

## **4.3 Research, Technology Development and Quality Assurance**

### **4.3.1 Research & Development**

#### **Objectives**

Development of medicinal plant sector in the country is suffering from scattered and inadequate research on various crucial aspects. The research results need to be consolidated, gaps identified and new initiatives taken to address such research needs.

#### **Activities**

(a) Research and Technology Development in the following areas can be supported in project mode:

- Traceability of raw drugs from harvest to consumption level.
- Germination and seed treatment protocols and certification.
- Bio-prospecting, population assessments and conservation biology of Medicinal Plants and Medicinal Aromatic Species (MASs).
- Collection, compilation, documentation, validation and digitization of published scientific information on various aspects of selected Medicinal Plants and their ASU & H formulations and preparations of comprehensive monographs thereof.
- Identification of substitutes/adulterants for traded medicinal plants using pharmacognostic, pharmacological and molecular parameters for their inclusion in Pharmacopoeia.

- Finding substitutes for RET listed medicinal plants and finding use of sustainable alternative plant parts.
- Research aimed at lowering cost of cultivation and production of extracts, phytochemicals, natural colours, flavours and fragrances by using latest R&D technologies.
- Bio-activity Guided Fractionation.
- Development of DNA barcoding, spectrometry HPLC methods etc. for phyto-constituents (preferably the bio-actives/marker compounds) and validation of these methods.
- Study of phyto-chemical variations within available genotypes, chemotypes, ecotypes etc., development of post-harvest treatment, search for elite quality germplasm and development of quality planting material for mass scale propagation.
- Establishment of quality standards in respect of norms related to toxicity and heavy metal content to increase acceptability of botanicals in the International market.
- The impact of invasive species on habitats of native medicinal plants and foreign matter on the safety and efficacy of medicinal plants including MASs in their habitat.
- Development of Biotechnological Techniques (BT) & Information Technology (IT) based tools applications related to Medicinal plants.
- Ethno-medicinal documentation and exploration.
- Marketing, econometrics policies/ regulatory issues related to Medicinal Plants.
- Establishing National and regional raw drug repositories for references.
- Study the impact of environmental changes like global warming and topographical variations in medicinal plants.
- Setting up of national and regional Botanical Reference Standards (BRS).
- Development of improved planting materials, germ plasm bank, development of improved cultivars etc.

- Any other emerging issues or suggestions rendered by SFC.
- (b) M.Phil/ Ph.D/ Post-Doctoral Fellowship programme on subjects related to medicinal plants through various Educational/ Research Institutions in the country, will be supported. Applications will be screened by the Project Screening Committee of NMPB, which will also finalise the emoluments based on prevailing arrangements in other similar Institutions. NMPB will also engage directly a limited number of JRF/SRF/Research Assistants, etc. (upto five) as per UGC/DST norms for specific projects while allowing them to enrol in academic institutions to pursue doctoral/other studies. The engagement and emoluments will be finalised by Project Screening Committee on research and bring this to the notice of SFC.

### **Eligibility**

- R&D Institutions under CSIR, ICAR, ICFRE, ICMR, DBT, DST, Councils of Department of AYUSH etc.
- Universities recognised by the UGC.
- Industry both in public as well as private sector with R&D facilities.
- Non-government Organisations/Voluntary Organisations, with demonstrated expertise and infrastructure.
- Government funded institutes/colleges with demonstrable track record infrastructure and expertise.

### **Norms of Assistance**

R&D Institutions/Universities in the public sector/Government Aided colleges etc. will be eligible for 100% assistance. However, organizations/labs/Institutions in private sector will be eligible for 50% assistance.

### **Submission of Proposals**

The proposals for R&D will be invited so that strategic research in critical areas is assigned to competent organizations/ scientific professionals. The

eligible organization can apply directly to NMPB in the relevant proforma as at **Annexure - IV** where the proposal will go through scrutiny by the Project Screening Committee (PSC) before being considered for approval by SFC. Prior to placing before the PSC, wherever appropriate the research proposal can first be referred to subject expert by NMPB for taking expert's opinion on quality of the proposals. For such scrutiny a fee of Rs. 1500/- per proposal will be paid to the domain expert by the NMPB for examination and comments.

### **Management Support**

One project management Consultant along with one Data Entry Operator will be engaged for providing support at NMPB level for activities relating to scrutiny, implementation, monitoring and technical support to the state.

### **4.3.2 Quality Assurance**

#### **Objectives**

Today globally companies are looking for traceability of raw materials to their source, as it is obvious that the quality of the end product can only be as good as the quality of the components that go into that product. Hence the importance of maintaining good standards while collecting, cultivating and post-harvest handling of the raw material cannot be over emphasized.

#### **4.3.2.1 Promotion of Good Practices**

- For India to become a global hub in medicinal plants processing, we need to list out the challenges faced by the sector. One of the most important stakeholders is the group of intermediaries who are a very important part of the supply chain from collectors / cultivators to the end users of the raw material. These intermediaries are largely in the private sector and deal with bulk handling of raw material from procurement to storage and sale in the mandies. This is the stage at which there are maximum chances of contamination of the raw material, due to lack of general hygiene. Elimination of such sources of contamination is imperative for tackling the issues of microbial overload in herbal products. In order to do so, extensive capacity building of the intermediaries is required. There is a need to create awareness about maintenance of high standards

of hygiene amongst collectors, cultivators, other raw material handlers and traders. This capacity building should be an on-going process through a series of stakeholder meetings, workshops, seminars etc. A strategy will be initiated for registration/devising regulation of important intermediaries in the Market Supply Chain of medicinal plants. This will be done by providing support in a project mode, to appropriate agencies.

- In addition to this, we need to evolve norms for proper handling of raw material i.e. what constitutes good practice as far as raw drug handling is concerned. Also there needs to be in place a system of self-regulation through peer groups in mandies. Consultancies studies will be commissioned for this purpose. This will also be addressed through focussed projects through SFC approval.
- Presently testing is by and large limited to the finished products. Industry has always held that in the absence of supply of contamination free raw material, it is not fair to expect the products to stand up to rigorous testing. Hence, maintaining a chain of practices to ensure good quality of raw material will create a win-win situation for the producers / traders on the one hand by ensuring better prices and the manufacturers on the other by ensuring greater market access. This will also be supported in a consultancy/project mode.

In order, to more effectively address the above challenges the following measures will also be taken in project/consultancy mode:

- a. Development of agro-techniques of selected medicinal plants.
- b. Protection of Good agricultural practices (GAP), Good Field Collection Practices (GFCP), Good Harvesting Practices (GHP) & Post Harvesting Practices, Good Storage Practices (GSP). The work done by QCI for GAP & GFCP in the 11th Plan will be taken forward towards actual field implementation in project mode.
- c. Support to testing laboratories, reimbursement of testing charges to stakeholders.
- d. Development of certification protocols for sustainable harvesting of seeds, planting materials and raw drugs from the wild in project mode.
- e. Other measures for Quality certification programmes as necessary.

#### **4.3.2.2 Raw Drug Repositories**

Another important aspect of quality is the true botanical identity of the herb. To ensure proper identity, there is a need to establish multiple Raw Drug Repositories (RDR), which can supply certified samples of Indian medicinal plants on cost basis, to act as Reference Standards.

Phytochemical reference standards (PRS) are required for assay purposes. There is a need to create a mechanism in India for consistent supply / sale of PRS required by various Pharmacopoeias for quality assessment of Indian medicinal plants.

For this purpose, it is essential to establish multiple Raw Drug Repositories, in different areas of the country. Each RDR could be encouraged to develop proficiency / core competence, in a few of the above listed scientific areas.

The RDR's should ideally work on development of "Key Distinguishing Characters" (KDC) for Indian medicinal plants so that they can be distinguished from their look alike / adulterants. Some of the techniques are:

- Pharmacognosy parameters like Macroscopy (organoleptic characters)
- Microscopy (Anatomy and powder microscopy), TLC, HPLC etc.
- DNA barcoding and fingerprinting
- Detection of characteristic/marker compounds
- Fingerprinting using new techniques like LC-MS-MS and NMR profile etc.

#### **Norms of Assistance**

For national repository of rawdrugs /BRS total assistance admissible is Rs. 10 crores, while for regional raw drug repositories it is Rs. 5 crores each to Govt. Organizations.

## AT A GLANCE

### Appendix

### IMPORTANT COST NORMS FOR COMPONENT ASSISTANCE

S. No.	Component	Cost	Remarks
<b>1</b>	<b><i>In-situ</i> conservation</b>		
	A) Establishment of Medicinal Plants Conservation and Development Areas (MPC-DAs)	Rs. 20,000 per hectare	100% Central Assistance
	B) Revisit and upgradation of MPCA	Rs. 5000/- per hectare	100% Assistance
	C) Assistance for mainstreaming Medicinal Plants in Management/Working Plans	Rs. 1.5 lakh per forest Division/ Wildlife Division	100% Assistance
	B) <i>in-situ</i> resource augmentation	Cost norms of MoE&F under National Afforestation Programme	100% Assistance See Annexure - I
<b>2</b>	<b><i>Ex-situ</i> conservation</b>		
	i) ex-situ conservation	Cost norms of MoE&F under CSS National Afforestation Programme	As per para 4.1.2 See Annexure - I
<b>3.</b>	<b>Eco Task Force for rehabilitation of critical medicinal plant habitats</b>		
	Eco Task Force	Project based	100% assistance to the eligible organization
<b>4.</b>	<b>Support to JFMC/ Panchayats/Van Panchayats/ SHGs</b>		
	Value addition, drying, warehousing and augmenting marketing infrastructure etc.	Rs. 15 lakhs per JFMC/Panchayats/Van Panchayats/SHGs/BMCs	100% assistance per JFMC/Panchayats/Van Panchayats/ SHGs/BMCs
<b>5.</b>	<b>Research, Technology Development and Quality Assurance</b>		
	i) R&D Projects on theme areas	Project based	100% assistance for Govt. Institutions/ PSUs, Govt. Aided Institutions etc. and Non-profit making Philanthropic Organizations with requisite expertise.  50% assistance for projects received from private sector organizations

	ii) Network research projects involving two or more institutions	Project based	100% assistance for Govt. Institutions/ PSUs, Govt. Aided Institutions etc. and Non-profit making Philanthropic Organizations with requisite expertise.  50% assistance for projects-received from private sector organizations
	iii) Raw drug repository of medicinal plants	Rs. 10 crores for national raw drugs repository and Rs. 5 crores each for regional raw drug repositories	100% assistance to Govt. Institutions/PSUs.  For private organizations assistance would be decided by SFC in project mode
	<b>ESTABLISHING QUALITY STANDARDS AND CERTIFICATION and other interventions not specifically mentioned elsewhere.</b>	Project based	100% assistance.
<b>6</b>	<b>Awareness Building, Exposure Visits, Education and Capacity Building of Stakeholders through IEC</b>		
	Training and Capacity Building Programmes for field staff of Forest Dept., Institutions, Universities, Horticulture Dept., Agriculture Dept., Growers and Collectors	a) Rs. 2,000/- per trainee (farmer) for a minimum of 2 days within the state b) Rs. 5,000/- per head for exposure visits to other states. c) The expenditure on officers training within the State will be Rs. 5,000/- per officer and outside the State the cost would be restricted to Rs. 10,000/- per officer (Travel cost will be additional)	100% Assistance  1. Travel cost will be limited to 3 <sup>rd</sup> AC train fares per participants. However, for Govt. Servants it will be as per entitlement.  2. For places not connected by Rail, travel by available modes will be permitted as approved by the PSC/ SFC.



	Workshops/ Seminar/ Arogya	<p>a) Rs. 1.00 lakh for District level,</p> <p>b) Rs. 2.00 lakhs for State level,</p> <p>c) Rs. 3.00 lakhs for Regional level,</p> <p>d) Rs. 5.00 lakhs for National level</p> <p>e) Rs. 10.00 lakhs for International level.</p>	100% assistance
	Participation in exhibition/ fair	<p>For participation by other Agencies</p> <p>a) Rs. 1.00 lakh for State level,</p> <p>b) Rs. 2.00 lakhs for National level</p> <p>c) Rs. 3.00 lakhs for International level</p>	<p>100% assistance for Govt. Organizations</p> <p>For Private organizations including industries 50% of the prescribed cost or actual expenditure whichever is less (which includes expenditure on Travel, accommodation, Hire charges, stall fabrication, etc.) will be reimbursed.</p> <p>Participation by NMPB will be as per the actuals.</p>
<b>7</b>	<b>PROMOTION OF HERBAL GARDENS</b>		
	Herbal Gardens of State and National Importance	As per the project proposal	100% assistance
	Institutional/ Public Herbal Garden	<p>a) Rs. 3.00 lakhs per hectare for establishment</p> <p>b) Annual maintenance of the Herbal Garden @ upto Rs. 60,000/- per year per ha. for next four years.</p>	100% assistance
	School Herbal Gardens	<p>a) Rs. 25,000/- per school for an area of 500 sqm.</p> <p>b) Up to Rs. 7,000/- per annum/ per school for maintenance for next 4 years</p>	100% assistance
	Home Herbal Gardens	Rs. 2500/- per HHG.	100% assistance

8	<b>MANAGEMENT SUPPORT</b>	Upto 5% of the outlay under the scheme to NMPB	This will include salary and Admn. Expenses of NMPB incl. TE, OE, appointment of Consultants for each component, monitoring, publicity, advertising etc.
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**National Medicinal Plants Board**  
Ministry of AYUSH

**Proforma For Submission of Project Proposals on Research, Technology  
Development and Quality Assurance**

*(To be filled by the applicant)*

**PART I: GENERAL INFORMATION**

1. Project Title: .....
  
2. Name of the Institute/University/Organisation submitting the Project Proposal:  
.....
  
3. State: .....
  
4. Status of the Organization (University/Public /Govt. Aided/ Pvt. Sector/NGO):  
.....
  
- 5.. Registration No. with date and PAN / TAN/ TIN Nos. :  
.....

(The NGOs and Companies will be required to submit their Articles of Association, Memorandum of Association and Annual reports with audited records of last 3 years)

6. Name and designation of the Executive Authority of the Institute/University forwarding the application:

. Category of the Project (Please tick):.R&D/ Technology development/ Quality Assurance/ others

8. Specific Area/ Field of project:

9. Name(s) of plant species to be studied

10. Duration: .....Years.....

11. Total Cost (Rs.) .....

12. Details of projects supported earlier by NMPB (whether completed/ not completed) with details of equipment acquired.

13. Is the project Single Institutional or Multi-Institutional (S/M):

14. If the project is multi-institutional/ Network mode, please furnish the following:

Name of Project Coordinator and participating institutes with complete address and responsible person (PI of the leading partner shall act as the project coordinator):

Affiliation: .....

Address: .....

15. Scope of application indicating anticipated product and processes

16. Deliverables and outcome anticipated.

17. Project Summary with keywords (Not to exceed one page. Please use separate sheet).

## PART II: PARTICULARS OF INVESTIGATORS

*(One or more co-investigators are preferred in every project. Inclusion of co-investigator(s) is mandatory for all the project)*

18. Principal Investigator:

Name:

Date of Birth: ..... Sex (M/F): .....

Designation:.....

Department:

Expertise/Area of research interest of PI: .....

Institute/University:.....

Address: .....

.....PIN:.....

Telephone:..... Fax:.....

E-mail:.....

Mobile No.:

Number of research projects (along with details) being handled at present:.....

Work done (Competence of PI in specific area proposed)

**19.1 Co-Investigator - 1:** (same details as for the Project Investigator)

**19.2 Co-Investigator - 2** (Same details as for the Project Investigator)

## **PART III: TECHNICAL DETAILS OF PROJECT**

### **(Under the following heads on separate sheets)**

20. Introduction (not to exceed 2 pages or 1000 words)
  - 18.1 Origin of the proposal
  - 18.2 (a) Rationale of the study supported by cited literature (b) Hypothesis (c) Key questions.
  - 18.5 Current status of research and development in the subject (both international and national status)
  - 18.6 The relevance and expected outcome of the proposed study
  - 18.7 Translational potential of Research findings, any potential outcome/ result is expected.
  - 18.8 Preliminary work done so far
21. Specific objectives (should be written in bulleted form, a short paragraph indicating the methods to be followed for achieving the objective and verifiable indicators of progress should follow for each specific objective)
22. Work Plan: should not exceed 3-4 pages (the section can be divided according to the specific aims and under each specific aim, the following should be stated clearly as sub headings with relevant flow chart).
  - 22.1 Work plan/ Time lines (methodology/experimental design to accomplish the stated objectives)
  - 23.2 Connectivity of the participating institutions and investigators (in case of multi-institutional projects only)
  - 24.3 Alternate strategies (if the proposed experimental design or method does not work, please indicate alternate strategy)

25. Time frame: (Please provide quantifiable outputs in bulleted form)

Period of study	Achievable targets
6 Months	
12 Month	
18 Months	
24 Months	
30 Months	
36 Months	

#### PART IV: BUDGET PARTICULARS

##### Budget in Rupees

##### A. Non-Recurring (e.g. equipments, accessories, etc.)

S.No.	Item	Year 1	Year 2	Year 3	Total Cost (₹ in lakhs)

**Sub-Total(A)**

##### B. Recurring

##### B.1 Manpower

S.No.	Position and Numbers	Consolidated Emolument	Year 1	Year 2	Year 3	Total Cost (₹ in lakhs)

**Sub-Total(B.1) =**

## B.2 Consumables

S.No.	Item	Quantity	Year 1	Year 2	Year 3	Total Cost (₹ in lakhs)

**Sub-Total(B.2) =**

Other items	Consolidated Emolument	Year 1	Year 2	Year 3	Total Cost (₹ in lakhs)
<b>B.3 Travel</b>					
<b>B.4 Contingency</b>					
<b>B.5 Overhead/ Institutional charges</b> (If applicable)					
<b>Sub-total of B</b> (B.1+B.2+B.3+B.4+B.5)					
<b>Grand Total (A + B)</b>					

**Note: Please give justification for each head and sub-head separately mentioned in the above table.**

Financial Year: April to March

In case of multi-institutional project, the budget estimate to be given separately for each institution.

**C. Budget–component-wise–contribution by the organization (only in case of private R&D institute/ Industry) and the budget being sought from NMPB.**



## **PART V: EXISTING FACILITIES**

Resources and additional information

1. Laboratory:
  - a. Manpower
  - b. Equipments
2. Other resources such as clinical material, animal house facility, glass house. Experimental garden, pilot plant facility etc.

## **PART VI: DECLARATION/CERTIFICATION**

It is certified that

- a) There search work proposed in the scheme/project does not in any way duplicate the work already done or being carried out elsewhere on the subject.
- b) The same project proposal has not been submitted to any other agency nor shall be submitted for financial support.
- c) The emoluments for the manpower proposed are those admissible as per the approved emoluments of NMPB.
- d) If the project involves the utilization of genetically engineered organisms, we agree to submit an application through our Institutional Biosafety Committee. We also declare that while conducting experiments, the Biosafety Guidelines of the concerned departments would be followed in total.
- e) If the project involves field trials/experiments exchange of specimens, etc. we will ensure that ethical clearances would be taken from concerned ethical Committees/Competent authorities and the same would be conveyed to NMPB before implementing the project.
- f) It is agreed that any research out come or intellectual property right(s) on the invention(s) arising out of the project shall be in accordance with the decision of NMPB, Ministry of AYUSH.
- g) The institute/university agrees that the equipment, other basic facilities and such other administrative facilities will be extended to investigator(s) throughout the duration of the project.
- h) The Institute/organisation assumes to undertake the financial and other management responsibilities of the project.

- i) The organization shall abide by all the 'Terms and Conditions' of the grant-in-aid stipulated in the operational guidelines of the scheme.
- j) All records and reports related to the project have been maintained separately and shall be shown and furnished as and when required by the NMPB, Ministry of AYUSH or its authorized representatives.
- k) Project shall be open for evaluation of physical progress and utilization off undsat the discretion of Ministry of AYUSH.
- l) The undersigned shall be responsible for the authenticity of the information and documents furnished in the application and proposal.
- m) Ministry of AYUSH shall have the right to recover the grant or take legal action against the organization for any default or deviation from the terms and conditions of sanction of grant.
- n) No financial assistance/grant has been sought and or obtained from any Central or State Govt. organization for the same purpose.
- o) All related provisions of Biological Diversity Act 2002 and other relevant rules, regulations and notification shall be complied with.
- p) The undersigned shall be responsible to ensure that all applicable laws/rules and legal provisions are followed.
- q) It is also certified that the project proposal is formulated as per the relevant provisions/ clauses of the guidelines of the Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants and if the Project is approved, the PI would sign Agreement in the prescribed format as given at part-VIII.

**Signature of Principal Investigator:**

**Date:**

**Signature of Co-Investigator**

**Signature of Co-Investigator**

**Date:**

**Date:**

**Signature of Project Coordinator**

**Signature of Executive**

**Authority (applicable only for multi-institutional projects) or Head of Institute/ University with Date :**

## PART VII: PROFORMA FOR BIOGRAPHICAL SKETCH OF INVESTIGATORS

Provide the following information for the key personnel in the order listed on PART II.

**Follow this format for each person. Do Not Exceed Three Pages**

Name: .....

Designation : .....

Area of Research expertise: .....

Department/Institute/University: .....

Date of Birth : .....Sex (M/F) .....

SC/ST/ OBC : .....

Contact details:-

### A. Education(Post-Graduation onwards & Professional Career)

SI No.	InstitutionPlace	Degree Awarded	Year	Fieldof Study/ Specializa-tion

### Position and Honors

#### Position and Employment (Starting with the most recent employment)

SINo.	Institution Place	Position	From(Date)	To (date)

Honors/Awards

ProfessionalExperience and Training relevant to the Project

**B. Publications (Numbers only) .....**

Books:.....Research Papers, Reports :.....General  
articles:..... Patents : .....Others (Please specify) :.....  
..... Selected peer-reviewed publications (Ten  
best publications in chronological order)

Research Support for ongoing Research Projects (with copies of sanction orders.)

SI No.	Title of Project	Funding Agency	Amount	Date of sanction and Duration

**Completed Research Projects (State only major projects of last 3 years)**

SI No.	Title of Project	Funding Agency	Amount	Date of completion

**Place:**

**Signature of Investigator**

**Date:**

## PART VIII: PROFORMA OF AGREEMENT

### (TO BE SIGNED BY PROJECT INVESTIGATORS AFTER APPROVAL OF PROJECT)

This Agreement is made and entered into on this -----day of -----, 20---  
-- BETWEEN the National Medicinal Plants Board (NMPB), Ministry of AYUSH, Government of India, having its office address at Room No. 306, AYUSH Bhawan, B-Block, CGO Complex, INA, New Delhi – 110023 hereinafter called “NMPB” (which expression shall wherever the context so admits include its successors and assignees) of the First Part

ANDJ

.....(Name of the Organization) .....(Give full address of the Head Office)..... engaged in research, development and other promotional activities relating to medicinal plants, hereinafter called “the Grantee” (which expression shall wherever the context so admits include its successors and permitted assignees) of the Second Part

WHEREAS NMPB operates a scheme entitled “Central Sector Scheme for Conservation, Development and Sustainable Management of Medicinal Plants” (hereinafter called “Its Scheme”) to support innovative research, development and promotional activities on medicinal plants

AND WHEREAS the Grantee has submitted a project entitled ..... (Title of the Project)..... to NMPB for grants-in-aid (hereinafter called “the Project”) which has been scrutinized and modified wherever necessary by the Project Screening Committee (PSC) and the Standing Finance Committee (SFC) of the scheme constituted by NMPB for the specific purpose and the Grantee has accepted the modifications in the Project.

AND WHEREAS NMPB has approved the Project and agreed to provide support in the form of grants-in-aid to the extent stated in **Annexure-A** on the terms and conditions contained hereinafter in this Agreement

WHEREAS the Grantee has agreed to enter into an agreement with NMPB for undertaking the Project on the terms and conditions referred to above.

Now, therefore, in consideration of NMPB agreeing to provide grants-in-aid for the Project, the Parties hereto agree as follows:

## 1. (a) DEFINITIONS

That unless the context otherwise requires, for the purposes of this agreement the following words shall mean as under:

- (i) "Agreement" means this agreement together with the annexures which form part of this agreement.
- (ii) "PSC" means Project Screening Committee constituted by NMPB.
- (iii) "SFC" means Standing Finance Committee constituted by NMPB.
- (iv) "PMC" means the Project Monitoring Committee appointed by NMPB as referred to in clause 4 of this Agreement.
- (v) "Project" means the project as approved by NMPB for providing grants-in-aid under the scheme. A copy of the Project is annexed at **Annexure- B**.
- (b) All Annexures (viz. Annexures 1 to 2) to this Agreement shall be integral part of this agreement.

## 2. RESPONSIBILITIES OF THE "GRANTEE" ORGANISATION

- (a) That the Organization shall:
  - (i) carry out the activities of the Project as outlined in the project document, including the amendments effected thereto, and conform to the specified outputs, milestones, minimum work programmes and targets as approved by the PSC/ SFC.
  - (ii) Meet the expenditure on the Project activities to the extent as agreed to, through its own sources, as per details given in **Annexure 1**;
  - (iii) Maintain a separate account for the project funds and receipts, if any;
  - (iv) To submit an audited statement of accounts along with utilization certificate and expenditure details for each financial year to NMPB within 6 months of closure of the financial year;

- (v) To permit the PMC access to project area or the premises, at all times, where the Project activity is being/shall be carried out and provide all information and produce or make available the concerned records for inspection and monitoring of the Project activity, required by the PMC or other authorized representative of NMPB.
- (vi) Utilize the funds sanctioned by NMPB for the Project activities only for the purposes as specified in the Project;
- (vii) Abide by the decision of NMPB, based on assessment of the progress in the Project by PMC, or any other body/ committee assigned by NMPB to modify the objectives, outputs, milestones, targets, funding as also the foreclosure of the Project or of its components;
- (viii) Acknowledge the assistance of NMPB while publishing in any manner the details of the project, its progress or its success, subject to provisions of *subclause (v) of clause 5* below and to furnish copies of such publication to NMPB.

**(b) The Grantee Organization acknowledges and agrees that:**

- (i) The duties, responsibilities and functions assigned or entrusted to it as specified in the Project document shall be deemed to be the role, duties and responsibilities assigned and entrusted under this Agreement and any delay, failure or default in performance of Grantee regarding its duties as specified in the Project document shall be deemed to be a default under this Agreement;
- (ii) The Grantee Organization shall at all times indemnify and keep indemnified NMPB against any claims or suites in respect of any losses, damages or compensation payable in consequences of any accident, death or injury sustained by its (Grantee's) employees or by any other third Party resulting from or by any act, omission or operation conducted by or on behalf of Grantee.
- (iii) The Grantee shall at all times indemnify and keep indemnified NMPB against all claims/damages etc. by any infringement of any Intellectual Property Rights (IPR) while doing its responsibilities/work under the Project and this Agreement;

- (iv) The Grantee shall notify NMPB of any material change in its status and/or shareholding, as the case may be in particular where such change would impact on performance of obligations under the Project and this Agreement; and
- (v) The Grantee agrees and acknowledges that the time for completion of project, as set-forth here, is the essence of the Agreement and Grantee shall accordingly undertake the Performance of Work hereunder with the objective of achieving the project implementation and completion within the time schedule set-forth in Project document.
- (vi) Handling of patents as per terms & conditions of the grants.

### **3. FINANCIAL ARRANGEMENTS**

That the financial arrangements under this Agreement shall provide:

- (i) that the total estimated cost of the Project as mutually agreed shall be Rs.....lakhs (Rupees ..... only);
- (ii) the detailed year wise and head wise breakup of the financial support by NMPB and agreed contribution by the Grantee shall be as given in **Annexure 1**. Release of funds shall be subject to completion of minimum work programmes and satisfactory progress against the milestones specified in the Project as determined by NMPB and on submission of statement of accounts/audited statement of accounts and utilization certificates as provided for in subclause (a) (iv) of clause 2;
- (iii) the Grantee shall ensure that the funds of the Project are actually utilized only for the Project and as expressly provided in this Agreement. Re-appropriation/ Revalidation of funds from one budget head to another shall not be effected by the Grantee without the specified written approval of NMPB, communicated directly by NMPB;
- (iv) the Grantee shall immediately refund any funds out of grants-in-aid disbursed to it for the Project remaining unutilized with it on foreclosure/termination/ completion of the Project to NMPB along with detailed accounts of funds received, utilized and unutilized balance returned. These provisions shall apply, *mutatis mutandis*, to any component of the Project decided to be foreclosed. In case the termination of the Project is by the Grantee, in terms



of provisions of *subclause of clause 9*, the refund of funds shall be in respect of funds remaining unutilized as on the date of notice by the Grantee;

- (v) the provision of grants-in-aid to the Grantee does not create any liability, explicit or implicit, on NMPB in respect of the manpower engaged in the Project.

#### **4. PROJECT MONITORING COMMITTEE**

A Project Monitoring Committee (PMC)/ PSC appointed by NMPB shall monitor achievements of the defined objective(s) of the Project. The functions of the PMC shall be:

- (i) To monitor the progress of the Project in conformity with the milestones, targets and objectives as contained in the Agreement;
- (ii) To keep track of funding from any other source to the Grantee for this particular project;
- (iii) based on the foregoing, to assess and suggest
  - a) closing or dropping or modifying any of the components of the Project, within the overall approved objectives, budget and timeframe,
  - b) inclusion of additional industrial/institutional partner(s), if the Grantee requests involvement of such partner(s), in the overall interest of the Project, and
  - c) revision of the funding support to the Grantee;
- (iv) To advise on issues related to publications and securing of IPR; and
- (v) To advise on any other matter as referred it to by NMPB.

#### **5. RESULTS OF THE PROJECT**

- (i) The deliverables from the Project are defined and included in the Project document.
- (ii) The intellectual property generated from the Project shall be the joint property of the Grantee and NMPB.

- (iii) It is the responsibility of the Grantee to protect any intellectual property rights that may result from the Project. The Grantee shall also bear expenditure involved in protecting such intellectual property.
- (iv) The Grantee shall not assign or transfer the IPR/knowledge generated from the Project to any third party directly or indirectly without written consent from NMPB.
- (v) Any publication in journals, presentation in seminars in respect of the IPR emanating from the Project is prohibited until such publication/presentation is first reviewed from the point of protection of IPR by NMPB and a written permission is issued by NMPB. These publications shall be in the name of the concerned research workers, and the fact that the work has been carried out with support from NMPB shall be duly acknowledged.

## **6. PROJECT DURATION**

The Project duration shall be ..... years effective from the date of release of funds by NMPB which shall be effected only after signing of this Agreement by both the parties. It shall be the endeavor of the Grantee to complete the Project within the stipulated period. In case NMPB as recommended by the PSC/SFC feels that it is desirable to undertake further developmental work on the outcome of the Project which requires additional financial commitment and extension of the stipulated project schedule, the Grantee shall submit the extension request or a separate Project proposal with full justification for consideration under the scheme. In such a case, the Grantee will have to execute a supplementary agreement laying down the terms, conditions and financial arrangements of such further research work and issues relating to the intellectual property right generated by such further work.

## **7. COMPLETION**

The Project shall be deemed to have been successfully completed as & when so assessed by NMPB. In case, during the tenure of the Project it is found that the Project or any Project component is not likely to lead to successful completion, NMPB may decide to foreclose the Project or the Project component as warranted. The decision of NMPB shall be final in all respects. However, if the Grantee would like to continue the project at its own cost, it

would be able to do so without restrictions from NMPB after complying with the relevant provisions.

## **8. EFFECTIVE DATE, TENURE AND TERMINATION OF THE AGREEMENT**

- (i) The Agreement shall be effective from the date of its signing by both the Parties (if the Agreement is signed through circulation by Post, the date on which NMPB signs the Agreement shall be considered as effective). The Agreement shall be valid for -----\* years. It can be extended if agreed to by both the parties. The Letter of Intent to this effect shall be issued by NMPB.
- (ii) The Agreement duly signed by both the Parties shall remain in the custody of NMPB and a copy of the Agreement duly authenticated by NMPB shall be provided to the Grantee.
- (iii) The Grantee may, before the completion of the Project, terminate this Agreement by giving three months notice in writing to NMPB. NMPB may also terminate the Agreement by written notice to the Grantee committing breach of any term of this Agreement and either not rectifying it to the satisfaction of NMPB or not satisfying in NMPB about its inevitability within a specified period.

## **9. FORCE MAJEURE**

The Parties shall not be held responsible for non-fulfillment of their respective obligations in successful completion of the Project under this Agreement due to the exigency of one or more of the force majeure event such as but not limited to acts of God, War, Flood, Earthquakes, Strikes not confined to the premises of the party, Lockouts beyond the control of the party claiming force majeure, Epidemics, Riots, Civil Commotions etc. lying beyond the reasonable control of and not brought about at the instance of the Party claiming to be affected by such event and which has caused the non-performance or delay in performance; provided on the occurrence and cessation of any such event the party affected thereby shall give a notice in writing to the other party within one month of such occurrence or cessation. If the force majeure conditions continue beyond six months, the parties shall jointly decide about the future course of action on the Project. The validity of the claim of force majeure by the Grantee shall be determined by NMPB after due enquiry and the decision of NMPB in this regard shall be final.

## 10. ARBITRATION

In case of any dispute, Secretary (AYUSH) or his nominee shall be the Arbitration authority.

## 11. NOTICES AND JURISDICTION

- (i) Subject to the provisions of *clause 10* hereof, the Courts at New Delhi shall have exclusive jurisdiction in all matters concerning this Agreement including any matter arising out of the arbitration proceedings or any award made therein.

IN WITNESS WHEREOF the parties hereto through its duly authorized representatives have signed this Agreement on the day, month and year mentioned hereinbefore.

Parties

For and on behalf of the President of India

Signature

Name

Designation

Seal

Witnesses

1. Signature

Name

Address

2. Signature

Name

Address

For and on behalf of the Grantee duly authorized vide Resolution No. ....

and dated ..... of the Board of Directors of Grantee

Signature

Name

Designation

Seal

Witnesses

1. Signature

Name

Address

2. Signature

Name

Address

**BUDGET DETAILS**

**(Once the project is approved by NMPB, the budget details will be communicated to the Grantee, thus revised budget details agreed to by the parties shall be annexed here as Annexure 1)**

## **Annexure – B**

**Complete Project document with amendments like approved budget, approved timelines (which will also be communicated to the Grantee), and any other amendments communicated to the Grantee by NMPB.**

**(This document should be bound as part of the Agreement and labeled as Annexure 2 and should not be submitted as a separate document.**

**Minimum work programme/ milestones/ timelines shall have to be specifically mentioned)**