around one-fifth of their 100 research and development staff committed to the project. Scientists say smallpox and anthrax pose the biggest germ-warfare threats, but only smallpox virus has pandemic potential. Military strategists are concerned that virus lots retained by the Soviet Union during the Cold War could fall into the hands of militant groups or rogue states. CK http://id.medscape.com/42939.rhtml?srcmp=id-092101

Defending against bioterrorism

Anthrax, botulism, smallpox, plague, Ebola and the zoonosis tularemia all make the CDC's A-list of potential biological weapons. In the face of such threats, following the September 11th terror attacks, many Americans have reportedly purchased antibiotics and gasmasks. Others would like to receive vaccinations. However, an effective vaccine is only available for smallpox and quantities of the vaccine are limited. Mass vaccination programs against potential biological threats would be impractical and, as with any vaccination campaign, would carry some degree of risk. Instead, antibiotics could be used to treat some of the class A diseases. US officials have assured the public that the government is fully prepared to deal with a potential biological attack. Although many people are sceptical, others feel that the difficulties inherent in producing and spreading significant quantities of dangerous microorganisms are enough to deter many would-be bioterrorists from making the attempt. AV http://www.bt.cdc.gov/Agent/Agentlist.asp

Artificial cow eradicates tsetse

One of Africa's most harmful pests, the tsetse fly, which transmits fatal sleeping sickness in humans and nagana in cattle, has been all but eradicated from parts of the continent with the help of a novel artificial cow. Developed by an international group of researchers, the artificial cows attract tsetse flies by using kairomones to mimic the smell of real cattle. The fake cattle are impregnated with insecticides that kill any tsetse flies that are attracted to them. Artificial cows were introduced into Zimbabwe in the mid-1980s, when thousands of cattle were infected with nagana. Cases have plummeted to practically zero and have remained at this low level for the past 5 years, largely owing to the use of artificial cows, of which ~60,000 are now in use. The fake cows also act as an effective barrier to stop tsetse flies re-invading areas already cleared. CK http://www.mediscover.net

The glass-eaters

Just how deep is the deep biosphere? Cores taken from glass, super-cooled lava at the ocean's floor, reveal microbial 'tunnels' deep in the rock. Researchers found evidence of bioalteration of glass 500 m below the earth's crust and extensive bioalteration down to 300 m. Traditionally it was thought that inorganic processes alone were responsible for dissolution of lava. The recent findings (published in Geochemistry, Geophysics, Geosystems) build on mounting evidence that microorganisms play an important part in the alteration of glass. The extent of this role in nutrient cycling is not yet known. AV http://scrippsnews.ucsd.edu/releases2001/staudigel_rockeaters.html

Anthrax-resistance gene located

Identification of an anthrax-resistance gene in mice could lead to new anthrax therapies. Investigators from Harvard Medical School have pinpointed the resistance gene, kif1C; different alleles of the gene result in either susceptibility or resistance to anthrax lethal toxin. Kif1C is a molecular motor protein, but why certain forms of the protein make macrophages resistant to the anthrax toxin is unknown. In the event of an anthrax outbreak in the USA, officials are prepared to use antibiotics to fight the disease. However, to be effective against anthrax, antibiotics must be administered promptly. The new findings could help explain what happens in the early stages of the disease and could lead to effective preventative measures. AV http://www.hhmi.org/news/dietrich.html http://www.eurekalert.org/pub_releases/2001-10/hms-aig092801.php

2002 'flu vaccine finalised

The recommendation for the composition of the vaccine for the 2002 Southern Hemisphere influenza season has been decided following agreement by international experts at a WHO meeting held in Cannes, France in September. Around 200 million influenza vaccine doses are produced and given globally every year. The annual decision about the vaccine composition is made possible by the coordinated work of >110 influenza laboratories and four WHO Collaborating Centres. It has been recommended that the influenza vaccine for 2002 in the Southern Hemisphere contain the following three components: an A/Moscow/10/99(H3N2)-like virus; an A/New Caledonia/20/99(H1N1)-like virus; and a B/Sichuan/379/99-like virus. This vaccine is intended for use from May to October 2002. CK http://www.who.int

MMR jab safe after all?

Fears that the MMR vaccine is associated with increased risk of inflammatory bowel disease or autism appear to be totally unjustified, according to a review in Archives of Disease in Childhood. Dr David Elliman from St George's Hospital, and Dr Helen Bedford from the Institute of Child Health, both in London, review data that demonstrates the safety of MMR vaccine. This includes results from a study showing no association between the vaccine and bowel disease, carried out by the group who first suggested the link in the early 1990s, and results from a study of children up to 3 years after vaccination, which found no association between the vaccine and autism. Elliman and Bedford believe that MMR vaccine is safer than giving single vaccinations, which are unlicensed, and of which the safety, potential side effects and efficacy are unknown. CK http://id.medscape.com/43063.rhtml?srcmp=id-092801