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## Infectious disease surveillance update

### Polio in Africa

The Central African Republic (CAR) has become the seventh polio-free country to have an outbreak caused by polio virus imported from Nigeria. The last paralytic polio case reported in CAR was in July 2000. This latest case follows the reporting of type 1 poliovirus spreading from Nigeria to Benin (one case), Burkina Faso (seven cases), Cameroon (one case), Chad (five cases),

### Tuberculosis vaccine research receives boost

The Gates foundation has pledged US \$82.9 million in what is the largest grant ever, to develop new tuberculosis vaccines. The grant will more than double the amount spent annually on tuberculosis vaccine research worldwide, and will be given to The Aeras Global TB vaccine Foundation to fund human trials of promising tuberculosis vaccines, and early research on the next generation of vaccines. Jerald Sadoff, President of Aeras, and the former clinical Director for Vaccine Development at Merck, is optimistic. "Our goal—and we believe it is achievable—is to license and deliver a more effective tuberculosis vaccine within 10 years". The main areas of focus will be on vaccine trials. Two candidates in the pipeline are the genetically modified rBCG30, an enhanced version of the BCG vaccine, and a fusion protein that combines two proteins from the pathogen that are primary targets of the immune system. The other areas of research will be improved animal models and next-generation vaccines.

Another vaccine hopeful for tuberculosis has just entered the first phase of human safety testing, and is the first recombinant vaccine to reach human trials in the USA. The National Institute of Allergy and Infectious Diseases supported the research on the vaccine, named Mtb72f, in collaboration with a Seattle biotechnology company, Corixa, and GlaxoSmithKline Biologicals who will conduct the trial. Phase 1 will enroll 20 volunteers to assess vaccine safety.

Ghana (eight cases), and Togo (one case). Clare Hajaj (UNICEF) told *TLID* that it was critical for the northern states of Nigeria to resume immunisation. "These areas now constitute the most active single viral reservoir in Africa", she explained. "West Africa is now at a turning point, they can get rid of it [polio], as they did until recently. If they were to start immunising tomorrow until every child was vaccinated, we could stop transmission in the low season, and be in a good position again". But doubts over the safety of the vaccine still loom. Islamic and government leaders have visited vaccine production sites, and are awaiting further testing of the vaccine with the hope that they will be finally convinced of the vaccine's safety. "By Feb 18, we hope this controversy will be over, and we can resume our campaigns", said David Heymann (WHO). On Feb 23, it is hoped that ten west African countries will take part in a synchronised campaign to immunise 63 million children. But Hajaj feels the delay in Africa has been very costly, diverting attention from other countries like India and Pakistan, where resources are urgently needed on a much larger scale. "An additional US\$150 million is needed to fund our activities during 2004 and 2005", Hajaj added.

### SARS in China

China has now reported its fourth case (three confirmed and one probable) of severe acute respiratory syndrome (SARS). The latest laboratory-confirmed cases include a 35-year-old business man, and a 40-year-old Director of a hospital and practising physician from Guangzhou, Guangdong Province. Both cases had a mild form of the disease and have made a full recovery. The sources of infection in these most recent cases are unknown. In the case of the 20-year-old waitress (*Lancet Infect Dis* 2004; 4: 65), experts are still investigating a possible animal source. There is some circumstantial evidence that the waitress was infected from contact with Himalayan palm civets. Samples collected from cages that housed civets at the restaurant where the waitress worked have tested

positive for the SARS coronavirus. However, evidence that civets transmit the virus to human beings remains inconclusive.

### BSE in the USA

On Feb 9, 2004, the US Department of Agriculture (USDA) announced the end to its search for additional cases of bovine spongiform encephalopathy (BSE). The field investigation of the case of BSE in a cow in the state of Washington is now complete. "We feel very confident the remaining animals, the ones we have not been able to positively identify, represent little risk", said Ron de Haven, chief veterinarian at the USDA. The authorities checked 189 farms and ranches and tested 255 animals, none of which had BSE. But an end to the search means that the fate of 11 of the 25 cattle that are believed to have eaten the same feed as that given to

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Cows in quarantine in Mabton, WA

the infected Holstein in Washington will remain a mystery. The 25 cattle were among 81 born into the birth herd of the index animal from Alberta, Canada, and shipped to the USA in 2001. Only 29 of the 81 cattle have been accounted for. Over 2000 tons of meat and bone meal contaminated with protein from the positive cow will soon be disposed of. But officials are still cautious, since the source of the feed thought to have sickened the Holstein is still unknown, and they cannot be certain that all 95 million head of cattle in the USA are free of BSE. An international review panel has warned that other cases are likely.

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