Government of India Ministry of Chemicals and Fertilizers Department of Pharmaceuticals

Operational Guidelines of the Scheme for Promotion of Research and Innovation in Pharma MedTech (PRIP) Sector

1. Background

Pursuant Government of announcement 2023-24 to launch a new Programme to promote research and innovation in pharmaceuticals to be taken up through Centres of Excellence and encourage industry to invest in research and development in specific priority areas, and in order to transform Indian Pharma MedTech sectors from cost based to innovationbased growth by strengthening the research infrastructure in country, Government of India has launched new scheme, viz.. 'Promotion of Research and Innovation in Pharma MedTech (PRIP) Sector' (herein after referred to as 'Scheme') which has been notified vide Gazette Notification No. 199 dated 17th August 2023.

2. Objectives of the scheme

The objective of the scheme is to encourage industry to invest in R&D in 'Priority areas' and to inculcate the culture of quality research and nurture the pool of scientists in the country by promoting industry-academia linkage, which will lead to sustained global competitive advantage and contribute to quality employment generation in the country.

3. Components of the scheme:

The scheme has two components, as follows:

3.1 Component A:

It is proposed to establish Centres of Excellences (CoEs) at the seven existing National Institutes of Pharmaceutical Education & Research (NIPERs) a t

S A S N a g a r (M ohali), A h m e d a b a d, H y d e r a b a d, Guwahati, Kolkata, Hajipur and Raebareli at a tentative cost of Rs. 700 cr over a period of five years, with following specializations:

i	NIPER Mohali	Anti-Viral and Anti-Bacterial Drug
		Discovery and Development
ii	NIPER	Medical Devices
	Ahmedabad	
iii	NIPER	Bulk Drugs
	Hyderabad	
iv	NIPER Kolkata	Flow Chemistry and Continuous
		Manufacturing
V	NIPER Raebareli	Novel Drug Delivery System
vi	NIPER Guwahati	Phytopharmaceuticals
vii	NIPER Hajipur	Biological Therapeutics

These CoEs will help in building specific research capacities in the identified priority areas in a focused time bound programme, for which following actions shall be taken:

- a. NIPERs should actively seek out well-established industry partners (national or international) with a significant market presence and a high order of expertise in their respective research fields for Centers of Excellence (CoEs). Industrial Partner would work with NIPERs to develop CoE and help bridge gap between the Industry and Academia.
- b. Research under Component A would be taken at CoE itself. The Research program and time-bound deliverables of CoEs will be fixed in consultation with the Board of Governors (BoGs) of the respective institutes.
- c. The financial reporting/ approval of activities of CoE shall be subject to Government rules and subject to approval / overall supervision of BoG and, where applicable of DoP.

Submission and Approval of the proposal for CoE

i. NIPERs will be required furnish their proposal in consultation with BoG within a period of 30 days of issuance of these

guidelines for setting up of CoE in the format as at **Appendix** I.

- ii. NIPERs would be required to furnish an undertaking that no regular manpower posts would be created out of the financial assistance provided under the scheme and expenditure on salaries of contractual workforce employed for the CoE after 5 years would be borne by them.
- iii. NIPERs would be required to ensure that CoEs achieve self-sufficiency within five years of their establishment. An undertaking as at **Appendix II** would be required to be furnished by NIPERs.
- iv. NIPER will delineate the precise allocation and utilization of funds and provide a detailed breakdown of the financial resource deployment. The same should outline the allocation for essential activities such as research infrastructure development, equipment procurement, on-going operational expenses, etc.
- v. NIPERs need to demonstrate prudent fiscal management and effective resource utilization, aligning with the objectives of the PRIP Scheme to promote innovation and research excellence in the pharmaceutical and Med-Tech sectors.
- vi. NIPER shall ensure strict adherence to the provisions of GFR for execution of the CoEs activities.
- vii. The proposals will be appraised, and after incorporating its inputs and suggestions, if any, approved by the DoP.

3.1.1 Monitoring and Evaluation of CoE

The progress of CoE will be monitored by in the following manner:

In-house CoE Committee - Each NIPER will form a CoE committee under the chairmanship of their director with representatives of Industry stakeholder, research/academic institution with relevant expertise, Departmental Heads concerned, Finance Officer of the Institute as members for regular monitoring of the CoE.

The in-house committee shall have the following responsibility-

- i. The in-house committee shall be responsible for day-to-day monitoring and administrations of the CoE.
- ii. The In-house committee shall be responsible for timely execution of the deliverables of the CoE as per the approved proposal.
- iii. The In-house Committee shall submit quarterly progress report of the Centre of Excellence (CoE) to the Steering Committee.

Board of Governors (BoG), NIPER- Shall be the BoG of the respective NIPER, constituted as per the provisions of The NIPER Act,1998 and NIPER(Amendment)Act, 2021. The BoG shall have the following functions-

- **i.** The Research program and time-bound deliverables of CoEs will be fixed in consultation with the Board of Governors (BoGs) of the respective institutes.
- ii. All the financial approval of activities of CoE subject to approval / overall supervision of BoG and, shall be subject to Government rules(GFR) and where applicable of DoP.

Steering Committee (SC) - The Steering Committee (SC) will be set up under the chairpersonship of Secretary (DoP), with Joint Secretary (NIPER/R&D, DoP), Representative from CDSCO, FA (DoP) and Director/ Deputy Secretary (NIPER/R&D, DoP) as members. The Steering Committee may co-opt technical members. The functions of the Steering Committee will as follow-

- I. The progress of CoE will be reviewed by SC.
- ii. The SC may revise ceilings under non-recurring and recurring heads as deemed appropriate for respective CoEs during the tenure of the Scheme restricted to the Component A ceilings.
- iii. The SC will also be authorized to carry out any amendments in the deliverable and outcome of the CoE considering advice of the in-house NIPER committee, if any.

The funding allocated under this component shall not be diverted to component B.

3.2 Applicants under Component B: <u>Promotion of Research</u> in <u>Pharma MedTech</u> sector:

- The financial assistance under this component would be provided to promote R&D in six priority areas, which are detailed in **Appendix-III.** The component is further divided into the following three categories:
- i. Category B-I Up to Nine established Pharma-Medtech companies will be selected under this category, who are willing to carry out research work in one or more of the six priority areas in collaboration with Government Institutes of National Repute as per Appendix X, conducting research in domain of Pharmaceuticals and Medical Devices. Investment made by the companies on the projects at the institute would be supported at the rate of 35% of the total cost or Rs 125cr whichever is less on a milestone basis from TRL 1 to reach TRL 9 over a period of five year on benefit sharing principle. A company may apply for funding under this category at any stage of research (TRL 1-9). However, funding will be provided for ongoing approved project *vis a vis* current TRL. Decision regarding IP rights, ownership of the assets created would be as per prior agreement between the company and individual institute itself.
- ii. Category B-II Up to Thirty research projects in any of the six priority areas which are at successfully validated level will be selected under the category. The research work at entry of the beneficiaries in this category should be at either TRL 5 or 6. The Research work would be supported at the rate of 35% of the total cost or Rs 100 cr whichever is less on a milestone basis from TRL 5 to reach TRL 9 over a period of five year on benefit sharing principle.
- iii. **Category B-III** Funding up to Rs 1Cr would be provided to research projects in any of the six priority areas to help innovators including Indian startups and MSMEs to reach TRL 4. Around **125 research projects** from innovators/ start-ups/ SMEs/ MSMEs having potential or having made sufficient headway in the research of priority areas will be selected.

4. **Definitions**

4.1 Annual **turnover:** Annual turnover, in reference to a business or company, is a financial metric that represents the total revenue generated by the company from its primary operations over a specific period of 12

months. It is commonly calculated on an annual basis and provides an indication of the company's sales performance and the scale of its business activities. The annual turnover figure includes all income generated from the sale of goods or services, excluding any taxes, discounts, or returns. It reflects the total value of all sales made during the specified period, regardless of whether the payment has been received or not.

- **4.2 Applicant:** Applicants for the Component B of the Scheme shall be any Proprietary Firm or Partnership Firm or Limited Liability Partnership (LLP), start-ups or a Company /Group of companies registered in India and making an application for seeking approval under the Scheme. The applicant should not have been declared as bankrupt or willful defaulter or reported as fraud by any bank or financial institution or non-banking financial company.
- **4.3 Applicant Groups**: The applicants shall apply within the following three groups based on the respective criteria:
 - **4.3.1 Category B-I:** Applicants having annual revenue for pharmaceutical goods more than or equal Rs 1,000 Cr with average R&D expenditure of 3-5% in last five year and for medical devices, the annual turnover should not be less than Rs. 250 Cr and existing R&D expenditure should be minimum 1-3% of total annual revenue.
 - **4.3.2** Category B-II: R&D projects in priority areas at higher TRL level (TRL-5/6 to TRL-9).
 - **4.3.3** Category B-III: Research Projects in priority area at TRL 1 onwards to TRL 4. Preference will be given to startups/MSME/SME.
 - **4.4 Application:** Application submitted by an applicant to the Project Management Agency (PMA) as per the Application form prescribed under these guidelines containing requisite information, along with supporting documents and application fee.
- **4.5 Application Acknowledgement Date:** The date on which an application is acknowledged by the PMA after carrying out initial scrutiny in this regard.
- **4.6** Application **Approval Date:** The date on which approval letter under the Scheme is issued by the PMA.

- **4.7** Application **Window:** Time period allowed for filing the applications. The application window shall be opened based on notice issued by the department from time to time.
- **4.8** Base year: Financial Year 2023-24.
- **4.9 Clinical Trials:** shall means clinical trials as defined in Drug and Cosmetics Act and approved by the competent authority as defined in the act as amended from time to time.
- **4.10 Empowered Committee (EC)**: It refers to the committee constituted by DoP under the chairpersonship of CEO, NITI Aayog with Secretary level representatives from the Departments of Pharmaceuticals, Health & Family Welfare, Health Research, Biotechnology, AYUSH, Science & Technology, Scientific and Industrial Research, Scientific Secretary, O/o Principal Scientific Advisor to the Government of India (PSA) and Additional Secretary & Financial Advisor, Department of Pharmaceuticals as members.
- **4.11** Financial **Year:** Financial Year begins on the 1st of April of a year and ends on 31st March of the following year.
- **4.12 Force Majeure:** Extraordinary events or circumstances beyond human control such as an event described as an act of God (like a natural calamity) or events such as war, strike, public health emergency, riots, crimes (but not including negligence or wrong- doing, predictable/ seasonal rain and any other events specifically excluded).
- **4.13 Funding:** It is the financial assistance provided to each selected participant based on the laid down eligibility criteria.
- **4.14** Project **Appraisal and Approval Committee** (**PAAC**): It refers to the committee formed under the chairpersonship of Secretary (Pharmaceuticals) with representatives (not below the level of Joint Secretary) from DST, DSIR, DBT, DGHS, DHR, AYUSH and CDSCO to examine and approve the projects as well as consider and approve claims for disbursements.
- **4.15** Project Management Agency (PMA): is the agency appointed by the DoP to act on its behalf for receipt and appraisal of applications, verification

- of eligibility and examination of disbursement claims in accordance with these guidelines.
- 4.16 **Project Management Unit (PMU):** is the unit established in the dept of Pharmaceuticals to work as secretariat for the administrations and execution of both scheme.
- 4.17 **Participants**: shall refers to applicants selected under the scheme.
- 4.18 **Net sale**: shall refers to Gross sales less the cost of return, allowances and discounts.
- **4.19 R&D expenditure:** This includes expenditure on R&D and product development including clinical trial costs in India only. All non-creditable taxes and duties would be included in such expenditure.
- **4.20 R&D cost:** This includes expenditure incurred by the participants on the project selected under the scheme, including clinical trials whether in-house or through CRO, subject to verification. and shall not include expenditure on R&D counted as investment under PLI 2.O. All non-creditable taxes and duties would be included in such expenditure.
- **4.21 Successor-in-interest** refers to a party or entity that succeeds or takes over the rights, obligations, and interests of another party in a legal or business context. It typically occurs when there is a transfer or transition of ownership, assets, liabilities, or contractual relationships from one entity to another. The successor-in-interest essentially steps into the shoes of the original party and assumes their rights, responsibilities, and legal standing.
- **4.22** Technical **Committee:** A technical committee of 5-7 members with representatives from scientific departments, CDSCO and experts from industry & academia would be set up.
- **4.23** Technology Readiness Levels (TRL): Technology Readiness Levels (TRLs) are methods for estimating the maturity of technologies during the acquisition phase of a program. TRLs are based on a scale from 1 to 9 with 9 being the most mature technology. For the purpose of the scheme, TRL as

defined by DBT-BIRAC are taken as the standards. TRL Levels are indicated at **Appendix XI.**

- **4.24 Transfer of Technology (ToT):** Transfer of technology refers to the process of sharing and disseminating knowledge, expertise, skills, and intellectual property from one entity to another. It involves the transmission of technology-related information, innovations, techniques, or methodologies from a source (such as a research institution, company, or individual) to a recipient (another organization, industry, or country) for the purpose of adoption, implementation, and utilization.
- **4.25 Group of Companies**: Group Company(ies) shall mean two or more enterprises which, directly or indirectly, are in a position to:

Exercise twenty-six percent or more of voting rights in other enterprise.

Or

Appoint more than fifty percent of members of Board of Directors in the other enterprise, as defined in the FDI Policy Circular of 2017.

- **5. Tenure of the scheme:** The tenure of the scheme will be for a period of five years from FY 2023- 24 to FY 2027-28.
- **Selection of the applicants:** Selection of the applicants in each group will be governed by the parameters given in **Appendix IV**.
 - 6.1 All eligible applicants shall be ranked on the basis of marks obtained in the evaluation criteria as given in **Appendix IV**.
 - 6.2 The applicant securing highest marks shall be ranked Number 1, followed by applicant securing second highest marks and so on.
 - 6.3 The selection of the applicants shall be in the order of their ranks.
 - 6.4 If two or more applicants have same score, the applicant having higher marks in respect for R&D expenditure criteria will be ranked higher for B-I and, for Group B-II and BIII the projects applying for R&D in priority area (5&6) will be ranked higher. Applicants undertaking R&D in same area, the one with higher TRL level will be ranked higher.
 - 6.5 **Number of applicants to be selected**:

Group A: 9 participants with maximum of 3 Foreign MNCs

Group B: 30 participants/projects with maximum of 10 Foreign MNCs

Group C: 125 participants, of which:

- Minimum of 50 startups subject to sufficient eligible applicants
- Minimum of 20 Medtech projects subject to sufficient eligible applicants.
- Any company/Group of Companies can apply in both BI & BII but would be selected in either BI or BII.
- Any company/group companies can be selected in maximum 3 projects overall.

7. Funding provided to grantees under the scheme:

- 7.1 Project cost to be approved for R&D will be calculated post application acceptance.
- 7.2 The funding allocated for various categories would be as follows:

Category B I - Rs. 1,125 crores

Category BII - Rs. 3,000 crores

Category B III - Rs. 125 crores

7.3 The funding allocation is milestone based will be released in the following instalments:

1st Instalment: Signing of Agreement	10%
2nd Instalment: Completion of 1st Milestone	30%
3rd Instalment: Completion of 2nd Milestone	30%
4th Instalment: Completion of approved project	30%
and submission of final report	
Total	100%

The milestones achieved by the applicants will be reviewed periodically by PMA. Last instalment will be released after submission of project completion report.

- 7.4 The funding allocated for one category, if left under-utilized at the end of the year can be moved to other category applicants based on their need and performance. The modalities in this regard shall be finalized by PMA with the inputs from PMU.
- 7.5 For the proposals finally approved for funding support, PMA will sign agreement with grantees on behalf of DoP.
- 7.6 Necessary guidance notes and templates are provided to Grantees by PMA.
- 7.7 All grantees are required to open a separate, auditable, no-lien bank account with a scheduled commercial bank in order to receive the funds.

Budget planning:

Details	Category	Category	Category B
	В	В	III
	I	II	
		Nonrecur	ring cost
Upgradation of	20%	30%	70%
Equipment/	2070	2070	7070
infrastructure			
		Recurri	ng cost
Manpower,			
Consumables,	80%	70%	30%
Approvals,			
Clinical Trials,			
Travel,			
Contingencies etc.,			

Waivers	The	above	guidelines	shall	be	followed
	unle	ss there	is a specific	exem	ptio	n by DoP.

9. Benefit sharing:

9.1 Category B I and B II:

- 9.1.1 Beneficiaries under category B I and B II will need to share the benefits for the successful product/technology developed through DoP's support in either of the following ways:
 - a. Through 10 % benefit sharing on net sale proceeds per year of the product starting from first sale of the product/technology till 10 years; or
 - b. Through 10% benefit sharing on net sale of the product till amount starting from first sale of the product/technology till the amount is equivalent to 150% of assistance received from DoP: or
 - c. In the form of equity (face value of shares equivalent to 100% of the assistance provided by DoP).
- 9.1.2 Beneficiaries will have the option to choose one of the above at the time of signing the agreement.
- 9.1.3 DoP may seek payment by way of one-time transaction in the occurrence of events as under:
- a. The fund recipient entity successfully commercializes the product/technology supported through PRIP scheme.
- b. Licensing/Assignment/ Technology-transfer of the Project developments to any third party where the fund recipient is not undertaking direct market reach which also be treated as successful commercialization.
- c. If the fund recipient intent to transfer or sell/assign the interest of developments, it shall take prior written permission from DoP before doing so. DoP reserves the right to realize the benefit sharing, in case of one-time transaction, as will be mutually while granting such permission.
- d. If the fund recipient licenses the interest of project developments for periodical payments including benefit sharing, then the fund recipient can also continue to share the benefits as prescribed by DoP to be met from the periodical proceeds received from licensees/sub-licensees.

- e. In cases of significant changes such as public offering of shares, raising of venture funds, change in the share holding pattern, change in the legal entity status, changes due to substantial expansion, merger and acquisition etc. DoP reserves the right to enforce the benefit sharing obligation or the Surety Bond and recover the remaining benefit sharing committed for the project through the resolution or liquidation process as a receivable in favour of DoP.
- 9.1.4 Payment of benefit sharing shall fall due beginning with the first sale of the product(s) and the liability to pay benefit sharing will terminate upon the first of any of the following two events to occur:
- a. Payment of 10 % benefit sharing on net sale of the product for a period of 10 years.
- b. Through 10% benefit sharing on net sale of the product till amount is equivalent to 150% of assistance disbursed from DoP that was not returned as unutilized funds OR in the form of equity
- c. in case of Foreclosure or Termination of Project.

9.2 Category B-III:

- 9.2.1 Beneficiaries under category B III will need to share the benefits for the successful product/technology developed through DoP's support in either of the following ways:
 - a. Through 5% % benefit sharing on net sale proceeds per year of the product starting from first sale of the product/technology till 10 years; or
 - b. Through 5% benefit sharing on net sale of the product till amount starting from first sale of the product/technology till the amount is equivalent to 100% of assistance received from DoP: or
 - c. In the form of equity (face value of shares equivalent to 100% of the assistance provided by DoP).
- 9.2.2 DoP would also seek payment in case there is transfer of intermittent technology, know-how, application to third party to further carry out commercialization with/ without further development by way of one-time transaction.

- 9.2.3 Payment of benefit sharing shall fall due beginning with the first sale of the product(s) and the liability to pay benefit sharing will terminate upon the first of any of the following two events to occur:
- a. Payment of 5% % benefit sharing on net sale of the product for a period of 10 years.
- b. Through 5%% benefit sharing on net sale of the product till amount is equivalent to 100% of assistance disbursed from DoP that was not returned as unutilized funds OR in the form of equity
- c. in case of Foreclosure or Termination of Project.

10.Application:

- 10.1 The applicant is required to submit the application as per the form prescribed in **Appendix V**.
- 10.2 The Scheme shall be open for applications during the Application Window which is for 45 days. No application shall be accepted after the end of the Application Window.
- 10.3 A period of 45 days is considered as application under scrutiny after the closure of application window.
- 10.4 Considering the time taken for selection of participants, FY 2023-24 shall be gestation period.
- 10.5 An applicant shall submit an undertaking in the format given in **Appendix VI**, the Details of In-house R&D as per the forgiven in **Appendix VII** and the details of No lien account as per the format given in **Appendix VIII**.
- 10.6 On receipt of an application in the prescribed format, PMA will conduct an examination as per the checklist. The aforesaid examination shall preferably be completed within 15 working days from the date of the receipt of the application or any subsequent submission of the revised application if the original application was returned as incomplete earlier.

Thereafter, the PMA shall issue an acknowledgement of receipt of the application. This acknowledgement shall not be construed as approval of the Scheme.

10.7 In case, on the above-mentioned examination, an application is found to be incomplete, PMA shall inform the applicant accordingly within 15 working days of receipt of the application. An applicant must complete the shortcomings within 15 days of such communication from PMA, failing which the application will be closed under intimation to the applicant.

10.8 A non-refundable application fee, as mentioned in **Appendix V** of these guidelines, would be payable for each application. The application fee would be accepted electronically only.

11. **Online Portal:**

- 11.1 All applications will be submitted through an online portal maintained by the PMA. In case the portal is not available, applications may be submitted in physical form to the PMA.
- 11.2 Upon successful submission of an application, PMA will issue a unique Application ID to the applicant for all future references pertaining to the Scheme.
- 11.3 Application can be made on the online portal.

12. Role and Responsibilities of the Project Management Agency (PMA)

12.1 The PMA shall be responsible for:

- 12.1.1 Development and maintenance of an online portal for receipt of the applications.
- 12.1.2 Receipt of applications, examination and processing of applications and issuing acknowledgements.
- 12.1.3 Evaluation of the received application on financials ground (Verification of annual turnover, R&D expenditure committed investment for determining eligibility for disbursement of incentive. and evaluation of the documents submitted.

- 12.1.4 Weekly submission to PMU about the status of applications received and processed under the Scheme.
- 12.1.5 Placing the appraisal reports of shortlisted participants before the DoP through PMU for its concurrence.
- 12.1.6 Submission of shortlisted applicants after concurrence of DoP to Technical Committee for technical evaluation.
- 12.1.7 Completion of documentary formalities and issuance of approval letter to all selected participants.
- 12.1.8 The PMA will have the right to carry out physical inspection of an applicant's offices through site visit with approval of DoP.
- 12.1.9 Verification of the reconciliation of disbursement claims with prescribed documents.
- 12.1.10 Compilation of data regarding progress and performance of the Scheme through Quarterly Review and other information/documents.
- 12.1.11 Maintenance of records in a systematic manner, both digital and physical, to be handed over to DoP as may be mutually decided.

13. Project Management Unit (PMU)

- 13.1The PMU shall be responsible for providing secretarial services for administrations of component A &B of the scheme. The PMU shall carry out the following responsibilities:
- 13.1.1 Providing secretarial and other support to the Steering Committee for carrying out its responsibilities in administrations and management of Component A.
- 13.1.2Providing secretarial and other support to the PAAC and EC for carrying out its responsibilities in management of Component B.
- 13.1.3 Preparation of agenda papers for meetings and providing secretarial assistance to DoP for the same.
- 13.1.4 The PMU may convene stakeholders' consultations as and when deemed necessary during the tenure of the Scheme.
- 13.1.5 The PMU will co-ordinate with concerned departments, respective NIPERs and with TC and PMA for implementation of the scheme.

14. Technical Committee (TC)

- 14.1 The Technical Committee (TC) as defined in para 1 above, will be responsible for technical evaluation of the project, shortlisted by PMA, for appraisal and approval by PAAC.
- 14.2 The TC will examine and appraise the projects in respect of technical eligibility TRL level, alignment with priority area, strategic importance, alignment with National Health Priorities etc. and rank the projects for the approval of PAAC.
- 14.3 The Technical Committee will define the milestones in for the selected project for continuous evaluation .
- 14.4 Examination of claims and assess the milestone achievement for disbursement of incentive and making appropriate recommendations to the PAAC through PMU.
- 14.5 On a reference made by PMU, the TC will examine any technical query with respect to additional requirements, extension in duration of project, etc. and submit the report to PMU before the same is considered by PAAC.

15. Project Appraisal and Approval Committee (PAAC)

- 15.1 The Project Appraisal and Approval committee (PAAC), as defined in para 1 above, will perform following functions:
 - 15.2 PAAC will examine and approve the projects, consider and approve claims for disbursements and take appropriate steps to contain the expenditure within the prescribed outlay.
 - 15.3 The PAAC shall meet as often as necessary to ensure timely consideration of applications and disbursement claims and conduct periodic review of the Scheme. The PAAC will consider applications, as recommended by the PMA and TC, for approval under the Scheme.
 - 15.4 The PAAC may seek such additional information as considered necessary for approval. The PAAC, while considering applications for approval, shall ensure that the total amount of f payable does not exceed the financial outlay of the Scheme.
 - 15.5 The PAAC will conduct a periodic review of selected applicants with respect to their employment generation and development under the Scheme.
 - 15.6 The PAAC will consider claims for disbursement, as examined and recommended by the PMA, for disbursement of funding.

- 15.7 The PAAC may seek input from the Technical Committee on technical issues related to the Scheme, as may be deemed necessary.
- 15.8 The PAAC may request additional information, details and documents from the applicant as deemed necessary.

16. Empowered Committee (EC)

- 16.1 The Empowered Committee (EC) as defined in para 1 above will perform following functions:
- 16.2 The EC shall monitor and conduct periodic review of the Scheme and define Nationals Health priorities preference for the scheme.
- 16.3 The EC will also be authorized to carry out any amendments in the scheme and the guidelines thereof.
- 16.4 The EC may revise incentive rates and ceiling, if required, be done, shall not result in exceeding the total financial o of the scheme.
- 16.5 In case of a Force Majeure event, the EC may amend, modify or withdraw any Clause under the Scheme.

17. Approval and disbursement of funding under the Scheme

- 17.1 Application under the Scheme can be made by any company registered in India.
- 17.2 An application, complete in all aspects, will have to be submitted before the due date. Acknowledgement will be issued after initial scrutiny of the application.
- 17.3 The eligible applicants will be appraised on an ongoing basis and considered for approval, based on predefined selection criteria.
- 17.4 The funding shall be released to the selected participants under the scheme who meet the required threshold criteria.
- 17.5 Timely disbursals of funding by the PMA will be monitored by DoP and reviewed by the PAAC subject to budgetary allocations by the Department of Expenditure.
- 17.6 The funding will be provided on investment in research as defined in scheme guidelines in respect of maximum period of 5 years for component B from the date of approval.
- 17.7 The progress in approval of applications and disbursal of funding shall be monitored on an ongoing basis against the monitoring framework to be specified in the guidelines.

- 17.8 The PMA shall recommend two (02) waitlisted applicants, if available, along with selected applicants, for each target segment.
- 17.9 All the applications will be finalized within 90 days from the date of closure of the application window.
- 17.10 After receiving approval from the PAAC, the PMA will issue a letter to the selected applicant within 5 working days, communicating approval under the Scheme. The approval letter shall clearly mention the following:
 - i N a m e of the applicant
 - ii Target area of research
 - iii Funding allocated.
 - iv Baseline (if any)
 - v Scheduled date of commencement of the work
- 17.11 The selected applicant shall submit, within two weeks of date of issuance of approval letter by the PMA, a bank guarantee of prescribed amount along with undertaking as per **Appendix VIII**, in favour of PMA.
- 17.12 The aforesaid approval letter shall not be construed as a guarantee for disbursement of incentive as the same will be dependent upon verification of eligibility after submission of disbursal claim and other criteria defined in these guidelines.
- 17.13 If the selected applicant is found to be ineligible at any stage, or if it has not compiled with notifications, orders, guidelines etc., of the Scheme, or declines the offer of the approval under the Scheme at any stage, for any reason, the offer letter issued shall stand cancelled. In such case, the offer shall be extended to the waitlisted applicant for the period remaining.
- 17.14 For claiming incentive under the Scheme, applicants will be required to submit claims for disbursement of incentive to the PMA. Applicants must ensure that the claims are complete in all respects and are accompanied by all the documents required as per prescribed format and made available on the online portal.
- 17.15 An applicant may submit a claim for disbursement of incentive on annual basis. Claims for any period shall be made only once, unless

- withdrawn, and no subsequent part claims shall be allowed for the said period.
- 17.16 Claims for disbursement of incentive shall be filed along with supporting documents within one month of the closure of the given financial year. If the claim is found to be in order, same shall be released after submission of final audited accounts of the Company for the project.
- 17.17 The PMA shall examine and verify eligibility and assess incentive payable to an applicant based on the method laid down in these guidelines and the approval letter issued to the applicant.
- 17.18 The PMA will have the right to verify any document(s) in relation to the claim for incentives including but not limited to Statutory Auditor or Independent Chartered Accountant certificates, whichever is applicable, and returns furnished to various Ministries / Departments / Agencies. The PMA shall also have the right to examine the end realization and settlement/ payments corresponding to sales and investment respectively by way of Statutory Auditor or Independent Chartered Accountant certificates, bank statements etc. to the extent deemed necessary.
- 17.19 In case of any doubt with respect to determining eligibility and incentive amount due, or any other matter in discharge of its duties and responsibilities, the PMA may refer such matter to PAAC for clarification and the decision of PAAC shall be final in this regard.
- 17.20 The PMA shall process claim for disbursement of incentive within 60 days from the date of receipt of such claim and make appropriate recommendations to PAAC.
- 17.21 PAAC will consider claims for disbursement of incentive, as examined and recommended by the PMA.
- 17.22 PMA will maintain a separate Bank Account for receipt of application fees from applicants and funds from DoP related to the incentives and make disbursements of incentive amount to the applicants upon approval of the claim by DoP. All interest earned on this account shall accrue to the Consolidated Fund of India.

- 17.23 PMA shall disburse the incentive through direct transfer (via PFMS) after approval of the claim and completion of all pre-disbursal formalities by the applicant.
- 17.24 If the PMA or DoP is satisfied that eligibility under the Scheme and / or disbursement of incentives have been obtained by misrepresentation of facts or falsification of information, DoP may ask the applicant to refund the incentives along with interest calculated at 3 years SBI MCLR prevailing on date of disbursement, compounded annually, after giving an opportunity to the applicant of being heard. In this regard, the applicants shall submit an undertaking in the format prescribed at **Appendix V**.
- 17.25 DoP shall make budgetary provisions for disbursal of incentives under the Scheme. The PMA will submit budgetary requirements to DoP as a consolidated amount on quarterly basis.
- 17.26 PMA shall furnish, an applicant and product wise statement of all claims received, processed and approved and all incentives, disbursed and pending, to DoP on quarterly basis.
- 17.27 Yearly review will be undertaken by the EC and half yearly review with respect to progress and performance of the Scheme will be done by PAAC.
- 17.28 All approved applicants shall be required to furnish self-certified Quarterly Review Report within 30 days from the end of each quarter which will be reviewed by DoP.

18. Residual

- 18.1 In case the project is declared unsuccessful/commercially viable, the remaining assistance would not be released and any un-utilized amount as on date would be refunded to DoE within 30 days of the declaration.
- 18.2 To obviate any malpractices in the financial matters where disbursements are made to companies by the Government, it has been decided to provide a deterrent against corrupt practices for promotion of transparency and equity. Therefore, keeping in view the sensitives involved in the process and taking cue from the instructions of the Central Vigilance Commission regarding adoption of an Integrity Pact in the matter of procurement, it has been decided to obtain

undertaking(s) from applicants under the Scheme as per format at **Appendix X.**

18.3 An applicant shall intimate the PMA of any change in the shareholding pattern during the tenure of Scheme, after up-dation with the Registrar of Companies (RoC).

18.4 Any change in the shareholding pattern of an applicant leading to a successor-in interest during the tenure of the Scheme, shall be intimated by PMA for approval of the DoP to consider for disbursal of incentives.

18.5 In the event of a change to the successor-in-interest, any investments previously undertaken by the initial applicant-whose approval was sanctioned under the scheme-will be acknowledged when establishing eligibility.

Furthermore, If a company previously identified as part of the applicants group, whose investment were included in the computation of minimum cumulative investment under the scheme, cease to be affiliated with the applicant ,the investment contributed by such disaffiliated group companies will no longer be counted in the calculation of minimum cumulative investment for future investment claims .To make up for this deficit in the investment applicant or the remaining group companies will need to compensate before making any subsequent incentive claims.

18.6 All transactions by the selected applicant with Related Parties will be subject to the provisions of relevant statutes and Accounting Standards – 18 and corresponding Ind-AS, as amended from time to time. In case of any proceedings under any Act leading to adjustment of pricing in the transactions between related parties, effect shall be given in calculation of incentive and/ or eligible committed investment.

18.7 An applicant should inform PMA and DoP of any additional IP's being generated from the project which may fall under the Benefit Sharing Clause of respective Category of Component B.

FORM FOR ESTABLISHING CENTRE OF EXCELLENCE AT NIPERS

Table 1: Basic Details

S.	Outline	Details
No.		
1.	Name of the	
	Institute and	
	area of specialization	
2.	Proposed Outlay*	
	The NIPERs will clearly define	
	both recurring & non-recurring	>
	costs of the respective CoEs in	~O
	consultation with their BoG.	.01
3.	Duration	2023-24 to 2026-27
4.	Objectives of the COEs	7
	M	\
5.	Manpower Requirement*	
	No regular manpower will be	
	created from the financial	
	assistance provided under the	
	scheme.	
6.	Target Beneficiary of COEs	
7.	Outline the significant	
	initiative that NIPER plans to	
	undertake within the specialized	
	domain of its	
	Centers of Excellence (CoEs).	
8.	Measurable outputs/outcomes*	

	NIPER will clearly define their measurable outputs/ outcomes that they aim to
	*The deliverables of CoEs will be fixed by the Department of Pharmaceuticals in
	consultations with Board of Governors (BoGs) of the respective institutes. The CoEs will be reviewed based on set deliverables.
9.	Planned Industry-Institution collaboration
10.	Approval and Clearance

1. General

- 1.1 Specialized Area of the COEs:
- 1.2 Total estimated financial outlay:

2. Proposed Outlay

Details of proposed financial outlays.

Please provide component-wise cost estimates for usage of proposed outlay for different requirements:

Table 2: Financial outlay on different requirements

S. No.	Segment	Subject	Justification	Amount (in
				crore)
1.				
2.	Recurring			
3	Non-			
4	Recurring			
	Total			

3. **Duration**

Please provide year-wise cost estimates for usage of proposed outlay in the table below.

Table 3: Details of the Financial (year-wise)

Segmen t		Subject	Proposed Outlay (year wise)			e)	
						(in c	rores)
			2023-24 (P	2024	2025	202	202
			reparatory	-25	-26	6-27	7-28
Doguming	1	Subject	year)				
Recurring	1	Subject					
ng		Justification:					
	2	Subject		5			
		Justification:	10				
Non-Re	3	Subject	J				
curring		Justification:					
	4.	Subject	*				
		Justification:					
Total							
Grand Total	al	Y					

4. Objectives of COEs

Enumerate the primary objectives that NIPER is striving to achieve within its designated Center of Excellence (CoEs) and elucidate how these objectives align with the overarching goals of the PRIP Scheme and the mandate of Department of Pharmaceuticals.

5. Manpower Requirement

No regular manpower will be created from the financial assistance provided under the scheme. Information regarding the workforce engaged to be communicated to the Project Monitoring Agency (PMA) through quarterly reports.

Table 4: Manpower Requirement

Sno.	Temporary Manpower Requirement (in no. of personnel)	Details of outsourcing of services	Associated Cost an funding Source	Remarks d
		. (2.	

6. Target Beneficiaries

- A. Please specify the target beneficiaries in terms of location, area and segment of population, industries, companies, institutions, etc.
- B. Please give the details of estimated coverage of target population and basis for selection of the target beneficiaries.

7. Significant Initiative

Outline the significant initiative that NIPER plans to undertake within the specialized domain of its Center of Excellence (CoEs).

Table 5: Key Initiative Undertaking

Sno.	Key Initiative undertaken	Impact
1.		
2.		
3.		
4		
5		
6		

8. Outcomes and Deliverables

Indicate year-wise targets for outputs and outcomes of NIPER along with the activities to be undertaken and inputs to be used in the form of measurable indicators in the table below. Data sources for each indicator must be clearly mentioned along with key assumptions and risks involved (if any) along with their severity as perceived by the proposer. Baseline data (Year and Value) should also be benchmarked and mentioned for all indicators.

Table 6: Measurable Indicators for Outcome/Output

Sno	Output/Deliverables	Activities	Measurable	Impact
		undertaken	Indicators	
1				
2				
3				
4				

_		
_		
~)		
_		

9. Year-wise targets for outputs and outcomes

Table 7: Yearly Output

Highlights	Year I	Year II	Year III	Year IV	Year V
Physical					
/Infrastructure					
development					
Patents					
Publications					
Students trained					
Industry sponsored.			•		
projects					
Any other					
component, if any					

10. Planned Industry-Institution collaboration.

NIPERs are required to foster robust industry-academic linkages, necessitating the meticulous consideration of specified eligibility criteria when forging collaborations with industrial partners.

Table 8: Planned Industrial Collaboration

Sno.	Year	Planned	Justification	Expected
		Industrial		Expected Output
		Collaboration		
1.				
2.				
3.				

11. The tentative list of eligibility criteria to be considered by NIPERs for Academic-Industry partnership:

Table 9: Eligibility criteria for Industry

S.	Eligibility Criteria for Industry		
No			
	Reputed Pharmaceuticals/Med-Tech Industry with existing		
1.	R&D expenditure should be a minimum of 2% of total.		
	annual revenue.		
	Company's experience		
2.	Pharma Med-Tech company should have a minimum		
	experience of 10 years in the respective fields.		
	Existing Academic Collaboration of the Industry		
3.	Previous patents filed, research publications. Support available for Technology transfer, regulatory processes. Previous track record of collaboration with academic/research institutes.		
4.	Existing patent record of the industry (inclusive of		
	national & international)		
5.	Infrastructure Facilities-		
.	The company should have		
	adequate research and development infrastructure.		
6.	Miscellaneous		

12. Approvals and Clearances

Requirement of mandatory approvals and clearances, if any from various local, state and national bodies and their availability may be indicated in a tabular form (Land acquisition, environment, forestry,

wildlife etc.)

Table 10: Approval/ clearances

S. No.	Approval/Clearances	Agency concerned	Availability (Y/N)



Undertaking to be furnished by NIPERs.

We, [Institute Name], hereby undertake to comply with the following conditions for availing the funding under the Scheme for establishment of the Center of Excellence (COE) in [Specify the Field] for a duration of up to 5 years:

1.	We,,
	hereby acknowledge that the funding that would / may be provided to us
	under the Scheme for Promotion of Research and Innovation in Pharma
	MedTech Sector (PRIP) notified by Department of Pharmaceuticals
	(DoP) vide Gazette Notification no. 199 dated 17th August, 2023 in Part-
	I, Section 1 of the Gazette of India (Extraordinary), will be provided to us
	based on, and after relying upon, the information provided by us to avail

they said incentives. We understand and acknowledge that the financial support provided under this scheme is contingent upon our strict adherence to the guidelines and regulations established by the scheme's governing authorities.

- 2. We hereby confirm that the information provided by us for availing the said funding is true, correct, and complete in all respects and the material fact/ information that may have an adverse impact on the information provided by us for availing the said funding has been concealed. We acknowledge and confirm that the foregoing averment is on an on-going basis and further undertake to immediately appraise the Department of Pharmaceuticals about any change in the status of information provided by us to avail the said funding.
- 3. We commit to providing regular progress reports and updates to the

concerned authorities, as per their requirements, to demonstrate the effective utilization of the financial assistance and the successful establishment and operation of the CoE.

- 4. We further commit to ensuring that the Center of Excellence (CoE) becomes self-sufficient within five years from the date of its establishment, and we will not rely on DoP for funding the salaries of individuals employed within the CoE after the period of 5 years.
- 5. In the event of any proposed changes, deviations, or adjustments to the plan and budget approved under this scheme, we shall promptly inform the competent authority and seek their prior approval before implementing such changes.

We hereby agree to uphold and comply with the aforementioned conditions and acknowledge that this undertaking is being submitted to the competent authority to formalize our commitment.

Authorized
Signatory: [Name]
[Designation]
[Institute
Name] [Date]

PRIORITY AREAS UNDER THE SCHEME

The scheme shall cover Pharma and MedTech research under six (06) priority areas as mentioned below:

I. Area/ Product 1

- i. New Chemical Entity (NCE)
- ii. New Biological Entity (NBE)
- iii. Phyto-pharmaceuticals (Natural Product)

Area/Product 2

i. Complex generics: Products with

- a. A complex active ingredient(s) (e.g., peptides, polymeric compounds, complex mixtures of APIs, naturally sourced ingredients)
- b. A complex formulation (e.g., liposomes, colloids)
- c. A complex formulation technology and manufacturing processes permeation enhancers, continuous flow manufacturing
- d. A novel route of delivery (e.g., locally acting drugs such as dermatological products and complex ophthalmological products and optic dosage forms that are formulated as suspensions, emulsions or gels)
- e. A complex/novel dosage form (e.g., modified release formulations, transdermal, metered dose inhalers, extended release injectable)
- f. Innovative drug-device combination products (e.g., medicated catheters, auto injectors, metered dose inhalers

ii. Biosimilars

Area/ Product 3 - Precision medicine (Targeted innovative therapeutics)

- i. Any approach that uses information about a person's own genes or proteins to prevent, diagnose, or treat a disease.
- ii. Stem cell therapy, gene therapy
- iii. Biomarkers

Area/ Product 4 – Medical Devices

- i. AI/ML based medical devices with software development,
 Software as Medical Device (SaMD) and software in Medical Device (SiMD)
- ii. Medical diagnostics and screening devices with genetic technology.
- iii. Robotic medical devices for surgical procedures
- iv. Medical devices with telemedicine facilities

Area/Product 5- Orphan Drugs

Medicinal products intended for diagnosis, prevention or treatment of life threatening or very serious diseases or disorders that are rare- about 450 rare diseases recorded in India (in tertiary care hospitals)

VI. Area/ Product 6 - Drug development for AMR

Prioritisation will be done within and among the categories based on future.

A. Selection parameters

1. Category B I:

- Annual turnover of the company should be not less than Rs. 1000 cr. and the existing R&D expenditure in Pharma should be minimum 3-5% of total annual revenue. As regard medical devices, the annual turnover should not be less than Rs. 250 cr. and existing R&D expenditure should be minimum 1-3% of total annual revenue.
- o Committed R&D expenditure in priority areas in next 5 years.
- Joint Research publications with academia in peer-reviewed journals indexed in databases: Medline, Pubmed Central, Science Citation index, Science Citation Index Expanded, Embase, Scopus, Directory of Open Access Journals (DoAJ) etc.,
- Products launched in the market through collaboration with academia.
- Existing patent record of the industry (inclusive of national and international patents).
- Patents filed under Indian Patent Act (process patent and product patents)
- Any company may apply for funding under this category at any stage of research (TRL 1-9) however funding will be provided for ongoing approved project viz-a-viz current TRL.
- One company can perform research in multiple subareas under one priority area however undertaking by the applicant that the project with same objectives and deliverables has not received funding from any other agency.
- The proposed objectives and deliverables should not have received funding support from any other agency.
- The institute should have basic research facilities that are available for conducting research by the company.
- o There must be a MoU or letter of acceptance between the applicant and the institute before applying for the benefit through the scheme, defining the usage of the infrastructure and ownership of the product developed by the company must be clearly defined.

- At least 10% of the human resources for the projects must be from the students/faculties of the institutes which will be trained by the company.
- The funding will include expenditure incurred on manpower specifically hired for the projects, raw products, equipment, consumables, cost of clinical trials regulatory process, contingencies etc.

2. Category B II:

The beneficiaries will be selected in this category subject to meeting the following essential criteria:

- Submission of pre-clinical trial results
- Approval for Phase 1 trials.
- Study design for Phase 2 clinical trials.
- Viability of the research being conducted.
- Sustainability, scale-up and marketing strategy.

3. Category B III:

Indicative criteria for selection of beneficiaries under this category are as follows:

- Start-ups and SME MSME will be given preference.
- SMEs, MSMEs and Start-up should be registered with DPIIT.
- Applicants with academia collaboration will be given preferences.
- Availability of research talent and of research infrastructure.
- Unmet need being solved, disease being targeted.
- Process patent and application process.

Possibility of generating IP, Clear potential for becoming commercially viable product.

Financial support can be provided only once to any potential, opportunities and national importance.

B. Eligibility criteria weightages

Category B-I:

S. No.	Eligibility Criteria	Weightage
1.	Annual turnover of the company should not be less than • 1000 Cr for Pharma and the existing R&D expenditure in Pharma should be a minimum of 2%-5% of total annual revenue. • 250 Cr for Med-Tech and the existing R&D expenditure in Med-Tech should be at least 1-3% of total annual revenue	10
2.	Academic Collaboration • Status of NIRF Ranking based on Pharmacology and Medical Devices • Availability of Research areas and Research Infrastructure • Previous patent filed, research publications. • Support available for Technology transfer, regulatory processes. • Previous track record of collaboration with industry	15
3.	Committed R&D expenditure in priority areas in next 5 years.	5

	Higher the committed R&D expenditure in	
	priority areas by the company, more points in	
	the weightage	
	Joint Research publications with academia in	
	peer-reviewed journals indexed in databases:	
4	Medline, Pubmed Central, Science Citation	5 5 5
4.	index, Science Citation Index Expanded,	3
	Embase, Scopus, Directory of Open Access	
	Journals (DoAJ) etc.	
	Sustainability, scale-up, and commercial	
	viability of the proposed products (2 points	
	each)	
	 Novelty with respect to competitors 	
	in market	
	Proof of concept	
	 Forecast of returns in research/ 	
5.	Potential for high economic benefit	14
	 Potential of proposed 	
	product/technology for disrupting the	
	markets and target market for	
	addressing niche segment	
	 Environmental Impact 	
	 Go-to-market strategy. 	
	 Potential business partners 	
	Existing patent record of the industry (inclusive	.
6.	of national and international patents)	3
7	Patents filed under Indian Patent Act (process	5
7.	patent and product patents)	3
	TRL Rating (TRL 1 to 9) (More the TRL Level	
	more the weightage)	
O	• TRL 1 to 2: 1 Points	
	• TRL 2 to 3: 2 Points	6
8.	• TRL 3 to 4: 3 Points	0
	• TRL >4: 6 Points	
	Any company may apply for funding under this	
	category at any stage of research (TRL 1-9)	

	TOTAL	100
	Any other support	
	Hand-holding support	
	research areas	
	Capacity Building in any other	10
	 Training support 	10
	• Equipment support	
	present at the selected institute in the form of:	
11.	Value addition in the Research ecosystem	
	One Health principles	
	needs.	
	Societal Impact - Solve unmet	
	 Innovation and new technology 	
	National Health Policy and	20
	 In line with objectives of the 	• •
	national importance in healthcare	
	Public Health Priorities/Areas of	
10.	points each)	
10.	Viability of the research on the basis of; (4	
	accordingly.	
	backgrounds and points can be awarded	
	selected/employed may be from diverse	
	The human resource workforce	
		5
	company.	~
	the institutes who will be trained by the	
	projects must be from the students/faculties of	
	At least 10% of the human resources for the	
9.	Human resource employed-	
	approved project viz-a-viz current TRL.	
	however funding will be provided for ongoing	

Category B-II.

S. No.	Eligibility Criteria	Weightage
1.	Submission of pre-clinical trial results	10
2.	Approval for Phase 1 trials	10
3.	Study design for Phase 2 clinical trials	10
4.	Projects in priority areas (5,6)	5
5.	Priority of the research on the basis of.	10
	 Public Health Priorities/Areas of 	
	national importance in healthcare	
	 In line with the objectives of the 	
	National Health Policy	
	 Innovation and new technology 	
	 Societal Impact 	
	Solve unmet needs	
6.	Infrastructure Facility- The company should	15
	have adequate research and development	
	infrastructure	
7.	Sustainability, scale-up, and commercial	18
	viability of the proposed products (3 points	
	each)	
	 Novelty with respect to competitors 	
	in market	
	 Forecast of returns in research/ 	
	Potential for high economic benefit	
	 Market Adoption and Customer 	
	Acceptance	
	 Environmental Impact 	
	 Go-to-market strategy. 	
	 Does the technology offer import 	
	substitution	
8.	TRL Rating (TRL 5 to 9) (More the TRL Level	10
	more the weightage)	
	• TRL 5 TO 6: 4 Points	
	• TRL 6 TO 7: 7 Points	
	• TRL 7 TO 9: 10 Points	

	TOTAL	100
	(No. Of National and International Patents)	
9.	Previous Patents and track record of approval	12

Category B-III

Eligibility Criteria	Weightage
SMEs, MSMEs, and start-ups registered with	5
DPIIT	
SMEs, MSMEs, and Start-up with industry-	20
academia collaboration.	
Previous collaboration (National	
/ International)	
Industrial collaboration	
Academic collaboration	
 Developing new products/ 	
Technology through in Make in	
India, Startup India, and others	
Availability of research talent and	20
infrastructure	
Unmet needs are being solved, disease being	15
targeted, and national health	
concerns	
Track records of patent/ citation/ research	10
papers	
Possibility of generating new IP	10
Potential for Employment Generation	10
Does the technology offer import	10
substitution/ and offer export potential	
TOTAL	100
	SMEs, MSMEs, and start-ups registered with DPIIT SMEs, MSMEs, and Start-up with industry-academia collaboration. • Previous collaboration (National / International) • Industrial collaboration • Academic collaboration • Developing new products/ Technology through in Make in India, Startup India, and others Availability of research talent and infrastructure Unmet needs are being solved, disease being targeted, and national health concerns Track records of patent/ citation/ research papers Possibility of generating new IP Potential for Employment Generation Does the technology offer import substitution/ and offer export potential

<u>Application form: Promotion of Research & Innovation in Pharma</u> MedTech Sector (PRIP) Scheme

1. **Instructions:**

- The application shall be duly signed by the authorized signatory of the company.
- Applicants are advised to follow the format provided in the template for submitting their applications. Applicants are requested to provide information and enclose all supporting documents as detailed.
- All applications will be submitted through an online portal to the PMA. A
 non-refundable application fee as mentioned below would be payable for
 each application. The application fee would be accepted electronically
 only.
- Applicants may go through the guidelines carefully before filling in the details in the application.
- If any document which is required to be submitted along with the application is available on a government website, the website link where this document can be viewed may be provided. The responsibility of the correctness/ veracity of contents rest with the applicant(s).
- Documents to be furnished: Certificate from Statutory Auditor, Certificate from company Secretary/ Board of Directors.
- Key Personnel Details: Contact Details of three senior employees of applicant. Details would include Name, Designation, Address, Phone number and email ID.

2. Application Fee Under the Scheme:

S. No	Applicant Categories	Application Fees
1	Category B I	Rs 1,00,000
2	Category B II	Rs 1,00,000
3	MSMEs in Category B	Rs. 30,000
	II	

4 Category B III NA

Application Fee will be paid electronically through NEFT / RTGS to the bank account identified under PFMS as per detail given on the portal.

3. **APPLICATION FORMAT**

	Part A: General Information				
1.	Name of the				
	Applicant				
2.	Title of the				
	Project				
3.	Company det	tails			
	Name	Address	Ownership	Annual	Balance sheet
		•	V	Turnover	for previous
		V			3yrs
4.	Academic Ins	stitution details		ory B I)	
	Name	Addres	SS	State or Co	entral govt.
5.	Category of A	Applicant			
	Category I	Categor	y II	Category III	
6.	Major R&D Achievements of the company				
7.	Area/ Sub Area of the proposal				
8.	TRL level				
9.	Total cost				
	DoP				
	Company				
10.	Name of the project coordinator				
	Company				
	Institute				
11.	Executive Summary				
12.	Outcome/ De	liverables in for	m of products		
13.	Benefits to A	cademic institut	e (only for Cate	gory B I)	

		Part B	3: Technical I	Details of the	;		
			proposa	<u> </u>			
14	4. Introductio	n					
15	5. Rationale						
16	6. Objectives						
17	7. Current sta	tus of R&D	on the topic/	prior art			
18	3. Current sta	tus of R&D	on the topic l	y the applic	cant com	pany	
19	P. IPR status						
20). Methodolog	gy					
21	1. Plan of wor	k					
22	2. Performan	ce Indicators	s/ Milestones	(Half yearly))		
23	3. Plan of Par	tnership and	l Institution H	Building			
24	4. Expected O	utcome/ Del	iverables	•			
				λ			
		P	Part C: Budge	et Plan			
25	5. DoP contrib	oution	. (75			
	Item	1st	2nd	3rd	4th	5th	Total
	Non -		12				
	Recurring	4					
	Recurring						
		1)				
26.	Company co	ntribution					
	Item	1st	2nd	3rd	4th	5th	Total
	Non -						
	Recurring						
	Recurring						
]	Part D: Payr	nent of Appli	cation Fee (excluding	,	
			Category 1	3 III)			
27.	Details of the	e Application	ı Fee				
	Amount						
	Due						
	Amount			Date of			
	Paid			Payment			

Bank	Bank	
account	Name	
No. (From		
which		
payment is		
made)		
IFSC Code	Unique	
	reference	
	number	

Note - Details of documents and certificates required to be uploaded by the Applicant along with the Application Form shall be provided on the Scheme Portal.



FORMAT OF UNDERTAKING(Undertaking of the Applicant on letterhead)

1	We					
1.	** C, .	. .	 	 	 	

hereby, acknowledge that the incentives that would / may be provided to us under the Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP) notified by Department of Pharmaceuticals (DoP) vide Gazette Notification no. 199 dated 17th August, 2023 in Part-I, Section 1 of the Gazette of India (Extraordinary), will be provided to us based on, and after relying upon, the information provided by us to avail the said incentives.

- 2. We hereby confirm that the information provided by us for availing the said funding is true, correct and complete in all respects and that no material fact/ information that may have an adverse impact on the information provided by us for availing the said funding has been concealed. We acknowledge and confirm that the foregoing averment is on an on-going basis and further undertake to immediately appraise the Department of Pharmaceuticals about any change in the status of the information provided by us to avail the said funding.
- 3. We further undertake that in the event of (i) any of the information provided by us to avail the said funding being found false, incorrect or incomplete, or (ii) in the event of the undertakings and
 - confirmations stated at para 2 above being found false, incorrect, incomplete or breached; we will (a) refund the entire amount of funding availed by us along with interest calculated at 3 years SBI MCLR prevailing on the date of disbursement, compounded annually, for the period between excess payment and date of refund.
- 4. We acknowledge that the remedies provided in para 3 (a) above are not the exclusive remedies available with the Department of Pharmaceuticals and are without prejudice to any legal remedies available with

Department of Pharmaceuticals for events mentioned in Para 3 (i) and (ii) above.



DETAILS OF IN-HOUSE R&D

(Undertaking from the Applicants under Category B II & B III on letterhead)

1.	Location of the R & D unit				
2.	Main objectives of the R&D Program				
3.	Whether R&D establishment is housed in a separate building inside/outside the				
	factory premises?				
4.	List of major R&D equipment procured as on date (Details in separate sheet)				
5.	Do you have a full-time R&D Director/Head? if so,				
	a. Name & Designation				
	*O'				
	b. Qualification				
	c. Experience				
	d. Date of appointment to the post				
	e. Contact Nos (Telephone, Mobile, Fax and				
	Email)				
6.	Details of R&D achievements made during the past 3 years (in				
	separate sheet)				
7.	Give particulars of R&D projects in progress.				
8.	Details of grants-in-aid/ fund/ loan/ equity received from R & D				
	programmes/				
	commercialization of technologies from any central/ State Govt.				
	Department(s) during the last three years				

M.Chineo

DETAILS OF NO LIEN ACCOUNT

(To be furnished on bank's printed letter head)

	Ref No.: Dated:
	•••
Subject: No Lien account opened in favour of M/sproject titled "" under PRIP scheme.	for
Sir/ Madam,	
At the request of M/sadvise you that we have opened a separate no lien according	
No in our books for the purpose of financial assistance aggregating to Rs (Rupees	_
only) sanctioned by you which may be availed of by the corp. PRIP scheme for project entitled "	mpany under
,"	
and the project cost component put in by the Company amount (Rupees	
We confirm that the said total sum of Rs. (Rupe lakhs only), as and when received by us either in part of be credited by us to the said no lien account and that we will or claim any right of set off or lien on any balance lying to the said account.	r in full, will I not exercise
It is confirmed that we had not taken any other undertaken	ing from the

account holder contrary to the certificate issued hereto.

We further confirm that we shall furnish to the Department of Pharmaceuticals, as and when required by it, a certified true copy of the

No Lien Account.

Yours faithfully,

Chief Manager

(Name & Seal of the Bank)



Consent for audit of R&D site/offices/ facility

(To be signed by full time Director / CEO / MD of the company / firm duly depicting the designation and submitted on official stationery of the applicant along- with the authorization to do so)

1. Whereas the applicant namely (name of the Company with address) has submitted an application under Promotion of Research and Innovation in Pharma-MedTech sector in India (PRIP) Scheme for Pharmaceuticals, notified by Department of Pharmaceuticals (DoP) vide Gazette Notification no.199 dated 17th August, 2023 in Part-I, Section of the Gazette of India (Extraordinary), to Department of Pharmaceuticals (DoP), Government of India seeking incentives for

the application pertaining	to	
R&D		. (priority area) at
(location(s)).		7

2. Now, therefore, the applicant or its agencies or its consultants engaged with the R&D project in priority area shall allow the PMA or any other authorized agency as designated by DoP/ PAAC for verification of facility/ offices and information/ documents submitted for the approval of application and disbursement of incentives under PRIP Scheme.

Date

Signature

(Name & designation with address)

Director / CEO / MD

Proforma for Integrity compliance

(To be signed by full time Director/ CEO/ MD of the company/ firm duly depicting the designation and submitted on official stationery of the applicant along- with the authorization to do so)

FORMAT-A

1. Whereas the applicant namely (name of company with address) has submitted an application under PRIP Scheme for Pharmaceuticals notified by Department of Pharmaceuticals (DoP) vide Gazette Notification no. 199 dated 17th August 2023 in Part-I, Section of the Gazette of India (Extraordinary) to Department of Pharmaceuticals (DoP), Government of India seeking incentives for the application

pertaining to R&D (priority area) at..... (location(s)).

- Now, therefore, the applicant including its officers / representatives commits and undertakes that he / she will take all measures necessary to prevent corruption. He / She commits to observe the following principles during his / her association / engagement with DoP or its agencies or its consultants engaged with the process of appraisal and verification of application for the approval of application and disbursement of incentives under PRIP.
- 2.1 The PRIP applicant will not directly or through any other person or firm, offer, promise or give to any of the DoP's officer(s) or consultant or agency representative (appraisal or / and verification agency appointed by DoP to handle the application) involved in the process of dealing with application or to any third person any material or

other benefit which he / she is not legally entitled to in order to obtain in exchange any advantage of any kind whatsoever before or during or after the process of the application for grant of approval or disbursement of incentives under PRIP.

- 2.2 The PRIP applicant will not commit any offence under the relevant IPC / PC Act; Further, the applicant will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the DoP.
- 2.3 The PRIP applicant shall disclose the name and address of the duly authorized Agents/Representatives who will be dealing with DoP or its agencies and the remuneration of these agents or representatives shall not include any hidden amount or component to get the work done in undue manner or causing inducement of whatsoever nature whether in cash or kind to influence the normal process or practice of work.
- 2.4 The PRIP applicant will disclose any and all payments he / she has made, is committed to or intends to make to agents, brokers or any other intermediaries, other than regular employees or officials of the applicant, in connection with the grant of approval or / and disbursement of incentives.
- **2.5** The applicant will not offer any illicit gratification to obtain unfair advantage.
- **2.6** The applicant will not collude with other parties to impair transparency and fairness.
- **2.7** The applicant will not give any advantage to anyone in exchange for unprofessional behaviour.
- The applicant declares that no pervious transgressions occurred in the last 3 years with any other Company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprises / Central or State Government or its any instrumentality in India.
- 4. The applicant agrees that if it is found that the applicant has made any incorrect statement on this subject, the application will be closed or rejected and DoP reserve the right to initiate legal action of whatsoever nature. In case if DoP has disbursed the incentives under PRIP, the amount disbursed to applicant be recoverable along with interest

calculated at 3 years SBI MCLR prevailing on the date of disbursement, compounded annually besides blacklisting of the applicant and initiation of legal action of whatsoever nature at the discretion of DoP.

The contents of the above undertaking have been gone through and after understanding the same is being executed / given on......day of..........

(month / year)

Signature (Name & designation with address)

Director / CEO / MD

FORMAT-B

- 1. Whereas the applicant namely (name of company with address) has submitted an application under PRIP Scheme for Pharmaceuticals notified by Department of Pharmaceuticals (DoP) vide Gazette Notification no. 199 dated 17th August, 2023 in Part-I, Section of the Gazette of India (Extraordinary) to Department of Pharmaceuticals (DoP), Government of India seeking incentives for the application pertaining to R&D (priority area) at....... (location(s)).
- 2. And whereas, the applicant has submitted an undertaking for.
 observance and commitment for Integrity vide Undertaking dated....
 ...given under the signatures/ authority of applicants.... (name and designation) to DoP in respect of aforesaid application.
- 3. And whereas, the applicant including its officers/ representatives gives commitment and undertake that he / she will take all measures necessary to prevent corruption and that he/ she will not directly or through any other person or firm, offer, promise or give to any of the DoP's officer(s) or consultant or agency representative (appraisal or / and verification agency appointed by DoP to handle the application) involved in the process of dealing with application or to any third person any material or

other benefit which he / she is not legally entitled to in order to obtain in exchange any advantage of any kind whatsoever before or during or after the process of the application for grant of approval or disbursement of incentives under PRIP.

4.	And whereas, the application submitted by the applicant has been given
	the approval by DoP vide its communication no
	dated

5.	And whereas, the applicant has submitted a claim for disbursement of
	incentive dated to the PMA for claiming incentives of
	INR

- 6. And whereas, the PMA has considered the claim for disbursement of
 - incentive and is in the process of disbursement / release of incentives on the claim dated.....
- 7. Now, therefore, we hereby confirm the compliance thereof with the Integrity Undertaking submitted to DoP duly certifying that there is no breach to the same and requests that eligible incentives under PRIP be released to applicant and the number of incentives be credited in the bank account of applicant.
- 8. The contents of the above Undertaking have been gone through and after duly understanding the same, is being executed / given on..... day of..... (month / year).

Signature (Name & designation with address)

Director / CEO / MD

APPENDIX XI

APPENDIX XI

TRL for Drugs

APPENDIX XI		
	-	APPENDIX XI FRL LEVEL RL for Drugs
Column1	Column2	Column3
Stage	Technology Readiness Level	Definition
Ideation	TRL-1	Need identified, Basic principles observed and reported (Scientific research begins to be translated into applied research and development)
Proof of Principle	TRL-2	Research ideas developed, hypothesis formulated and protocols developed (Idea proven on initial level by In-vitro studies i.e., biochemical studies etc)
Proof of Concept demonstrated	TRL-3	Hypothesis testing and initial proof of concept (PoC) is demonstrated in a limited number of in vitro models and limited in-vivo efficacy studies (Studies

		proven by In-vitro
		model studies i.e., relevant Cell based
		models, ex-vivo,
		organoid cell model and In-vivo efficacy in
		minimum number
		of animals).
		Efficacy, & safety of candidate drug
		formulation is
		demonstrated in a defined animal model
Dunct of company		(Results of
Proof of concept	TRL-4	formulation studies, pharmacokinetic studies
established		& ADME, PD ,
		safety of candidate formulations preliminary
		level and
		efficacy in in-vivo disease model)
		Pre-clinical studies, including GLP efficacy,
		acute and
Early-stage		chronic toxicity in animal model producing
validation	TRL-5	sufficient data for
		DCGI application for clinical trials. DCGI
		approval for Phase-1 trial
	~ (Material produced in GLP facility for clinical
	TRL-6	trials. Phase-1
		Clinical trials done, and results submitted to
null		DCGI.
		Investigative new drug application reviewed
		by DCGI for
		approving Phase-II Clinical trials
		Phase-II Clinical trials completed, and data
Late-stage	TRL-7	reviewed by DCGI
Validation		and Phase-III Clinical trial plan approved
		Phase-III Clinical trials completed
Pre-	TRL-8	-
		successfully. DCGI
commercialization		approves the New Drug Application and
		provides commercial

		manufacturing license for market introduction
Commercialization		Commercial launch of the new drug, Post
and	TRL-9	marketing studies
post market studies		and surveillance

TRL for Biosimilars

Stage	Technology Readiness Level	Definition
Ideation	TRL-1	Review of Scientific Knowledge Base Scientific findings are reviewed, including patent status and assessed as a foundation for conceptualizing new technologies
Proof of Principle	of Principle TRL-2	Development of Hypotheses and Experimental Designs Scientific studies to identify the innovator molecule. Development of Biosimilar along with assays to test activities of candidate molecules in vitro. High expression Clone available
Proof of Concept demonstrated	TRL-3	Identification and Characterization of Preliminary Product Expression of biosimilar product, studies for efficacy and toxicities in vitro. Comparative evaluation of product for Bio similarity with innovator molecule a. Physiochemical b. Biological - in-vitro and in-vivo

	<u> </u>	Call line about stariestics of Master Call book
		Cell line characterization of Master Cell bank
		and
		Working Cell Bank & process development
		Bio similarity demonstrated, in vitro efficacy
		and
		preliminary efficacy demonstrated in vivo in
		appropriate
		small animal model
		Process development, optimization,
		demonstration of
		bio similarity and generation of consistency
		data
		Optimization of process development for
		performing
		preclinical studies. Generation of three
		consistent batches.
Proof of concept	TRL-4	Formulation development,
established		Appropriate formulation finalized for the
		route of
	Pi	administration. Draft Product Profile.
		Process optimized
		and regulatory approvals for preclinical
		candidate
		compound from the relevant body
		(RCGM/GEAC).
		Advanced Characterization of Product and
Early-stage	TRL-5	Initiation
validation		of Manufacturing
		Conduct pre-clinical studies (in vivo toxicity
		and efficacy
		in relevant in vivo models; PK/PD studies,
		ADME
		characteristics and/or immune responses) as
		necessary for
		regulatory filing. Identify manufacturing
		partners.
		Submission of pre-clinical data to RCGM

		Regulated Production, Regulatory
		Submission
		Manufacture GMP-compliant pilot lots.
		Begin stability
null	TRL-6	testing on biosimilar. Develop
		assays/analytical methods
		for product characterization and release
		(potency, purity,
		sterility and identity).
		Scale-up, Completion of GMP Process
		Validation and
		Consistency Lot Manufacturing and
		Regulatory
		Approvals
		Develop a scalable and reproducible
	TRL-7	manufacturing
		process amenable to GMP. Determine dosing
		and
Late-stage		treatment population for Phase 3 study.
Validation		Complete stability
		studies of the GMP drug product in a
		formulation, dosage
		form, and container consistent with Target
		Product
		Profile. Finalize GMP manufacturing
		process. Identify
		clinical sites and begin contract negotiations.
		DCGI
		Approval for the Phase 3 Clinical study
		Clinical Trials Phase 3 and Approval or
		Licensure
	TRL-8	Complete clinical efficacy trials (e.g., Phase
Pre-		3), and/or
commercialization		expanded clinical safety trials as appropriate.
		Prepare and
		submit Biologics Licensing Application
		BLA.

		Full	commercial	application.
Commercialization		The techno	logy has been full	y developed and
and	TRL-9	can		be
post market studies		distributed/	marketed.	Post-marketing
		surveillance	e.	

TRL for Medical Devices

Stage	Read in	Definition (Medical Devices including diagnostic devices)	Definition (In vitro Diagnostic Kits& reagents)	Definition (Biomedical implants)
Ideation	TRL- 1	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development)	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development)	Need identified, Basic principles observed and reported (Scientific research begins which can be translated into applied research and development)
Proof of Principle		Market surveillance data and competitor analysis available to support the idea. Basic device design	Hypothesis formulated and protocols developed. Market surveillance data	Market surveillance data and competitor analysis available

	1			
		ready and product	_	to support the
		specifications	·	idea. Basic
		defined based on the		implant design
		competitor	1 1	ready,
		analysis and patent	Individual core	candidate
		landscaping. FTO	components of	materials
		ensured.	kit/reagents	shortlisted and
		Development of individual	(Antibodies/	product
		components initiated.	Antigens/Aptamer	specifications
			s/Nano	defined based
			particles)	on the
			finalized,	competitor
			developed/procure	analysis
			d for	and patent
			testing	landscaping.
				FTO
			9	ensured
			7	Material
		101		research
				completed
		To divide at	Individual core	and material
		Individual	components	properties of
		modules/Components/PCB s/Software	optimized at	the finalized
		W.	lab scale.	material/compo
Proof of		s/Systems developed and tested	Demonstrated	sites
			the limit of	compared
Concept demonstr	IKII	separately for its functionality on a	detection/Sensitivi	against
	≺	•	ty with	benchmarks.
ate		breadboard/laboratory	metabolite serial	Relevant
d		level. Material	dilution	ASTM
		safety, electrical safety &	or ELISA or	standard tests
		biocompatibility of the	spiked	(strength,
		systems	biological sample	ductility,
		demonstrated	studies.	corrosion,
				surface
				properties,

	ı			
				activity,
				usability, shelf
				life etc.) on
				the material
				performed
				successfully.
				Material
				sterilization
				method
				finalized.
				Biocompatibilit
				y (ISO
				10993) proven
				in in vitro
				cytotoxicity
				assays.
			9	Material safety
			Optimized core	and or
			components	imaging
		Functional Prototype	integrated	compatibility
		developed by	into the kit or	proven in in
		integration of different	platform	vivo small
		modules and	(Microfluidics/	animal model
		safety, efficacy and	filter	study (with
Proof of		performance of	paper/ LFA etc.)	Institutional
	TRL-	candidate device or system	along	Animal Ethics
establish		demonstrated in a defined	with the reagents	Committee
ed	Γ	laboratory,	to	approvals).
cu		Simulated Environment or	come up with a	Functional
		animal	functional	Prototype
		model (with Institutional	prototype of	implant device
		Animal	the kit.	developed as
		Ethics Committee	Integrated system	per the design
		approvals)	tested	in a near
			in house with	GMP
			metabolite	condition.
				Sterilization

				and packaging established.
			serial dilution or ELISA or spiked biological sample studies.	In vivo pre-
Early stage validatio n	TRL-	Relevant IEC & ISO tests (Electromagnetic interference, Electromagnetic compatibility, Electrical safety, Biocompatibility, software test, radiation safety test drop test, packaging test, transportation test, physico –chemical and mechanical testing etc.) of the device performed, and safety proven. Quality management certification (ISO13485) in place. Design iterated prototype ready to go for clinical validation. Clinical study plan approved by Institutional Ethical Committee and/or CDSCO	Integrated system tested in-house extensively with clinical samples (Blood, Urine, Sputum etc.) before taking it for clinical validation. Analytical validation of the kit completed. Shelf life, stability data of the kit reagents available. Quality management certification (ISO13485) in place Clinical study plan approved by Institutional Ethical	clinical studies performed (with Institutional Animal Ethics Committee approvals) using functional prototype implant device on the relevant small or big animal (disease) models to establish its safety (tissue reactivity/ allergy/degrada bility, Histopathology) and efficacy (. Quality management certification (ISO13485) in place. Design

		I	I
		Committee and/or	
		CDSCO	prototype ready
			to go for
			clinical
			validation.
			Clinical
			study plan
			approved by
			Institutional
			Ethical
			Committee
			and/or
			CDSCO
		7	Clinical level
			implant device
		0.	fabricated
	Fully functional clinical	Clinical study	using clinical
	grade device	performed	grade material
	ready with regulatory	on statistically	in GMP
	dossier for use	on statistically significant number	facility with
	on human subjects/patients.	of	safety dossier
	Quality		for use on
	assurance certification (like	samples at one or	human
	CE)	two	subjects/patient
TRL-	applied. Pilot clinical	centres to define the	s Quality
6	study/trials on		assurance
	limited number of	specificity and	certification
	subjects/patients to	sensitivity	(like
	prove safety and	of the Assay/kit.	CE) applied.
	substantial	Quality	Pilot clinical
	equivalence/efficacy. Data	assurance	trials
	submitted	certification	performed on
	to CDSCO for Pivotal	for the product	statistically
	study approval	applied/obtained	significant
			number of
			patients
			against
			0

Manufacturing lines established. Design for manufacture evaluation (DFM) finalised and devices manufactured. Documentation on design history file (DHF) ready. Pivotal clinical study/trials completed and clinical performance data submitted to CDSCO for manufacturing license Manufacturing lines evaluation report submitted to CDSCO for CDSCO for Documentation on design history file (DHF) ready. Performance evaluation report of study/trials completed and clinical performance notified products (IVD study/trials completed and clinical performance data submitted to CDSCO for manufacturing license Pre- TRL- Manufacturing license Manufacturing Manufacturing Manufacture (DFM) finalised and devices manufactured. Documentation on design history file (DHF) ready. Performance evaluation report of study/trials completed and clinical performance data submitted to CDSCO for manufacturing license Manufacturing Manufacturing Manufacturing					the predicate implant device to prove safety, substantial equivalence/eff icacy. Data submitted to CDSCO for Pivotal study approval.
	stage Validatio	TRL- 7	established. Design for manufacture (DFM) finalised and devices manufactured. Documentation on design history file (DHF) ready. Pivotal clinical study/trials completed and clinical performance data submitted to CDSCO for	Trials completed at NABL accredited centres and performance evaluation report submitted to CDSCOfor Commercial license. Performance evaluation report of notified products (IVD for HIV, HCV, HBV and Blood grouping sera) obtained from NIB,	lines established. Design for manufacture (DFM) finalised and devices manufactured. Documentation on design history file (DHF) ready. Pivotal clinical study/trials completed and clinical performance data submitted to CDSCO for manufacturing
commerc 8 obtained from license license			Manufacturing license obtained from	Manufacturing license	Manufacturing license

iali		CDSCO and commercial	obtained and	obtained from
zation		batch	commercial	CDSCO and
		manufacturing initiated	scale	commercial
			manufacturing set	batch
			up/Packing/labelli	manufacturing
			ng etc.	initiated
			Commercial	
			batch	
			manufacturing	
			initiated	
Commer			Commercial	
cial		Commercial launch of the	launch of in	Commercial
ization		new	vitro diagnostic	launch of the
and	TRL-I	device, Post marketing	kit or	implant, Post
post	9	studies and	reagents and Post	marketing
market		surveillance	marketing studies	studies and
studies		sui veinanee	and	surveillance
studies			surveillance	

4. TRL for Regenerative Medicine

Stage	Technology Readiness Level	Definition
Ideation	TRL-1	Scientific findings are reviewed and assessed
		as a foundation for conceptualizing new
		technologies.
Proof of	TRL-2	Development of Hypotheses and Experimental
Principle		Protocol Designs - Hypothesis (es) generated,
		research plans and/or protocols are developed.

Proofof	TRL-3	Target/Candidate Identification and their
Concept		Characterization
demonstrated		
		Mandatory registration of Institutional
		Committee for Stem Cell Research (ICSCR)
		and Institutional Ethics Committee (IEC), with
		National Apex Committee for Stem Cell
		Research and Therapy (NAC-SCRT) and
		CDSCO respectively
		Begin research, data collection, and analysis in
		order to test hypothesis. Explore alternative
		concepts, identify and evaluate critical
		technologies and components.
		-Sample collection after informed consent
		from the voluntary donor and begin
		characterization of candidate(s).
		-Preliminary efficacy demonstrated in vitro
		and in vivo.
	4	 Identify target and/or candidate.
		Demonstrate in vitro activity of
		candidate(s)
		Generate preliminary in vivo as
		proof-of-concept efficacy data (non-
		GLP).

Proofof	TRL-4	Candidate Optimization and Non-
concept		GLP In Vivo
established		Demonstration of Activity and Efficacy
		Animal Models: Initiate development of
		appropriate and relevant animal model(s) for
		the desired indications and perform non-GLP
		in vivo toxicity and efficacy.
		Assays: Initiate development of appropriate
		and relevant assays and associated reagents for
		the desired indications.
		Manufacturing: Manufacture laboratory-scale
		(i.e., non-GMP) quantities of bulk product and
		proposed formulated product.
		Demonstrate non-GLP in vivo
		activity and potential for efficacy
		consistent with the product's
	4	intended use (i.e., dose, schedule,
	~ <	duration, route of administration,
		and
	Y	route).

APPENDIX X

INSTITUTE OF NATIONAL REPUTE AFFILIATED TO PHARMACEUTICALS AND MEDICAL DEVICES

Note: this list is indicative only and non-exhaustive*

De	partment of Pharmaceuticals Institute
1	National Institute of Pharmaceutical Edu
	cation and Research, Mohali (http://www.niper.gov.in)
2	National Institute of Pharmaceutical Education and
	Research, Hajipur
	(<u>https://www.niperhajipur.ac.in</u>)
3	National Institute of Pharmaceutical Education and
	Research, Kolkata
	(http://www.niperkolkata.edu.in)
4	National Institute of Pharmaceutical Education and
	Research,
	Hyderabad (http://www.niperhyd.ac.in)
5	National Institute of Pharmaceutical Education and
	Research, Guwahati
	(https://niperguwahati.ac.in)
6	National Institute of Pharmaceutical Education and
	Research,
	Ahmedabad (https://www.niperahm.ac.in)
7	National Institute of Pharmaceutical Education and
	Research, Raebareli
	(<u>http://niperraebareli.edu.in</u>)
CS	IR INSTITUTES
1	Centre for Cellular and Molecular Biology
	(www.ccmb.res.in)
2	Central Drug Research Institute (<u>www.cdriindia.org</u>)
3	Institute of Genomics and Integrative Biology
	(<u>www.igib.res.in</u>)
4	CSIR-Institute of Himalayan Bioresource Technology
	(https://www.ihbt.res.in/en/)
5	CSIR-Indian Institute of Chemical Biology
	(<u>http://www.iicb.res.in</u>)
6	Indian Institute of Chemical Technology
	(vyvyvy ii atin dia ana)
•	(<u>www.iictindia.org</u>)
7	Indian Institute of Integrative Medicine (<u>www.iiim.res.in</u>)

8	Indian Institute of Toxicology Research
	(www.iitrindia.org)
9	CSIR-Institute of Microbial Technology
	(https://www.imtech.res.in/)
1	National Chemical Laboratory (www.ncl.india.org)
0	
•	
DF	BT INSTITUTES
1	National Institute of Immunology (http://www.nii.res.in/)
2	National Centre for Cell Science (https://www.nccs.res.in/)
3	National Brain Research Centre
•	(http://www.nbrc.ac.in/newweb/)
4	Institute of Life Sciences (https://www.ils.res.in/)
•	
5	Rajiv Gandhi Centre for Biotechnology
•	(https://www.rgcb.res.in/)
6	Institute for Stem Cell Science and Regenerative Medicine
•	(https://www.instem.res.in/)
7	Translational Health Science and Technology Institute
•	(https://thsti.res.in/newthsti/)
8	National Institute of Biomedical Genomics
	(https://www.nibmg.ac.in/)
9	Regional Center for Biotechnology (<u>https://www.rcb.res.in</u>)
1	Center for DNA Fingerprinting and Diagnostics [CDFD]
0	
. 1	National Lastitute of Dlant Common Descend
1	National Institute of Plant Genome Research
1	
1	National Institute of Animal Biotechnology (NIAB)
2	readonal institute of Allinial Diotechnology (MAD)
•	

1	International Center for Genetic Engineering and
3	Biotechnology (ICGEB)
1	National Centre for Cell Science (NCCS), Pune
4	
1	National Institute of Biomedical Genomics (NIBMG),
5	Kalyani
De	epartment of Higher Education
1.	Indian Institute of Technology (IIT), Hyderabad
	(<u>https://www.iith.ac.in</u>)
2	Indian Institute of Technology (IIT), Mumbai
	(<u>https://www.iitb.ac.in</u>)
3.	Indian Institute of Technology (IIT), Patna
	(<u>https://www.iitp.ac.in</u>)
4.	Indian Institute of Technology (IIT), Delhi
	(<u>https://www.iitd.ac.in</u>)
5.	Indian Institute of Technology (IIT), Ropar
	(https://www.iitrpr.ac.in)
6.	Indian Institute of Technology (IIT), Mandi
	(https://www.iitmandi.ac.in)
7.	Indian Institute of Technology (IIT), Roorkee
	(https://www.iitr.ac.in)
8.	Indian Institute of Technology (Banaras Hindu University),
	Varanasi
	(https://www.iitbhu.ac.in)
9.	Indian Institute of Technology (IIT), Jammu
	(https://www.iitjammu.ac.in)
10	Indian Institute of Technology (IIT), Palakkad
•	(https://www.iitpkd.ac.in)
11	Indian Institute of Technology (IIT), Tirupati
	(https://www.iitp.ac.in)
12	Indian Institute of Technology (IIT), Goa
10	(https://www.iitgoa.ac.in)
13	Indian Institute of Technology (IIT), Bhilai
	(https://www.iitbhilai.ac.in)
14	Indian Institute of Technology (IIT) Dharwad
•	(<u>https://www.iitdh.ac.in</u>)

	15	Indian Institute of Technology Gandhinagar
		(https://iitgn.ac.in)
	16	Indian Institute of Technology Kharagpur, West Bengal
		(https://www.iitkgp.ac.in/)
	17	Indian Institute of Technology Madras, Chennai, Tamil
		Nadu (https://www.iitm.ac.in/)
	18	Indian Institute of Technology Guwahati, Assam
		(https://www.iitg.ac.in/)
	19	Indian Institute of Technology Jodhpur, Rajasthan
		(https://www.iitj.ac.in/)
	20	Indian Institute of Technology Kanpur, Uttar Pradesh
		(https://www.iitk.ac.in/)
	21	Indian Institute of Technology Indore, Madhya Pradesh
		(<u>https://www.iiti.ac.in/)</u>
	22	Indian Institute of Science Education and Research (IISER),
		Pune
		(<u>https://www.iiserpune.ac.in</u>)
	23	Indian Institute of Science Education and Research (IISER),
		Kolkata
		(<u>https://www.iiserkol.ac.in</u>)
24		Indian Institute of Science Education and Research (IISER),
		Mohali
		(<u>https://vvww.iisermohali.ac.in</u>)
	25	Indian Institute of Science Education and Research (IISER),
		Bhopal
		(https://www.iiserb.ac.in)
	26	Indian Institute of Science Education and Research (IISER),
27		Thiruvanathapuram (https://www.iisertvm.ac.in)
27		Indian Institute of Science Education and Research (IISER),
		Tirupati
20		(https://www.iisertirupati.ac.in)
28		Indian Institute of Science Education and Research (1ISER),
	20	Berhampur (https://www.iiserbpr.ac.in)
	29	All India Institute of Medical Sciences, Rishikesh
	30	All India Institute of Medical Sciences, Bhopal, Madhya Pradesh

	31	All India Institute of Medical Sciences, Bathinda, Punjab
	32	All India Institute of Medical Sciences, Bhubaneswar, Odisha
33		All India Institute of Medical Sciences, Bibinagar, Telangana
	34	All India Institute of Medical Sciences, Deoghar, Jharkhand
	35	All India Institute of Medical Sciences, Gorakhpur, Uttar Pradesh
	36	All India Institute of Medical Sciences, Jodhpur, Rajasthan
37		All India Institute of Medical Sciences, Mangalagiri, Andhra Pradesh
	38	All India Institute of Medical Sciences, Nagpur, Maharashtra
	39	All India Institute of Medical Sciences, Kalyani, West Bengal
	40	All India Institute of Medical Sciences, New Delhi, Delhi
	41	All India Institute of Medical Sciences, Patna, Bihar
	42	All India Institute of Medical Sciences, Raebareli, Uttar Pradesh
	43	All India Institute of Medical Sciences, Raipur, Chhattisgarh
	44	Postgraduate Institute of Medical Education and Research, Chandigarh
	45	Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab
	46	Maulana Azad National Institute of Technology, Bhopal Madhya Pradesh
	47	National Institute of Technology, Calicut Kozhikode Kerala
	48	Motilal Nehru National Institute of Technology, Allahabad
	49	National Institute of Technology, Durgapur, West Bengal
	50	National Institute of Technology, Hamirpur, Himachal Pradesh
	51	Malaviya National Institute of Technology, Jaipur, Rajasthan
	52	National Institute of Technology, Yupia, Arunachal Pradesh
	53	National Institute of Technology, Andhra Pradesh

54	National Institute of Technology, Sikkim Ravangla
55	National Institute of Technology, Nagaland, Dimapur
56	National Institute of Technology, Mizoram
57	National Institute of Technology, Manipur, Imphal
58	National Institute of Technology, Delhi
59	National Institute of Technology, Meghalaya, Shillong
60	National Institute of Technology, Goa
61	National Institute of Technology, Puducherry, Puducherry
62	National Institute of Technology,
	Warangal Telangana
63	National Institute of Technology, Agartala, Tripura
64	National Institute of Technology, Raipur, Chhattisgarh
	Sardar Vallabhbhai National Institute of Technology, Surat,
	Gujarat
66	National Institute of Technology,
(7	Karnataka Surathkal Karnataka
67	National Institute of Technology, Tiruchirappalli Tamil Nadu
68	National Institute of Technology, Rourkela, Odisha
69	National Institute of Technology, Silchar, Assam
70	National Institute of Technology, Srinagar, Jammu and Kashmir
71	National Institute of Technology, Uttarakhand
72	National Institute of Technology, Jamshedpur, Jharkhand
73	National Institute of Technology, Kurukshetra, Haryana
74	Visvesvaraya National Institute of Technology, Nagpur,
	Maharashtra
75	National Institute of Technology, Patna Patna Bihar

DH	IR/ICMR Research Instituions		
1.	National JALMA Institute for Leprosy & Other Mycobacterial Diseases (https://www.jalma-icmr.org.in/)		
2.	National Institute of Cancer Prevention and Research (https://nicpr.icmr.org.in/)		
3.	National Institute of Occupational Health (<u>http://nioh.org/)</u>		
4.	National Centre for Disease Informatics and Research (https://ncdirindia.org/)		
5.	Bhopal Memorial Hospital & Research Centre (http://bmhrc.ac.in/)		
6.	National Institute for Research in Environmental Health (https://nireh.icmr.org.in/)		
7.	National Institute for Research in Tuberculosis (http://www.nirt.res.in/)		
8.	National Institute of Malaria Research (https://nimr.org.in/)		
9.	National Institute of Pathology (http://instpath.gov.in/)		
10	National Institute of Medical Statistics (http://icmrnims.nic.in/)		
11	National Institute of Nutrition (https://www.nin.res.in/index.html)		
12	National Institute of Cholera and Enteric Diseases		
	(http://www.niced.org.in/)		
13	National Institute for Research in Reproductive Health (http://nirrh.res.in/)		
14	National Institute of Immunohematology (https://www.niih.org.in/)		
15	National Institute of Virology (https://www.niv.co.in/)		
16	National AIDS Research Institute (https://nari-icmr.res.in/)		
17	Rajendra Memorial Research Institute of Medical Sciences		
•	(http://www.rmrims.org.in/)		
	DRDO INSTITUTES		

1	Defence Bioengineering & Electro-medical Laboratory
	(https://www.drdo.gov.in/labs-and-
	establishments/defence-bio-engineering-electro-medical-
	laboratory-debel)
2	Defence Institute of Bio-Energy Research
	(https://www.drdo.gov.in/labs-and-establishments/defence-
	institute-bio-energy-research-diber)
3	Defence Institute of High-Altitude Research
•	(https://www.drdo.gov.in/labs-and-establishments/defence-
	institute-high-altitude-research-dihar)
4	Defence Institute of Physiology & Allied Sciences
	(<u>https://www.drdo.gov.in/labs-and-establishments/defence-</u>
	institute-physiology-allied-sciences-dipas)
5	Defence Institute of Psychological Research
	(<u>https://www.drdo.gov.in/labs-and-establishments/defence-</u>
	institute-psychological-research-dipr)
6	Institute of Nuclear Medicine and Allied Sciences
	(<u>https://www.drdo.gov.in/labs-and-establishments/institute-</u>
	nuclear- medicine-allied-sciences-inmas)
	AYUSH INSTITUTES
1	Central Council for Research in Ayurvedic Sciences
•	(http://www.ccras.nic.in/)
2	Central Council for Research in Homoeopathy
•	(https://www.ccrhindia.nic.in/)
3	Central Council for Research in Unani Medicine
•	(https://ccrum.res.in/)
4	Central Council for Research in Siddha
•	(http://siddhacouncil.com/home/)
5	Central Council for Research in Yoga and Naturopath
	(http://www.ccryn.gov.in/)

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