

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 2426
TO BE ANSWERED ON WEDNESDAY, 15TH MARCH, 2023

DRUGS FROM THE SEA

2426. SHRI PARBHUBHAI NAGARBHAI VASAVA:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) the status of extraction of potential drugs from the ocean particularly life saving drugs, anti-cancer, anti-tuberculosis, etc; and
- (b) the details of performance of these drugs from the sea programme vis-a-vis similar programme of advanced scientific nations?

ANSWER

THE MINISTER FOR STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) and (b) CSIR-Central Drug Research Institute was the nodal lab for MoES. A total of 2654 compounds were screened for different activities for Anti-Cancer, Anti-Angiogenic, Anti-inflammatory, Anti-Bacterial, and GPCR profiling. Specifically for Anticancer activity of compounds submitted through MoES program was evaluated on five different cancer-type cell lines (MDA-MB231, DLD-1, FaDu, HeLa, and A549) as per standard operating protocol (SOP).

1. With this endeavor we have identified a potent Anti-cancer molecule named **GS/IICT5/6**, the molecule has shown a better tumor inhibitory profile as compared to Sunitinib. Currently, the molecule has cleared the initial safety profile. The molecule will be evaluated further.
2. On similar lines Cancer patients suffer from neuropathic pain after chemotherapy. In our endeavors for relieving the patient suffering using the MoES program, we have discovered a novel compound **SB/CDRI4/105** that can alleviate chemotherapy-induced peripheral neuropathic pain. Currently, the molecule is also in the advanced stages of lead optimization and IND-enabling studies will be enabled shortly.
3. A potent molecule **SP/NISER29**, a new class drug having anti-cancer activity has been identified. The molecule has shown potent anti-tumor activity in the animal model better than taxol. The compound has very good stability and disrupts the cytoskeletal filaments. The does not meet the criteria for further development and the data has been published.
