Work on super vaccines

2195. SHRI SU iESH pACHOURI: Will the PRIME MINISTER be pleased to state:

- (a) whether a gen-tically engineered hapatitis B-virus vaccini has been developed abroad; if so, what ITS the details thereof; ani
- (b) whether any v.ork in this new field has been undertaken in this country; if not, whether it is propose 1 to undertake any i such research work i i the field of supervaccines which are under development abroad?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECH-NOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVED iPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K. R. MARAYANAN); (a) Yes, Sir. A genetically engineered Hepati-tis-B virus sfh-unit vaccine has been developed and produced using the microorganism yeast. This accine called 'Hepato-vax' has been approved for commercial sale in USA and some o her countries. Based on results obtained ;o far, the genetically engineered vaccine appears comparable to the plasma derived Hepatitis-B vaccine.

(b) No, Sir. It s proposed to initiate R&D work toward producing genetically engineered Hepatitis B vaccine in Indian Laboratories sucn a i National Institute of Virology, National 1 istitute of Immunology and All India Institu e of Medical Sciences.

Research and development work on monochlor al antibodies

2196. SHRI URESH PACHOURI: Will the PRIME MINISTER be pleased to state:

(a) whether Government are aware that monochlonal antibodies, specific for curing heart cancer, have 'een developed in some countt ies; if so, wh.-.t are the details thereof;

(b) whether any similar research and development work is under way in this country; and

to Questions

(c) what i'\$ the estimated number of cancer cases in this country and in the world and what is our annunal expenditure in research and development for cancer?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECH-NOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K. R. NARAYANAN); (a) No, Sir.

- (b) No. Sir.
- (c) The estimated number of cancer cases in India is 1.5 million and it is estimated that 5.9 million people are affected by cancer every year throughout the world.

The Indian Council of Medical Research has an outlay of Rs. 150 lakhs for the year 1987-88 on research and development for cancer.

University Industry co-ordination in the country

- 2197. SHRI SURESH PACHOURI: Will the PRIME MINISTER be pleased to state:
- (a) whether Government are aware that Biotechnologsy revolution in the West has been possible due to university-industry coordination; and
- (b) whether a similar co-ordination between ICAR|CSIR|ICMR etc. and industry exists in the country; if not, what are the reasons therefor and corrective steps proposed/taken?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECH-NOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE