as diagnostics, drugs and vaccines. Yet the world's biomedical research and development system is simply not geared towards generating products for which there is little or no market.

### BE PREPARED

The G7 plan is expected to address this, initially with a survey of potential threats and an audit of available candidate drugs and vaccines. A funding pool of \$50 million to \$100 million annually would then take the most promising candidates through to phase I clinical trials to test their safety. This would mean that, in the event of an outbreak, they could be taken directly into clinical trials to test their efficacy in the field. This is a sensible proposal. One of the most frustrating aspects of the Ebola epidemic was that several potential drugs and vaccines existed but had not undergone phase I trials.

Public-private partnerships created over the past 15 years have encouraged the research and development of products to address neglected diseases and others that do not have large markets. They can also serve as a hub for coordinating research and attracting further funds. In principle, therefore, if similar partnerships were aimed at potential threats, they could accelerate product development. Research agencies must not only step up support for work on such threats, but also translate this into medical countermeasures (see page 18).

Another welcome proposal is to speed up trials by developing protocols and experimental designs before outbreaks occur, and to have these pre-approved by regulators, so that when there is an outbreak, trials could start immediately. For Ebola, such trials were agreed by researchers, regulatory authorities and affected countries only after the epidemic was under way. (To their credit, everyone involved pulled out all the stops to cooperate and fast-track the process. They agreed on protocols and experimental designs in a matter of months, a procedure that normally takes years.)

**“The ultimate goal must be functional health systems in every country.”**

The proposals also call for \$150 million to \$200 million per year to create a reserve force of 10,000 scientists and health-care workers who can be rapidly deployed during an outbreak — a sort of United Nations ‘Blue Helmets’ for health. The oft-touted idea has merit, but

should not distract from the more fundamental need to expand the global workforce of disease researchers and health-care workers.

Who would be in charge of such a force? Indeed, who would coordinate the other measures if they are approved? And how will they sit with existing initiatives, such as the US-led Global Health Security Agenda coalition of several dozen countries and organizations that was launched in February last year?

The new proposals call for the creation of a \$40-million-a-year multilateral organization that would be responsible for global outbreak response. Housed within the World Health Organization (WHO), the unit would be autonomous enough to avoid WHO bureaucracy. It would have a mandate to link to UN agencies, the World Bank and other organizations — including non-governmental organizations, industry and philanthropies. Such inclusiveness has too often been insufficient.

The G7 and other countries should back the suggested moves. Governments and organizations should find the cash required. But all involved should remember that international systems for responding to outbreaks are only part of the picture — as starkly exposed by Ebola. What is most important is having robust health systems on the front line.

At the World Health Assembly, the annual meeting of the health ministers of WHO member states, which was held last month in Geneva, Switzerland, Merkel rightly said that the ultimate goal must be functional health systems in every country. That was the explicit aim of the revised International Health Regulations, adopted in 2007 by 196 countries, including WHO member states, which committed to targets for surveillance and emergency-response infrastructure.

Yet most countries missed the 2012 deadline for achieving these targets, with only 64 countries reporting being up to speed as of this year. At the Geneva meeting, the deadline for the remainder was extended yet again, to 2016. In the current flurry of interest in emergency initiatives, society should not forget that what is needed most is long-term investment in research and health-care systems in all countries, so that they can better respond to disease threats themselves. ■