श्री चित्रा तिरुवाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM

THIRUVANANTHAPURAM - 695 011, KERALA, INDIA (एक राष्ट्रीय महत्य का संस्थान, विज्ञान और प्रौषोगिकी विभाग, भारत सरकार)

(एक राष्ट्राय महत्त्व का संस्थान, ।वज्ञान आर प्राचानका विज्ञान, मारत सरकार) (An Institution of National Importance, Department of Science and Technology, Government of India) देलीफॉन नं./Telephone No.: 0471-2443152 फैक्स/Fax: 0471-2446433, 2550728 ई-मेन/E-mail: sct@sctimst.ac.in वेबसाइट/Website: www.sctimst.ac.in

TIME BOUND PARLIAMENT QUESTION

Sub: Admitted Lok Sabha Unstarred Question No.1830 (Dy. No. 5016) due for reply on 11.02.2022 on the subject "Research in Regenerative Medicine".

Ref: Email from DST on 07.02.2022.

Please note that a reply in line with the question on regenerative medicine is already answered by the Institute on 03.02.2022, a copy of which is attached herewith.

Development of Medicines is not mandate of SCTIMST and the institute is not doing any research in drug development.

Date: 08.02.2022

DIRECTOR

निदेशक / DIRECTOR श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान Sree Chitra Tirunal Institute for Medical Sciences and Technology त्रिवेन्द्रम / Trivandrum-695011

श्री चित्रा तिरुवाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM THIRUVANANTHAPURAM - 695 011, KERALA, INDIA

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TIME BOUND PARLIAMENT QUESTION

Sub: Admitted Lok Sabha Starred Question Diary No, 5016 due for reply on 11.02.2022 on the subject "Research in Regenerative Medicine".

Point-wise inputs submitted by <u>Sree Chitra Tirunal Institute for Medical Sciences and Technology,</u> <u>Trivandrum (SCTIMST).</u>

(a) Whether the country is research and development of medicine and if so, the details thereof and the reaction of the Government thereto;

The Heart Failure Biobank inaugurated last year at the ICMR Center of Excellence at SCTIMST is isolating peripheral blood mononuclear cells (PBMCs) from the patients with heart diseases and storing it under ultra-low temperatures in liquid nitrogen (-140C).

PBMCs are a good source for deriving stem cells with the potential capacity to develop into cardiac muscle cells which can function normally. This is one of the futuristic concepts in regenerative medicine related to cardiology. These cells can also be made to secrete certain paracrine factors to support repair of cardiac tissues, in conditions like heart failure. These cells also have the potential for disease modeling and drug discovery.

Research in tissue engineering and regenerative medicine has been one of the focus areas in the Department of Applied Biology, SCTIMST where researchers have worked on several tissue engineering problems like regeneration of cartilage, bone, liver, cornea, pancreas, blood vessel, skin tissue engineering, etc

(b) Whether Government needs to increase the pace of research in regenerative medicine to come up to the global level, especially in the area of clinical trials and regulatory requirement and if so, the details thereof;

Yes, the pace of research in regenerative medicine needs to increase in India especially in the area of clinical trials and regulatory requirement.

In India at present, Cell Biology Based Therapeutic Drug Evaluation Committee (CBBTDEC) by CDSCO is involved in cell therapy based clinical approval since 2010. Indian Council of Medical Research (ICMR) is also involved in providing guidelines for conducting biomedical and clinical research activities for clinical regulation. In the area of regenerative medicine, tissue engineered

		products including stem cell-based products are categorized as a drug in evaluating its clinical practice application but specific guidelines for clinical trials in the area of regenerative medicine is lacking. More research work related to harmonization of standards for a tissue engineered Medical product is required. At present, specific guidelines in regenerative medicine is lacking in India which limits accelerated clinical trials and its clinical translation. Proper and simplified and specific guidelines for the translation of products in tissue regeneration needs to be developed.
(c)	Whether the Government has prepared any plan of action in this regard with fixed targets and if so, the details thereof;	Not Applicable
(d)	The funds allocated for the purpose during the last three year and the current year;	Not Applicable
(e)	The extent to which the Government has achieved the target and goals so far in this regard; and	Not Applicable
(f)	Whether the Government has entered into any agreement with other countries for research and development of medicines and if so, the details thereof?	Not Applicable

Date: 03.02.2022

DIRECTOR



ानदशक / DIRECTOR वी चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान Sree Chitra Tirunal Institute for Medical Sciences and Technology जिवेन्द्रम / Trivandrum-695011