

**GOVERNMENT OF INDIA  
HEALTH AND FAMILY WELFARE  
LOK SABHA**

UNSTARRED QUESTION NO:3439

ANSWERED ON:13.08.2010

MALARIA AND DENGUE

Jawale Shri Haribhau Madhav;Patil Shri C. R. ;Sivasami Shri C.

**Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:**

- (a) the status of development of vaccines to prevent the Viral infections such as Dengue, Chikungunya, Hepatitis E, Hepatitis A-G, HIV and H5N1/H1N1 flu;
- (b) the details of Institutes in our country, which are conducting research work in various types of viral infections;
- (c) whether the Government has developed an organization having State-of-art research infrastructure facilities, modern molecular virology-immunology platforms, advanced electron microscopy applications base and vector biology facilities; and
- (d) if so, the details thereof?

**Answer**

MINISTER OF THE STATE IN THE MINISTRI OF HEALTH & FAMILY WELFARE (SHRI S. GANDHISELVAN)

(a): The status of development of various vaccines in India against these viral infections is as follows:

**Dengue:** The existing knowledge about the variants among dengue virus and technology does not permit creation of a single vaccine for all four dengue serotypes circulating in India.

**Chikungunya:** Candidate vaccine has been developed by an indigenous company in India and toxicology studies and clinical trials are expected to be initiated soon.

**Hepatitis E.:** National Institute of Virology (NIV), Pune under Indian Council of Medical Research (ICMR) has developed a candidate vaccine using recombinant DNA technology. Animal experiments in monkeys showed complete protection. This work was done in collaboration with Serum Institute of India (SII), Pune.

**Hepatitis A:** Impact of Hepatitis A vaccine in India has been cleared by the Drug Control General of India (DCGI).

**HIV:** No vaccine is available for human use in the world. Several approaches are being tried out. Only Phase - I (safety and immunogenicity) studies have been undertaken in India.

**H1N1 flu:** Two killed vaccines from SII and Zydus and one live attenuated vaccine from SII have been approved for marketing in India. Other vaccines from Bharat Biotech & Panacea (killed vaccine) are undergoing clinical trials in India. Vaccines using VLP technology (Cadila Pharma) and vaccine using Toll-like receptor technology (Biological Evans) are in development stages.

**H5N1 flu:** Candidate vaccine strains prepared by NIV under ICMR in collaboration with CDC is available with World Health Organization (WHO) for possible manufacture of H5N1 vaccine by interested countries as part of pandemic preparedness for H5N1. Indian firms have the capability to manufacture these at a short notice.

(b): Institutes under the ICMR viz. NIV, Pune; National AIDS Research Institute, Pune; Tuberculosis Research Centre, Chennai; National Institute of Cholera and Enteric Diseases and Virus Unit, Kolkata; Enterovirus Research Centre, Mumbai; Centre for Research in Medical Entomology, Madurai; Desert Medical Research Centre, Jodhpur; Regional Medical Research Centres at Bhubaneswar, Portblair, Jabalpur and Dibrugarh are involved in research on various viral infections. In addition, several Medical colleges as well as institutions of the Department of Biotechnology, and CSIR as well as other Research institutions also conduct research on various aspects of viral diseases.

(c) & (d): NIV under ICMR for viral research in India is equipped with state-of-art modern facilities. Several other institutes under ICMR also have modern facilities for virus research including bio-safety level- 3 facility. An initiative has also been undertaken by ICMR to strengthen/ establish diagnostic capabilities in viral diseases within various Medical colleges and institutes in the country.