NEWS IN BRIEF

THE HOT VACCINE

The Serum Institute of India has manufactured a vaccine that can tolerate temperatures upto 40°C for upto 3 weeks. This miraculous vaccine is called MenAfriVac and was developed for mass immunization against Meningococcus A in Africa. The desperate need for such a vaccine was felt when a massive epidemic of meningococcemia swept Africa between 1996 and 1997 affecting more than 250,000 patients annually, and killing up to 25,000 persons every year. Funded largely by the Bill & Melinda Gates Foundation, and developed by Dutch and US researchers, the Serum Institute of India was commissioned to manufacture it.

This vaccine does not require the rigorous cold chain that is vital for most vaccines. It uses a technology called controlled temperature chain (CTC) that has been developed to provide vaccines in remote areas where cold chain maintenance may not be possible due to erratic electricity supply and lack of ice manufacturing capability. Using a CTC, the MenAfriVac meningitis A vaccine and its diluent can be removed from the 2-8°C cold chain for a single period of time not exceeding four days. During this period, it can be stored, transported and administered at temperatures up to 40°C. A peak threshold indicator card, placed inside the vaccine carrier, will inform teams and staff if peak temperatures of 40°C are reached. Because the health worker need not return to the health center every night, more people in remote areas can be reached. It is estimated that CTC approach can reduce the cold chain-related campaign costs by 50 per cent. For the remaining MenAfriVac campaigns between 2014 and 2016, the savings would translate to over $12 million dollars. Since it is manufactured in India, the cost of one dose is Rs 36/- or just 60 cents as against $5 for the polysaccharide vaccine previously used. A trial comparing use of the vaccine with CTC *versus* standard cold chain maintenance in rural Benin has been recently published in the journal *Vaccine*. Neither group had a case of meningitis A, and the vaccine remained viable at temperatures as high as 39°C. (*The Hindu 5 March 2014; http://apps.who.int/iris/bitstream/10665/86018/1/WHO_IVB_13.04_eng.pdf*)

THE QUALITY OF INDIAN DRUGS

Surprise checks conducted by the Central Drugs Standard Control Organisation (CDSCO) to test the quality of drugs on a monthly basis last year has found that 2.3% of the drug samples were sub-standard. No spurious drugs were detected. The surveillance report was released by the central drug regulator possibly in response to various reports in American media casting doubts on Indian drug quality. Last month a group of US academicians and doctors briefed American Congress on the perils of sub-standard drugs from India. The Indian pharmaceutical industry has reacted strongly to these 'sweeping generalizations', and asked that specific details of sub-standard drugs – and the specific companies – be made public.

Of 1123 drugs tested by the DCGI (Drug Controller General of India), 26 failed to qualify. Highest number of sub-standard drugs were found in Jammu and Kashmir with 17% failing quality checks and the next highest offender was Himachal Pradesh where 7% of drugs were of inferior quality. (*The Hindu 10 March 2014; The Economic Times 20 March 2014*)

DOUBTS ABOUT 'LANDMARK' STEM CELL RESEARCH PAPER

Weeks after a landmark paper was published in Nature in January this year, doubts about its authenticity began surfacing. The paper described a simple acid bath method to reprogram mature mammalian cells into pluripotent stem cells. The paper was criticized for irregularities and apparent duplicated images. Numerous scientists also had difficulty reproducing the supposedly simple method.

The lead author of the RIKEN Center for Developmental Biology in Kobe, Japan is a lady scientist in Japan's male-dominated scientist community. The *Nature* paper was found to contain two images apparently duplicated from Obokata's doctoral dissertation. Her thesis also reported experiments dealing with cells that were supposedly in an embryonic state, but the cells reported in the *Nature* paper were said to be derived from a different process in an altogether different experiment. Nature has refused comment on the subject but is conducting its own evaluation. The whole episode just highlights the pressures for breakthroughs in this highly competitive field. (*The Hindu 3 April 2014*).

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