

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY**

**RAJYA SABHA
UNSTARRED QUESTION NO. 2176
TO BE ANSWERED ON 12/05/2016**

RESEARCH WORK ON GM MEDICINAL HERBS

2176. SHRI ANUBHAV MOHANTY:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether any research work has been carried out to Genetically Modified medicinal herbs that have proven to be beneficial in the treatment of terminal illness, if so, the details thereof; and
- (b) if not, whether the Ministry would consider initiating research work in the field of medicinal herbs for the benefit of millions suffering due to non-availability of suitable medicine?

ANSWER

MINISTER OF STATE FOR SCIENCE & TECHNOLOGY AND EARTH SCIENCES

(Y. S. CHOWDARY)

(a) Yes Sir, the Jamia Hamdard, New Delhi in collaboration with M/s IPCA Pvt. Ltd., Mumbai has carried out research on development of genetically modified medicinal herb - *Artemisia annua* with higher artemisinin content (an antimalarial drug) by transferring HMG CoA Reductase gene under Institute-Industry Collaborative Research Project supported by Department of Science & Technology (DST). An application has been submitted by Jamia Hamdard, New Delhi to Review Committee of Genetic Manipulation (RCGM) to conduct confined field trials for best event selection of *Artemisia annua* transgenic lines in terms of transgene stability as well as inheritance and high artemisinin content (more than 1%). The RCGM has recommended the application to Genetic Engineering Appraisal Committee (GEAC) for further consideration. The CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT) has recently initiated genetic modification related work on two medicinal herbs - *Picrorhiza kurroa* and *Podophyllum hexandrum* for imparting stress tolerance and enhancing secondary metabolite production.

(b) Does not arise.
