

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

UNSTARRED QUESTION NO:2755
ANSWERED ON:10.05.2006
PROMOTION OF STEM CELL RESEARCH
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Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

- (a) the details of the steps being taken by the Government in the field of stem cell research;
- (b) whether stem cell research laboratories would be set up in various parts of the country;
- (c) if so, whether foreign assistance would be taken for procuring advanced stem cell research technology;
- (d) the likely amount required for setting up of stem cell research laboratories in various parts of the country;
- (e) whether a comprehensive policy has been framed for the promotion of stem cell research; and
- (f) if so, the salient features thereof?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH & FAMILY WELFARE (SMT. PANABAKA LAKSHMI)

(a) to (d): Stem Cell Research, although still in its infancy, has emerged as a cutting edge science hoping to make medical breakthrough for meeting health need of both the developed and developing countries. Realizing the potential of the Stem Cell Research in modern therapeutics and biomedical research, Indian Council of Medical Research (ICMR) and Department of Biotechnology have strongly recommended that Stem Cell Research and its clinical application should be promoted in the country. According to ICMR around 15 institutions and 3 premier health centers in the country are involved in stem cell research and related activities. Some of these are :

Council's Institute of Immunohaematology, Mumbai have undertaken peripheral blood stem cell therapy for four aplastic anemia patients.

All India Institute of Medical Sciences, the Premier Health care center of the country is involved in clinical studies on stem cell therapies in different clinical conditions particularly Cardiovascular diseases.

Another major institute involved in stem cell research in India is the L.V. Prasad Eye Institute, based at Hyderabad. Its doctors succeeded in transplanting limbal stem cells to 200 patients.

The National Brain Research Centre in Gurgaon is involved extensively on neural stem cell and its use in several congenital and acquired CNS disorder, including Parkinson's disease.

The National Centre for Cell Sciences, Pune has been working on developing a repository of cell cultures and cell lines, cryo-preservation technology for bone marrow and development of skin for burns and vitiligo patients.

DBT has envisaged big plans for creating infrastructure in the stem cell research arena. The department has mooted plans to create a stem cell center at CMC Vellore with a funding of Rs.19 crore.

DBT is making efforts to promote city clusters programs at Delhi, Vellore, Hyderabad, Pune and Bangalore through an active and enhanced interaction and collaboration between basic researchers and clinicians. Significantly, a number of competent researchers and clinicians are already involved in stem cell research at these places. The aim of the clusters is to share information, explore collaboration with clinicians and discuss emerging policy issues. The stem cell cluster at Bangalore will consist of the Indian Institute of Science (IISc), NCBS, Manipal Hospital, CMC Vellore and a local company.

Various countries including US, UK, Korea, China, Singapore are interested in having collaborative activities in the area of stem cell research with Indian scientists. Besides, in the private sector Reliance Life Science and Manipal AcuNova have also taken the lead in the Stem Cell Research.

(e) & (f) Presently a draft policy for stem cell research has been framed. According to the policy, stem cell research should be promoted in the country in the view of its potential for clinical use. Research based on stem cell derived from adults, bone marrow or fetal cord blood may be undertaken after obtaining appropriate informed consent and with adequate safety measures. For embryonic

stem cell research, embryos should not be generated for the sole purpose of obtaining stem cells. Only surplus, spare or supernumerary embryos can be used after obtaining informed consent of both spouses. Such collection of embryos should be done only from registered Assisted Reproductive Technique (ART) clinics. To safeguard national interest, it is also perceived that all human genetic research, stem cell research and stem cell research involving international collaboration must be undertaken after formal clearance of the national government.