

**Umbrella Memorandum of Understanding  
Between**

**ICAR-National Institute of Biotic Stress Management, Raipur**

**And**

**Amity University Chhattisgarh, Raipur**

*for facilitating*  
Students' Training/Postgraduate Research

This Memorandum of Understanding (hereinafter referred to as MoU) is made on this 18<sup>th</sup> day of the month of **June** in the year **2020** by and between the **ICAR-National Institute of Biotic Stress Management** having its Head Office at **Raipur** [hereinafter called "**NIBSM**"/First party], a constituent Research Institution of the Indian Council of Agricultural Research, Krishi Bhavan, New Delhi-110 001 on the ONE PART and the **Amity University Chhattisgarh, Raipur** Private University or Institution having its headquarters at **Raipur** [hereinafter called "**AUC.**"/Second party] on the OTHER PART (who for the purpose of this MoU are hereinafter collectively referred to as the parties).

The parties, having discussed fields of common research interests and allied activities between the two institutions, have decided to enter into long-term collaboration for promotion of students' training and quality postgraduate research in cutting edge areas in accordance with the provisions contained in the Guidelines issued *vide* Letter No. 2-8/2012- HRD dated 11th December, 2012 or as revised from time to time.

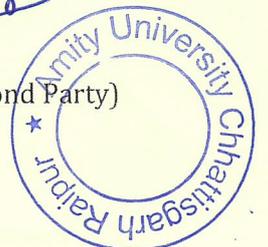
WHEREAS the "First Party" is involved in the studies on **Biotic stress management in agricultural crops with major disciplines of Agricultural Biotechnology, Plant Pathology, Agricultural Entomology, Weed science, Artificial Intelligence, and allied disciplines** (specific mandated domain within the approved disciplines/divisions), WHEREAS the "Second Party", established *vide* **F. No 7267/D 136/21-A/C.G./14 dated 13.08.2014 by Govt. of Chhattisgarh (Law and Legislative Affairs Department, Mantralaya, Mahanadi Bhavan, Naya Raipur)** *vide* Act No. **13 of 2014** and recognized by University Grants Commission] at its **Amity Institute of Biotechnology** is involved in **Biotechnology based research, innovation and entrepreneurship.**"

AND WHEREAS it has been considered expedient to agree in writing to participate jointly in the projects requiring expertise and logistics from both the parties.

  
(Signature of First Party)

**निदेशक**  
**Director**  
माकअनुप-स.ज.स्टे.प्र.सं., बरोडा.  
**ICAR-NIBSM, Baronda,**  
रायपुर (छ ग.)  
**Raipur (C G.)**

  
(Signature of Second Party)



## Article 1. Scope

- 1.1 The Second party will recognize the First party as an Institute for conducting research related to the thesis requirement of the research students for **M.Sc, M.Tech and Ph.D. Degrees in Biotechnology, and other disciplines of overlapping mandate**. The Second party will recognize Scientists of the ICAR Institute as recommended by its Director in accordance with the University rules and regulations for guiding students working for the said degree.
- 1.2 Operational details of research effort and collaboration will be made in common research programmes and/or projects restricted to specific mandated domain within the approved disciplines/divisions. The objective(s) for research work for a student coming from a Second party outside NARS should be exclusively different as far as possible.
- 1.3 Research instrumentation facility and library facilities available with the First party and the Second party will be made available to the faculty and research scholars. However, the costs of specific consumables will be borne by the respective organizations.
- 1.4 There shall be an exchange of students for academic, research and training purposes. Accommodation in the Hostel shall be arranged, wherever possible, as per extant rates. The duration of exchange visits will be determined by mutual consent between both the parties.

## Article 2. Management

- 2.1 Director of the First party and the Vice-Chancellor/Head of the Institution of the Second party will be responsible to work out operational details of co-operation between the two organizations and ensure proper and effective implementation of this MoU.
- 2.2 The Advisory Committee will meet at least once in a year alternatively in the institutions of the First party and the Second party to review the activities. This meeting shall include presentation on the academic and research activities, which should be open to the students, faculty and scientists.

## Article 3. Exchange of Information

- 3.1. The term "information" includes scientific or technical data, results and/or methods of investigation, and other information intended to be provided, exchanged, or arising under project descriptions entered into pursuant to this MoU.
- 3.2. The parties support the widest possible dissemination of information. Each party in joint projects shall be given the right to use, disclose, publish or disseminate such information for any and all purposes.

## Article 4. General Provisions

- 4.1 It is understood that the First party and the Second party subscribe to the principle of equal opportunity and do not discriminate on the basis of race, sex, age, caste or religion. Both the Institutions shall abide by these principles in the administration of this agreement and neither party shall impose criteria for exchange of scholars or students, which violate principles of non-discrimination.
- 4.2 Both parties understand that all financial agreements will have to be negotiated separately and will depend on the availability of funds.
- 4.3 Both parties acknowledge that exchange of students from one party to the other shall be subject to the availability of funds and shall comply with the regulations and policies of the First party and the Second party.
- 4.4 Any research publications arising will be jointly published in accordance with the provisions laid out in Item 3.2.1C of the Guidelines for the students to conduct research for their degree programme as trainees at ICAR institutions as notified *vide* Letter No. 2- 8/2012-HRD dated 11th December, 2012 or revised guidelines, if any, as may be issued from time to time.



(Signature of First Party)

**निदेशक**  
**Director**  
माकानुप-रा.जै.स्टे.प्र.सं., बरोडा.  
**ICAR-NIBSM, Baronda,**  
रायपुर (छ ग.)  
**Raipur (C G.)**

  
(Signature of Second Party)



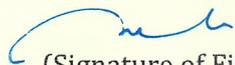
- 4.5 A copy of the thesis/dissertation will be submitted to the First Party after the award of the degree by the Second party.
- 4.6 All questions related to this MoU arising during its term will be settled by the parties by mutual agreement. Disagreements at the operating level shall be forwarded to respective higher officials for appropriate resolution failing which an arbitrator of mutual acceptance may be identified for the settlement of dispute, if any.
- 4.7 All questions not foreseen related to this MoU will be handled by the parties by mutual agreement.
- 4.8 Nothing in this MoU is intended to affect other cooperation or collaborations between the parties.

#### Article 5. Intellectual Property Rights

5.1 The Second party will be expected to ensure protection of the Intellectual Property Rights generated or likely to be generated during the student's research work. The ICAR as the first applicant (for its institute) and the Second party shall be the joint applicants for IPRs and the students and involved scientific staff shall be included as the inventor/ breeder/ author. The 'ICAR Guidelines for Intellectual Property Management and Technology Transfer/Commercialization' as amended from time to time shall be the reference for exploitation of the generated intellectual property, whose management and benefits sharing shall be mutually decided in each case.

#### Article 6. Admission and Fees

- 6.1 All those who wish to register as trainees or for Master/Doctoral programme under this MoU must apply for admission at the Second party. The allocation of Major Guide/Advisor would be finalized before the registration and will be governed by the provisions laid out in Items 3.2.1A and 3.2.2A of the Guidelines for the students to conduct research for their degree programmes as trainees at ICAR institutions as notified *vide* Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time, for the students from within NARS and outside NARS, respectively.
- 6.2 Admission of the students and the award of degrees for different programmes will be the responsibility of the Second party as per the rules and regulations.
- 6.3 Allotment of the students at the First party will be done by the approval of Director of the First party and Vice-Chancellor/Head of the Institution of the Second party.
- 6.4 The First party would have the right to screen the student's eligibility for admission based on their academic period.
- 6.5 The PME Cell of the First party in consultation with the representative of the Second party shall decide the location and sharing quantum of research work.
- 6.6 The number of student(s) at any particular time will be subjected to the availability of research facilities and scientists' time to guide thesis research at the First party institution.
- 6.7 Any student(s) admitted to the First party for training/postgraduate research, if found violating the rules and regulations laid down by the First party or indulge in such activities that amount to tarnishing the image of the Institute, or cause damage to the property, the registration of such student(s) would be summarily terminated. The Second party will not complete the formalities of issuing the certificates to such students until they compensate the losses to the First party.
- 6.8 Fees will be charged from the students by the First party as per Guidelines for the students to conduct research for their degree programmes as trainees at ICAR institutions *vide* Letter No. 2-8/2012-HRD dated 11th December, 2012 or revised Guidelines, if any, as may be issued from time to time. No fee may be charged by the First party from the students registered with AU/DU within NARS. However a student registered with a Second party, outside NARS, will deposit fee of Rs. 10,000/- for training duration of 3 months (not leading to a degree/dissertation) and Rs. 30,000/- per semester (six months) for training, research,

  
(Signature of First Party)

निदेशक  
Director  
माकअनुप-रा.ज.स्ट्रे.प्र.सं., बरौंडा  
ICAR-NIBSM, Baronda,  
रायपुर (छ.ग.)  
Raipur (C.G.)

  
(Signature of Second Party)



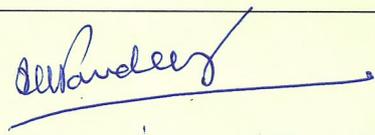
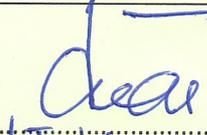
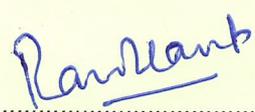
dissertation exceeding three months. Any change in fee structure by ICAR will be applicable from the date of revision and shall be charged by the First party.

**Article 7. Entry into effect, modification and termination**

- 7.1. This MoU shall become effective on the date it is signed by the parties and shall be valid for three years extendable up to five years. Both parties shall review the status of the MoU at the end of each three/five year period to determine any modification, whenever necessary. The period of validity of this MoU may be extended by mutual consent up to five years. This MoU may be amended by mutual written agreement and may be terminated at any time by either party upon written notification signed by the competent authority of the party initiating termination. Such notification must be given to the other party at least six months in advance from the effective date of termination.
- 7.2. All joint activities not completed at the expiration or termination of the MoU may be continued until their completion under the terms of this MoU.
- 7.3. No amendment or modification of the MoU shall be valid unless the same is made in writing by both the parties or their authorized representatives and specifically stating the same to be amendment of the MoU. The modifications/changes shall become part of the MoU and shall be effective from the date on which they are made/executed, unless otherwise agreed to.

This MoU has been executed in two originals, one of which has been retained by the First party and the other by the Second party).

IN WITNESS WHEREOF, the parties have executed this MoU and represent that they approve, accept and agree to terms contained herein.

<p><b>ICAR-National Institute of Biotic Stress Management, Baronda, Raipur</b> (Name and Address of the First Party)</p>	<p><b>Amity University Chhattisgarh, Raipur</b> (Name and Address of the Second Party)</p>
<p><b>Dr. P.K. Ghosh</b> Director ICAR-National Institute of Biotic Stress Management, Raipur</p>	<p><b>Prof. (Dr.) Rajendra Kumar Pandey</b> Vice-Chancellor Amity University Chhattisgarh, Raipur</p>
<p><b>Tel No. 0771-2225333</b></p>	<p><b>Tel. No. 0771- 7114243</b></p>
<p>Date: <b>18<sup>th</sup> June 2020</b></p>	<p>Date: <b>18<sup>th</sup> June 2020</b></p>
<p> <b>निदेशक</b> <b>Director</b> भाकृअनुप-रा.ज.स्ट्रे.प्र.सं., बरौंडा. <b>ICAR-NIBSM, Baronda,</b> रायपुर (छ.ग.) Raipur (C.G.)</p> <p>Signature with Seal</p>	<p> <b>Prof (Dr.) R.K. Pandey</b> Vice Chancellor Amity University Chhattisgarh</p> <p>Signature with Seal</p>
<p>Witness 1.....  (J. KUMAR)</p>	<p>Witness 1.....  (Prof. Ravi Kant Singh)</p>
<p>Witness 2.....  (P. KAUSHAL)</p>	<p>Witness 2.....  (Dr. Kesh Kumar Nayak)</p>



# AMITY UNIVERSITY

## CHHATTISGARH

### AMITY INSTITUTE OF BIOTECHNOLOGY

#### CENTRE OF EXCELLENCE IN AYURVEDIC MEDICINES & RESEARCH

**Amity University Chhattisgarh** established a Centre of Excellence in Ayurvedic medicine and research with a vision of putting together the knowledge and skill of the most eminent faculty and researchers in Ayurveda to formulate and design the most precise and targeted Ayurveda and related professional empowerment and skill development courses for the benefit of

- a) Doctors, students and teachers of Ayurveda.
- b) Para-medical staff, therapists, pharmacists, nursing assistants, occupational therapists and other human resources associated with Ayurveda industry.
- c) General public.

The centre will lead research into efficacy mechanisms involved in Ayurvedic therapeutics as well as develop standardisation protocols and certification systems to help traditional medicines gain global acceptability.

It will also lead research programmes to identify active compounds in medicinal plants and herbal formulations, their molecular targets and pathways to discover potential new therapeutic uses for them.

The proposed centre would have an Ayurveda-Inspired Discovery (AID) as a research programme. Among the objectives of the centre of excellence will be

- a) The analysis of Ayurvedic therapeutics for treatment response and their effect on patho-physiological processes and developing uniform protocols, compositions and components.
- b) The characterisations of herbal products using advanced technologies such as genetic bar coding, genetic fingerprinting and mass spectroscopy.

The centre will also include a research centre to study medicinal plant conservation, metabolic engineering to improve active plant components and a discovery programme looking for therapeutically significant molecules and compounds.

**Initiated by:** Hon'ble Vice Chancellor- Amity University Chhattisgarh

**Faculty-in-charge:** Dr. V. Balasubramanian, AIB, AUC



## Facilities Required:

### Establishment of Animal House & Animal cell culture lab

- The separate animal house and cell culture lab are required for the evaluation of drugs dose.

### Plant tissue culture Lab

- The plant tissue culture lab is required for cultivation of important medicinal plant in laboratory condition, those cannot grow in medicinal/herbal garden (Outdoor environment).

### Greenhouse

- To grow the very rare medicinal plants cultivated through plant tissue culture.

### Herbal garden

The herbal garden could be utilized for the growing of common and very rare medicinal plants for studying about the bioactive compounds/drug molecules

## Instruments Required:

1. Weighing Balance (4 digit)
2. Soxhlet extractor apparatus
3. Lyophilizer
4. Laminar air flow (Vertical) - 2 (Animal and plant tissue culture)
5. Safety hood cabinet
6. FT-IR
7. Hot air oven
8. HPTLC unit (Automatic sample loader)
9. Column chromatography unit
10. UV cabinet
11. Filtration unit with Vacuum Pump
12. Probe Sonicator
13. Peristaltic pump
14. Autoclave
15. Plant tissue culture rack
16. CO<sub>2</sub> incubator

## Action Taken:

### 1. Establishment of herbal garden:

The establishment of herbal garden was proposed to Hon'ble C-IV Sir through Hon'ble VC Sir. Our Hon'ble C-IV Sir approved and allotted 4.7351 acres for the establishment of herbal garden with in our campus (**Annexure-I:** Area approved by Hon'ble C-IV Sir;



**Annexure-II:** Layout for the plantation approved by Hon'ble VC Sir). We have prepared the proposal for receiving fund for the establishment of herbal garden from National Medicinal Plant Board (NMPB).

### 2. MoU Signed with AIIMS, Raipur:

To accelerate the research activities related to Ayurveda, we had an MoU signing with the All India Institute of Medical Science (AIIMS), Raipur. The collaboration will be extended in the innovative research on following topics, related to medical field (not limited to):

- Drug Discovery (bioactive compounds) for cancer and multidrug-resistant pathogens from various sources such as Medicinal Plants and Microbes.
- Wound healing (Leprosy and diabetic ulcer) and designing of dressing materials coated with bioactive compounds from medicinal plants.
- Nano-biotechnology and nanomedicines.
- Diagnostic kits, preparation for various diseases using genetically engineered monoclonal antibodies.
- Biopolymers for tissue and bone implantation.
- Impacts of micro/nanoplastics on living systems.

#### Outcome of MoU with AIIMS:

- We submitted a proposal titled “Mapping of genetic allele polymorphism of Drug metabolising enzymes (DMEs) in Indian Population with perspectives Pharmacogenomics applications” to Institutional Ethics Committee (IEC), AIIMS and got the approval for human sampling and processing in collaboration with Department of Pharmacology, AIIMS, Raipur.

### 3. Research Topics assigned to Research Scholars:

The research has been started at AIB under CoE in Ayurvedic Medicine and Research. Two Ph.D. Scholars have been started research work on exploring of traditional medicinal plants for controlling of diseases.

- Ms. Arpita Srivastava is working on “Study of genetic diversity and anti-uropathogenic properties of *Andrographis paniculata* found in different regions of Chhattisgarh”
- Mr. Atul Kumar Jha is working on “Development of Dressing Material for healing the Diabetic and Leprosy wounds through traditional Medicinal plant *Tridax procumbens*”

- Encl:**
1. **Annexure-I:** Area approved for herbal Garden by Hon'ble C-IV Sir.
  2. **Annexure-II:** Layout for the plantation approved by Hon'ble VC Sir.
  3. **Annexure-III:** Copy of MoU with AIIMS.
  4. **Annexure-IV:** Copy of IEC approved by AIIMS.



# AMITY UNIVERSITY CHHATTISGARH

## OUTCOME REPORT

of

### **Social Outreach Report on Teaching Sustainable Agricultural Practices**

*24<sup>th</sup> September-2021*

By

*AMITY SCHOOL OF ARCHITECTURE & PLANNING*

#### **General Introduction-**

Under this session the villagers will be educated and introduced about some of the modern and sustainable agricultural practices like how they can prepare organic compost / manure by using the household waste so that they could use them in their own farming utilization additionally some vegetable seeds are also provided for cultivation and a sample of organic manure is provided for their references.

#### **Objective(s) of the Event:**

This will help the villagers to become self-sustainable and it will help the villagers for farming more efficiently

## Envisaged Vs Achieved Outcomes

Sn	Envisaged Outcome	Is the outcome tangible or intangible? *	Achieved Outcome	Remarks, if any
1.	Detailed Report for consisting an overview of the North-Eastern part of India	Tangible	Social Awareness among Villagers	

### 1. Actionable Progressive Outcomes

Outcomes requiring prolonged monitoring are as under:

Sn	Envisaged Outcome (a)	Outcome activity yet to be achieved (b)	Is the outcome tangible or intangible?*	Action plan to achieve the Outcome activity described in column "(b)" (c)	Target Date (d)	Responsibility (e)	Remarks, if any (f)

(\*) – *Tangible outcomes should have a specific target date. Intangible outcomes need not have a specific target date.*

#### ***Faculty Accompanied:***

Ar. Swarna Junghare,

Ar. Nishant Biswas

Ar. Khushboo Sahu

Mr. Mukesh Verma

# PHOTOGRAPHS:



## PROJECT PROPOSAL

**1. Title of the Project:** “Establishment of Herbal Garden for the Germplasm Conservation of Endemic and Endangered Traditional Medicinal Plants in Chhattisgarh”

**2. Name of the organization**

Centre of Excellence on Ayurvedic Medicines & Research  
Amity University Chhattisgarh,  
State Highway-09, Manth/Kharora,  
Baloda Bazar Road, Raipur - 493225, Chhattisgarh.  
Phone no.: 077730 10791.

**3. Name of the Project Leader/Principal Investigator and Co-PIs and their full address.**

**3.1. Principal Investigator**

**Dr. V. Balasubramanian**, Assistant Professor, Amity Institute of Biotechnology, Amity University Chhattisgarh, State Highway-09, Manth/Kharora, Baloda Bazar Road, Raipur - 493225, Chhattisgarh, Mobile No.: +91-8667800253, Email Id: vbalasubramanian@rpr.amity.edu

**3.2. Co-Principal Investigators**

- 1. Dr. Ravi Kant Singh**, Professor & Director, Amity Institute of Biotechnology, Amity University Chhattisgarh, State Highway-09, Manth/Kharora, Baloda Bazar Road, Raipur - 493225, Chhattisgarh, Mobile No.: +91-9718515328, Email Id: rksingh@rpr.amity.edu
- 2. Dr. DVN. Sudheer Pamidimarri**, Associate Professor, Amity Institute of Biotechnology, Amity University Chhattisgarh, State Highway-09, Manth/Kharora, Baloda Bazar Road, Raipur - 493225, Chhattisgarh, Mobile No.: +91-6305473428, Email Id: spamidimarri@rpr.amity.edu

#### **4. Brief introduction of concept and justification of the project**

Chhattisgarh is known for its diversified medicinal plant varieties. Chhattisgarh is nearly 40% covered by the forest area and rich in biodiversity. Those forests come under two major categories such as, Tropical Moist and Dry Deciduous forests. The forest area of Chhattisgarh totally covered with the reserved forest area (25782.167 Sq. Km), protected forest area (24036.100 Sq. Km), and undermarked protected forest (9954. Sq. Km). Chhattisgarh is acknowledged as “herbal state” for their richness in medicinal plant diversity.

The medicinal plants are more valuable for their active compounds, using for human health without or less side effects. The different parts of plants such as root, stem, leaves, bark, flowers and seeds are acquired more attention because of its various medicinal properties. Plant species confined to single geographical area considered to be endemic plants. The endangered plants are in the verge of extinction. Majority of the endemic plant species are coming into endangered category because of climatic change and anthropogenic activities prone due to uncontrolled exploitation of naturally habitat. The state possesses many important endemic and endangered medicinal plants which should be conserved to protect our traditional ethnobotanical knowledge. Due to anthropogenic activities, the ecosystem losses the important plant diversity and hence, urgent action is necessary in order to ensure that the biodiversity of entire ecosystem is conserved. Many of these plants can be used for the developing valuable medicinal products and therefore their conservation will also help in improving the tribal population uplifting.

Amity University have been pioneered in the center of research and excellence in herbal medicine and its application in healthcare sector. The faculties of Amity University Chhattisgarh also possess necessity expertise and facilities in our moto to conserve the endemic and endangered medicinal plants. For this purpose, the university also established in “Center of Excellence in Ayurvedic Medicine and Research”. This center adopts a multidisciplinary approach on exploration of medicinal plants by Biotechnology, Nanotechnology and Plant Tissue Culture. In research pursues using a state-of-the-art facility our Center of Excellence also collaborate with All Indian Institute of Medical Sciences (AIIMS), Raipur and National Institute of Biotic Stress Management (NIBSM), Raipur.

In this proposal our major objective is to establish a germplasm bank for the conservation of endemic and endangered plants species. A detailed representation list of some endemic and endangered medicinal species of Chhattisgarh is given in Table 1.1, 1.2, and 1.3.

**Table 1.1** Endemic and Rare Flora of Chhattisgarh State

**Note:** In addition, plants will be included as per the suggestions provided by Biodiversity Board and will be established into the library of flora in the herbal garden.

S. No.	Name of Flora	Family	Tree/Shrub/ Herbs	Medicinal Uses
1	<i>Strobilanthes campanulatus</i> Wight	Acanthaceae	Herb	No data available
2	<i>Strobilanthes jeyporensis</i> Bedd.	Acanthaceae	Shrub	No data available
3	<i>Strobilanthes pulneyensis</i> C.B. Clark	Acanthaceae	Shrub	No data available
4	<i>Peucedanum nagpurensis</i> (C.B.Clark) Prain (= <i>Peucedanum glaucum</i> var. <i>nagpurensis</i> C.B.Clark) Tejraj	Apiaceae	Herb	Used in sexual diseases
5	<i>Diospyros paniculata</i> Dalzell	Ebenaceae	Tree	Treat several ailments including burns, gonorrhoea, biliousness, blood poisoning, rheumatism and ulcer.
6	<i>Bridelia montana</i> (Roxb.) Willd. (= <i>Clutia monana</i> Roxb.)	Euphorbiaceae	Shrub	Bark and Root—astrigent, anthelmintic. Used in the treatment of bone fracture
7	<i>Gigantochloa bastareana</i> H.B.Naithani & R.C.Pal	Poaceae	Bamboo	No data available
8	<i>Crotalaria trifoliumstrum</i> (Khip)	Fabaceae	Shrub	No data available
9	<i>Desmodium tortuosum</i> (Sarivan)	Fabaceae	Herb	No data available
10	<i>Erythrina resupinata</i> (Pangra)	Fabaceae	Herb	Fetal anti- implantation, anti-tumoral, uterine stimulant, abortive, toxicity evaluation
11	<i>Hoya wrightii</i>	Asclepiadaceae	Climber/ Epiphytes	Antiradical and antimicrobial activities
12	<i>Lespedeza</i> sps	Fabaceae	Herb	Treat rheumatism
13	<i>Mucuna imbricata</i> (Kevatch)	Fabaceae	Climber	Treat the symptomatic effects in Parkinson's disease, anabolic, androgenic, analgesic, anti-inflammatory, antispasmodic, antivenom, aphrodisiac, febrifuge,

				cholesterol lowering, hypoglycemic, immunomodulator, antilithiatic, antibacterial, antiparasitic, cough suppressant, blood purifier, carminative, hypotensive, and uterine stimulant properties
14	<i>Nogra</i> sps	Fabaceae	Herb	No data available
15	<i>Sophora bakeri</i>	Fabaceae	Small trees and shrubs	No data available
16	<i>Uraria prunellaefolia</i> (Pitharan)	Papilionaceae	Herb	No data available
17	<i>Vigna pisos</i>	Fabaceae	Climber	No data available

**Table. 1.2** List of Endangered flora of Chhattisgarh

**Note:** In addition, plants will be included as per the suggestions provided by Biodiversity Board and will be established into the library of flora in the herbal garden.

S. No.	Scientific Name	Family	Tree/Shrub/Herbs	Medicinal Uses
1	<i>Peucedanum nagpurensis</i> (C.B.Clark) Prain (= <i>Peucedanum glaucum</i> var. <i>nagpurensis</i> C.B. Clark)	Apiaceae	Herb	
2	<i>Alstonia Venneta</i> R Br. (Chatium)	Apocynaceae	Shrub/Small tree	Useful for skin diseases, leprosy, cobra and other venomous bites, epilepsy, fatigue, fever, syphilis, insanity, helminthiasis, epilepsy, as remedy for impure blood
3	<i>Artocarpus hirsutus</i> (Aini)	Moraceae	Tree	The bark cures diabetes, tapeworm infection, anaemia, malarial fever, asthma, dermatitis, diarrhoea, pimples and ulcers
4	<i>Baliospermum montanum</i> (Danti)	Euphorbiaceae	Herb	Roots and seeds are used to reduce edema, pain and anti-inflammatory
5	<i>Barleria lupulina</i> Lindl (Tadretu)	Acnathaceae	Herb	Roots are used for centipede and insect bites and are anti-inflammatory. Young shoots with leaves are ground and applied for skin diseases. Leaves are used to treat herpes simplex
6	<i>Begonia picta</i> Sm	Begoniaceae	Herb	Used as a poultice on sore nipples. The root juice is used as an eyewash to treat conjunctivitis. It is also

				consumed in the treatment of peptic ulcers
7	<i>Berberis asiatica</i> roxb ex DC (Rasaut)	Berberidaceae	Shrub	Used as a tonic, alternative, demulcent, diaphoretic, and diuretic, in the treatment of diarrhoea, jaundice and skin diseases, syphilis, chronic rheumatism and urinary disorders
8	<i>Butea monosperma</i> var <i>lutea</i> (Parsa)	Papilionaceae	Tree	Root bark is used as an aphrodisiac, analgesic and anthelmintic. The stem bark is used for the treatment of dyspepsia, diarrhea, dysentery, diabetes, ulcers, sore throat and snake bites
9	<i>Celastrus paniculata</i> willd (Pen)	Celastraceae	Woody Climber	Used as memory sharpener and anti-depressant
10	<i>Chlorophytum arundinaceum</i> baker (Safed musli)	Liliaceae	Herb	Useful in diseases like renal calculus, leucorrhoea and diabetes
11	<i>Chlorophytum tuberosum</i> baker (Safed musli)	Liliaceae	Herb	Used for arthritis, cancer, diabetes, boosting vitality, improving sexual performance
12	<i>Clerodendrum serratum</i> (I) moon (Chantakarni)	Verbenaceae	Shrub	Used as antitoxic, antiseptic, astringent, and styptic, and control asthma, cough and scrofulous affections
13	<i>Cordia rothii</i> roem and schult (Lasura)	Boraginaceae	Shrub/Small tree	Treat dyspepsia, fever, diarrhea, leprosy, gonorrhoea and burning sensation, anthelmintic, astringent, diuretic, demulcent, purgative, expectorant, tonic, ulcer and cough
14	<i>Costus speciosus</i> (Koen) (Kanda)	Zingiberaceae	Herb	Treat fever, rash, asthma, bronchitis, and intestinal worms
15	<i>Craterostigma plantagineum</i> hochst	Scrophulatiaceae	Herb	Treat abdominal pains and diarrhea
16	<i>Curculigo orchioides</i> gaertn (Kali musli)	Amaryllidaceae	Herb	Used to cure impotency, aphrodisiac, tonic, jaundice, and skin ailments, anticancer, and hepatoprotective
17	<i>Curculigo angustifolia</i> roxb (Tikhur)	Zingiberaceae	Herb	Used in antifungal and antibacterial medications
18	<i>Curcuma aromatica</i> salish (Van haldi)	Zingiberaceae	Herb	It is an antiinflammatory agent, to promote blood circulation, to remove blood stasis and for the treatment of cancer
19	<i>Curcuma caesia</i> roxb (Kali Haldi)	Zingiberaceae	Herb	Used in treating leucoderma, asthma, tumours, piles, bronchitis, bruises

20	<i>Curcuma pseudomontana</i>	Zingiberaceae	Herb	Beneficial against leprosy, dysentery, cardiac diseases and general debility
21	<i>Cymbidium aloifolium</i> sw	Orchidaceae	Epiphytic orchid	Anti-inflammatory, Paralysis, joining fractured bones, fever, weakness of eyes, chronic illness, burns, sores
22	<i>Diospyros paniculata</i> (Tendu)	Ebenaceae	Tree	Antihyperglycemic, antiplasmodial and antimicrobial activity
23	<i>Embelia tsjeriam-cottam</i> A Dc (Baibriang)	Primulaceae	Shrub/Small tree	Powerful anthelmintic, used in the treatment of insanity and heart diseases, antiparasitic and carminative.
24	<i>Entada phaseoloides</i> merrill (Gilla)	Mimosaceae	Woody Climber	Cure rheumatic joint and muscle pains, and to treat respiratory ailments, ulcers, abdominal muscle spasms and headaches
25	<i>Eryngium foeditum</i> l	Apiaceae	Herb	Cure burns, ear ache, fevers, hypertension, constipation, fits, asthma, stomachache, worms, infertility complications, snake bites, diarrhea, and malaria
26	<i>Euphorbia fusiformis</i> buchham (Duddhi)	Euphorbiaceae	Herb	used traditionally for female disorders, respiratory ailments (cough, coryza, bronchitis, and asthma), worm infestations in children, dysentery, jaundice, pimples, gonorrhoea, digestive problems, and tumors
27	<i>Geodorum dialatatum</i> R Br	Orchidaceae	Orchid/Herb	Treat diarrhea, stomach pain, rheumatoid arthritis, cancer, asthma, bronchitis, sexual impotency, tuberculosis
28	<i>Gloriosa superba</i> L Kalihari	Liliaceae	Climber	Ulcers, leprosy, piles, inflammations, abdominal pains, itching and thirst
29	<i>Grewia rothii</i> DC (Bhemal)	Tiliaceae	Shrub	Leaves have antimicrobial, anticancer, antiplatelet and antiemetic activities; fruit possess anticancer, antioxidant, radioprotective and antihyperglycemic properties
30	<i>Gymnema sylvestre</i> R Br. (Medhasirghi)	Ascleiadaeae	Climber	used for the treatment of rheumatism, blood-vessel inflammation, haemorrhoids, and snake bites, reduce blood sugar levels in diabetics,

31	<i>Hedychium coronarium</i> loenig ex Retz	Zingiberaceae	Shrub	used to treat pain in the chest and arms, tonsillitis, and antirheumatic,
32	<i>Marsdenia tencissima</i> (Roxb) Moon (Jifi)	Asclepiadaceae	Climber	Used for the treatment of asthma, trachitis, tonsillitis, pharyngitis, cystitis, pneumonia and drug or food poisoning
33	<i>Madhuca longifolia</i> (Mahua)	Sapotaceae	Tree	Used against heart diseases, leucorrhea, menorrhagia, polyuria, bronchitis, and tonsillitis. The bark of the tree is used for rheumatism, chronic bronchitis, diabetes mellitus, and bleeding
34	<i>Neolitsia chinensis</i> (Lamk) Chun	Lauraceae	Shrub/small tree	Anti-spasmodic, Emollient
35	<i>Operculina turpethum</i> (Nisoth)	Convolvulaceae	Herb	Used for the treatment of skin disorders such as vitiligo and several diseases such as cervical lymphadenitis, fistulas, constipation, chronic gout, fever, bronchitis, ulcers, hemorrhoids, tumors, obesity, jaundice, herpes, and induced lacrimation
36	<i>Oryza meyeriana</i> Mailli ssp graulata takeoka (Jangli Dhan)	Poaceae	Grass/Herb	Contraceptive (Wild rice)
37	<i>Peucedaman dhana</i> buch Ham-ex clarke (Duku)	Apiaceae	Herb	Used against diseases such as cancer, oral and dental diseases, inflammation, neural damage, depression, alcoholism and epilepsy
38	<i>Phrynium imbricatum</i> roxb	Marantaceae	Shrub	Treat rheumatoid arthritis
39	<i>Plumbago Zeylanica</i> L (Chitra)	Plumbaginaceae	Herb	Antimicrobial, hepatoprotective, anticancer, antifertility, antiulcer, antifungal and wound healing
40	<i>Pterocarpus marsupium</i> roxb (Bija)	Febaceae	Tree	Fractures, constipation, hemorrhages skin diseases, depurative, ophthalmology, leprosy, rectalgia, and leucoderma, rheumatoid arthritis, skin diseases, external use for sores, boils, stomach pain and gastrointestinal disorders
41	<i>Pygmaepremna herbacea</i> (roxb) Moldenke (Bhagangi)	Verbenaceae	Shrub	Used for the bronchitis, asthma, hypertension, tumors, inflammation, hiccups, epilepsy and helminthiasis
42	<i>Rouwolfia serpentina</i> benth ex kurx (Sarp Gandha)	Apocnaceae	Shrub	Hypnotic, hypotensive and sedative, treat wounds and itches

43	<i>Santalum album</i> (Chandan)	Santalaceae	Tree	Treat genito-urinary disorders, fever, sunstroke, digestive problems and abdominal pain
44	<i>Smilax Zeylanica</i> (Ram Dataun)	Smilacaceae	Climbing shrubs	Treat syphilis, gonorrhoea, skin disease and acts like a blood purifier
45	<i>Spilanthes calva</i> DC (Akarkara)	Asteraceae	Herb	Treat tuberculosis and pain
46	<i>Strychnos potatorum</i> L f (Mirmali)	Loganiaceae	Shrub/small tree	Treat watering and aching eyes, epilepsy, cough, gonorrhoea, leucorrhoea, bronchitis, chronic diarrhoea, strangury, kidney and bladder stones, diabetes and eye diseases
47	<i>Swertia angustifolia</i> buch ham ex D Don (Chirayata)	Gentianaceae	Herb	Used for fever, constipation, upset stomach, loss of appetite, intestinal worms, skin diseases, and cancer.
48	<i>Tacca leontopetaloides</i> (L) Kuntze (Diva Awain)	Traccaceae	Herb	Treat stomach ailment, stop internal hemorrhaging in the stomach and colon and applied to wounds to stop bleeding.
49	<i>Trachyspermum sycotocarpum</i> (Clarke) wolff	Apiaceae	Herb	Stimulant, carminative, flatulence, atonic dyspepsia, diarrhoea, abdominal tumours, abdominal pains, piles, and bronchial problems, lack of appetite, galactagogue, asthma and amenorrhoea
50	<i>Tylophora indica</i> (Burm f) Merr (Anantmool)	Asclepiddaceae	Climber	Used in treating bronchial asthma and allergic rhinitis
51	<i>Brginea indica</i> (Kunth) Roxb (Gondila)	Liliaceae	Herb	Anthelmintic, alexiteric, expectorant, cardiac, heart stimulant, diuretic, deobstruent and emmenagogue
52	<i>Zanthoxylum rhesta</i> (Roxb) DC (Tejphal)	Rutaceae	Tree	used to treat malaria, rheumatism, loss of stomach tone; fruit could be used in the treatment of diarrhea and rheumatism, urinary and venereal diseases, rheumatism and lumbago
53	<i>Cleome burmanni</i> (Hulhul)	Cleomaceae	Shrub	Anthelmintic properties
54	<i>Sapindus laurifolia</i> (Ritha)	Sapindaceae	Tree	Antibacterial properties
55	<i>Terminalia arjuna</i> (Koha)	Combretaceae	Tree	Treat heart disease, wounds, hemorrhages and ulcers
56	<i>Vitex trifolia</i> (Nirgundi)	Lamiaceae	Shrub or small tree	Treat fever, stomach related issues, rheumatic pain and problems caused due to inflammation

**Table 1.3** Other Common Medicinal Plants

<b>S. No.</b>	<b>Common name / Maturity period</b>	<b>Botanical Name or Family</b>	<b>Parts Used</b>	<b>Medicinal Use</b>
1	Amla ( T )After 4th year	<i>Emblica officinalis</i> Fam - Euphorbiaceac	Fruit	Vitamin - C, Cough , Diabetes, cold, Laxativ, hyper acidity.
2	Ashok ( T )10 years onward	<i>Saraca Asoca</i> Fam : Caesalpinanceac	Bark Flower	Menstrual Pain, uterine, disorder, Deiabetes.
3	Aswagandha ( H ), One year	<i>Withania Somnifera</i> Fam: Solanaccac	Root, Leafs	Restorative Tonic, stress, nerves disorder, aphrodisiac.
4	Bael / Bilva (T)After 4-5 year	<i>Aegle marmelous</i> Fam: Rutaccac	Fruit, Bark	Diarrhea, Dysentery, Constipation.
5	Bhumi Amla ( H), with in one year	<i>Phyllanthous amarus</i> Fam : Euphorbiaccac	Whole Plant	Anemic, jaundice, Dropsy.
6	Brahmi ( H ) Indian penny worth/one year	<i>Bacopa, Monniери</i> Fam: Scrophulariaccac	Whole plant	Nervous, Memory enhancer, mental disorder.
7	Chiraita ( high altituted) with in one year ( H )	<i>Swertia Chiraita</i> Fam: Gentianaccac	Whole Plant	Skin Disease, Burning, sensation, fever.
8	Gudmar / madhunasini, after Four year ( C )	<i>Gymnema Sylvestre</i> Fam: Asclepiadaccac	Leaves	Diabetes, hydrocil, Asthma.
9	Guggul ( T)after 8 years	<i>Commiphora Wightii</i> Fam: burseraccac	Gum rasine	Rheumatoid arthritis, paralysis, laxative.
10	Guluchi / Giloe ( C )With in one year	<i>Tinospora Cordifolia</i> Fam: Menispermaceae	Stem	Gout, Pile, general debility, fever, Jaundice.
11	Calihari / panchanguliaGlori Lily Five years	<i>Gloriosa superba</i> Fam: Liliaccac	Seed, tuber	Skin Disease, Labour pain, Abortion, General debility.
12	Kalmegh/ Bhui neem ( H ) with in one year	<i>Andrographis Paniculata</i> Fam : scanthaccac	Whole Plant	Fever, weakness, release of gas.
13	Long peeper / Pippali ( C ) after two to three years	<i>Peeper longum</i> Fam : Piperaccac	Fruit, Root	Appetizer, enlarged spleen, Bronchitis, Cold, antidote.

14	Makoi ( H )Kakamachi/ With in one year	<i>Solanum nigrum</i> Fam: Solanaccac	Fruit/whole plant	Dropsy, General debility, Diuretic, antidysentery.
15	Pashan Bheda / Pathar Chur ( H )One year	<i>Coleus barbatus</i> Fam : Lamiaccac	Root	Kidney stone, Calculus.
16	Sandal Wood ( T )Thirty years onward	<i>Santalum Album</i> Fam: santalinaccac	Heart wood, oil	Skin disorder, Burning, sensation, Jaundice, Cough.
17	Sarpa Gandha ( H )After 2 year	<i>Ranwolfia Serpentina</i> Fam: apocynaccac	Root	Hyper tension, insomnia.
18	Satavari ( C )After 2-3 year	<i>Asparagus Racemosus</i> Family: liliaccac	Tuber, root	Enhance lactation, general weakness, fatigue, cough.
19	Senna ( S )With in 1 year	<i>Casia augustifolia</i> Fam: Liliaceae	Dry Tubers	Rheumatism, general debility tonic, aphrodisiac.
20	Tulsi (perennial) Each 3 months	<i>Ocimum sanctum</i> Fam: Lamiaccac	Leaves/Seed	Cough, Cold, bronchitis, expectorant
21	Vai Vidanka ( C ), 2nd year onward	<i>Embelia Ribes</i> Fam: Myrsinaccac	Root, Fruit, Leaves	Skin disease, Snake Bite, Helminthiasis.
22	Pippermint ( h ) Perennial	<i>Mentha pipertia</i> Fam:Lamiaccac	Leaves, Flower, Oil	Digestive, Pain killer.
23	Henna/Mehdi ( S ) 1/25 years	<i>Lawsennia iermis</i> Fam: lytharaceae	Leaf,Flower, Seed	Burning, Steam, Anti Inflammatory.
24	Gritkumari ( H ) 2nd-5th yr	<i>Aloe Vera</i> Fam: Liliaceae	Leaves	Laxative, Wound healing, Skin burns & care, Ulcer.
25	Sada Bahar ( H ) Periwinkle/Nyantara	<i>Vincea rosea/ Catharanthus Roseus</i> Fam :apocyanace	Whole Plant	Leukemia, Hypotensive, Antispasmodic, Antidot.
26	Vringraj ( H )	<i>Eclipta alba</i> Fam: Compositae	Seed/whole	Anti-inflammatory, Digestive, hairtonic.
27	Swet chitrak Perennial ( h )	<i>Plumbago Zeylanica</i> Fam: Plumbaginaceae	Root, Rootbar	Appetizer, Antibacterial, Anticancer.
28	Rakta Chitrak ( H )	<i>Plumbago Indica</i> Fam : plumbaginaceae	Root, Root bar	Dyspepsia, colic, inflammation, cough.
29	Kochila ( T )15 yrs	<i>Strychnos nuxvomica</i> Fam: Loganiaceae	Seed	Nervous, Paralysis, healing wound.

30	Harida ( T )	<i>Terminalia chebula</i> Fam: Combretaceae	Seed	Trifala, wound ulcer, leprosy, inflammation, Cough.
31	Bahada (T)	<i>Terminalia bellerica</i> Fam: Comretaceae	Seed, Bark	Cough, Insomnia, Dropsy, Vomiting, Ulcer, Trifala.
32	Gokhur ( H ) CrawlingPuncture Vine/1 yr	<i>Tribulus terrestris</i> Fam: Lygophyllaceae	Whole Plant	Sweet cooling, Aphrodisiac, appetizer, Digestive, Urinary.
33	Neem ( T )	<i>Azardirchata indica</i> Fam : Mahaceae	Rhizome	Sedative, analgesic, epilepsy, hypertensive.
34	Anantamool/sariva (S) Indian Sarap sarilla	<i>Hemibismus indicus</i> Fam: Asclepiadaceae	Root/ Leaf	Appetizer, Carminative, aphrodisiac, Astringent.
35	Bach ( H ) Sweet Flag/1 yr	<i>Acorus calamus</i> Fam : araceae	Rhizome	Sedative, analgesic, hypertensive.
36	Vasa ( S )	<i>Adhatoda vesica</i> Fam : Sacanthaceae	Whole Plant	Antispasmodic, respiratory, Stimulant.
37	Nageswar ( T ) Nag Champa	<i>Mesua ferrea</i> Fam : Guttiferae	Bark, Leaf, Flower	Asthma, Skin, Burning, Vomiting, dysentery, Piles.
38	Benachar ( S ) Khus/khus	<i>Vetiveria ziziinoides</i> Fam : Toaceae / Graminae	Root	Hyperdipsia, Burning, ulcer, Skin, Vomiting.
39	Mandukparni ( H ) Indianpennywort	<i>Centella asiatica</i> Fam : Umdelliferae	Whole plant	Anti-inflammatory, Jaundice, Diuretic, Diarrhea.
40	Kaincha/CreeperBaidanka	<i>Mucuna truriens</i> Fam: Fabaceae	Root, Hair, Seed, Leaf	Nervous, Disorder, Constipation, Nephropathy, Strangury, Dropsy.
41	Dalchini Perenial Shrub	<i>Cinnamomum zeylanicum</i> Fam: Lauraceae	Bark, Oil	Bronchitis, Asthma, Cardiac, Disorder, Fever.
42	Kurai (S)	<i>Holorheena antidysentrica</i> Fam:apocyaceaceae	Bark, Seed	Scabies, Antipyretic, Amoebic dysentery.

## **5. Objectives**

1. Collection and cultivation of endemic and endangered medicinal plants in Chhattisgarh.
2. Establishment of germplasm bank for the conservation of endemic and endangered plants of Chhattisgarh.
3. To mass propagate the collected endemic and endangered plants by using horticulture and plant tissue culture techniques.
4. To distribute and restore the propagated plants into its natural ecosystem.
5. To act as a nodal center for identification and characterization of medicinal plants.
6. To serve as a nodal center for conservation and provide training to self help groups, general public as well as staffs of different government agencies engaged in conservation activities.
7. To carry out research on medicinal plants and its applications to develop medicinal and value-added products and create a platform for a digital repository.

## **6. Project period: 3 years**

## **7. Methodology**

### **7.1. Land area**

The Amity University Chhattisgarh has been already allotted 5 acres of land area (Location coordinates: 21.394023359036225, 81.8934511508349) for the establishment of herbal garden and germplasm banking. This area will be used for the cultivation and mass propagation of endemic and endangered medicinal plants of Chhattisgarh.

### **7.2. Collection of endemic and endangered medicinal plants**

The endemic and endangered plants will be collected from the forest with the help of forest department and tribal communities in the forest area. The list of plant species represented in the Table 1.1 & 1.2. In addition, plants will be included as per the suggestions provided by Biodiversity Board and will be established into the library of flora in the herbal garden.

### **7.3. Identification of collected endemic and endangered medicinal plants**

The methods of identification of collected plants include expert determination, recognition, comparison, and the use of dichotomous keys for the identification. And also seeking support from the Biodiversity Board and Forest department for the identification of collected endemic and endangered plants.

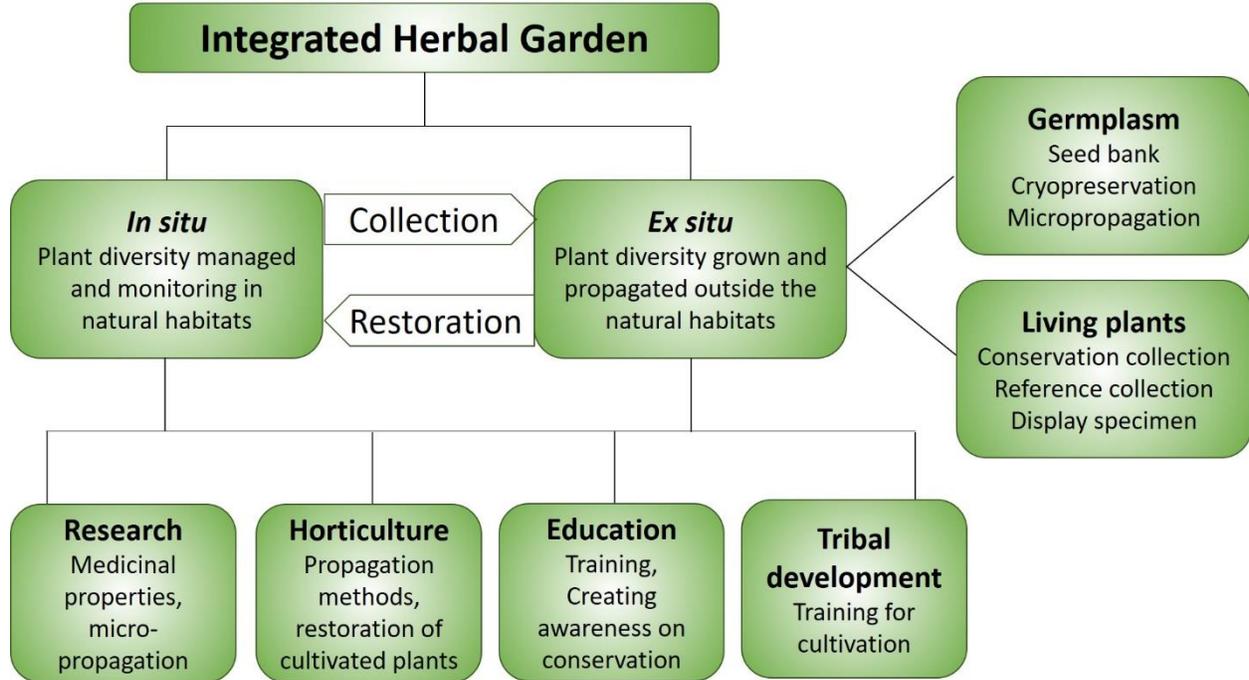
### **7.4. Germplasm Conservation of threatened plants through herbal garden**

There are two major methods will be adopted to conserve the endemic and endangered medicinal plant species either by *in situ* or *ex situ* conservation methods. *In situ* methods are conserving the plants on-site by maintaining its native habitats, and conditions by natural ways and *ex situ* methods are off-site conservation techniques to recover the plant diversity from the threatening and endangered conditions. Among the all-other *ex situ* methods, medicinal plants garden is one of the most effective technique to shelter and grow threatened medicinal plants of Chhattisgarh within the restricted area. We will be establishing the herbal garden for the conservation of threatened plant species of Chhattisgarh. That selected area will be prepared naturally by adding biofertilizers through soil mixed with cow dung for the cultivation of collected threatened plants from the forest. The cultivation of endemic and endangered species will be followed by the methods of horticulture. Shade net and plant tissue culture protocols will be applied for the plants whose plant material is limited and needs selective adaptation. Following to the mass propagation protocols, the species will be restored to their natural ecosystems.

### **7.5. Preparation of Digital repository**

The digital repository will be prepared for maintaining the germplasm database of endemic and endangered plant species of Chhattisgarh. The digital repository will be developed in WampServer 2.5 web hosting platform on Windows operating system. The backend database will be established in MySQL relational database management system (RDBMS). This database will also provide all the information about the endemic and endangered medicinal plant species of Chhattisgarh.

## Strategic Plan



## 8. Outcome of the project

- The project conserves the endemic and endangered plants through germplasm banking.
- It will help in mass propagation and restoration of threatened plant species of Chhattisgarh with the help of government officials and self-help groups.
- Improving the livelihood of tribal and self-help groups through restoration programmes of propagated plants in established herbal garden into the natural ecosystem.
- Providing training and creating awareness for the conservation of medicinal plants among the general public and government officials.
- Serving as nodal center for identification and characterization of local medicinal plants and maintaining the digital repositories.

### Financial outlays

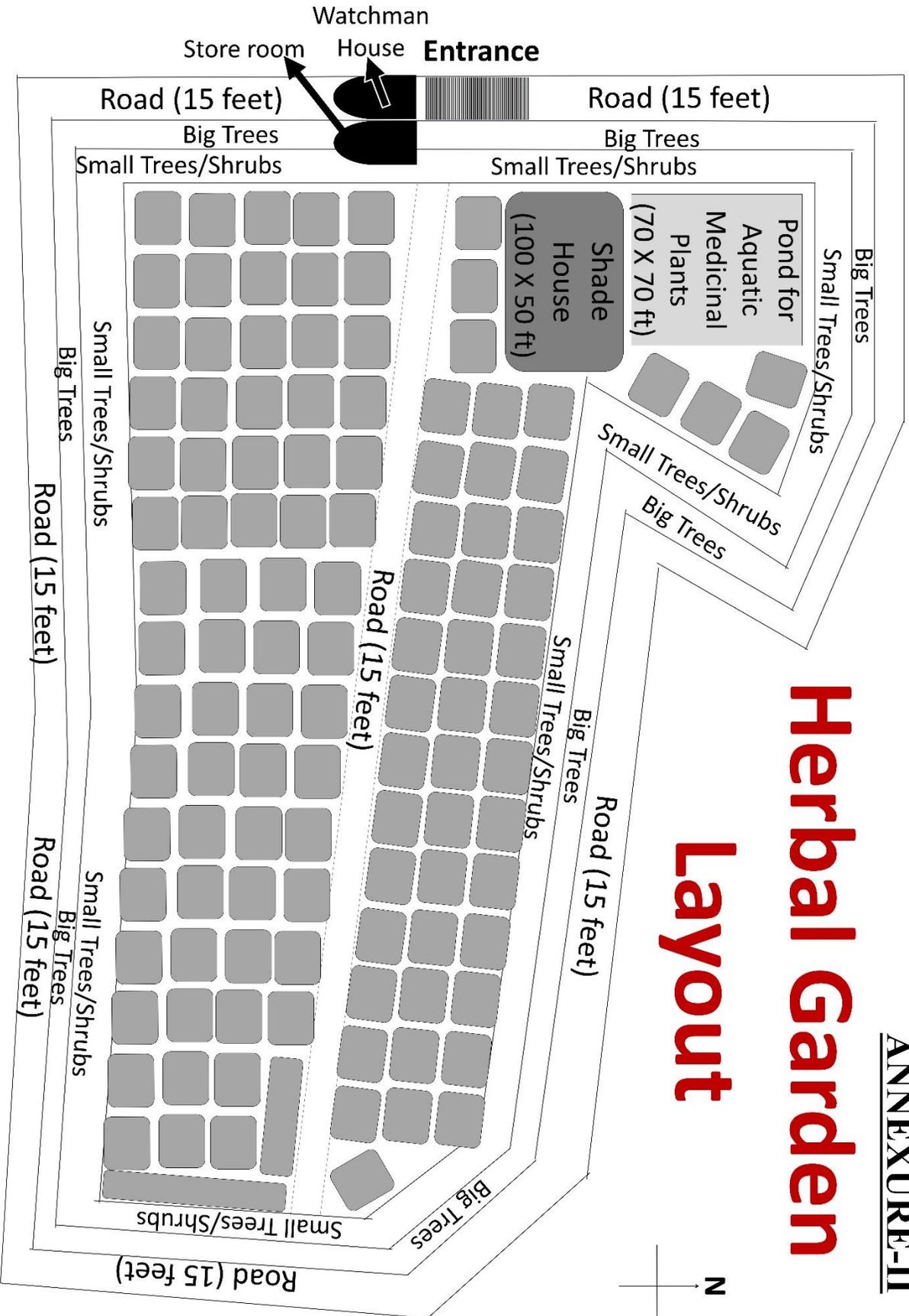
S. No.	Expenses	Budget (Rs.)			
		Year-I	Year-II	Year-III	Total
1	Seeds & seedlings purchasing (Rs. 30,000 per hectare)	60,000	15,000	-	75,000
2	Land Development (Rs. 25,000 per hectare)	50,000	25,000	-	75,000
3	Irrigation Facilities (Rs. 30,000 per hectare)	60,000	-	-	60,000
4	Semi-permanent Shade Net House: (3000 sq ft)	1,00,000	-	-	1,00,000
5	Plantation Including Maintenance: (Rs. 60,000 per hectare)	-	1,20,000	1,20,000	2,40,000
6	Entry Point Fixed-cutting of footpath along plantation site (Rs. 10,000 per hectare)	20,000	20,000	20,000	60,000
<b>Subtotal</b>		<b>2,90,000</b>	<b>1,80,000</b>	<b>1,40,000</b>	<b>6,10,000</b>
<b>Total</b>					<b>Rs. 6,10,000</b>

**Total Financial Outlay:**

**Rs. 6,10,000 (Rupees Six Lakhs Ten Thousand only)**

# Herbal Garden

## Layout



## Unnat Bharat Abhiyan Welcome Kit October, 2021 (13th-33)

Unnat Bharat Abhiyan <unnatbharatabhiyaniitd@gmail.com>

Thu 10/7/2021 2:22 PM

📎 8 attachments (3 MB)

UBA Household Survey Form, 29th april 2019 (1) (1).docx; Village\_level\_Survey Form25th april 2019 (1) (1).docx; How to prepare action plan (1).pdf; Congratulation letter from IIT Delhi (1).pdf; newspaper template doc for web (1) (1).docx; Guideline for use of UBA funds (1).pdf; UBA MONTHLY PROGRESS REPORT FORMAT (1) (1).docx; MHRD letter for DC's (2).pdf;

Dear Sir/ Madam,

**Greetings from** Unnat Bharat Abhiyan!

**Congratulations** to the Participating Institution selected under Unnat Bharat Abhiyan, a flagship program of the Ministry of Education (MoE) Government of India through a challenge mode application. We are glad that you have selected the cluster of villages under Unnat Bharat Abhiyan (UBA) in consultation with the District Collectors.

The next step is to complete the survey of all the villages adopted by you under the program. Please find attached a copy of a template for Baseline Household survey form as well as the Village survey form to be filled in during the field survey. An attempt should be made to cover all Households in the village. One Village survey forms are to be filled for each village. Kindly get it completed in all village survey as soon as possible. Then the data should be uploaded online on the reporting portal of the UBA website from your side. The Reporting Portal' login credentials are the same as your registration credential, soon the portal will be activated for uploading the data. After login your login credential and uploaded the baseline survey data on UBA Website for further analysis. After final submission of baseline survey data an analysis report of the data, fed by you will be generated on the UBA Website at your Institute page under Reporting Portal on the home page. You may use the same for the preparation of the plan of action/ Village development plan/ Technologies intervention for each village.

You are requested to complete PRA exercise of adopted villages for identification of major problems and preparation of a plan of action/ technical interventions. You are advised to kindly contact the village development officer and representatives of villages and organize Gram Sabha meeting as soon as possible and identify three major issues to be taken up for village development. You can set short term, medium-term and long-term goals for village development. You should start addressing two or three challenging issues immediately without waiting for household surveys to be completed. These issues should be identified through Gram Sabhas and should ensure public participation in planning and implementation. A template for seeking information regarding plan of action for the key problem identified in villages has been developed. A template for seeking information regarding plan of action for the key problem identified in villages will be available soon on the reporting portal to upload your plan of action. Please find attached copy of PRA report for Nuarnghabad village (IIT Delhi adopted village) along with PPT of "Development and Demonstration of Participatory GIS for use by Rural Stakeholders in Watershed Development. We have already uploaded some of village development plan on the UBA website, please visit the UBA website for more information.

**A tentative timeline for its implementation could be as follows.**

Item of work	Time from the date of launch
--------------	------------------------------

Selection of the Cluster	One month
Awareness generation	Two months
Social mobilization	Three months
Baseline Survey	Three months
Situation analysis	Five months
Village development plan	Seven months
Approvals and sanctions	Eight months
Implementation in the field	Nine months
Progress Review	One Year

You are also requested to keep IIT Delhi, the National Coordinating Institute updated about your activities so that the same can be uploaded on the website of UBA.

--

With Regards,

**Prof. Virendra K Vijay**

**National Coordinator - Unnat Bharat Abhiyan**

**IREDA Chair Professor**

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