

SPECIAL REPORT

High noon in Libya

This week sees yet another crisis point in the Libyan case of six foreign health professionals sentenced to death on charges of injecting hundreds of children with HIV. **Declan Butler** traces the efforts of scientists to help establish the truth.

Rich Roberts didn't realize what he was getting into last October, when he decided to mobilize his fellow Nobel laureates to draw attention to a death-penalty case in Libya. Six medical workers — five nurses from Bulgaria and a Palestinian doctor — were charged with deliberately infecting more than 400 children with the virus that causes AIDS. Roberts, like many scientists, was shocked at how scientific evidence exonerating the medical workers had been ignored, and decided to do something about it.

For Roberts, a 1993 Nobel laureate in medicine or physiology, it was the start of a relentless commitment. Over the past nine months, he has had a string of meetings with top-level diplomats, and on 10 June he even flew to Libya for a late-night meeting at the Corinthian Hotel in Tripoli with Seif al-Islam Gaddafi, son of the Libyan leader Muammar al-Gaddafi, to try to help find a solution.

Roberts has also spent endless hours gathering an eventual 120 signatures from Nobel laureates

— a record — for an open letter to Muammar al-Gaddafi. "A miscarriage of justice will take place without proper consideration of scientific evidence," warned the letter (see *Nature* **444**, 146; 2006). And it called on "the appropriate authorities to take the necessary steps to permit such evidence to be used in this case".

On 31 October, just days before it was published, Roberts hand-delivered the letter to Libya's ambassador to the United Nations, Attia Omar Mubarak. Their meeting in New York lasted an hour and a half. Mubarak was dismayed about the letter, arguing that the Islamic way was to try to negotiate a settlement between the accused and the injured. But, says Roberts, Mubarak did admit the possibility that the whole thing was an accident that had been seized on by prosecutors.

As *Nature* went to press this week, Libya's Supreme Council of the Judicial Authority was expected to annul or commute the death sentences of the six medical workers, a verdict



that had been upheld by the country's supreme court just days before. The saga's anticipated ending is the result of months of careful negotiating between diplomats, informed and helped along by the input and advocacy of leading scientists.

Consideration of solid evidence is something the medical workers need badly. They were arrested in 1999, after an outbreak of HIV in more than 400 children at the Al-Fateh hospital in Benghazi; more than 50 of them have since died. The medical workers were initially charged with deliberately injecting the children as part of a plot by the US Central Intelligence Agency. Those charges were then dropped, with prosecutors now claiming that the medical workers used the children as guinea pigs to test a therapy in an illicit clinical trial.

In the midst of such spy-novel overtones, scientists have worked to inject credible evidence into the case. For instance, Vittorio Colizzi, an AIDS researcher at Tor Vergata University in Rome, Italy, testified at the medical workers' first trial along with Luc Montagnier, whose group at the Pasteur Institute in Paris discovered HIV. The scientists presented evidence that the infections were accidental, the result of a lack of safety precautions at the hospital. Other researchers, including Luc Perrin of the Geneva University Hospital in Switzerland, had reached the same conclusions independently. But the court threw their arguments out, on the basis that an investigation by Libyan doctors had reached the opposite conclusion.

THE TRIPOLI SIX



Ashraf Ahmad Jum'a



Valia Cherveniashka



Snezhana Dimitrova



Nasya Nenova



Kristina Valcheva



Valentina Siropoulo



Activist groups have shown their support for the medical workers sentenced to death.

For Colizzi, the stakes go beyond the death penalties. He fears that blaming the medical workers is part of wider denial of AIDS by Libya, which has a large population of migrant workers from sub-Saharan Africa who have HIV. Libya and many countries also need to face up to the problem of hospital-borne diseases and to introduce safe healthcare programmes, he adds.

United front

Last autumn, after an editorial in *Nature* called for activism (see *Nature* 443, 605–606; 2006), scientific and human-rights groups including the American Association for the Advancement of Science, the Federation of the European Academies of Medicine, and the New York Academy of Sciences renewed public appeals and letter-writing campaigns to politicians. Robert Gallo, an HIV expert at the University of Maryland in Baltimore, and 43 other leading international researchers followed with a letter in *Science*.

Although most groups kept their actions to appeals, others were more hands-on. The Massachusetts-based Physicians for Human Rights campaigned publicly, and used its well-established political networks to quietly press the case. The International Human Rights Network of Academies and Scholarly Societies also worked behind the scenes.

Meanwhile, a team of European experts in

the molecular phylogenetics of viruses decided to apply their expertise to the HIV sequences of the infected children being treated in Europe. The initiative of the group, who until then knew little about the case apart from what they had read in the news, was to provide crucial new evidence.

The initial phylogenetic analyses of the sequences confirmed epidemiological evidence that the infection had started at the hospital before the medical workers had started working there. As the retrial drew to a close, the researchers worked night and day to finish their analyses, suspending all other uses of their 40-processor cluster supercomputer to dedicate it solely to analysis of the Libyan sequences.

Given the stakes, the team tested and retested their findings using multiple models. “We decided to throw the book at the data,” recalls Oliver Pybus, an evolutionary biologist at the University of Oxford, UK. The results of every model were concordant; the start of the outbreak predated the March 1998 arrival of the medical workers. The paper was published online in *Nature* on 6 December, just before the scheduled court verdict (see *Nature* 444, 836–837; 2006).

On 19 December, the court again handed down the death sentence to the medical workers. But if the findings had no effect on the court



AIDS MEDICS IN LIBYA

Find all our coverage of this story online.

www.nature.com/nature/focus/aidsmedicslibya

L. LARBI/REUTERS

P. PETROV/AP

decision, they nonetheless had a major indirect effect by highlighting that scientific evidence had been ignored. The paper, coming on top of the Nobel letter and the rest of the scientific advocacy, catalysed an explosion of international outrage to the verdict, putting intense pressure on both Libya and the international community to renew efforts to find a way out of the crisis.

Then, on 1 January 2007, Bulgaria joined the European Union — a further turning point in the case, as it could now count on the diplomatic clout of the 27-nation body. In the months that followed, the most prominent role in talks was by diplomats from the European Commission and Britain, and from Seif al-Islam Gaddafi — a key intermediary through his charity, the Gaddafi Development Foundation. By contrast, US officials, although calling for Libya to exercise clemency, did not figure prominently behind the scenes.

Political influence

Events accelerated in early June, with visits to Libya by Benita Ferrero-Waldner, the European commissioner for external affairs; Tony Blair, the British prime minister at the time; and Frank-Walter Steinmeier, the German foreign minister. A possible deal that emerged was that the Supreme Court would uphold the death-penalty verdict, but that this would be quickly cancelled by a higher political body. The strength of the international medical and scientific advocacy gave diplomats additional grounds to push towards reaching a speedy conclusion.

The broad contours of the proposed deal remain as they have long seemed: humanitarian aid for long-term treatment of the infected children, which scientists emphasize is essential as the children too are victims of the tragedy.

“Scientists have worked to inject credible evidence into the case.”

Families of the children, who have been told for years that

the medics were guilty, are expected to receive US\$1 million per child in compensation, funnelled through the Gaddafi foundation. Media reports have portrayed this as debt relief for money Libya owes dating back many decades. But the finer details of the diplomatic settlement remain shrouded in mystery, and it is far from clear as to where the money will come from.

For Roberts, the experience of this case has convinced him that scientists can do more in human-rights causes. Writing letters is useful, he says, but scientists can make a bigger difference if they engage personally with the diplomats and others involved. “We scientists can be much more effective if we are prepared to spend the time fighting for the issues in which we believe strongly.”

Declan Butler