



**PARLIAMENT OF INDIA
RAJYA SABHA**

**DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE
ON SCIENCE AND TECHNOLOGY, ENVIRONMENT, FORESTS AND
CLIMATE CHANGE**

THREE HUNDRED FORTY SECOND REPORT

**DEMANDS FOR GRANTS (2021-2022) OF THE
DEPARTMENT OF BIOTECHNOLOGY
(DEMAND NO. 89)**

(Presented to the Rajya Sabha on 8th March, 2021)
(Laid on the Table of Lok Sabha on 8th March, 2021)



**Rajya Sabha Secretariat, New Delhi
March, 2021/ Phalguna, 1942 (Saka)**

**Website : <http://rajyasabha.nic.in>
Email: rsc-st@sansad.nic.in**

**PARLIAMENT OF INDIA
RAJYA SABHA**

**DEPARTMENT-RELATED PARLIAMENTARY STANDING COMMITTEE
ON SCIENCE AND TECHNOLOGY, ENVIRONMENT, FORESTS AND
CLIMATE CHANGE**

**THREE HUNDRED FORTY SECOND REPORT
DEMANDS FOR GRANTS (2021-2022) OF THE
DEPARTMENT OF BIOTECHNOLOGY
(DEMAND NO. 89)**

(Presented to the Rajya Sabha on 8th March, 2021)
(Laid on the Table of Lok Sabha on 8th March, 2021)



**Rajya Sabha Secretariat, New Delhi
March, 2021/ Phalguna, 1942 (Saka)**

CONTENTS

	PAGES
1. COMPOSITION OF THE COMMITTEE	(i)
2. INTRODUCTION	(ii)
*3. ACRONYMS	
4. REPORT	1-12
*5. RECOMMENDATIONS/OBSERVATIONS-AT A GLANCE	
*6. MINUTES	

** To be appended*

COMPOSITION OF THE COMMITTEE
(2020-21)
(Constituted w.e.f. 13th September, 2020)

1. Shri Jairam Ramesh – **Chairman**

RAJYA SABHA

2. Shri Anil Baluni
3. Shri R.S. Bharathi
4. Shrimati Vandana Chavan
5. Shri Hishey Lachungpa
6. Shri Parimal Nathwani
7. Shri Bhaskar Rao Nekkanti
8. Shri Ashwini Vaishnaw
9. Shri Binoy Viswam
10. @Shrimati Seema Dwivedi

LOK SABHA

11. Shri Guharam Ajgalley
12. Shri Pradan Baruah
13. Shri E.T. Mohammed Basheer
14. Shri Jashvantsinh Sumanbhai Bhabhor
15. Shri Sudarshan Bhagat
16. Shri Anantkumar Hegde
17. Shri S. Jagathrakshakan
18. Shri Mohammed Azam Khan
19. Shrimati Jyotsna Charandas Mahant
20. Dr. Swami Sakshiji Maharaj
21. Shri Asaduddin Owaisi
22. Dr. Ranjan Singh Rajkumar
23. Shri Kotha Prabhakar Reddy
24. Dr. Jayanta Kumar Roy
25. Shrimati Satabdi Roy (Banerjee)
26. Shri Mahesh Sahoo
27. Shri Francisco Sardinha
28. Shri Anurag Sharma
29. Shri Ram Shiromani
30. Shri Kirti Vardhan Singh
31. Dr. Ramapati Ram Tripathi

SECRETARIAT

Shri Pradeep Chaturvedi, Joint Secretary
Shri T. N. Pandey, Director
Shri Rakesh Anand, Additional Director
Shri Rajiv Saxena, Under Secretary
Shri Harish Kumar, Committee Officer
Shri Ankit Chansoria, Assistant Committee Officer

@ Nominated w.e.f. 23rd December, 2020, in lieu of Shri Ravi Prakash Verma who ceased to be a member of the Committee on expiry of his term in Rajya Sabha on 25th November, 2020.

INTRODUCTION

I, the Chairman of the Department-related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change, having been authorised by the Committee to present the Report on its behalf, present this Three Hundred Forty Second Report of the Committee. This Report deals with the detailed Demands for Grants (2021-2022) of the Department of Biotechnology (Demand No.89).

2. In the meeting of the Committee held on the 17th February, 2021, the Secretary and other officers of the Department of Biotechnology gave an overview of the various activities of the Ministry and the Members sought clarifications on various aspects of the performance of the Department to enable it to scrutinise the Demands for Grants.

3. The Committee expresses its thanks to the officers of the Department of Biotechnology for replying to the clarifications sought by the Members and placing before it the required material to enable it to scrutinise the Demands for Grants of the Department.

4. The Committee considered and adopted the draft Report in its meeting held on the 4th March, 2021.

NEW DELHI;
March 4, 2021
Phalguna 13, 1942 (Saka)

(JAIRAM RAMESH)
Chairman,
Department-related Parliamentary Standing Committee on Science
and Technology, Environment, Forests and Climate Change,
Rajya Sabha.

REPORT

The Department-related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change considered the Demands for Grants (2021-22) of the Department of Biotechnology in its meeting held on 17th February, 2021.

2. BUDGETARY DETAILS FOR THE FINANCIAL YEAR 2020-21 AND ALLOCATION FOR 2021-22

2.1 The following table gives the details of the B.E., R.E. and actual expenditure of the Department in 2020-21 and budgetary allocations made to the Department for B.E. 2021-22:

(₹ in crore)

Sl. No	PARTICULARS	2020-21			Budget Estimates for FY 2021-22
		B.E.	R.E.	Actual (till 31.01.2021)	
1	Secretariat	36.48	28.00	22.57	35.18
2	Biotechnology Research and Development	1580.00	1323.23	961.67	1660.28
3	Industrial and Entrepreneurship Development	322.67	343.77	262.71	960.00
4	Assistance to Autonomous Institutions	815.61	577.00	468.16	806.91
5	Biotechnology Industry Research Assistance Council (BIRAC)	32.00	28.00	17.60	40.00
	Grand Total	2786.76	2300.00	1732.71	3502.37

2.2 The Committee observed that there was a decrease of more than 17 percent in R.E.2020-21 allocation of ₹ 2300.00 crore as compared to B.E. 2020-21 allocation of ₹ 2786.76 crore. The Committee sought to know from the Department about the impact of this reduction in budgetary allocation on the implementation of the key programmes and initiatives of the Department. The Department informed the Committee that although reduction in allocation in

R.E. 2020-21 did not impact the implementation of on-going projects and all the committed funds have been provided, yet the financial releases of new proposals have been impacted. The Committee enquired from the Department about its strategy towards managing financial and physical targets of these new proposals/initiatives, which have been impacted by the budgetary cut in R.E. 2020-21. The Department submitted before the Committee, that it has decided to provide partial funding support for implementation of the activities of new proposals and the remaining support will be provided during early FY 2021-22. The Department further informed that the funding required for COVID-19 projects was made available. The Committee also received analysis through a public representation that the Department's fund utilisation across three major particulars - Biotechnology Research and Development, Industrial and Entrepreneurship Development and Assistance to Autonomous Institutions was above 90% during the 2016-20 period.

2.3 The Committee recognises that the Department has been able to utilise over 75 percent of the funds allotted during R.E. 2020-21 upto 31.01.2021. The Committee appreciates the overall fund utilisation by the Department in the recent past and urges the Department to fully utilise the funds by the end of the financial year.

3. Central Sector Schemes of the Department

3.1 The following table highlights the reduction in R.E. 2020-21 allocations for the two Central Sector Schemes:

(₹ in crores)

Budgetary Head	B.E. 2020-21	R.E. 2020-21	% increase/decrease of R.E vis-à-vis B.E
Biotechnology Research and Development	1580.00	1323.23	16.25 % reduction
Industrial and Entrepreneurship Development	322.67	343.77	6.50 % increase

3.2 The Committee observed that there was a reduction of more than 16 percent in R.E. 2020-21 allocation for the Central Sector Scheme –

‘Biotechnology Research and Development’. Further, despite an overall reduction in the R.E. 2020-21 allocation for the Department, the R.E. allocation under the Central Sector Scheme – ‘Industrial and Entrepreneurship Development’ was increased by more than 6 percent. It was brought to the attention of the Committee that the thrust areas under the umbrella scheme Biotechnology Research and Development include Basic Research; research in Agriculture and Allied Area; research in Environment and Clean Energy; Bioinformatics; BioPharma Mission; Human Resource Development, etc. and the thrust areas under the umbrella scheme Industrial and Entrepreneurship Development include Innovation Research; Entrepreneurship Development; Development of Bio Clusters; Mission COVID-Suraksha – Indian Vaccine Development.

3.3 The Committee notes with satisfaction that the allocation was increased at the R.E. 2020-21 stage under the Central Sector Scheme – ‘Industrial and Entrepreneurship Development’ under which the Department is implementing the crucial programs related to mitigation of COVID-19 pandemic. The Committee wishes that the Department will continue and further strengthen the initiatives taken by it under these schemes.

3.4 The Department submitted before the Committee that against the demand of ₹ 3951.27 crore, the Department has been allocated ₹ 3502.37 crores in B.E. 2021-22. The Committee enquired from the Department about the impact of this difference on the scheme/programmes of the Department. The Department informed that the shortfall is not substantial and as the key programmes being implemented have duration of 2 to 5 years in general, hence, the difference of budgetary allocation demanded and actually allocated for FY 2021-22, will not impact the desired outcomes and the Department will be able to implement its key programmes efficiently within the budget allocated for the year 2021-22. The Committee also observed that the Department received an

allocation of ₹ 3502.37 in B.E. 2021-22, an increase of more than 52 percent over R.E. 2020-21.

3.5 The Committee hopes that with the increased allocation of Rs. 3502.37 crore in B.E. 2021-22, the Department will be able to regain the momentum lost due to COVID-19 pandemic in the implementation of some of its schemes and new initiatives, and shall utilise its resources judiciously to augment research and development, human resource capacity building, identify and support the start-up ecosystem and strengthening initiatives for fighting COVID-19.

3.6 The Committee further observed that the budgetary allocation for B.E. 2021-22 under the head ‘Industrial and Entrepreneurship Development’ is ₹ 960.00 crore which is more than 250 percent of the funds allocated under the same scheme in R.E. 2020-21. The Committee, therefore, enquired the reasons for this substantial increase, and was informed that the increase in allocation under the Central Sector Scheme is due to Department’s initiative ‘Mission COVID Suraksha’ – the Indian COVID-19 vaccine development mission, which was launched as a part of third stimulus package.

3.7 The Committee notes and appreciates the initiative of the Department towards ensuring the timely development of COVID-19 Vaccine for the nation.

3.8 The Committee observes, with surprise, that the entire budget allocation of the Department in 2021-22 is represented as revenue expenditure, and nothing is earmarked as Capital expenditure under any budgetary head. The Committee enquired about this anomaly and was informed that no provision of funds under the “Capital Section” has ever been made in the Demands for Grants of the Department during the last 10 years. It was further informed by the Department that a total provision of ₹ 873.25 crore has been made under the object head ‘Grants for Creation of Capital Assets’ in the Grants for the year 2021-22 under the major heads ‘Other Scientific Research’ and ‘North Eastern Areas’. The Committee has been further informed through a public representation that the

Outcome Budget also speaks about creating new bioparks but does not specify the amount that will be spent on this. Further it was submitted that the Demand for Grants contains only 2 sub-heads under Central Sector Schemes/ Projects - Biotechnology Research and Development, and Industrial and Entrepreneurship Development, and that further details on grant requirements in alignment with the various outputs indicated in the Outcome Budget are required. It is noted that the Outcome budget includes indicators for these two heads accounting for ₹ 2620.28 crores. The additional ₹ 846.91 crore being asked for in the demand for grant is not reflected in the Outcome budget.

3.9 The Committee notes with utmost concern that details of the activities planned to be undertaken by the Department with the increased allocation for creation of Capital assets are not available in the documents furnished by the Department and break-up of budgetary allocations for Revenue and Capital Expenditure as well as funds allotted for Establishment Expenditure under various Budgetary Heads. Without the above information, the Committee is constrained in analysing the spend on new infrastructure and research. The Committee recommends that the Department should invariably furnish the above information to the Committee to facilitate analysis of Demands for Grants, and recalibrate the outcomes and outputs based on the complete Departmental funding.

3.10 The Committee further recommends that the Department should immediately take up the matter with the concerned authorities and explore the possibility of bringing the necessary changes in the classification of allocation of funds under revenue and capital expenditure.

MAJOR INITIATIVES OF THE DEPARTMENT FOR FY 2021-22

4. The Committee sought to know from the Department, the new initiatives that the Department intended to take in FY 2021-22. In response, the Department informed that the following key programmes, in addition to the programmes initiated in the past, will be taken up by the Department in the year 2021-22:

5. Mission COVID Suraksha

5.1 The Committee was informed by the Department that the Indian COVID 19 Vaccine Development Mission - “Mission COVID Suraksha” was launched as part of the third stimulus package, for research and development of Indian COVID-19 vaccines. The goal of the Mission is to provide safe and efficacious COVID 19 Vaccines which are affordable and accessible. It was further submitted that the Mission aims to accelerate the development of approximately 5-6 vaccine candidates within the next 12 months and ensure that atleast 2-4 of these are closer to licensure and introduction in Public Health System. The Mission is being implemented by BIRAC, a PSU of the Department of Biotechnology. The total budget allocated to Mission COVID Suraksha is ₹ 900 crore for 12 months. An amount of ₹ 180 crore was released to BIRAC, as the first instalment. In response to the query regarding the milestones set by the Department under the Mission COVID-19 Suraksha, the Department provided the following information:

Activity	Targets for 0-6 months	Targets for 6-12 months
Preparation of Immunoassay Labs	Identification and support for clinical Immunoassay labs	Setting-up and operationalization of the clinical Immunoassay labs
Animal studies for immunogenicity and challenge		Immunogenicity and challenge studies for 02 vaccine candidates
Phase I / II / III Clinical trial support	Initiation of trial for 1 vaccine candidate	Initiation of trial for 01 vaccine Candidate and Completion of trial of 02 candidates

5.2 The Committee desired to know the status of the current vaccine production capacity with respect to the two approved vaccines and how soon could these vaccines be made available to the non-priority population. The Department informed that the inactivated vaccine candidate, COVAXIN, developed jointly by Bharat Biotech and Indian Council of Medical Research (ICMR), has a planned production capacity of 150 million doses per year. The estimated manufacturing capacity of the Non-replicating viral vector vaccine (COVISHIELD) by Serum Institute of India Pvt. Ltd., is about 70-100 million

doses per month. The Department further submitted that the provision of guidance on prioritisation of population groups, vaccine procurement and delivery is a mandate of the National Expert Group on Vaccine Administration for COVID-19, constituted by the Government of India.

5.3 The Committee notes the response of the Department and recommends the Department to strengthen on its part, the efforts for ramping up the production capacity of the two approved vaccines as well as provide all research, laboratory infrastructure and capacity building support to the other vaccine candidates in the pipeline, in order to ensure the availability of a safe, affordable, and efficacious vaccine to the wider population as soon as possible.

6 Biotech URJIT Cluster

6.1 The Department informed the Committee that with the aim of bringing research into the mainstream of Innovation, Translation and Commercialization and synergising resources between institutions, Universities, Research laboratories, Industries and SMEs for technology & product development and building enterprises, the Department has initiated the Biotech URJIT (University Research Joint Industry Translation) Cluster programme.

6.2 The Committee impresses upon the Department the need to have orientation, clear focus and seamless framework for translation of research outcomes into technologies, products and services that may be used by the Industries, SMEs, Entrepreneurs and citizens at large. The Committee appreciates the initiative taken by the Department and extends its full support to this endeavour of the Department.

7 Technology Cluster

7.1 The Committee sought information about the initiative of the Department towards establishing Technology clusters in the country. The Department submitted that the Union Budget announcement of FY 2020-21 declared setting up of facilities for designing, fabrication and validation of proof of concept, and further scaling up Technology Clusters, harbouring such test beds and small-scale manufacturing facilities. The Department was taking necessary action for

creation of Technology Clusters (T-Clusters) which would serve as the growth engine for engagement of innovation with Commercialization i.e., promoting supplies of innovative products from India so as to excel the country as the Innovation Hub.

7.2 The technology clusters would consist of pilot and manufacturing scale facilities for common usage by Start-ups and SMEs in order to support the development and early-stage manufacturing of the innovative affordable products, paving way for growth and scaling of the ecosystem. The expansion of Start-ups into SMEs, and SMEs' progression to large industries, would have cascading effect on creating a wider base of Large Industries, growth in FDI inflow, capacity building, strategic initiatives enabling collaborations, global partnerships and related activities. Establishment of such common usage facilities could augment in making India as \$100 Billion Biomanufacturing Hub.

7.3 T-Clusters will have Pilot scale and Manufacturing facilities that can provide plug and play options, reducing the burden of high capex investments especially for the Start-ups and micro, small and medium scale companies. T-Clusters will have two components: (i) PoC to Pilot (Technology Propellers) and (ii) Pilot to Manufacturing (Manufacturing Zones). The Technology Propellers (T-Propellers) as accessible, ready to move in common facilities, will serve and impact large number of start-ups, several incubators and SMEs. Whereas, manufacturing Zones (M-Zones) will provide headway to start-ups which are ready with their final products to produce and market their products.

7.4 The Committee enquired from the Department about the progress made in this initiative and was informed that a series of stakeholder's meetings have been organised for drafting of the concept. Detailed Project Report has been prepared and identification of priority sector is under review.

7.5 The Committee recognises the need for extending all possible support in terms of resources, technology, infrastructure and creating opportunities for growth for budding start-ups and entrepreneurs as well as for SMEs. The Committee appreciates the initiative of the Department and

recommends the Department should accelerate the process of identification of priority sectors and selection of location for setting up T-Clusters. The Committee also recommends that the Department should ensure equitable geographical distribution of these Technology Clusters, so that the benefits of this initiative can reach the underserved regions of the country as well.

8. AUTONOMOUS INSTITUTIONS OF THE DEPARTMENT

8.1 The Committee desired to know from the Department about the budgetary allocation in R.E. 2020-21 under the head ‘Assistance to Autonomous Institution’ and reductions, if any, made under this head. The Committee was informed that the B.E. 2020-21 allocation under the budgetary head ‘Assistance to Autonomous Institutions’ was ₹ 815.61 crore which was drastically reduced to ₹ 577.00 crore, a massive reduction of almost 30 percent. The Committee observes that the reduction under this budgetary head accounts for almost 50 percent of the total reduction of the allocation to the Department at R.E. 2020-21 stage.

8.2 The Committee recommends that the Department make judicious use of the revised allocations for 2020-21 by prioritising the available resources and ensuring full utilisation of funds. The Committee also recommends the Department to make efforts to generate internal budgetary resources and try to offset the reduction in budgetary allocation.

8.3 The Committee further sought to know from the Department the details of the financial allocations made in B.E. 2021-22 under the budgetary head ‘Assistance to Autonomous Institutions’. The Department informed that there are 16 Autonomous Research and Development Institutions under the administrative control of the Department with a total budgetary allocation of ₹ 806.91 crore in B.E. 2021-22. These have been working relentlessly over the past year to develop effective interventions focused on diagnosis, treatment and prevention for combating the COVID-19 pandemic and that the Department has, till 31.01.2021, spent a total of ₹ 336.51 crore, amounting to 14.63 percent of R.E. 2020-21, on COVID-19 related initiatives. These initiatives include the

DBT-BIRAC COVID-19 Research Consortium for development of Diagnostics, Vaccines, Novel Therapeutics, Repurposed Drugs and other biomedical interventions against COVID-19. The Department further informed the Committee that nearly 120 projects being undertaken by industry and academia have been supported. The Department also informed that the Indian SARS-CoV-2 Genomic Consortium (INSACOG) has been launched to ascertain the status of new variants of SARS-CoV2. It was further submitted through public representation, that these institutions contributed significantly to India's COVID-19 testing capacity, and that for future pandemic preparedness, upgrading of these institutions to address gaps in BSL3/4 capabilities is essential.

8.4 The Committee notes the contribution of the Autonomous Institutions under the Department and extends its heartfelt appreciation to the scientists, researchers, etc. working in the Department of Biotechnology and its affiliated institutions for their invaluable efforts/contribution towards strengthening the nation's fight against COVID-19 pandemic. The Committee further recommends upgrading infrastructure to address the gaps in BSL3/4 capabilities to further improve both diagnostics and research on new pathogens.

8.5 The Committee also recommends that the Department should impress upon all the Autonomous Institutions to enlist 10 goals/objectives that each of these laboratories propose to pursue in the medium to long term plan. The Autonomous Institutions should further indicate the goals/objectives that will be pursued during the year 2021-22 along with the steps that the Department plans to undertake to achieve these goals during the year. On its part, the Department of Biotechnology should also develop a mechanism to periodically monitor the progress of the goals/objectives of each of these Autonomous Institutions.

8.6 The Committee enquired from the Department about the revenue generated by the Department through commercialisation of its services,

products, research capacities and technologies developed. The Department informed the Committee that the Autonomous Institutions under the Department of Biotechnology are for Basic and Translational Research and not for services. The Department further submitted that most of the Autonomous Institutions are at nascent stage as most of them are established during the last two decades, and hence, have just initiated revenue generation from their services, products, research capacities and technology development. The Committee was also informed that the quantum of revenue generated by these Autonomous Institutions is below 1 percent of the R.E. of last three years.

8.7 The Committee notes the efforts made by the Department for revenue generation and recommends that the Department should explore further avenues to augment revenue generation through technology transfer, consultancy services, patents, etc. The Committee recommends that the Department should actively reach out to the private sector and disseminate information about the technologies/products/services developed by the Department. On its part the Department should also set targets for the same and actively monitor the progress.

8.8 During the meeting held on 17th February, 2021, the Committee also enquired from the Department about the status of the project on “Establishment of a Pune Biotech Cluster- Model Organisms to Human Disease”. The Department informed the Committee that the project was sanctioned on 29.06.2018 at a total cost of ₹ 125.41 crore and the first-year release amounting to ₹ 19.54 crore has been sanctioned to National Centre for Cell Sciences (NCCS) and Indian Institute of Science Education and Research (IISER). The Department further informed the Committee that the second instalment of the Grant could not be released because of certain administrative issues.

8.9 The Committee recommends that Department should resolve all the administrative issues which have held up the release of the second instalment of the Grant and release the funds allocated for the Pune Biocluster, at the earliest.

8.10 The Committee strongly urges the Department to explore deeper into developing cure for certain rare diseases, for which the country is, by and large, dependent on imports and the patients have to shell out exorbitant amount of money for the cost and a sizeable amount on their excise/import duty.
