

**GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA**

UNSTARRED QUESTION NO:6987
ANSWERED ON:11.05.2005
NEW MILLENNIUM FUND
Prasad Shri Lal Mani

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

- (a) whether any basic change has been brought about in the laboratories by the `Team CSIR` of Dr. R.A. Mashelkar;
- (b) if so, the factors responsible for the changes in each laboratory;
- (c) the progress made after implementation of the same and the complete details in this regard;
- (d) whether the government has constituted a `New Millennium Fund`;
- (e) if so, the amount available with the said Fund;
- (f) the areas of research which are to be provided financial assistance from the said Fund;
- (g) the projects which have been funded so far out of the said Fund alongwith the amount of assistance; and
- (h) the criteria fixed for providing financial assistance to any project?

Answer

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE (INDEPENDENT CHARGE) OF THE DEPARTMENT OF OCEAN DEVELOPMENT (KAPIL SIBAL)

(a) Yes Sir. Various basic changes have been brought in CSIR.

(b) The key factors responsible for the changes have been:

1. Enunciation of `CSIR 2001: Vision & Strategy` which provided a roadmap for change;
2. Enunciation of Intellectual Property Management Policy in 1996;
3. Operationalization of multi-laboratory network projects spanning entire CSIR;
4. Launching of new models for public-private partnership (PPP);
5. Creation of Human Resource Development Centre with progressive human resource policies;
6. Modernization of R&D facilities; and
- 7 Right sizing of the organization.

(c) The improvement in performance of CSIR during the period 1995 to 2004 could be gauged from the following indicators reflecting on the scientific research output as well as patents:

Sl. No. Indicators 1995 2004

1. Contributions to basic research (no. of papers in peer reviewed international SCI Journals) 1600 2628

2. Average Impact Factor/Paper	0.85	1.920
3. Foreign patents filing	58	430
4. Foreign patents granted	14	240

(d) Yes Sir. The Government of India has initiated a farsighted new scheme entitled 'New Millennium Indian Technology Leadership Initiative (NMITLI)' in the year 2000. The scheme is being implemented by CSIR on behalf of Government of India.

(e) A sum of Rs. 71.63 crore was made available for the terminal two years of the Ninth Five Year Plan and a sum of Rs. 205 crore was allocated in the Tenth Five Year Plan.

(f) The scheme supports niche projects in diverse technological areas including agriculture & plant biotechnology, biotechnology, chemicals, drugs & pharmaceuticals, energy, materials, information & communication technology.

(g) The list of the projects supported under the scheme along with the envisaged financial assistance is at Annexure 1.

(h) There are two broad categories of projects supported under the NMITLI scheme viz. (i) Nationally Evolved Projects, and (ii) Industry Originated Projects. Development of the projects and the criteria for financial assistance follows a well-laid step-wise procedure. The details of the procedure are at Annexure 2.

Annexure -1

Sl.No.	Project Title	Envisaged Outlay (Rs. in Lakh)
2000-2001		
1.	Defunctionalization of carbohydrates as a feed stock to manufacture well identified industrial chemicals	253.73
2.	Gene based new targets and markers for cancer of head & neck, gall bladder and brain (glioma)	1426.526
3.	Stimuli sensitive polymeric nano-particle based advanced drug delivery systems for cancer, diabetes and anti-bacterials	313.40
4.	New Targets, Drug Delivery Systems, Bio-enhancers and Therapeutics for latent M. tuberculosis	2354.320
5.	Pathway engineering in tea, mentha, aswagandha plants for desired secondary metabolites	788.30
6.	Stationary fuel cell based power packs using agro-alcohols, naphtha (methanol, LPG).	690.00
7.	Liquid crystals for flat panel display devices with unparalleled performance parameters	154.00
8.	Meso-scale modeling for monsoon predictions	1215.35
9.	Nano-material catalysts and associated process technology for alkylation/	552.40

acylation/nitration of well identified industrial chemicals, pre-reforming of hydro-carbons and sulphur removal (<50 ppm) from petroleum fuels

2001-2002

10. Versatile, portable PC based software for bioinformatics And Development of Linux cluster version of Bio-suite 1701.80
11. Biotechnology for replacing chemical process in leather sector 630.00
12. Biodegradable plastics from agricultural wastes: Cellulose esters based on bagasse 350.00
13. Novel herbal therapeutics for degenerative disorders
 - i. Osteoarthritis and rheumatoid arthritis especially for pain management
 - ii. Diabetes mellitus type II (NIDDM) with emphasis on insulin sensitization
 - iii. Hepatic disorders with emphasis on hepatocellular protection. 1068.22
14. Enhanced productivity in cement manufacture through Improved granular processing and resource conservation 487.00
15. Microbiological conversion of Erythromycin to Clarithromycin and other novel biologically active molecules 121.54
16. Development of novel biotech therapeutic molecule -Lysostaphin 780.00
17. Development of an Oral herbal formulation for treatment of Psoriasis: a clinical and scientific challenge. 972.00

2002-2003

18. A cost effective Simple Office Computing (SofComp) platform to replace PC 330.00
19. A PC based high-end 3D visualization platform for computational biology-'Darshee' 192.80
20. Nano-material coatings and advanced composites for tribological applications in automotive industry 754.25
21. Environmentally secure rare earth based colorants for surface coatings 444.15
22. Functionalization of alkanes 674.57
23. Novel molecular diagnostics for eye diseases and low vision enhancement devices 347.93
24. Value added polymeric materials from renewable resources: Lactic acid and lactic acid based polymers 613.00
25. Recombinant approach to produce a-linolenic acid and docosahexanoic acid (DHA) in sunflower and yeast 325.80

2003-2004

26. Biotechnological Approaches for Improvement of Plant Species with Special Reference to Pulp and Paper 497.30
27. Development of Novel Fungicides 554.20
28. Improved Genome Annotation Through a Combination of Machine Learning and Experimental Methods: Plasmodium falciparum As a Case Study 625.215

29. Development of next generation peripheral interface technologies: USB 2.0 PHY and 1394B PHY	529.60
30. Oral Delivery of Insulin	287.13
31. Pharmacological and Genomic Investigations on Withania somnifera- An Indian Medicinal Plant	367.00
32. Development of fuel cells based on Hydrogen	2351.00
33. Development of a 500 kW low cost horizontal-axis Wind Turbine	527.30

2004-05

34. Novel expression system	215.59
35. Development of selected Medical Implants	660.18
36. Genetic Improvement of Jatropha curcas for Adaptability and Oil Yield	555.38
37. Development of Globally competitive 'Triple-Play' Broadband Technology	1188.75

Annexure-2

Nationally Evolved Projects

In order to put in place nationally evolved projects, wide-ranging consultation is carried out to elicit ideas. The short listing of the ideas is done by a "screening committee" followed by selection of broad areas by the domain Expert Groups. The projectization of the areas is then carried out by "domain champions". The best players in the field are then invited to participate in the projects. Once the project is finalized, it is reviewed and considered by the designated High Powered Committee (HPC). The HPC recommended projects are considered for support by CSIR Governing Body.

Industry Originated Projects

For this category of projects the process begins by soliciting of proposals through press advertisement and personal letters from DG, CSIR. The screening of the conceptual proposals thus received is carried out by a "committee" followed by assessment and rating of short listed ideas by the domain experts. The development of top rated two ideas in each domain is undertaken with the assistance of NMITLI designated experts. The project thus finalized are considered and reviewed by the HPC and the recommendations of HPC are considered by CSIR Governing Body in order to decide on the projects to be supported in a given period. Usually less than 5% of the projects received are considered for development.

The companies registered in India and having more than 50% of shareholding by Indians/non-resident Indians are eligible for support under this category. However, at any given time not more than two projects of any company are supported.

Financial Support

The financial support to all the projects under NMITLI Scheme is in the form of grant-in-aid to the institutional partners in public domain and as soft loan (@ 3% interest) to the industrial partners.