

# **NATIONAL BIODIVERSITY AUTHORITY**

**475, 9<sup>th</sup> SOUTH CROSS STREET  
KAPALEESWAR NAGAR  
NEELANKARAI, CHENNAI 600 041  
[www.nbaindia.org](http://www.nbaindia.org)**

## **MINUTES OF THE FIFTH MEETING**



**सत्यमेव जयते**

**20<sup>TH</sup> JANUARY, 2006  
Indian Institute of Spice Research  
KOZHIKODE**

# **FIFTH MEETING OF NATIONAL BIODIVERSITY AUTHORITY**

**Indian Institute of Spice Research  
KOZHIKODE**

**20.01.2006**

**PROGRAMME**

**10.00 am – 6.00 pm**

- 1. Welcome Address and Major Achievements of NBA:**
- 2. Confirmation of Minutes of 3<sup>rd</sup> Meeting:**
- 3. Action Taken Report on Minutes of the 3<sup>rd</sup> Meeting**
- 4. Administrative Matters of NBA.**
- 5. Vote of thanks:**

**CHAIRMAN  
SECRETARY  
SECRETARY  
SECRETARY  
SECRETARY**

## CONTENTS

1. Introductory remarks by Chairman, NBA	4
2. Major Activities of NBA	7
Meetings Conducted by NBA	7
Publication of NBA	9
3. Confirmation of Minutes of 4 <sup>TH</sup> Meeting of NBA	11
4. Action taken on the Minutes of the 4 <sup>TH</sup> Meeting	11
5. Agenda and Administrative Matters for discussion	12
1. Approval application forms	12
2. Approval of proposals for funding by NBA	20
3. Approval of TOR	23
4. Appointment of Administrative Officer	24
5. Pay fixation	25
6. Approval of Microbial Cultures import	25
7. Bulletin	28
8. Printing of Biodiversity Act and Rules	28
9. Sanction power of Chairman	29
10. Appointment of Expert consultant	29
11. Approval of Draft Guidelines	32
12. Agreements for approval	33
13. Appointment of Expert consultant	33
14. Number of Plant per each application	34
15. EC on database meeting recommendation	34
16. Any other items for discussion	35
<b>ADDITIONAL AGENDA ITEMS FOR DISCUSSION WITH PERMISSION OF THE CHAIR</b>	
1. Honorarium For Nba Bulletin	35
2. Approval Of Application For Access Of Bioresources	35
3. Guidelines On Colloborative Research Projects	38
4. Minutes of the meeting on ec on data base Conducted on 09.12.2005	47
5. Minutes Of The Meeing On Expert Committee On Cololoborative Research Projects Conducted On 7 <sup>th</sup> Jan 2006	48
6. Meeting on Finalisation of Agreements on 17 <sup>th</sup> Jan 2006	66
7. Minutes of The Meeting on EC on Endemic Endangered and Threatened Species on 18 <sup>th</sup> Jan 2006	106
Appendix 1 Attendance of Members Present	107

# NATIONAL BIODIVERSITY AUTHORITY

## MINUTES OF THE FIFTH MEETING

**DATE :** 20<sup>th</sup> January 2006

**TIME :** 10.00AM to 6:00PM

**VENUE :** **Indian Institute of Spice Research, KOZHIKODE**

The proceedings of the fifth meeting of the National Biodiversity Authority commenced at 10.00 am on 06.10.2005 at Indian Institute of Spice Research, KOZHIKODE. The Chairman, NBA **Prof. S. Kannaiyan** extended a warm welcome to the members of the Authority to the 5<sup>th</sup> meeting and briefed them the major achievements made by NBA during the period between 4<sup>th</sup> and 5<sup>th</sup> meeting.

The Chairman Prof. S. Kannaiyan has given a brief account on IISR's background and its achievements in Research and Development. Indian Institute Spices Research is playing a significant role in Spice Research in India. The institute is catering to the need of the India's spice research and technology transfer. The Chairman, NBA, Prof. S. Kannaiyan has also briefly indicated the significant achievements of IISR to the members of National Biodiversity Authority.

The Institute had its beginning as a Regional Station of Central Plantation Crops Research Institute (CPCRI), established by the Indian Council of Agricultural Research (ICAR) at Calicut, during 1975, for conducting research exclusively on spice crops, and was upgraded as National Research Centre for Spices (NRCS) in 1986 and was further elevated to the present Indian Institute of Spices Research (IISR) during 1995. The institute has the mandate to conduct research on black pepper, cardamom, ginger, turmeric, cinnamon, cassia, clove, nutmeg, allspice, garcinia, vanilla and paprika.

Advanced facilities, both for basic and applied research in crop improvement, crop production, crop protection and post-harvest technology has been set up at the institute. Specialized laboratories for biotechnology, molecular biology, post-harvest processing and bio-control have been established. A Walk-in Cold Room, Repository of Biocontrol Agents, *In vitro* Gene Bank, Greenhouse, Hardening Facility and V-Sat for Internet Connectivity are also available.

The institute has a sanctioned strength of 42 Scientific, 19 Administrative, 36 technical and 62 supporting staff. In addition, 37 Research Fellows also work in various external aided projects in the institute. The total budget outlay for the X Plan is Rs. 735 lakhs. The Agricultural Technology Information Centre (ATIC), National Information Centre for Spices, Agricultural Research Information System, Bioinformatics Centre and

Krishi Vigyan Kendra also function at the institute. The ATIC of IISR play a key role dissemination of information and technology transfer among growers of spices in the country.

The institute functions as the headquarters of the All India Coordinated Research Project on Spices, which coordinates research on spice crops being conducted at 27 centres all over the country. The institute has linkages with several universities, research institutes, and developmental agencies for collaborative research and developmental activities in spices.

The institute is recognized as a Centre for PhD Studies by University of Calicut, Calicut; Bharathiar University, Coimbatore; Nagarjuna University, Nagarjuna Nagar; Mangalore University, Mangalagangothri and Kerala Agricultural University, Trichur.

The institute and its scientists have won many prestigious awards including the prestigious 'ICAR Best Institute Award 1999' for outstanding contribution in the field of spices research and extension.

### **Indian Institute of Spices Research, Calicut - Significant Achievements**

- The institute has collected, conserved and characterized the biodiversity of spices germplasm for yield, quality, abiotic and biotic stresses. The collections include 3350 accessions of Black Pepper, 394 of Cardamom, 756 of Ginger, 899 of Turmeric, 482 of Nutmeg, 233 of Clove, 408 of Cinnamon including cassia, 61 of Garcinia, 180 of Allspice, 103 of Vanilla and 54 of Paprika.
- Various improved varieties with desirable traits were developed and recommended for release which included nine varieties in Black Pepper (*Sreekara, Subhakara, Panchami, Pournami, PLD-2, IISR-Thevam, IISR-Girimunda, IISR- Malabar Excel* and *IISR-Shakthi*), five in Turmeric (*Suvarna, Sudarshana, Suguna, Prabha* and *Prathibha*), three in Cardamom (*Kodagu-Suvasini, IISR-Avinash* and *IISR-Vijetha*), three in Ginger (*Varada, Rejatha* and *IISR-Mahima*), two in Cinnamon (*IISR-Navashree* and *IISR-Nithyashree*) and one in Nutmeg (*IISR-Vishwashree* ).
- Vegetative propagation techniques and micro propagation protocols were developed for all major spices. Large-scale multiplication and distribution of elite planting material of spice crops to the farming community throughout India is also being undertaken.
- Integrated Nutrient Management (INM) schedules were developed for major spice crops for different soils. Nutrient requirement for targeted production of black pepper and turmeric was standardized. Organic farming systems for sustainable production of black pepper, cardamom, ginger and turmeric are being developed.

- High production technologies and mixed cropping systems were developed for increased productivity per unit area of land. The long-term effect of weather on productivity of black pepper was studied.
- The production physiology of spice crops is being studied. Biosynthetic pathways for curcuminoids in turmeric was elucidated and phenyl alanine ammonia lyase, the major enzyme initiating the synthesis of curcumin was characterized.
- The distribution, incidence, epidemiology, characterization and crop loss caused by pests and pathogens were studied. Sensitive diagnostics for detection of pathogens of spice crops has been developed. A National Repository of *Phytophthora* collections from various hosts has been established.
- Eco-friendly integrated strategies involving cultural methods, biocontrol agents, natural products and resistant varieties were developed for the management of pests and diseases that resulted in substantial increase in yields and pesticide-free produce.
- A Repository of Bio-control Agents consisting of bacteria and fungi was established to conserve, characterize and document the variability and potential of bio-control agents. Potential bio-control agents were identified against major pathogens including nematodes and technologies for their mass multiplication were developed.
- Post-harvest technologies for processing black pepper and cardamom and preparation of value added products such as white pepper and salted ginger were standardized. Drying techniques for nutmeg, mace and cinnamon were also standardized.
- Large scale demonstrations of technologies developed by the institute were carried out in farmers fields and its impact in increasing the productivity of major spices was studied.

## 1 A. MAJOR ACTIVITIES OF NBA

<b>MEETINGS CONDUCTED BY NATIONAL BIODIVERSITY AUTHORITY</b>
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**(i) MEETING FOR ORGANISING “PROJECT EVALUATION COMMITTEE”**

Organized by National Biodiversity Authority, Chennai

Date: 10-11-2005.

Venue: NBA Conference Hall, Chennai.

**(ii) MEETING FOR ORGANISING “COMMITTEE TO EVALUATE THE ACCESS, PATENT, TRANSFER OF RESEARCH RESULTS AND MATERIAL TRANSFER APPLICATIONS”.**

Organized by National Biodiversity Authority, Chennai

Date: 11-11-2005.

Venue: NBA Conference Hall, Chennai.

**(iii) “EXHIBITION ON MARINE FAUNAL DIVERSITY- AMAZING WORLD OF ANIMALS – AN EXPOSITION.”**

Organized by National Biodiversity Authority and MBS, Zoological Survey of India, Chennai.

Date: 26 – 29<sup>th</sup>, October, 2005

Venue: Marine Biological Station, ZSI, Chennai.

**(iv) “A WORKSHOP ON AWARENESS CREATION ON BIODIVERSITY AND CONSERVATION OF MUSHROOMS”**

Organized by National Biodiversity Authority, Chennai and Indhira Gandhi Agricultural University, Raipur.

Date: 1 – 2<sup>nd</sup> December, 2005.

Venue: College of Agriculture, IGAU, Raipur.

**(v) INTERNATIONAL CONFERENCE ON “EMERGING TRENDS IN PLANT MICROBES INTERACTIONS”**

Organized by CAS in Botany, University of Madras with a special session on biodiversity of Endophytic Plant Pathogens

Date: 8 – 10<sup>th</sup> December, 2005.

Venue: CAS in Botany, University of Madras.

A special session on Biodiversity of Endophytic Plant Pathogens was organized which is Chaired by **Prof S.Kannaiyan**, Chairman, NBA.

**(vi) “EXPERT COMMITTEE ON DATABASE ON BIODIVERSITY AND TRADITIONAL KNOWLEDGE”**

Organized by National Biodiversity Authority, Chennai

Date: 9-12-2005,

Venue: NISCAIR, Pusha Campus, New Delhi.

**(vii) “BIODIVERSITY, POLLUTION, EIA AND ENVIRONMENTAL MANAGEMENT AND DISASTER MANAGEMENT WITH REFERENCE TO TSUNAMI – QUIZ PROGRAMME FOR COLLEGE STUDENTS”.**

Organized by National Biodiversity Authority, Chennai and Department of Advance Zoology & Biotechnology, Loyola College, Chennai.

Date : 12 & 13 December, 2005.

Venue: Lawrence Sundaram Auditorium, Loyola College, Chennai.

**(viii) “MARINE BIODIVERSITY OF GULF OF MANNAR AND PALK BAY IN TAMIL NADU”**

Organized by National Biodiversity Authority and Aquaculture Foundation of India, Chennai.

Date: 17.12.05 and 18.12.05.

Venue: M.G.Mahal, Madurai Road, Ramanathapuram.

**(ix) “NATIONAL SYMPOSIUM ON CONSERVATION AND VALUATION OF MARINE BIODIVERSITY”**

Organized by National Biodiversity Authority and Zoological Survey of India.

Date: 26 – 29<sup>th</sup> Dec, 2005.

Venue: Marine Biological Station, ZSI, Chennai.

**(x) ADVISORY COMMITTEE MEETING ON AGRO BIODIVERSITY**

Organized by National Biodiversity Authority, Chennai

Date: 29-12-2005.

Venue: NBA Conference Hall, Chennai.

**(xi) MEETING FOR ORGANISING “COMMITTEE TO EVALUATE THE ACCESS, PATENT, TRANSFER OF RESEARCH RESULTS AND MATERIAL TRANSFER APPLICATIONS”.**

Organized by National Biodiversity Authority, Chennai

Date: 29-12-2005.

Venue: NBA Conference Hall, Chennai.

**PUBLICATIONS**  
**BY**



<b>NATIONAL BIODIVERSITY AUTHORITY</b>
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**PAPERS PUBLISHED BY Prof. Dr. S. Kannaiyan, Chairman, NBA**

Kannaiyan, S., and K. Kumar 2005. *Azolla Biofertilizer for sustainable Rice Production*. Daya Publishing House, Delhi p.452.

Ramalingam, N., and S. Kannaiyan. 2005. Impact of denitrifying bacterium, *Pseudomonas* inoculation and PPD application on Denitrifying activity in soil amended with N<sub>2</sub> fixing green manures. *Indian J. Ecol*; 32(1): 92-93.

Jaberlin Prabina, K. Kumar and S. Kannaiyan. 2005. DNA amplification fingerprinting as a tool for checking genetic purity of strains in the cyanobacterial inoculum. *World J. Microbiol & Biotechnol*; 21: 629 – 634.

Kannaiyan, S. 2006 Overview on Biodiversity Act – 2002. In: *Biodiversity Awareness Workshop*, CTCRI, Trivandrum, Kerala.

Kannaiyan, S. 2006. Biodiversity and Conservation of Mushroom fungi. In: *Biodiversity Awareness Workshop*, CTCRI, Trivandrum, Kerala.

**LECTURES DELIVERED by Prof. S. Kannaiyan, Chairman, NBA**

- Special lecture delivered on **Biological diversity Act, 2002 and IPR during 14<sup>th</sup> Oct, 2005 winter school on “Implications of WTO Agreements on Indian Agriculture”** organized by the National Academy of Agricultural Research Management, Rajendranagar, Hyderabad.
- Delivered a lecture on **“Biological Diversity Act, 2002 and Biodiversity Management Committee** to the participants of the one day workshop jointly organized by Central Agricultural Research Institute, (CARI), Portblair and National Biodiversity Authority, Chennai on Biodiversity and Bioresource Conservation Awareness on 7<sup>th</sup> October, 2005 at CARI, Portblair.

**Dr. K. VENKATARAMAN, Secretary, NBA, Chennai.**

- **“Biodiversity Conservation through Biodiversity Act, 2002”** Lecture delivered on 28<sup>th</sup> Sep, 2005 in one week training programme for Indian Economic Service Officers on Environmental Management at MGM beach resorts, Chennai, Organized by National Institute of Port Management, Chennai.
- **“Biodiversity Conservation and Introduction to National Biodiversity Authority”** Lecture delivered on 12<sup>th</sup> Dec, 2005 in one week compulsory training course on Biodiversity Conservation and Community for IFS Officers at GEER Foundation, Gandhi Nagar, Gujarat.
- **“Biodiversity Conservation and Law”** key note address delivered on 30<sup>th</sup> Dec, 2005 in workshop on Biodiversity Conservation and Sustainable development for NGOs Organized by CPR Environmental Education Centre and British High Commission, Chennai
- **“Marine Biodiversity Conservation through Biodiversity Act, 2002”** Lecture delivered on 25<sup>th</sup> October, 2005 enforcement training workshop at Ramanathapuram Customs Office conducted by the Wildlife Protection Society of India, New Delhi.
- **“Status of Coral Reefs in India”** Lecture delivered in the Working group meeting on Coral Reefs of India on 13<sup>th</sup> Oct, 2005 at Ministry of Environment and Forests, New Delhi.
- **“Biodiversity Conservation in India”** Prof S Krishnaswamy Endowment Lecture on 28<sup>th</sup> Oct, 2005 at Madurai Kamaraj University, Madurai.
- **“Azooxanthellate Corals of India”** Lecture given on 28<sup>th</sup> Nov, 2005 at Third International Symposium on Deep Sea Corals Science and Management, Miami, Florida, USA.
- **“Marine Biodiversity Conservation and Biodiversity Act 2002”** Lecture given on 17<sup>th</sup> Dec, 2005 in Workshop on Conservation of Marine Biodiversity Resources in Palk bay and Gulf of Mannar, Ramanathapuram, Tamil Nadu.
- **“Marine Biodiversity Conservation and Biological Diversity Act, 2002”** Lecture Delivered a on to the participants of the one day workshop jointly organized by Central Agricultural Research Institute, (CARI), Port Blair and National Biodiversity Authority, Chennai on Biodiversity and Bioresource Conservation Awareness on 7<sup>th</sup> October, 2005 at CARI, Port Blair.

Record of the discussions agenda wise is as follows:-

## 2. Confirmation of Minutes of 4<sup>th</sup> Meeting of NBA.

### MINUTES OF THE FOURTH MEETING OF THE NATIONAL BIODIVERSITY AUTHORITY

DATE : 6<sup>th</sup> October 2005

TIME : 2.00PM to 6:00PM

VENUE: Office of the Central Agricultural Research Institute  
Garachrma, Port Blair, Andaman and Nicobar Islands.

The minutes of the meeting as well as action taken on the agenda was confirmed and appreciated by the members present during the 5<sup>th</sup> meeting of the authority held on 20<sup>th</sup> January 2006 at IISR, Kozhikode.

## 3. ACTION TAKEN ON THE MINUTES OF THE FOURTH MEETING OF THE NATIONAL BIODIVERSITY AUTHORITY

DATE : 6<sup>th</sup> October 2005; TIME : 2.00PM to 6:00PM

VENUE: Office of the Central Agricultural Research Institute, Port Blair.

Agenda 1: Achievements:

Agenda 2: Confirmation of Minutes of 4<sup>th</sup> Meeting of NBA

Agenda 3: Action taken on the Minutes of the 4<sup>th</sup> Meeting

### Minutes of the Fourth Authority Meeting

DATE : 6<sup>th</sup> October 2005

TIME : 2.00PM to 6:00PM

VENUE: Office of the Central Agricultural Research Institute  
Garachrma, Port Blair, Andaman and Nicobar Islands.

#### 1. Welcome Address and Major Achievements of NBA

The proceedings of the fourth meeting of the National Biodiversity Authority commenced at 2.00 pm on 06.10.2005 at CARI, Port Blair, Andaman and Nicobar Islands. The Chairman, NBA **Prof. S. Kannaiyan** extended a warm welcome to the members of the Authority to the 4<sup>th</sup> meeting and briefed them the major achievements made by NBA during the period between 3<sup>rd</sup> and 4<sup>th</sup> meeting.

2. Confirmation of Minutes of 3<sup>rd</sup> Meeting:

3. Action Taken Report on Minutes of the 3<sup>rd</sup> Meeting

4. Administrative matters for Discussion

## AGENDA FOR DISCUSSION

# FIFTH MEETING OF THE NATIONAL BIODIVERSITY AUTHORITY

## Administrative Matters for Discussion

### 1. APPROVAL OF APPLICATION RECEIVED BY NBA

Twenty three applications have been received by the NBA for approval for according permission under the Biodiversity Act, 2002. The Act stipulates only 90 days for processing and according approval. There are however many other conditions to be followed such as

1. Recommendation of local Bodies: All Local Bodies have not been formed.
2. The list of Normally Traded Commodity (NTC) under Section 40 is yet to be finalized.
3. The exact parameters under which each application has to be approved should be notified as “Regulations”.
4. The Guidelines for Access and Benefit sharing as a “Regulation” has not yet been made.

However NBA cannot wait indefinitely till all the regulations were notified. Therefore the Authority is of view, that it will give approval to all the applications based on the recommendations of the Expert Committee. The Authority will however follow all procedures in future cases.

**Following are applications approved as per the comments of the Expert Committee as well as the decision taken by the Authority in its 5<sup>th</sup> meeting:**

1. Reference No: F. No. 9-1a/2003/Tech

Name of the Applicant: Smt.A.G.Indika Lakmini supported by Srilankan Govt.  
Type of application: Access of Bioresource Form 1  
Bioresource: *Emblica officinalis*

Comments: An agreement prepared by NBA will be signed by the party for benefit sharing as well as not transferring the material to third party.

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

2. Reference No: F. No.9-10/2004/Tech

Name of the Applicant: Mr.Chandy C.Thambi,  
International Flavours and Fragrances

Type of application: Form IV (Transfer of Material)

Bioresource: Vanilla (Normally Traded commodity)

1. It may be referred to Central Institute of Medicinal and Aromatic Plants (CIMAP, a unit of CSIR).

Comments: An agreement prepared by NBA will be executed with the party for benefit sharing as well as not transferring the material to third party.

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

**3. Reference No: F. No.9-17/2005/Tech**

Name of the Applicant: Ministry of Agriculture,  
Department of Agricultural Research and Education  
Type of application: Not submitted in any prescribed format. Collaborative  
Research Projects

Bioresource: *Brassica juncea*, *Brassica napus* under Oil seed improvement.

Comments: The application was recommended by the committee and be approved by the Government of India as per the extent guidelines for collaborative research projects. The material was accordingly exchanged with the knowledge and accent of Authority.

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

**4. Reference No: F. No.9-7/2003/Tech**

Name of the Applicant: Dr.A.Sait Sahul Hameed  
Type of application: Form IV (Transfer of Material) (Collaborative Research  
Proposal)

Bioresource: *Macro brachium rosenbergii* (infected freshwater prawn for research)

The committee has recommended the application with the following comments:

1. All the benefits arising out of the research should be shared. This project has the potential commercial value benefit sharing agreement should be signed.

Comments: The committee has recommended the application in view of the Government approved (INDO-FRENCH DEPARTMENT OF SCIENCE TECHNOLOGY supported) Collaborative research Proposal. An agreement

**prepared by NBA will be executed with the party for benefit sharing as well as not transferring the material/research results to third party.**

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

**5. Reference No: F. No.9-9/2004/Tech**

Name of the Applicant: Mr.Chandy C. Thambi,  
International Flavours and Fragrances  
Type of application: Form I (Access for commercialization) Form IV (Transfer of  
Material for commercial purposes)  
Bioresource: 35 families, 68 species

The committee has recommended the following:

1. Species access by the applicant to be scaled down probably 30 accessions per species.
2. Geographical location of India to be motioned.
3. The form in which the process is executed is to be mentioned.
4. The committee agrees in principle that such transfer may be executed only on well laid down guidelines including IPR's.

Comments: A letter to this effect may be written to IFF, Chennai get all the particulars mentioned above. This application may be approved with permission to access 30 accessions with an agreement an IPR and Benefit sharing. Transfer of material outside India is not permitted by the committee and the screening or bio prospecting may be done preferably in India with an Indian counterpart.

**The Authority is requested to approve**

**Approved by NBA with other condition prevailing in other acts. Instead of 30 accessions only 50 gm is allowed.**

**6. Reference No: F. No.9-13/2005/Tech**

Name of the Applicant: Mr. Gene E. Robinson  
Type of application: Form I (Access for Bioresource) Research Purpose  
Bioresource: *Apis florae*, *A. dorsata*, *A. cerana* and *A. mellifera* (Honey bees)

1. The committee recommends the project.
2. Concerned SBB's be informed appropriately.

Comments: The research is to be carried out by an Indian Dr Moushumi Sen Sharma with Dr Gene E Robinson, USA. An agreement prepared by the NBA for not transferring the material to third party and any commercial benefit to be shared to be executed.

The Authority is requested to approve

Approved by NBA as per the comments given by the Expert Committee

**7. Reference No: F. No.9-18/2005/Tech**

**Name of the Applicant: Mr. Patrick Martin**

**Type of application: Form 1 (Access application for research)**

**Bioresource: Crustaceans Daphnia, copepods, amphipods, larval stages of Diptera, Small fishes, macrophytes, meiofauna.**

The committee has recommended the following:

1. There are unlimited numbers of organisms in Tsho Moriri Lake in Ladakh. The sediments are to be collected from which specimens will be further collected.
2. The definition of Soil must be seen in perspective of definition provided under section 2(xxviii) of Plant Quarantine order 2003 (xxviii) "Soil" means earth, sand, clay, silt, loam, compost, manure, peat or sphagnum moss, litter, leaf waste or any organic media that support plant life and shall include ship ballast or any organic medium used for growing plants.
3. Purpose seems to be only collection of Bioresource.
4. The coverage of the project is very wide which include phytoplankton and Zooplankton, other flora and fauna including water samples.
5. Collection of soil must not be permitted.
6. The region of collection of Bioresource is crucial from the point of view of cold water flora and fauna, national security, special region under forest coverage, therefore need of scrutiny from these perspectives is essential.
7. The committee opines that all the specimens collected should first be deposited in an Indian repository and Indigenous Collection (IC) number be allotted to them.
8. The well documented sample duplicates should only be allowed to go out of the country.
9. The collection of samples is restricted to stated species of Crustaceans, larval stages of diptera, small fish and macrophite.
10. The NBA before finally permitting may ensure that the comments are obtained from **Prof. Brij Gopal**.

**Comments: The applicant has to identify an Indian collaborator to get the approval as well as the agreement executed by the NBA. As mentioned by the committee Prof Brij Gopal is to be contacted for his comments once again. The proposal is recommended with above stated condition.**

The Authority is requested to approve

**The members of the Authority did not approve the proposal in the present form unless a reply from Prof Dr Brij Gopal that his university is collaborating with the applicant.**

**8. Reference No: F. No.9-51/2005/Tech**

**Name of the Applicant: Ms. Rohini Balakrishnan**

**Type of application: Form 1 (Access for Research; Collaborative Research Project;**

**Approved by Indo French, DST supported Project)**

**Bioresource: Cricket species group Gryllinae, Eneopterinae and Phalangopsidae.**

The committee has recommended the application for approval with the following comments:

1. To deposit the materials collected in the designated repositories and document to state the claim of national sovereignty.
2. The committee recommends the project for approval.

**Government approved (INDO-FRENCH DEPARTMENT OF SCIENCE TECHNOLOGY supported) Collaborative research Proposal. Please find an Indian collaborator to be identified by the applicant to get the approval as well as the agreement executed by the NBA.**

**The Authority is requested to approve**

**Approved NBA as per the comments given by the Expert Committee**

**9. Reference No: F. No.9-53/2005/Tech**

**Name of the Applicant: Mr. Eric Smith**

**Type of application: Form 1 (Access for Research)**

**Bioresource: Venomous coral snakes**

The committee has recommended the application with the following conditions:

1. The committee recommends the project.
2. The research may be restricted to **South India**.
3. Only **500** specimen to be permitted **instead of** 2000 species.
4. No more than 3 species from each locality will be permitted.
5. Indian **collaborators confirmation** to be obtained before permitting the project.

**A letter to this effect from NBA to clarify the collaboration will be written. As well the above conditions mentioned by the committee will be intimated to the applicant. Agreement on access for research will be executed by NBA in this regard. The IPR claim on material and knowledge to be vested with the Indian Collaborator**



**The Authority is requested to approve**

**The members of the Authority did not approve the proposal is kept in abeyance.**

**10. Reference No: F. No.9-54/2005/Tech**

**Name of the Applicant: Mr. Eric Smith**  
**Type of Application: Form 1 (Access for Research)**  
**Bioresource: Amphibians and Reptiles**

The committee has recommended the following:

1. No associated commercial exploitation is allowed either by 1<sup>st</sup> party or 3<sup>rd</sup> party transfer.
2. The research may be restricted to **South India**
3. Only **500** specimen to be permitted **instead of** 2000 species
3. The Committee recommends the project.
4. Indian **collaborators confirmation** obtained before permitting the project for approval.

**A letter to this effect from NBA to clarify the collaboration will be written. As well the above conditions mentioned by the committee will be intimated to the applicant. Agreement on access for research will be executed by NBA in this regard.**

**The Authority is requested to approve**

**The members of the Authority did not approve the proposal is kept in abeyance.**

**11. Reference No: F. No.9-55/2005/Tech**

**Name of the Applicant: International Flavors and Fragrances**  
**Type of application: Form III (IPR- Patending)**  
**Bioresource: *Decalepis hamiltonii* for vanilla flavor**

The committee has recommends for approval with an execution of agreement to share benefits arising out of IPR.

**An Agreement on IPR to be executed by NBA in this regard**

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On 12<sup>th</sup> Dec, 2005 a letter was received from the Company Secretary in connection with seeking approval from the NBA for patent application. In their letter they have confirmed that they will accept the terms and condition as stipulated in the BD Act, 2002. To this effect a reply letter was written in consultation with the Legal Consultant of NBA.

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

**12. Reference No: F. No.9-56/2005/Tech**

**Name of the Applicant: Dr. Nuatn Kaushik, TERI**

**Type of application: Form IV (Transfer of material for Research:  
Colloborative Research proposal under INDO-  
FRENCH DST supported project)**

**Bioresource: Bioactive Saponin from *Chlorophytum* sp.**

1. The committee recommends the project.

**Agreement on Material Transfer will be executed by NBA in this regard**

**The Authority is requested to approve**

**Approved by NBA as per the comments given by the Expert Committee**

**13. Reference No: F. No.9-64/2005/Tech**

**Name of the Applicant: Dr. Carden Wallace,**

**Type of application: Form 1 (Access for Researc)**

**Bioresources: Stag horn corals (*Acropora*) Schedule 1 of Wildlife Act 1972.**

1. Comments to be sought from NIO for collaboration.
2. Permission to collect the Schedule 1 corals will be necessary from concerned authority.

**A letter to this effect will be written to NIO for collaboration as well as the permission to collect coral obtained under Wildlife Act 1972 from MOEF from the applicant.**

**The Authority is requested to approve**

**Approved by NBA subject to clearance from the MoEF**

**14. Reference No F No 9-66/2005**

1. Name and address of applicant : Dr. N.W.Fadnavis, Sci.E-II,  
Biotransformations Laboratory, Indian  
Institute of Chemical Technology, Tarnaka,  
Hyderabad – 500 007.

Type of application: Form II

Bioresource: Microbial Wild cultures.

COMMENTS: The Committee recommended the proposal in principle. However, the authority be ensured and check with DST that the transfer is under robust MTA and IPRs are properly ensured with the counter part

**The Authority is requested to approve**

**Approved by NBA subject to confirmation with Department of Science and Technology, New Delhi**

**15. Reference No : F. No. 9-68/2005**

1. Name and address of applicant : Maharashtra Hybrid Seeds Company Limited (MAHYCO), 4E/15, Ashok Centre, III floor, Jhandewalan Extension, New Delhi – 110 055.

Type of application: Form II

Bioresource: Parental seeds of Eggplants

COMMENTS: The Cry 1AC gene has been transferred in to an important egg plant from Bengladesh since the source population of RHR-51 has come from MPKV, Rahuri the benefit sharing may be ensured through an agreement and the concerned party ie MPKV, Rahuri may be accordingly intimated. Since this is GM crop the GEAC, Ministry of Environment appropriately may be informed. The proposal was submitted to NBA through CEAC. The committee recommended the proposal.

**The Authority is requested to approve**

**16. Reference No : F. No. 9-69/2005**

1. Name and address of applicant : Maharashtra Hybrid Seeds Company Limited (MAHYCO), 4E/15, Ashok Centre, III floor, Jhandewalan Extension, New Delhi – 110 055

COMMENTS: The Cry 1AC gene has been transferred in to an important egg plant from Bari since the source population of RHR-51 has come from MPKV, Rahuri the benefit sharing may be ensured through an agreement and the concerned party ie MPKV, Rahuri may be accordingly intimated. Since this is GM plant the GEAC, Ministry of Environment appropriately may be informed. The proposal was submitted to NBA through GEAC. The committee recommended the proposal.

**The authority is requested to approve**

17. Reference No : F. No. 9-70/2005

1. Name and address of applicant : Maharashtra Hybrid Seeds Company Limited (MAHYCO), 4E/15, Ashok Centre, III floor, Jhandewalan Extension, New Delhi – 110 055

COMMENTS: The Cry 1AC gene has been transferred in to an important egg plant from Los Banos (UPLB)- Philippines since the source population of RHR-51 has come from MPKV, Rahuri the benefit sharing may be ensured through an agreement and the concerned party ie MPKV, Rahuri may be accordingly intimated. Since this is GM plant the GEAC, Ministry of Environment appropriately may be informed. The proposal was submitted to NBA through GEAC. The committee recommended the proposal.

**The authority is requested to approve**

**It was approved by the authority. However, a letter to be addressed to the VC/Director of research to clarify whether they have undertaken an agreement for benefits sharing mechanism. If not the University should enter into an agreement for benefit sharing. The MAHYCO should monitor the third party Transfer. The committee recommended and approved the project.**

**ACTION: MEMBER SECRETARY**

## **2. APPROVAL OF PROPOSALS FOR FUNDING**

**BY**  
**NATIONAL BIODIVERSITY AUTHORITY**

**Funding Proposal Details**

<b>SL. NO</b>	<b>PROJECT TITLE</b>	<b>SUBMITTED BY</b>	<b>AMOUNT</b> ( in Rupees)	<b>REMARKS</b>
1	Interactive workshop on Conservation and sustainable utilization of marine resources	<b>CAS in Marine Biol Annamalai Univ. Parangipettai</b>	<b>51,474/=</b> 14 June 2005	<b>Completed</b>
1A	Workshop on Implementation of Biodiversity Act, 200	<b>Dr. Devaraj Deputy Conservator of Forests, Pondy</b>	<b>13,056/=</b> 5 Aug 2005	<b>Completed</b>
2	Two day Workshop on “Facilitating formation of State biodiversity Boards and Biodiversity Management Committee in Indian Himalayan Region”	<b>DR. Uppeendra Dhar GB Pant Institute Almorah</b>	<b>1, 50, 000</b> September 11-12, 2005	<b>Completed</b>
3	National Conference on safe Environment for the Future Generations	<b>Auxilium College Gandhi Nagar Vellore</b>	<b>20,000/=</b> Sept 1-2, 2005	<b>Completed</b>
3A	Workshop on Biodiversity and bioresources conservation	<b>Director CARI, Port Blair</b>	<b>47,000/=</b>	<b>Completed</b>
4	Exhibition on Marine Faunal Diversity, Marine Biological Station Zoological Survey of India Chennai	<b>Officer in charge Marine Biol. Stn Zoological Survey of India</b>	<b>80,000/=</b> October 10- 14, 2005	<b>Completed</b>
5	A National Workshop on Awareness Creation on Biodiversity and Conservation of Mushrooms	<b>Dr. Thakur Depart. of Plant Pathology Indira Gandhi Agri Univ. Raipur</b>	<b>1,70,000/=</b> <b>To be held December1 -2, 2005</b>	Approved
6	Biodiversity pollution, EIA and Environmental management and Disaster management with reference to Tsunami-Quiz Program for College students	<b>Dr. D. Sudarsanam Loyola College</b>	<b>38,000</b> <b>To be held Dec 12-13, 2005</b>	Approved
7	Strategic Plan for establishing/strengthening botanical garden at Bhopal	<b>Dr. Shashirai MP Biodiversity Sarojininaidu Govt PG College Bhopal</b>	<b>3,00,000/=</b> <b>To be addressed to him to contact the Ministry</b>	Approved
8	Status of Fish Biodiversity conservation in some protected aquatic areas of Narmadha Basin	<b>Dr. Vipin Vyaz MP Biodiv. Board Barkatullah Univ. Bhopal</b>	<b>2,18,000/=</b>	Approved
9	Madhya Pradesh Bird vocalizations	<b>Dr. Pratap Singh</b>	<b>2,25,400/=</b>	Approved

		<b>MP Biod.Board IIFM BHOPAL</b>		
10	Plant Diversity of Chambal Region with special reference to conservation strategy of Threatened taxa.	<b>Dr. A K Jain MP BiodivBoard Inst of Ethonobiol, Gualier</b>	<b>5,92,000/=</b>	Not Approved
11	National Conference on Biodiversity 30 and 31 Jan 2006	<b>Dr., John Williams Loyola College</b>	<b>1,75,000</b>	<b>Approved</b>
12	Seminar on Conservation of Marine Biodiversity of Gulf of Mannar and Palk Bay in Tamil Nadu and Opportunities for livelihood support of fishers and other coastal communities	<b>Aquaculture Foundation of India Chennai</b>	<b>2,87,000/=</b> <b>To be held on 29-11- 2005 &amp; 30- 11-2005</b>	Completed
13	Workshop on “Facilitating formation of State Biodiversity Boards & Biodiversity Management Committees in Northern India”	<b>Dr. Neelima Jerath Punjab State council for Science &amp; Technology</b>	<b>1,63,000</b>	Approved
14	Proposal for holding regional workshop on Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 for the North Eastern States of India	<b>Shri. Talukdar Aaranyak</b>	<b>2,61,294</b>	Not Approved
15	Awareness building on Biological Diversity Act, 2002 with special reference to Wildlife Protection Act, 1972	<b>CPR Environmental Education Centre Chennai</b>	<b>3,07,600/=</b>	Approved
16	Organization of National workshop on implementing the National Biological Diversity Act, 2002 and Biological Diversity Rules, 2004	<b>Dr. P. Balakrishnan IUCN</b>	<b>4,15,000</b>	Approved
17	Development of user manual for the Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 of India	<b>Dr. P. Balakrishnan IUCN</b>	<b>4,50,000</b>	Approved
18	Developing a web-enabled, open source version of the People’s Biodiversity Register database	<b>Ms. Sulochana Gadgil Centre for Ecological Sciences, IISc.</b>	<b>5,00,000</b>	Approved
19	Awareness Training Programme on Biodiversity conservation to self help Groups of Tamil Nadu	<b>Dr. K Muthuchelian Centre for Biodive and Forest Studies MKU Madurai</b>	<b>75,000/=</b> <b>To be held on 25-01-2006</b>	Approved
20	National Conference on Forest Biodiversity Resources: Exploitation, Conservation and management	<b>Dr. K Muthuchelian Centre for Biodiversity MKU, Madurai</b>	<b>6, 50, 000</b> <b>21-03-2006 &amp; 22-03- 2006</b>	Approved
21	Awareness building on Biological Diversity Act, 2002 with special reference to Conservation Laws	<b>CPR Environmental Education Centre Chennai</b>	<b>7, 00,000/=</b>	Approved
22	Conference on Agrobiodiversity of	<b>National Biodiversity</b>	<b>15,00,000/=</b>	Approved

	India.	Authority, Chennai	Feb 12-15 2006	
23	Conservation and sustainable utilisation of economically important medicinal plants	<b>Shri. Sanjay Saxena</b> TERI	<b>99,16,000</b>	Not Approved
24	Assessment of agriculturally important bacterial and mycorrhizal community in Wheat, Rice and Bt. Cotton fields	<b>Ms. Reena Singh</b> TERI	<b>37,96,000</b>	Not Approved
25	Proposal on “Awareness generation workshop on Biological Diversity Act, 2002 for government officials of North Eastern States”	TERI	<b>2,87,212.50</b>	Approved
26	Formation of BMC’s and preparation of PBR’s in Karnataka	<b>Sri. Shivanna</b> Karnataka Biodiversity Board	<b>80,00,000</b>	Approved Rs.19,38,000/-
27	Launching a Biodiversity literacy movement in Rural India	<b>Dr. M. Velayuthan</b> MSSRF, Chennai	<b>38,23,000</b>	Approved
28	Ichthyofaunal Diversity in the Godavari and Krishna basins of Andhra Pradesh and conservation of Endangered species	<b>Dr. Ravi Shankar</b> Piska, Department of Zoology, University College of Sciences, Osmania University	<b>27,07,540</b>	Did not come for presenting not approved the Project Proposal
29	Geographical indications as a possible tool for sustainable use and benefit sharing of traditional crops	<b>Ms. Kalpana Sastri</b> NAARM Hydrabad	<b>14,72,000</b>	Approved
30	Creating awareness on conservation sustainable utilization and benefit sharing in the light of Biological Diversity Authority	<b>Dr. Prakash Tiwari</b> NAARM, Hyderabad	<b>28,57,001</b>	Approved Rs.27,57,001/-
31	Awareness creation of Biodiversity Act and setting up PBR in UT of Lakshadweep	<b>Dr. Vineeta Hoon</b> CARESS Chennai	<b>9,99,000</b>	Approved
32	Developing PBR’s through the synergistic interaction of Students, Villagers and NGO’s	<b>Dr. P. Pramod</b> SACON Coimbatore	<b>6,73,900</b>	Approved Rs.7,23,900/-
33	Training Panchayat President and officials of Agricultural, Animal Husbandry of Fisheries, Innovative farmers, NGO’s Conservation of Medicinal Plants	Mr.Dhanasekaran State Institute of Rural Development Chennai	<b>15,00,000/-</b>	Action: We have to address a letter to revise the project by including the Training components.

**The Members of the NBA approved the proposal with the following comments.**

The following proposals such as Proposal No 7: “On the Strategic Plan for establishing/strengthening botanical garden at Bhopal,” by MP Biodiversity Board, Proposal No 16 and 17 on “Organization of National Workshop on implementing the National Biological Diversity Act, 2002 and Biological Diversity Rules, 2004 and Development of user manual for the Biological Diversity Act, 2002 and Biological Diversity Rules 2004 of India by Dr P. Balakrishna, IUCN.

The members also of the opinion that proposal for awareness programmes less than Rs. 5 lakhs (Rs five lakhs) need not to be brought to the Authority meeting and only proposal above Rs 5 lakhs (Rs. Five lakhs) to be brought to the authority for approval.

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**ACTION: MEMBER SECRETARY**

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### **3. APPROVAL OF TERMS OF REFERENCE ON THE PREPARATION OF GUIDELINES BY EXPERT COMMITTEES**

#### **a. COMMITTEE ON REPOSITORIES**

**Terms of reference:**

1. To discuss and address the issue of voucher specimens located in India’s vast network of Universities, colleges and Research Institute and are not a part of the national repositories.
2. As per Section 39 Sub section (1) an inventory with relevant information, of repositories available in the country to be prepared for recommendation to the Government of India as designated repositories.
3. To prepare guidelines for safe keeping of the voucher specimen with adequate infrastructure and facilities.
4. To prepare guidelines to deposit the specimen in the designated repositories of India.
5. To prepare guidelines for monitoring the repositories regularly by a monitoring committees set up by the NBA.

#### **b. COMMITTEE ON RESEARCH RESULTS PUBLICATIONS**

**Terms of reference:**

1. As per section 4 Subsection (1) to verify if any guidelines are presently available on technology transfer from various institutes and departments of Government of India.
2. To prepare guidelines for publication of research results (technology transfer) in accordance with the BD Act (2002).



3. A guideline to be prepared for benefit sharing mechanism for transfer of research results.

### c. COMMITTEE OF AGRO BIODIVERSITY

#### **Terms of Reference:**

1. To define clearly the area of overlap and explicit differences in the BD Act, Seed Act and the Plant Variety Protection and Farmers Rights Act. To prepare a guidelines on how BD Act can be interpreted in relation to the above mentioned and other similar acts.
2. To define clearly where BD Act stands with reference to the Patents Act and the Geographical Indications Act.
3. To prepare a list of issues that needs immediate attention such as Crop/livestock/Fisheries/land races/ wild relatives.
4. To prepare guidelines for origin of domesticated diversity as biological heritage sites.
5. To prepare guidelines for presenting land races for protecting the farmers interests.
6. To prepare documentation of on Agrobiodiversity issues.

**The Authority is requested to approve**

**The members informed that the time limit for functioning of each Expert committee to be mentioned in all the Terms of Reference prepared.**

#### **ACTION: MEMBER SECRETARY**

### 4. APPOINTMENT OF ADMINISTRATIVE OFFICER

With reference to the Agenda Item No.3 approved in the Fourth meeting of NBA held on 6<sup>th</sup> October, 2005 for the appointment of Administrative Officer, the Under Secretary (Home) Govt. of Arunachal Pradesh, Itanagar has officially forwarded the application of Shri. R. Narayanan, Dy.S.P. Administrative Officer, vide Letter No. PHU/ESTT – B/07/95/Pt dt 29<sup>th</sup> November, 2005.

**The authority is requested to approve**

**The authority approved the appointment of Administrative Officer and the same may be executed as per Government of India rules as well as the Recruitment Regulations of NBA.**

#### **ACTION: MEMBER SECRETARY**

### 5. PAY FIXATION

**Dr. K. Venkataraman**, Officer Incharge, Marine Biological Station of ZSI was appointed to look after the work of the **Secretary** in the National Biodiversity Authority vide Letter No. J 22018/12/2003 – CSC(BC) dated 24<sup>th</sup> July, 2003 Govt. of India, Ministry of Environment and Forest, New Delhi. The post of Secretary in NBA is not the same cadre or in the same line of promotion for Dr.K.Venkataraman. Since he is holding two posts is eligible to draw the pay in the higher post as per F.R.49 (iii) since the scale of pay the post of Secretary is 18,400 – 22,400. F.R.49(iii) provides that the remuneration for additional post could be paid only for three months. Since the Authority is the Supreme, it is requested for approval.

**The authority is requested to approve**

**Deferred to the next Authority meeting.**

**ACTION: MEMBER SECRETARY**

## 6. APPROVAL OF MICOROBIAL CULTURES IMPORT



**vedanta**

### **Summary of Proposal**

**HINDUSTAN ZINC LTD.**

Rampura Agucha Mines

P.O Agucha – 311 029

Tel.:(91- 1483) 229018

Fax:(91-1483)229012

**Regd. Office:** Yashad Bhawan

Udaipur- 313 004 (Raj)

**Vedanta Resources Plc.**

**Email-subhashis.ghosh@vedanta.co.in**

### **Application for Access to Import Mesophile Bacterial Culture for In-House Research and Development Project**

This summary is submitted for an access to import Mesophile Bacterial Culture from SGS-LAKEFIELD, South Africa (Collaborative Research Centre for M/S Hindustan Zinc Limited (INDIA) and M/S GEOBIOTICS LLC (USA)), which will be used in In-House Research and Development Program for Extraction of Base Metals (Zinc, Lead etc.) from Mineral Beneficiation Process Waste (Tailing) of Rampura Agucha Mine (Hindustan Zinc Limited (Vedanta Resources Plc.)) via Bioleaching Route.

#### **Objective:**

The objectives of the Bacterial Culture Import Proposal are –

1. To evaluate the possibility of Extraction of valuable base metals from Mineral Beneficiation Process Waste (Tailing) via Bioleaching Route on Bench Scale Scheme at Central Research and Development Unit and Rampura Agucha Mine Unit of the applying organization.
2. To minimize the Metal Sulfide disposal in Process Waste (Tailing) by recovering them via Bioleaching Route, thus minimizing the Sulfide disposal to the waste. This

process will further boost up the existing Environment Friendly waste disposal process at Rampura Agucha Mine.

### **Profile of the Applying Organization:**

Hindustan Zinc Limited (INDIA) is a part of Vedanta Resources Plc.(Non-Ferrous Metal Group listed in London Stock Exchange) and a multiproduct (Zinc, Lead, Silver) player in non-ferrous global market. HZL is India's only integrated lead and zinc producer and one of the lowest cost producers in the world. The main operations are in Rajasthan, North West India. In May 2005 the facilities were expanded to take capacity from 220,000 tpa to 390,000 tpa of finished zinc. All the Units of HZL are certified with ISO 14000 and OHSAS 18000 standards.

### **Work Plan:**

The imported culture will be utilized for in-vitro Lab Scale Tests at Central Research and Development Laboratory and for in-vitro Pilot Scale Tests at Rampura Agucha Mine of Hindustan Zinc Limited (Vedanta Resources Plc.). The In-House R&D Unit of the applying organization is registered under Department of Science and Industrial Research and has long history of contributing to developments in Non-Ferrous Metal Technologies. Both the units are certified for ISO-9000, 14000 and OHSAS-18000. The methodology to be followed is—

- To determine the rate of oxidation of the Vedanta sulfide concentrate under simulated GEOCOAT<sup>®</sup> (Patented Technology by M/s GEOBIOTICS LLC) conditions in a 150 mm -diameter column during Lab Scale Tests and in a representative Bio-heap during Pilot scale Tests.
- To establish the relationship between the extent of oxidation and Base Metals' recovery,
- To determine the acid balance for biooxidation of the Vedanta concentrate in the GEOCOAT<sup>®</sup> system,
- To investigate the removal of iron from the biooxidation effluent solution by precipitation,
- To determine the stability of the precipitates from neutralisation of the biooxidation solution according to multiple extraction method adopted by the **EPA (Environmental Protection Agency) of the USA.**

### **Important Properties of Bacterial Culture:**

The mesophilic Bacterial Culture to be imported is supplied by M/S GEOBIOTICS LLC through an independent collaborative Research Lab. M/S SGS-LAKEFIELD. It is classified as a Class 1 Agent by US Department of Health Education and Welfare, Public Health Service. A Class 1 Agent is defined by them as one of no recognized hazard under ordinary conditions of handling. The Bacterial Culture to be imported is non-pathogenic, aerobic, autotrophic and chemosynthetic. These microorganisms naturally occur throughout the world and they are not Genetically Modified or produced by Recombinant DNA Technology. These Bacteria also do not appear in the List of Hazardous Microorganisms published in **RULES FOR THE MANUFACTURE, USE, IMPORT, EXPORT AND STORAGE OF HAZARDOUS MICRO ORGANISMS GENETICALLY ENGINEERED ORGANISMS OR CELLS**(To be notified under the EP Act, 1986) by **MINISTRY OF ENVIRONMENT & FORESTS NOTIFICATION**(New Delhi, 5<sup>th</sup> December,1989).The major constituents of the Culture are-

- *Acidithiobacillus caldus*

- *Acidithiobacillus ferrooxidans*
- *Acidithiobacillus thiooxidans*

They live by oxidizing inorganic compounds and build their internal proteins from raw materials like NPK salts in solution and carbon dioxide. Due to the fact that organic substances are toxic to the bacteria, they are non-pathogenic and incapable of causing disease, and therefore do not pose a health risk to humans or other animals. They are also acidophilic but generally do not survive below pH 1. Optimum temperature is 30-35°C. More specifically *Acidithiobacillus thiooxidans* grows in liquid medium on elemental sulfur, thiosulfate or tetrathionate. The key physiological features are as per the following:

Name	Culture Collection No.	Conditions for Optimum Chemolithoautotrophic growth		
		Temp (°C)	pH	NaCl (M)
<i>Acidithiobacillus thiooxidans</i>	ATCC 19377/8085	28-30	2.0-3.0	0
<i>Acidithiobacillus caldus</i>	ATCC 51756	45	2.0-2.5	0
<i>Acidithiobacillus ferrooxidans</i>	ATCC 23270	30-35	1.3-4.5	0

### **Decontamination, Disposal Mechanism, Risk Assessment:**

The shipment will be contained in sealed flasks at ambient temperature at pH 1.3-2.2 within packaging appropriate for transport of a very dilute acid. The usual International Regulations apply for the transport of acids by air.

This mesophilic bacterial culture is non-pathogenic and their existence depends on such specific conditions of acidity and oxygen supply that it can be disposed off as any acidic solution after neutralization to boost up the pH. As soon as the pH gets more than 3, the culture decline and become part of the general bacterial background. The shipment will be in the form of slurry of concentrate and acid at pH 1.3-2.2, at which level the culture will be in a hibernating state.

### **Quantity of Bacterial Culture to be accessed:**

GEOBIOTICS LLC mesophile cultures have a useful shelf life of around 3 months given that they are stored at around room temperature, after which time the buildup of an inoculum from that culture becomes more difficult. Accordingly, and allowing for unforeseen procedural errors in the laboratory, it is requested for an allowance to import a fresh culture batch of 5 litres volume annually for 2 years (total 10 liters). The proposed collection (mesophile mixed bacterial culture) will be imported via Air/Sea from M/S SGS-LAKEFIELD (Johannesburg, South Africa).

### **Address of Applying Organization:**

Rampura Agucha Mine (Hindustan Zinc Limited (Vedanta Resources Plc.)), Bhilwara-311029, Rajasthan

**Address (Research Station):** Central Research and Development Limited (CRDL), Hindustan Zinc Limited (Vedanta Resources Plc.), Debari, Udaipur-313024, Rajasthan, INDIA

**Regd. Office:** Yashad Bhawan, Hindustan Zinc Limited (Vedanta Resources Plc.), Udaipur-313004, Rajasthan, INDIA

**Contact Person:** Mr. SUBHASHIS GHOSH

Rampura Agucha Mine (Hindustan Zinc Limited (Vedanta Resources Plc.)), Bhilwara-311029, Rajasthan

Tel: +91 1483- 229018/13 (R A Mine)

Fax: +91 1483- 229012

Email: [subhashis.ghosh@vedanta.co.in](mailto:subhashis.ghosh@vedanta.co.in)

**The authority is requested to approve**

**A letter to the Director, National Bureau of Microbial Genetic Research (NBMGR), Mao, Varanasi to be written for clarification before the approval of Bacterial import by the Hindustan Zinc Ltd., Udaipur.**

**ACTION: MEMBER SECRETARY**

## 7. BULLETIN

Publication of “NBA Scientific Bulletin” by National Biodiversity Authority.

**The authority is requested to approve**

**The members of the Authority approved the proposal by NBA to publish the NBA Scientific Bulletin.**

**ACTION: MEMBER SECRETARY**

## 8. PRINTING OF BIODIVERSITY ACT & RULES BOOK

Publication of Biodiversity Act and Rule book by National Biodiversity Authority in local languages ie Tamil, Malayalam, Marathi and Bengali.

**The authority is requested to approve**

**The members of the Authority approved the proposal by NBA to publish Act and Rule book in local languages ie Tamil, Malayalam, Marathi and Bengali.**

**ACTION: MEMBER SECRETARY**

## 9.SANCTION POWER OFCHAIRMAN

Sanction Power of Chairman, NBA to Rs. 1, 00,000/- for the Purchase of office Equipments.

**The authority is requested to approve**

The members of the Authority opined that the Financial powers of the Chairman, NBA is equivalent to the Secretary, Government of India

**ACTION: MEMBER SECRETARY**

## 10. APPOINTMENT OF EXPERT CONSULTANT ON EC ON ACCESS AND BENEFIT SHARING BY TERI, NEW DELHI.

### **TERI, NEW DELHI Background Appreciation**

The dependence of human beings on biological diversity is evident in everyday life. Food, fiber, fuel, fodder, shelter, health and other needs of the growing world population are dependent on various components of biodiversity. It is also recognized that plant genetic resources for food and agriculture are a common concern of mankind and most countries depend on plant genetic resources originated elsewhere. Therefore, sustainable use of biological diversity at the national as well as international levels is of critical importance. For the same reason, access to and sharing of both genetic resources and technologies among nations is essential.

The Biological Diversity Act (BDA) was formulated after India became signatory to the Convention on Biological Diversity (CBD). Its objectives are 'to provide for conservation of biological diversity, sustainable use of its components and equitable sharing of the benefits arising out of the use of biological resources and for matters connected therewith or incidental thereto'.

These vital issues are faced with multiple challenges. It is all the more complex considering the involvement of a large number of stakeholders e.g. researchers, industries, foreigners and the local people. In view of this, formation of an expert committee on Access and Benefit Sharing and Material Transfer Agreement (MTA) by National Biodiversity Authority (NA) of India is a step in the right direction. This will help in formulating detailed guidelines for equitable sharing of benefits and prior informed consent, keeping in view the interests of the country, particularly the local people.

*About TERI (The Energy and Resources Institute)*

The Energy and Resource institute (TERI) is an autonomous, not for profit research institute established in 1974. As a unique developing country institution, TERI is committed to the goal of sustainable development. Simultaneous maintenance of ecological balance and sustainable levels of natural resources is one of its major visions. A booklet detailing the organizational profile of TERI is enclosed.

### **The Forestry and Biodiversity Group**

The Forestry and Biodiversity Group of TERI deals with diverse range of issues related to technical, policy and socio-economic aspects of India's forest resources, biodiversity conservation and rural development. The group is actively working to promote community participation in forest conservation through various institutional, training, capacity building programs, addressing gender issues, biodiversity research, management and access and benefit sharing and policy mechanisms. In addition, the group is involved in experimental research for afforestation in difficult sites including nursery development and silvicultural work.

Among the major focal areas are the impact of current policies and guidelines dealing with socio-economic and institutional aspects along with necessary inter-sectoral linkages for sustainable utilisation and conservation of biological resources and the role of community-based efforts. The group, thus, endeavours to facilitate the creation and development of models, systems and concepts for conservation and sustainable utilisation of our natural resources. Besides, we have also put considerable effort into documenting our research findings on the key issues involved in this sector through publications in the form of manuals, books, popular articles, research articles in national and international journals and awareness generation programs.

Forestry and Biodiversity Group has a multi-disciplinary, well-qualified and experienced team of professionals with backgrounds in biodiversity conservation, community resource development, gender issues, environmental and forest management, socio-economics, and agro forestry to name a few. Teams are drawn up in accordance with the specific needs of the projects, representing flexibility of approach and optimizing use of its diverse expertise. The Institute's strength also lies in its ability to effectively translate research results into tangible outcomes, which influence policies and institutional arrangements.

### **Role of TERI in the proposed project**

As defined in Terms of Reference (ToR), TERI will assist the Expert Committee on Access and Benefit Sharing (ABS) and Material Transfer Agreement (MAT) on the following aspects:

- Inventory of Material Transfer Agreements (MTA) in various government departments and organisations.
- Develop guidelines for patents in the light of benefit sharing arising out of biological diversity as per sub-section 2 of Section 6 of the Biological Diversity Act 2002.
- Develop guidelines, procedures and protocols for access to parts /whole of Flora, Fauna, Microorganisms and Genetic Material for new collections for research and/or commercial utilization.
- Develop guidelines for imposing terms and conditions for ensuring equitable sharing of benefits arising out of the use of accessed biological material and associated

knowledge in mutual agreement between the person applying of approval and the Authority in consultation with the Biodiversity Management Committee (BMC) taking into consideration of defined parameters of access, the extent of use, the sustainability aspect, impact and expected outcome levels including measures ensuring conservation and sustainable use of biological diversity.

- Develop guidelines for Prior Informed Consent (PIC) for researchers, industries, foreigners, State Biodiversity Boards, Biodiversity Management Committee (BMC) incorporating benefit-sharing clause.

TERI would undertake the assignment under the supervision and overall guidance of the expert committee.

### **Project Team and its experience**

TERI would depute an expert for assisting the Expert Committee. Deputation of Dr C S Silori, an expert in the field of Biodiversity Conservation is proposed for the purpose. Depending upon the need, other experts would be involved to complete the assignment. Dr Silori's CV is annexed.

### **Project Remuneration**

TERI will take this assignment at organisational level. For this, payment of a lumpsum amount may be considered as the remuneration. As the deputed professional of TERI would have to undertake journeys to Chennai for the committee meetings and on other occasions whenever needed, travel costs besides the boarding and lodging expenses would need to be reimbursed.

It is proposed that a lumpsum amount of Rs.2.50 lakhs may be considered as professional fee to TERI. The mode of travel could be by train from Bangalore and by air from Delhi. The boarding and lodging reimbursements could be as per TERI's entitlements.

TERI agrees to the ToR defined in the website of NBA for the said consultancy work. The duration would be 90 days or as extended by the NBA.

**The authority is requested to approve**

The authority approved the proposal and mentioned that the TOR should include the duration of 90 days and a lump sum amount of Rs 2.50 lakhs.

**ACTION: MEMBER SECRETARY**

## **11. APPROVAL OF DRAFT GUIDELINES**



**PREPARED BY NAARM, DARE, ICAR.**

**PROCEEDING OF THE ADVISORY COMMITTEE ON AGROBIODIVERSITY  
MEETING HELD ON 29.12.2005 AT THE OFFICE OF THE NATIONAL  
BIODIVERSITY AUTHORITY, CHENNAI.**

**The 1<sup>st</sup> Advisory committee on Agrobiodiversity meeting was held on  
29.12.2005. The following members were participated:**

1. Dr.S.Kannaiyan, Chairman, NBA, Chennai.
2. Dr.E.A.Siddique, Chairman, Agrobiodiversity, Ad.Committee, Hyderabad.
3. Dr.S.P.Tiwari, Member, Hyderabad.
4. Dr.S.Edison, Member, Trivandrum.
5. Dr.S.S.Kadam, Member, Parbhani.
6. Dr.S.K.Pandey, Member, Himachal Pradesh
7. Dr. M.Subramanian, Member Secretary, Agrobiodiversity, Adv.committee, Madurai.
8. Dr.K.Venkataraman, Member Secretary, NBA, Chennai.

Dr. S.Kannaiyan, Chairman, NBA welcomed the members. In his welcome address the Chairman underscored in detail about the importance of Agro biodiversity and the need for effective functioning of National Biodiversity Authority to protect the Agricultural Biodiversity in India. He observed that implementation of the biodiversity Act 2002 is the need of the hour to protect our Agricultural Biodiversity from foreigners, who continue to exploit this wealth without giving due credit to India. He has mentioned the provisions in section 3,4 and 5 and also indicated that the prior approval is needed from NBA for IPR. He requested the members to actively participate and make suggestions to frame guidelines for transfer and exchange of biological resources and information on traditional knowledge under collaborative research projects. The Chairman, NBA has indicated the guidelines for collaborative research prepared through a Committee of experts headed by Dr SP Tiwari and discussed in several meetings and interactive workshops and improved the draft significantly and the draft guidelines are in final shape for further improvements and suggestions by the members of the Advisory committee.

Dr E.A.Siddiq former DDG crops ICAR, and Chairman of the committee pointed out that there were already some rules and guidelines available in the ICAR for exchange of bioresources. Due to recent development at global level, new rules and regulations need to be framed especially for projects involving exchange for collaborative research. He also requested to discuss in detail how the benefit sharing mechanism of our germplasm would be shared by the parties in collaborative projects. He emphasized the importance of monitoring mechanism for third party transfers.

Dr. Kalapana Sastry, Principal Scientist, NAARM, Hyderabad presented the draft "Guidelines for transfer/exchange of biological resources and information under collaborative research projects and bilateral agreements/MoU for research involving

foreign individuals/agencies. She has mentioned the provisions in Section 3,4 and 5 and also indicated that the prior approval is needed from NBA for IPR. During the presentation minor details were looked at and the members suggested to incorporate the details and improved the draft guidelines. At the end of the presentation there was a detailed discussion on different issues of the guidelines and Chairman and the members have approved the guidelines for further action by NBA.

The following important topics were considered for discussion in the next meeting.

1. *In situ* conservation
2. Capacity building and Training need for local Biodiversity Management Committee.
3. Documentation of Traditional Knowledge and Medicinal Plants.
4. Transgenic and Biosafety.

Finally Dr K. Venkataraman, Member Secretary, NBA, proposed vote of Thanks.

**The authority is requested to approve**

The Authority approved the guidelines and the same is to be sent to Administrative Ministry for notification as Regulation of NBA.

**ACTION: MEMBER SECRETARY**

**12. AGREEMENTS FOR APPROVAL**

The minutes of the meeting of the approval of agreements to be held on 17.1.2006 will be placed before the authority for approval

**The authority is requested to approve**

This agenda is being dealt separately on page 71 as additional agenda after meeting of Finalization of agreements on 17<sup>th</sup> January 2006.

**13. APPOINTMENT OF EXPERT CONSULTANT FOR  
EXPERT COMMITTEE ON DATA BASE.**

With reference to the application dated 15.10.05, Ms. **Tijitha Anand** is posted as Expert Consultant on Databases on Bioresource and Traditional Knowledge for a period of ninety days to work in the office of the National Biodiversity Authority, Chennai.

**The authority is requested to approve**

The authority approved the application of Ms. Tijitha Anand to be posted as Expert Consultant on Database on Bioresource and Traditional knowledge for a period of ninety days from the period of her appointment.

**ACTION: MEMBER SECRETARY**

**14. NUMBER OF PLANT MATERIAL PER EACH APPLICATION  
FOR  
ACCESS FOR COMMERCIAL PURPOSE / BIOASSAY /  
SCREENING etc.**

NBA is receiving applications for access of bioresources for Commercial purposes, Bioassay, screening etc. In some of the applications the request for number of species accessed varies. In this connection the authority may finalise the number accessions/species per application. The expert committee approved by NBA has suggested 30 accessions per application during the meeting held on 11.11 2005.

**The authority is requested to approve**

The Authority informed that depending on the Status of the plants such as whether it in the Red Data category of Botanical Survey of India, CITES and other relevant literature, approval may be given not more than 50 gm of each accessions.

**ACTION: MEMBER SECRETARY.**

**15. EXPERT COMMITTEE ON DATABASE  
MEETING RECOMMENDATIONS**

**Expert Committee on Database on Biodiversity and  
Traditional Knowledge**

**Date:** 9.12.2005

**Time:** 10.00 am - 4.30 pm

**Venue:** NISCAIR, Pusa, New Delhi.

**Recommendations of the Committee:**

1. The Second meeting of the EC will be held at the **National Chemical Laboratory, Pune**, on the 3<sup>rd</sup> February 2006.
2. The Expert Consultant, Ms. Tijitha Anand to take up the task of compiling an exhaustive list of all institutes and organisations that has databases on biodiversity, making use of the format given on the NCBI website.
3. **Dr. Vishwas Chavan** and **Dr. Chinmaya Rathore** to take up the task of forming a “*Collaborative framework for setting up of the National Biodiversity Information System*” that will be discussed in the next meeting of the Expert Committee.

4. The importance to recognize the knowledge providers in order to sustain Biodiversity Act and Rules.
5. The need for a legal framework for recognition of rights in the area of traditional knowledge and biodiversity.

**Members Present: Dr. Madhav Gadgil, Chairman**, Expert Committee on Database.

**Ms. Tijitha Anand, Expert Consultant** and Member Secretary, Expert Committee on Database.

**Dr. V K Gupta, Director**, NISCAIR, New Delhi.

**Dr. A K Ghosh, CED**, Kolkata.

**Dr. R. Uma Shaankar**, UAS, Bangalore.

**Dr. Darshan Shankar, Director**, FRLHT, Bangalore.

**Dr. W S Lakra**, NBFGR, Lucknow, UP.

**Dr. Vishwas Chavan**, NCL, Pune.

**Dr. Chinmaya Rathore**, IIFM, Bhopal.

**Dr. S C Gupta**, NBAGR, Karnal.

**Dr. Bala Subramaiaam**, NISCAIR, New Delhi.

**Dr. H B Singh**, NISCAIR, New Delhi.

**The authority is requested to approve**

The authority approved the minutes of the Expert Committee on Database on Biodiversity and Traditional Knowledge

**ACTION: MEMBER SECRETARY**

**16. ANY OTHER ITEMS FOR DISCUSSION WITH THE  
PERMISSION OF THE CHAIR**

**ADDITIONAL AGENDA ITEMS FOR DISCUSSION WITH  
PERMISSION OF THE CHAIR**

**1. HONORARIUM FOR NBA BULLETIN**

NBA is publishing a NBA bulletin regularly. For this purpose articles are invited on selected topics and revised for publication and the authors to be paid an honorarium of Rs 5000/= (Rs Five thousands only) which includes honorarium and secretarial assistance. In case of more than one authors of the NBA bulletin the amount will be shared equally.

**The Authority is requested to approve**

The Authority approved the payment of Honorarium and secretarial assistance of Rs 5000/= (Rs Five thousands only) to the authors for the preparation of NBA Bulletin.

**ACTION: MEMBER SECRETARY**

**2. APPROVAL OF APPLICATION FOR ACCESS OF BIORESOURCES**

Reference No : F. No. 9-15/2005- Tech  
 Date of Approval :  
 Particulars of Charges Paid: Paid Rs.10000/- (D.D.No.: 116226 (Canara Bank)  
 dt.10-08-2005.

**APPLICATIONS TO NATIONAL BIODIVERSITY AUTHORITY FOR APPROVAL**

1. **Name and address of applicant :** Priyadarsanan Dharma Rajan,  
 Fellow Scientist, Ashoka Trust for Research  
 In Ecology and the Environment (ATREE),  
 #659, 5<sup>th</sup> Main, Hebbal, Bangalore – 560 024.
2. **Date of application  
 in the prescribed form** : 12.08.2005
3. **Type of form used** : Form IV
4. **Name of the project** : Inventorying of Certain Lesser-Known Insect  
 Taxa of Western Ghats.
5. **Type of Bioresource** : To conduct a qualitative survey of selected  
 lesser known insect taxa of the Western Ghats  
 of India.
6. **Application supported by any  
 other Government Institution** : Nil
7. **Collaborating Agency  
 Name and Address** : Nil

**Remarks :** The specimen collected will be sent to various museum in the world (Given in the application form) for identification and deposited in the National Museum of India.

**Comments of the Chairman of the Committee:**

D No 1-26/2005 Dated 16 Jan 2006  
 Dr S Prakash Tiwari, NAARM, HYDRABAD  
 Chairman,  
 Committee for approval of application on access/transfer of Research  
 Results/IPR/Material Transfer.

**Comments:**

Reference No 8/2/218/2003-NBA(S)

Name of the Applicant: Mr Priyadarshan Dharma Rajan

The taxonomic identification should be carried out in India with the help of Zoological Survey of India and other agencies. If so needed, the details including images be sent electronically. This is an era of virtual connectivity and the taxonomic identification alone does not justify transfer of insects. After classification the specimen should be deposited in designated repository.

There are other small discrepancies which may be noted. ICAR museum for insect deposits does not exist. The PDBC and IARI have need-based repository services of insects of agricultural importance. The PI should be aware of existing mechanisms, technical/technological resource support available in our country for insect collection and identification.

Views of other members be also sought since this issue has not been put to the committee.

**Sd. xxxxxx**  
**Dr S Prakash Tiwari**  
**Director, NAARM Hyderabad**  
**Chairman of the committee**

The Authority is requested to approve

The Authority did not approve the application for sending the insects collected for identification in foreign museums as mentioned in the application and informed that the identification of insects collected by the applicant is to be made with the Indian organization such as Zoological Survey of India.

**ACTION: MEMBER SECRETARY**

### 3. GUIDELINES ON COLLOBORATIVE RESEARCH PROJECTS

*Revised on 16.01.05 (after the comments of Dr Siddq) 3.1.06*

Guidelines for Transfer/Exchange of Biological Resources or Information Under Collaborative Research Projects and Bilateral

Agreements / MoU for Research Involving Foreign Individuals/Agencies

#### **I. Background**

Taking cognizance of the provisions of the Convention on Biological Diversity (CBD), and respecting the rich heritage available in our country on the other hand, the Government of India enacted an umbrella legislation called the Biological Diversity Act,

2002 (No.18 of 2003), and also notified the Biological Diversity Rules, 2004. The Biological Diversity Act, 2002 (BD Act, 2002) came into effect from 1.10.2003 [MoEF Notification S.O. 1146 (E)]. The commencement of different provisions of the Act took place from two different dates of appointment. The provisions under Sections 1, 2, 8-17, 48, 54, 59, and 62-65 were notified on 1.10.2003, and those covered under Sections 3-7, 18-47, 49-53, 55-58, and 60-61 on 1.7.2004 [MoEF Notification S.O. 753 (E)].

Collaborative research projects in the area of agro biodiversity are mainly under the domain of the Indian Council of Agricultural Research (ICAR), a premier, autonomous national organization responsible for the organization and management of research and education in all disciplines of agricultural sciences. In pursuance of its mandate, the ICAR has developed close links with several national and international research organizations including the centers of Consultative Group on International Agricultural Research (CGIAR). Through these links ICAR/ Department of Agricultural Research and Education (DARE) has been hitherto implementing a large number of collaborative research projects involving exchange of important biological resources. As per the Government of India (GOI) Allocation of Business Rules, the business allocated to ICAR/DARE includes “introduction and exploration of germplasm in respect of plant, fish and animal”. The exchange/transfer of Genetic Resources for Food and Agriculture (GRFA) constitute a distinct sub-set of biological diversity related to agriculture as per the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), India is a party to this treaty. The provisions in the treaty necessitate facilitated access to the material in the multilateral system for the purposes of food and agriculture research, breeding and training (Sec.12.3 of the ITPGRFA) and especially for the crops presently listed in its Annex-I. The Annex-I crops include 64 crops, of which 35 are food crops and 29 forage crops.

Some of the stated provisions of the BD Act, 2002 impinge on the allocated business of research and education of DARE/ICAR. Under the new regulatory mechanism in India, the Sections 3 to 7 of the BD Act, 2002 specially cover the provisions to this effect but in relation to Genetic Resources for Food and Agriculture (GRFA), there are no specific provisions in the BD Act, 2002 or the Biological Diversity Rules, 2004.

Under the auspices of ICAR, four bureaus are presently functioning. These are National Bureau of Plant Genetic Resources (NBPGR), New Delhi, National Bureau of Animal Genetic Resources (NBAGR), Karnal, National Bureau of Fish Genetic Resources (NBFGR), Lucknow and National Bureau of Agriculturally Important Microorganisms, (NBAIM), Mau Nath Bhanjan, UP. These bureaus are mandated with the task of the collection, evaluation, characterization, conservation, exchange, transfer and enhancement of genetic resources for purposes of research.

The new regulatory mechanism at the national level necessitate formulating a feasible system of transfer/exchange of biological resources for research within the provisions of the national laws. The BD Act, 2002 permits exchange or transfer of biological material or information for collaborative projects without making a reference to National Biological Authority (NBA) [Section 5(1)] if: (i) the collaborative projects conform to the policy guidelines issued by the Central Government on this behalf [Section 5(3) (a)] and, (ii) They are approved ones by the Central Government [Section 5(3) (b)]. In view of this provision, based on a comprehensive policy, general guidelines for transfer exchange of biological resources and information in collaborative projects need to be in place so as to create an enabling system of access and use of biological resources pertaining to agro biodiversity components for research within the legally formulated framework.

## **II. Scope and Purpose**

Under the new regulatory mechanism in force in India, the means, mechanisms and system for transfer or exchange of biological resources, or and information between collaborators in research projects need to be brought to the knowledge of researchers for purposes and research institutions of regulated access and use of biological resources in collaborative research projects involving foreign individuals or agencies. This document provides a set of guidelines that are applicable to collaborative research projects including bilateral/multilateral agreements, Memorandum of Understanding (MoU), workplans for research and which involve transfer or exchange of biological resources, or information relating thereto between institutions, including government sponsored institutions of India, and such institutions in other countries. However, it is stated that the



guidelines are applicable to agro biodiversity components of biological resources as defined under Section 2 (c) of the BD Act, 2002.

### **III. Definitions and Terms as used in the Guidelines**

- a) "agro-biodiversity" means biological diversity of agriculture related species and their wild relatives. It includes plants, animals, fish, microorganisms and other forms of biological resource(s);
- b) "benefit claimers" means the conservers of biological resources, creators and holders of knowledge and information relating to the use of such biological resources, and their byproducts innovations and practices associated with such use and application;
- c) "biological diversity" means variability among living organisms from all sources and the ecological complexes, of which they are part, and includes diversity within species or between species and of ecosystems;
- d) "biological resources" means genetic resources of plants, animals and microorganisms or parts thereof, their genetic material and by products (excluding value added products) with actual or potential use or value, but does not include human genetic material;
- e) "bio survey and bio utilization" means survey or collection of species, subspecies, genes, components and extracts of biological resources for any purpose and includes characterization, inventorisation and bioassay;
- f) "commercial utilization" means end uses of biological resources for commercial exploitation such as drugs, industrial enzymes, food flavours, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes used for improving crops, livestock and fish through genetic intervention, but does not include conventional breeding or traditional practices in use in any agriculture, horticulture, poultry, dairy farming, animal husbandry or bee keeping;
- g) "fair and equitable benefit sharing" means sharing of benefits as determined by the National Biodiversity Authority under Section 21 of BD Act, 2002;
- h) "National Biodiversity Authority" means the National Biodiversity Authority established under Section 8 of BD Act, 2002;

- i) "research" means study or systematic investigation of any biological resource or technological application, that uses biological systems, living organisms or derivatives thereof to make or modify products or processes for any use;
- j) "State Biodiversity Board" means the State Biodiversity Board established under Section 22 of BD Act, 2002;
- k) "sustainable use" means the use of components of biological diversity in such manner and at such rate that does not lead to long term decline of the biological diversity thereby maintaining its potential to meet the needs and aspirations of present and future generations;
- l) "value added products" means products, which may contain portions or extracts of plants and animals in unrecognizable and physically inseparable form.

#### **IV. Title**

The Guidelines may be called “Guidelines for Transfer/Exchange of Biological Resources or Information Under Collaborative Research Projects and Bilateral Agreements / MoU for Research Involving Foreign Individuals/Agencies”.

These are referred to as “The guidelines” in the following text.

#### **V. The Guidelines**

1. The guidelines are applicable to agro-biodiversity components meaning “biological diversity of agriculture related species and their wild relatives” as explained in Section 13(1) of BD Act, 2002 and other forms of living material including plants, animals, fish, and micro-organisms as defined in the Section 2 (c) of the BD Act, 2002, and as being dealt by the Indian Council of Agricultural Research (ICAR) / Department of Agricultural Research and Education (DARE).
2. The guidelines are applicable to collaborative research projects including bilateral/multilateral agreements, Memorandum of Understanding (MoU) and workplans thereunder for research, which involve transfer or exchange of biological resources, or information relating thereto between institutions, including government sponsored institutions of India, and such institutions in other countries.
3. The provisions of the Sections 3 and 4 of the BD Act, 2002 shall not apply to the collaborative research projects conforming to these guidelines as per the provisions of the Section 5 (3) (a) and (b) for the transfer / exchange of biological resource(s) to foreign nationals/agencies.
4. The transfer/exchange of the biological resource(s) shall be effected through the concerned repository/bureaus.

5. Extant projects not consistent with the provisions of the BD Act and based on agreement(s) concluded before the commencement of the Act stand rendered void as per the provisions of the Section 5 (2) of the BD Act, 2002.
6. The guidelines cover transfer/exchange of biological resources pertaining to agro biodiversity.
7. The collaborative research project, in no way, should jeopardize the stake of claims of national sovereignty on biological resources of India.
8. The aims, objectives, technical plan, output, outcome and impact of the collaborative project should be congruent with the relevant national/state policies and goals such as EXIM policy.
9. To cope with or avert the existing or potential calamity or to meet dire national or regional needs, the concerned department of Central Government of India may, on its own volition, send through the concerned authorized repository, the biological resource(s) for testing, screening, improvement or otherwise as deemed fit in the national interest in any collaborative research mode as considered appropriate.
10. The exemptions provided in the guidelines are not applicable to the collaborative research project merely and solely aiming towards exploration and collection of biological resources. The exploration and collection of biological resources, if considered a prerequisite of any collaborative research project, should be undertaken by the national repositories/bureaus only. The material so collected should be deposited in the concerned national repository/bureau and given an indigenous collection accession number. Thus collected and documented resource can, then, be used in the collaborative research project.
11. Any new taxon/breed/genetic stock/culture/strain/line discovered or developed through the project shall be notified to the concerned repositories/bureaus, and the voucher specimen be deposited with them.
12. The collaborative research projects involving persons/body as stated under Section 3 (2) (a), (b) and (c) of the BD Act, 2002 shall be cleared from security and sensitivity angles and be congruent with the guidelines laid-down by the Cabinet Secretariat/Ministry of Finance (Department of Economic Affairs) (vide F.No.1/30/200-PMU) and Department of Agricultural Research & Education (vide.F.No.7-11/2004 IC.IV) and as revised from time to time.
13. Approval to the collaborative research project should be accorded by at least one Department of Central Government of India as stated in Section 5 (3) (b) of the BD Act, 2002.
14. The transfer/exchange of biological resources shall be for research purpose only.

15. The quantity of material to be transferred / exchanged shall be limited to the needed experimental quantity of the biological resource(s) as specified by the concerned repositories / bureaus on a case-by-case basis.
16. The transfer/exchange of material shall be under the Material Transfer Agreement (MTA), as approved by the concerned department of Central Government of India i.e. Department of Agricultural Research and Education (DARE), Ministry of Agriculture (MoA) and as modified from time to time. A standard MTA is enclosed herewith as Annexure-I.
17. The institutions designated as repositories by the Central Government under the provision of Section 39 of the BD Act, 2002 shall function as the nodes for transfer/exchange of biological resource(s) under the collaborative research project(s). Import of biological resource(s) shall be done through the concerned repositories only. The following bureaus under the auspices of Indian Council of Agricultural Research (ICAR)/ Department of Agricultural Research and Education (DARE), Ministry of Agriculture (MoA) shall be deemed as designated nodal repository agencies, besides others as may be additionally designated by the Central Government in consultation with the National Biodiversity Authority (NBA) as per the provision of the Section 39(1) of the BD Act,2002.
  - National Bureau of Plant Genetic Resources (NBPGR), New Delhi
  - National Bureau of Animal Genetic Resources (NBAGR), Karnal, Haryana
  - National Bureau of Fish Genetic Resources (NBFGR), Lucknow, U.P.
  - National Bureau of Agriculturally Important Microorganisms, (NBAIM), Mau Nath Bhanjan, U.P.

Extant provisions of genetic resources being routed through respective ICAR institutes by the NBPGR (ICAR) in case of specific crops shall continue to be followed as per the Plant Quarantine Order, 2003.

18. The concerned department/repositories of biological resource(s), as applicable, will issue import permit and will carry out quarantine processing prior to the release of the material in India. Biological resource(s) transferred for research should be free from pests/pathogens of quarantine importance. While effecting the transfer/exchange of the biological resource(s), the necessary sanitation and phyto-sanitation measures and quarantine procedures as prescribed shall be strictly adhered to. These may include reports on case history of the biological resource(s) and risk analysis based on the recognized scientific principles. The responsibility of quarantine of plants exchanged for the research purpose rests delegated to the NBPGR. The provisions of the Plant Quarantine Order (2003), as applicable, shall be followed. For the quarantine of fish and animal biological resources the Department of Agriculture and Cooperation

(DAC) and Department of Animal Husbandry and Fisheries (DAHDF) of Ministry of Agriculture (MoA) are the concerned departments<sup>1</sup>.

19. The exemptions provided under the guidelines do not pertain to the collaborative projects involving species, which are restricted, protected or put under negative list as per any Act of Government of India. These exemptions also do not pertain to those collaborative projects involving survey/collection from protected areas such as national heritage sites, sanctuaries, reserved forests, biodiversity reserves, island ecosystems and fragile ecosystems or other restricted activity areas of similar kind in accordance with the Wild Life (Protection) Act, 1972, (53 of 1972) its amendments and rules thereon. Projects aiming at conservation and restoration of habitat(s) should be thoroughly reviewed and appraisal be made in regard to environmental concerns and protection of traditional knowledge. Thereafter, such projects be permitted only with the inclusion of built-in appropriate precautions in the project as per the provisions of Section 36 (4) of the BD Act, 2002.
20. The knowledge associated with any biological resource intended to be transferred or the knowledge generated during the execution of the project shall not be commercially utilized without the prior approval of the NBA as per the provisions of the Section 3 and 4 and corresponding Section 19 of the BD Act or without the prior approval of any authority to whom the power has been delegated by the NBA under Section 16 of BD Act, 2002.
21. The traditional biological resource(s) pertaining to agro biodiversity *per se* should not be allowed for grant of any form of intellectual property rights.
22. Access to unique traditional biological resource(s) that have any unique trait of commercial value or have substantial economic value in production, product quality, fitness, pest resistance etc. could be selectively restricted by the concerned department of the Central Government on case-by-case basis as per the comments of the concerned repository/bureau.
23. Plant varieties developed under the collaborative projects may be protected under any law enacted by Parliament as per the provisions of Section 6 (3) of the BD Act, 2002.
24. Local/traditional knowledge in oral or any other form collected and documented in the collaborative project shall be intimated to both NBA and State Biodiversity Board(SBB)as per Section 36 (5) of BD Act, 2002 for facilitating registration of such

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<sup>1</sup> The NBAGR, NBFGR and NBAIM may eventually carry out quarantine processing for research prior to the release of the material in India on subsequent capacity building for the purpose.

knowledge at the local, state and national level, and other measures of protection, including *sui generis* system.

25. Research papers, books, bulletins, registered accessions, patents and outputs in other forms of intellectual property shall be appropriately shared between the collaborators. The mechanism of sharing and protecting/patenting the outputs should be explicitly spelt out in the project and approved by the competent authority.
26. The list of biological resource(s) to be transferred /exchanged under the project shall be sent to the National Biodiversity Authority for prior information.
27. Benefits eventually accruing from the use of biological resource(s) transferred/exchanged under the collaborative research projects would be assessed and the benefit sharing would be determined by the NBA as per provisions of the Section 21 of the BD Act, 2002.
28. Transfer/exchange of transgenic material would be governed by the provisions of Environmental (Protection) Act 1986 and its subordinate legislation governing rules on Manufacture, Use, Import, Export and Storage of Hazardous Micro-Organisms, Genetically Engineered Organisms or Cells Rules, 1989 ,and operative guidelines including extant provisions set by the nodal ministry/department i.e. Department of Biotechnology (DBT), Ministry of Science and Technology, and Ministry of Environment and Forestry (MOEF) from time-to time.
29. In case of biological resource(s) related to plant(s), the projects should be referred to the NBPGR (ICAR) for technical comments. The transfer/exchange of plant genetic resources would be effected after considering the technical comments of the NBPGR (ICAR).
30. In case of biological resource(s) related to fish, the following may be additionally noted:-
  - 30.1 Projects should be referred to the NBFGR (ICAR) for technical comments. The transfer/exchange of fish genetic resources would be effected after considering the technical comments of the NBFGR (ICAR).
  - 30.2 Import of fish would be permitted only if the consignment is accompanied by Zoo sanitary/Quarantine certificate showing freedom from *Office of International des Epizooties* (OIE)-listed diseases that are considered to have significant adverse ecological and socioeconomic impacts and all other relevant documents.
  - 30.3 The import of fish into India for collaborative research shall be made through ports of entry where the quarantine and certification service stations are located. The consignments shall be got cleared from the quarantine/certification authorities at the entry ports before effecting their supply to the research laboratory/agency concerned.

- 30.4 Transfer/exchange of live fish will be restricted only to the species that are propagated in captivity.
31. In case of biological resource(s) related to animal(s), the following may be additionally noted:-
- 31.1. Projects should be referred to the NBAGR (ICAR) for technical comments. The transfer/exchange of animal genetic resources would be effected after considering the technical comments of the NBAGR (ICAR).
  - 31.2. The import of animal(s) into India for collaborative research shall be made through ports of entry where the quarantine and certification service stations are located. The consignments shall be got cleared from the quarantine/certification authorities at the entry ports before effecting their supply to the research laboratory/agency concerned.
32. In case of biological resource(s) related to microorganism(s), the following may be additionally noted:-
- 32.1 Projects should be referred to the NBAIM for technical comments. The transfer/exchange of microbial genetic resources would be effected after considering the technical comments of the NBAIM (ICAR).
  - 32.2 The micro-organisms, which could be used for biological warfare/high risk group/sensitive for bio security shall not be exported or imported.
  - 32.3 All requests made for the permission to exchange/export/import microbial germplasm samples must be accompanied with the detailed information on aspects such as scientific name, markers, identification and detection techniques, distribution and habitat, genetic stability and related aspects.

The guidelines should not be construed to be in contradiction with the provisions of national and international regulatory mechanisms such as Protection of Plant Varieties & Farmer's' Rights Act (PPV&FR Act) 2001, Convention on Biological Diversity (CBD), International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) etc. The collaborative research projects including bilateral/multilateral agreements, MoUs and workplans should rather facilitate harmonizing the provisions of these regulatory mechanisms.

[These guidelines would become effective for transfer/exchange of biological resources under collaborative research projects as and when approved by Central Government of India as per the provisions of Section 5 (3)(a) and (b) of the BD Act, 2002.]

**The Authority is requested to approve**

The approved the guidelines prepared by DARE, ICAR and the guidelines to be sent to the Administrative Ministry for notification through Ministry of Law and Justice.

**ACTION: MEMBER SECRETARY**

**4. MINUTES OF THE MEETING ON EC ON DATA BASE  
CONDUCTED ON 09.12.2005**

**Expert Committee on Database on Biodiversity and  
Traditional Knowledge**

**Date:** 9.12.2005

**Time:** 10.00 am - 4.30 pm

**Venue:** NISCAIR, Pusa, New Delhi.

**Recommendations of the Committee:**

1. The Second meeting of the EC will be held at the National Chemical Laboratory, Pune, on the 3<sup>rd</sup> February 2006.
2. The Member Secretary, **Ms. Tijitha Anand** to take up the task of compiling an exhaustive list of all institutes and organisations that have databases on biodiversity, making use of the format given on the NCBI website.
3. **Dr. Vishwas Chavan** and **Dr. Chinmaya Rathore** to take up the task of forming a “*Collaborative framework for setting up of the National Biodiversity Information System*” that will be discussed in the next meeting of the Expert Committee.
4. The importance to recognize the knowledge providers in order to sustain Biodiversity Act and Rules.
5. The need for a legal framework for recognition of rights in the area of traditional knowledge and biodiversity.

**Members Present:** **Dr. Madhav Gadgil, Chairman**, Expert Committee on Database.

**Ms. Tijitha Anand, Expert Consultant** and Member Secretary,  
Expert Committee on Database.

**Dr. V K Gupta, Director**, NISCAIR, New Delhi.

**Dr. A K Ghosh**, CED, Kolkata.

**Dr. R. Uma Shaankar**, UAS, Bangalore.

**Dr. Darshan Shankar**, Director, FRLHT, Bangalore.

**Dr. W S Lakra**, NBFGR, Lucknow, UP.

**Dr. Vishwas Chavan**, NCL, Pune.



**Dr. Chinmaya Rathore**, IIFM, Bhopal.

**Dr. S C Gupta**, NBAGR, Karnal.

**Dr. Bala Subramaiaam**, NISCAIR, New Delhi.

**Dr. H B Singh**, NISCAIR, New Delhi.

**The Authority is requested to approve**

**The authority approved the minutes of the Expert Committee on Database on Biodiversity and Traditional Knowledge**

**ACTION: MEMBER SECRETARY**

**5. MINUTES OF THE MEEING ON EXPERT COMMITTEE  
ON COLOBORATIVE RESEARH PROJECTS  
CONDUCTED ON 7<sup>TH</sup> Jan 2006**

First Meeting of the Expert Committee on Collaborative Research

**Members Present**

1. **Dr.B. S. Dhillon**, Director of Research, Punjab Agricultural University, Ludhiana 141 004, Punjab
2. **Prof. P. S. Ramakrishnan**, Jawaharlal Nehru University, New Mehrauli Road, New Delhi
3. **Prof. T. C. Narendran**, Systematic Entomology Laboratory, Department of Zoology, University of Calicut, Calicut-673 635
4. **Dr. G. S. Lavekar**, Director, Central Council for Research in Ayurveda & Siddha, 61-65, Institutional Area, Opp. D Block, Janakpuri, New Delhi
5. **Dr. Yogesh S. Shouche**, National center for Cell Science, Pune University Campus, Ganeshkhind, Pune-411 007.
6. **Dr S. Kannaiyan**, Chairman, National Biodiversity Authority, Chennai
7. **Dr K. Venkataraman**, Member Secretary, National Biodiversity Authority, Chennai
8. **Dr Hemal Kanvinde** Consultant, National Biodiversity Authority, Chennai
9. **Ms. Tijitha Anand**, Consultant National Biodiversity Authority, Chennai

## MINUTES OF THE MEETING

**WELCOME ADDRESS: Dr. K. Venkataraman**, Member Secretary, NBA

**Dr. K. Venkataraman** welcomed all the members of the Expert Committee to the NBA. He elaborated on the importance of collaborative research in the increase of our knowledge and how in many ministries guidelines are not in place. He said that the full day deliberations would be useful to NBA to fulfill its agenda and duties and also that the NBA would assist the committee in every way possible in order to ensure that its task is achieved.

**INTRODUCTORY REMARKS: Prof. Dr. S. Kannaiyan**, Chairman, NBA

**Prof. Dr. S. Kannaiyan** introduced the Biological Diversity Act 2002 to the members of the Expert Committee and specially clarified the sections 3, 4 and 5 of the act that deal with access, research result transfer and collaborative research respectively. He explained the process used by the ICAR to develop their guidelines by a special committee of experts and how every scientist was given an opportunity to express his views through many interactive sessions with four National bureaus of the ICAR a group of experts of ICAR. He explained that a similar procedure would help in getting more diverse views on collaborative research and the committee would come out with a clear document. He also invited the members to suggest names of experts who would be able to contribute towards the development of a policy guideline for the entire country. He then requested the committee Chairman to conduct the proceedings

**OPENING REMARKS: Dr. B. S. Dhillon**, Chairman, EC on Collaborative Research

**Dr. B. S. Dhillon** commented on the difficult task that the committee has to undertake and welcomed all suggestions by the committee. He explained the situation in ICAR which deals with domesticated diversity with the help of the four National Bureaus and said that this committee had a greater challenges that it has to address the entire diversity represented in India. He also said that the draft guidelines developed by the ICAR are for germplasm exchange only while this committee has a broader and wider scope. He said that this committee needed to develop a common guideline which was applicable to all collaborative projects whether run through Government departments or private organisations.

### DISCUSSION POINTS

#### **1. Discuss Section 5 of the BD Act 2002 and any other relevant section for this committee.**

The committee discussed the section 3, 4 and 5 of the BD Act 2002. They deliberated on the definition of the term body corporate and types of private organisations. It was decided that any company whether Indian or foreign which had a share capital from foreign country would need to get the approval from NBA to have any access to biological diversity.

The committee also deliberated on the “such institutions” of Section 5 and decided that this applied to all Government Departments and institutions.

**Prof. Kannaiyan** explained how third party transfers which are done without the knowledge of the Indian government is a great loss to the people of our country. Hence all such transfers based on India's biodiversity should be monitored and need stringent regulations.

There was a general discussion on who should be involved in the preparation of the guidelines. Dr. Venkatraman indicated that all the relevant ministries that deal in Biodiversity should have guidelines in place and these ministries should be listed and involved in the preparation of the guidelines. Else they should be requested to prepare independent guidelines for the activities of their ministries and the NBA would facilitate in technical matters and in any other way in necessary. Dr. Lavekar proposed that his Department of Ayush would like to develop such guidelines with the technical help from NBA.

**Dr. T. C. Narendran** was concerned that at present the repositories of germplasm/ specimen are not favourable to loan out of specimen for studies to outstation universities and institutes, while the repositories abroad are more than willing to share their information and specimens. He said that this needs to be rectified.

**Dr. P. C. Ramakrishnan** explained the importance of the traditional knowledge value systems in villages and how new technologies are eroding these value systems. He said that these guidelines should ensure that the local people's knowledge is safeguarded. He also reiterated that all local communities should be aware of the BD Act and the guidelines.

## **2. Discuss the documents available and the ICAR Draft Guideline on Germplasm Exchange**

The meeting material contained a few guidelines/ agreements developed by an NGO, two government departments and an International Research Agency (Appendix I). These documents were reviewed in minute details so as to cull out the relevant sections and principles and use them for the Indian guidelines.

Dr B.S.Dhillon asked for the ICAR draft guidelines (Appendix II) on germplasm exchange and suggested that we could use it as a template to build upon. The committee then deliberated on all the points of the guidelines and made changes to suit the present broader and more complex nature of the overall guidelines.

## **3. Discuss the "terms of reference" given to this committee to find out ways in which to meet the terms. -- The way forward.**

The terms of reference given to the committee were discussed and seen whether in the present meeting they were met and what more needs to be done so that the committee may fulfill these terms.

Term of reference:

- *Develop guidelines to address collaborative research in accordance with Section 5 of BD Act viz; bilateral or multilateral research approved by the Government of India (Note: Whether there is policy Guideline by the Government of India? Whether the Biodiversity Act has incorporated into already existing guidelines? Whether there is a need to prepare a new set of guidelines?)*

It was decided that the NBA should approach all the relevant ministries and obtain the present guidelines under which collaborative projects are approved. The NBA also to find out the types of collaboration underway in India that are related to biodiversity.

- *Develop guidelines in accordance with Section 5 of BD Act, for collaborative research amongst organisations, universities, departments etc involving foreign institutions (In view of the increased focus by outside agencies/organisation on certain groups of organisms such as salt tolerant varieties and insects, the committee may consider tightening of norms for collaborative research).*

At present the guidelines appended in II address the above concern. The committee discussed whether there was a need to differentiate in the collaborating institutes/bodies. It was decided that the policy guidelines developed by this committee will apply to all bodies/institutes that undertake collaborative projects *ie*; it shall apply to all.

- *Develop guidelines in accordance with Section 5 of BD Act, for accredited or approved bodies and industry; between industries and research organizations supported by the Government; industries and research organizations; between academic institutions within India and abroad.*

It was decided that since the guidelines would apply to all collaborating institutes, there was no need to make distinction between the natures of the collaborators. But the committee needs to ensure that third party transfers and benefit sharing issues are adequately addressed.

- *Develop guidelines in accordance with Section 5 of BD Act, for non collaborative research (collections) under the following three categories viz; flora, fauna and microorganisms of soils, sediments and genetic material from dead organisms.*
- *Develop guidelines for sharing of data and ongoing research in accordance to the Act.*

The committee decided that the above two terms were not within their purview since they were outside of the collaborative research. Dr. Venkatraman explained the different committees that are functioning and are proposed to be formed in the forthcoming NBA meeting. He also explained that some of the other committee will address other issues. This committee can send in their recommendations to the other committees in a transparent way by sharing the

view with other committee members. He said that at present the NBA does not have an implementing body and the forest department of the State Govt. may be used as the enforcement agencies for the NBA as earlier suggested by a member of the Authority Mr A J Kurian in the third meeting.

He also explained that the term “from dead organisms” was added to emphasize that dead parts harbour a lot of microbial diversity and should not be treated as inanimate objects.

#### **4. Discussions on any other matters:**

A few names were recommended by the experts to be included for organizing an interactive sessions and in the next meeting of the expert committee as needed.

1. Dr S. N. Sharma, Head, RPDP, CSIR, New Delhi
2. Dr Ravi Khetripal, Head, Plant Quarantine , NBPGR, New Delhi
3. Dr Roy Choudhury, Dept. Of Zoology, Univ. of Calcutta, Ballygunge Circular Road, Kolkata
4. Prof. Anantharaman, Dept. of Life Sciences, Manipur University, Impal
5. Dr R.K. Gupta, PAU, Ludhiana
6. Dr Tapan Ckakravarthy, IMC Chandigarh
7. Dr Bharat Desai, School of International Studies, JNU
8. Dr C.L.L. Gauda, Program Leader, ICRISAT.
9. Dr V. K. Joshi, Medicinal Plant
10. Dr Ganesan, TBGRI, Trivandram, Kerala
11. Dr Arumugam, Head, Dept of Zoology, Yniversity of Madras, Chennai.
12. Dr Kalpana Sastri, NAARM, Hydrabad.
13. Dr Anishetty Murthy, Hydrabad
14. Dr Varaprasad, Hydrabad
15. Dr Lakra, Director, NFGR, Lucknow
16. Dr Ahlawat, Director, NAGR, Karnal
17. Dr S K Arora, Director, NAI Microorganisms, Mau, Varanasi

#### **Recommendations**

The committee recommended the following

1. To merge the salient features of the documents discussed in the meeting and the ICAR document in order to prepare the first draft of the guidelines.
2. To organize interactive sessions with relevant scientists and policy makers, once the first draft of the guidelines are approved by this committee.
3. To send communications to the relevant ministries on the importance of making their own guidelines and defining their priority areas for undertaking collaborative research.

4. To communicate to them the ways in which NBA will support their efforts.
5. To gather information on the ongoing collaborations relating to research in biological diversity (All Ministries, All Universities, UGC Chairman, DG ICAR, DG CSIR, Secretary Animal Husbandary are to be addressed).

**Concluding Remarks: Dr. B. S. Dhillon**, Chairman, EC on Collaborative Research

The Chairman thanked all the members for their cooperation and inputs to the deliberations and suggested that the next meeting should be on any Saturday in April.

**Vote of Thanks: Dr. Hemal Kanvinde**, Member Secretary, EC on Collaborative Research

**GUIDELINES FOR COLLABORATIVE RESEARCH PROJECTS AND  
BILATERAL AND MULTILATERAL PROGRAMS THAT INVOLVE  
FOREIGN INDIVIDUALS OR UNIVERSITIES /INSTITUTIONS  
AGENCIES /NGOS**

**A. CONTEXT**

In recent years there have been immense developments in the biological sciences. Globalisation has led to further competition amongst nations. This had made collaborative research even more relevant in today's time.

Efforts to increase and to communicate knowledge are at the heart of collaborative academic endeavours. Quite often these collaborative endeavours will result in the creation of IP which will have rights conferred by statute and common law in India and which may be eligible for rights in other countries and under international treaties. Within the Indian Scientific community it is important to ensure that such rights are properly conferred on all those who are responsible for the development of the IP, while at the same time encouraging the openness and free exchange of ideas that are essential to successful scholarship. This policy requires the contribution of all parties to be appropriately recognized.

India has a responsibility towards its people and to protect the biological resources which the people depend upon are not harmed. India has to be alert and responsive to the changing political legal and market environments to ensure the above.

The NBA is committed to excellence in India's research and academic programs and it recognizes that the country's strengths can be enhanced by collaborative relationships with international partners, including governments, academic institutions, and other organizations. Such collaborative relationships should strengthen and complement India's scientific priorities and mission. The NBA

encourages researchers to share information and work in collaboration with others, where this is likely to advance the state of knowledge.

Taking cognizance of the provisions of the Convention of Biological Diversity (CBD), and respecting the rich heritage available in our country on the other hand, the Government of India enacted an umbrella legislation called the Biological Diversity Act, 2002 (No.18 of 2003), and also notified the Biological Diversity Rules, 2004. The Biological Diversity Act, 2002 (BDA) came into effect from 1.10.2003 [MoEF Notification S.O. 1146 (E)].

The BD Act, 2002 permits exchange or transfer of biological material or information for collaborative projects without making a reference to NBA [Section 5(1)] if:

- (i) the collaborative projects conform to the policy guidelines issued by the Central Government on this behalf [Section 5(3)(a)] and,
- (ii) Are approved by the Central Government [Section 5(3)(b)].

Thus, a comprehensive strategy and general guidelines for collaborative projects needs to be formulated.

The purpose of this policy is to set out the process by which proposed collaborative research partnerships with external institutions will be assessed and approved by the NBA. In considering a research partnership with other academic institutions, the NBA's responsibility and a paramount consideration is to protect the quality of India's research, academic programs and reputation, and also to assess and address any academic, legal, safety, and financial risks to India's environment and biological diversity, people and scientists.

However, a critical need that cannot be imposed by this policy/guideline is the requirement for all parties to discuss and negotiate issues with professionalism and in good faith.

## **B. PREAMBLE**

1. The National Biodiversity Authority is a Statutory Body established by the National Government of India as per the section 8(1) of the National Biological Diversity Act 2002. The mission of the NBA is:

- a. To encourage and support conservation and sustainable use of biological diversity and equitable sharing of benefits arising out of the utilisation of the biological resources.
- b. To respect and protect the knowledge of the local people relating to the use of biological diversity.
- c. To regulate by issue of guidelines for access to biological resources and for fair and equitable benefit sharing and for collaborative research.

2. The National Biodiversity Authority's policy/guideline on Collaborative Research has been developed to fulfill India's objective in ratifying CBD by providing:

- a. clear objectives and principles on conduct of collaborative research
- b. guidelines on which agencies in India are designated to approve collaborative projects

c. guidelines and mechanisms/procedures to obtain approval for collaborative projects.

3. It is the responsibility of the NBA to ensure that this policy/guidelines are distributed to all universities and research institutions so that all researchers are made aware on this policy and surrounding issues.

### C. GUIDING PRINCIPLES

The National Biodiversity Authority abides by all relevant national and international laws concerned with management of biological diversity.

The National Biodiversity Authority recognizes India's commitment to the treaties India is signatory to, that deal with the management of Biological diversity. The National Biodiversity Authority endorses the Convention on Biological Diversity.

The National Biodiversity Authority shall adopt procedures and employ practices to safeguard India's Biological Diversity and related knowledge.

### D. DEFINITIONS OF TERMS AS USED IN THE GUIDELINES (from the Act)

m) ~~"Agrobiodiversity" means biological diversity of agriculture related species and their relatives including plants, animals, fish and micro organisms~~

n) "benefit claimers" means the conservers of biological resources, their byproducts, creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application;

o) "biological diversity" means the variability among living organisms from all sources and the ecological complexes of which they are part, and includes diversity within species or between species and of eco systems;

p) "biological resources" means plants, animals and micro organisms or parts thereof, their genetic material and by products (excluding value added products) with actual or potential use or value, but does not include human genetic material;

q) "bio survey and bio utilization" means survey or collection of species, subspecies, genes, components and extracts of biological resource for any purpose and includes characterization, inventorisation and bioassay;

r) "commercial utilization" means end uses of biological resources for commercial utilization such as drugs, industrial enzymes, food flavours, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes used for improving crops and livestock through genetic intervention, but does not include conventional breeding or traditional practices in use in any agriculture, horticulture, poultry, dairy farming, animal husbandry or bee keeping;

s) "fair and equitable benefit sharing" means sharing of benefits as determined by the National Biodiversity Authority under section 21;

t) "National Biodiversity Authority" means the National Biodiversity Authority established under section 8;

u) "research" means study or systematic investigation of any biological resource or technological application, that uses biological systems, living organisms or derivatives thereof to make or modify products or processes for any use;

v) "State Biodiversity Board" means the State Biodiversity Board established under section 22;



w) "sustainable use" means the use of components of biological diversity in such manner and at such rate that does not lead to the long term decline of the biological diversity thereby maintaining its potential to meet the needs and aspirations of present and future generations;

x) ~~"value added products" means products which may contain portions or extracts of plants and animals in unrecognizable and physically inseparable form.~~

## **E. GUIDELINES FOR COLLABORATIVE RESEARCH PROJECTS**

### I. Introductory Statements

1. The guidelines are applicable to Indian researchers / Individuals or Universities /Institutions /Industries/Agencies /NGOs that wish to undertake collaborative research which has a component of Biodiversity and its knowledge within the project. There is no distinction between any type of Indian collaborator and all are treated equally in this guideline.
2. The guidelines are applicable to collaborative research projects including bilateral/multilateral agreements, Memorandum of Understanding (MoU) and work-plans there under for research, which involve transfer or exchange of biodiversity, or information relating thereto between institutions, including government sponsored institutions of India, and such institutions in other countries.
3. The guidelines should not be construed to be in contradiction with the provisions of national and international regulatory mechanisms such as Protection of Plant Varieties & Farmers Rights Act (PPV&FR Act) 2001, Convention of Biological Diversity (CBD), International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) etc.
4. The guidelines cover all biodiversity and related knowledge as defined in the BDA2002.
5. The collaborative research project, in no way, should jeopardize the stake of claims of national sovereignty on biological resources of India.

//The project should not harm the environment of our country.

// It should not impinge on areas of national security, particularly through custody and control over data and its dissemination/publication to the detriment of national security or interest, now or in the foreseeable future.

6. The aims, objectives, technical plan, output, outcome and impact of the collaborative project should be congruent with the relevant national/state policies and goals such as EXIM policy as well as in accordance with the B D Act 2002.
7. Projects that aim to protect and enhance endangered species/habitats should be encouraged.
8. Projects that will improve the productivity of domesticated diversity should also be encouraged.

## II. Exemptions to the guidelines

1. Approval of a collaborative project should be given by any Department of the Central Government or by the NBA as stated in Section 5 (3) (b) of the BD Act 2002. A copy of all such approvals should be sent to the NBA for information.

// Approval to the collaborative research project should be accorded by at least one Department of Central Government of India as stated in Section 5 (3) (b) of the BD Act.

2. The provisions of the Section 3 and 4 of the BD Act 2002 shall not apply to the collaborative research projects if these guidelines are followed. (please check)

// The provisions of the Sections 3 and 4 of the Biological Diversity Act 2002 (BD Act) shall not apply to the collaborative research projects conforming to these guidelines as per the provisions of the Section 5 (3) (a) and (b) for the transfer / exchange of biological resource(s) to foreign nationals/agencies

3. Existing Collaborative Research projects initiated before the BD Act 2002 shall continue but the extensions and new phases shall follow these guidelines.

//Extant projects not consistent with the provisions of the BD Act and based on agreement(s) concluded before the commencement of the Act stand rendered void as per the provisions of the Section 5 (2) of the Act.

4. Researchers/Scientists working in the Institutes like those of the CSIR and the ICAR shall follow the guidelines of their parent body provided those guidelines have integrated the concerns raised/provisions made by the BD Act 2002.

### III. Essential permissions needed before starting a collaborative project

1. The collaborative parties should make best efforts to identify any restraint/restriction associated with the use and distribution of the biodiversity they plan to investigate. Any restraint/restriction should be disclosed in the applications
2. Projects that are knowledge based should clearly take up a risk assessment of what can happen with the knowledge that they will gain. This risk assessment should accompany the approval application.
3. All collaborative research projects that come to the NBA for approval should have clearly spelt out terms of benefit sharing with all “benefit claimer”.
4. Periodic (annual / half yearly) reports of the biodiversity accessed or transferred and the quantity should be forwarded to the NBA.

//The list of biological resource(s) to be transferred /exchanged under the project shall be sent to the National Biodiversity Authority for prior information.

5. The collaborative research projects involving persons/body as stated under Section 3 (2) (a), (b) and (c) of the BD Act shall be cleared from the security and sensitivity angle and be congruent with the guidelines laid-down by the Cabinet Secretariat/Ministry of Finance (Department of Economic Affairs) (vide F.No.1/30/200-PMU) and NBA and concerned ministry. (is this essential?? Check II 2)

//The project should be reviewed from security and sensitivity angle and conditionality on use of projects results for strategic and /or national security uses.

6. For collaborative projects that may involve cruise of foreign vessels in Indian EEZ and or flights of foreign aircraft over Indian territory or visits to restricted areas clearances from appropriate Ministries and inter-ministerial groups, departments has to be obtained by both the collaborating parties and specifically mentioned in the application. (from CSIR)
7. Extension to projects will require fresh applications.
8. The collaborative research project cannot be transferred between researchers but can be transferred to new institution if the researcher's address changes (identity). This transfer needs the approval of the NBA.
9. The approval application should be accompanied by the correct forms as given in the BD Act 2002 or in the NBA website.

#### IV. All the agreements that will be signed post approval

1. Access if any for biological diversity should be approved by the NBA as per the terms of the "Access Agreement" signed by the concerned researcher.

2. The transfer/exchange of material shall be under the Material Transfer Agreement (MTA), as approved by NBA and /or the concerned department of Central Government of India.
3. Transfer or exchange between the collaborative institutes/researchers should follow the quarantine and the other related rules of India and operated through a designated repository. And as per the "MTA Agreement" by the NBA.
4. NBA should advice both parties of the rules of Quarantine and Export/Import rules and concerned repositories etc.

#### V. Guidelines for access

1. Access to unique traditional biological resource(s) that have any unique trait of commercial value or have substantial economic value in production, product quality, fitness, pest resistance etc. could be selectively restricted by the concerned department of the Central Government on case-by-case basis as per the comments of the concerned designated repository/ expert committee/ scientists/ institutes.
2. All requests made for the permission to access microbial germplasm samples must be accompanied with the detailed information on aspects such as scientific name, markers, identification and detection techniques, distribution and habitat, genetic stability and related aspects

#### VI. Guidelines on Knowledge - access and dissemination

1. The knowledge associated with any biological resource intended to be transferred or the knowledge generated during the execution of the project shall not be commercially utilized without the prior approval of the NBA as per the provisions of the Section 3 and 4 of the BD Act.
2. Local/traditional knowledge in oral or any other form collected and documented in the collaborative project shall be intimated to both NBA

and State Biodiversity Board(SBB)as per Section 36 (5) of BD Act for facilitating registration of such knowledge at the local, state and national level, and other measures of protection, including *sui generis* system. All traditional knowledge should be documented by a concerned ministry.

3. Parties involved in any Collaborative Project that may entail the use or dissemination of knowledge to which a person or group of persons may claim moral or legal rights, will not take steps that would prejudice such claims or diminish their value. In particular, the parties will not profit or act in such a way as to facilitate profit by third parties through the commercialization or dissemination of such knowledge without the prior approval of the NBA/Parent institution. Where the use or dissemination of such knowledge is envisioned, the Recipient will ensure that the moral or legal rights of any potential claimants are respected, through consultation with them and compensation to them, where available. This section will endure beyond the termination of the Project.

#### VII. Guidelines for transfer of biological material

1. The guidelines cover transfer/exchange of plants, animals, fish, microorganisms and other forms of living material comprising biological diversity as defined in the Section 2(c) of the BD Act.
2. The transfer/exchange of biological diversity shall be for the purpose for which permission is sought in the collaborative project only.
3. The transfer/exchange of the biological resource(s) shall be done through the concerned ministries and with the approval of the NBA. The voucher specimen shall be deposited in concerned designated repositories.

// The institutions designated as repositories by the NBA/Central Government under the provision of Section 39 of the BD Act shall function as

the nodes for transfer/exchange of biological diversity under the collaborative research project(s).

4. The quantity of material to be transferred / exchanged shall be limited to the needed experimental quantity of the biological resource(s) as specified in the proposal and approved by the NBA.

// The transfer/exchange of plant genetic resources would be effected after considering the technical comments of the designated committee/institution/repository.

5. The concerned designated repositories of biological resource(s), as applicable, will issue import permit and will carry out quarantine processing prior to the release of the material in India. Biological resource(s) transferred for research should be free from pests/pathogens of quarantine importance. While effecting the transfer/exchange of the biological resource, the necessary sanitation and phyto-sanitation measures and quarantine procedures as prescribed shall be strictly adhered to. These may include reports on case history of the biological resource(s) and risk analysis based on the recognized scientific principles.

// The import of biological resource(s) into India for collaborative research shall be made through ports of entry where the quarantine and certification service stations are located. The consignments shall be got cleared from the quarantine/certification authorities at the entry ports before effecting their supply to the research laboratory/agency concerned.

6. Transfer/exchange of transgenic material would be governed by the provisions of Environmental Protection Act 1986 and its subordinate legislation, operative guidelines and extant provisions set by the nodal ministry/department i.e. Department of Biotechnology (DBT), Ministry of

Science and Technology, and Ministry of Environment and Forestry (MOEF).

7. All requests made for the permission to exchange/export/import microbial germplasm samples must be accompanied with the detailed information on aspects such as scientific name, markers, identification and detection techniques, distribution and habitat, genetic stability and related aspects.

#### VIII. Guidelines for IPR and other benefit sharing issues

1. In the event of commercial exploitation the research results of a collaborative project, all intellectual contributors to that work should be entitled to share in the proceeds in proportion to their contributions, unless the entitlement to share has been willingly waived through informed consent. A share in the proceeds could also be granted to other parties such as the University/Institution/NBA/local communities or financial sponsors, at the discretion of the intellectual contributors.
2. Collaborators should specify, in advance and in writing, how the process by which the rights to IP arising out of the collaboration will be determined. The determination of rights should be based on the extent and nature of the contribution, and not on differences in power. Any waiver or modification of rights requires informed consent.

//In cases where a collaborative research project is under way and an agreement(s) with respect to the sharing of IP rights has been established, no individual may modify the agreement without making a reasonable effort to obtain written informed consent of all other parties to the research. Where established agreements are modified which waive, limit or assign IP rights, that modified agreement must be reviewed and approved by the Institutions and NBA.



//IP rights should be attributed in accordance with written negotiated agreements among the parties concerned, with due consideration given to Indian and international law.

3. Credit for new varieties, new processes or new taxon that are developed / discovered under the collaborative project should be shared between the two parties in a mutually beneficial way that is defined clearly in the proposal. NBA should ensure that the benefit sharing is equitable. The New varieties, new processes or new taxon that is developed should be registered in an approved/appropriate Indian institute /repository.
4. Benefits eventually accruing from the use of biological resource(s) transferred/exchanged under the collaborative research projects would be assessed and the benefit sharing would be determined by the collaborating parties in consultation with the NBA as per provisions of the Section 21 of the BD Act.
5. Research papers, books, bulletins, registered accessions, patents and outputs in other IP forms shall be appropriately shared between the collaborators. The mechanism of sharing and protecting/patenting the outputs should be explicitly spelt out in the project and approved by the competent authority.
6. The indigenous biological resource(s) should not be allowed for grant of any form of intellectual property rights.
7. Any new taxon/breed/genetic stock /culture/strain/line discovered/developed through the project shall be notified to the concerned designated repositories, and the voucher specimen be deposited with them.

8. Plant varieties developed under the collaborative projects may be protected under any law enacted by Parliament as per the provisions of Section 6 (3) of the BD Act.

#### IX. Guidelines for special areas and species and special conditions

33. To cope with or avert the existing or potential calamity or to meet dire national or regional needs, the concerned department of Central Government of India may, on its own volition, send through the concerned designated repository, the biological resource(s) for additional studies as appropriate.
34. Collaborative projects that involve survey/collection from protected areas of India, island ecosystems and fragile ecosystems or other restricted activity areas of similar kind in accordance with the Wild Life (Protection) Act, 1972, need special attention. Such projects may be permitted only with the inclusion of built-in appropriate precautions in the project as per the provisions of Section 36 (4) of the BD Act.
35. The need for exploration and collection of biological diversity, if considered, a prerequisite of any collaborative research project needs to be carefully scrutinized. The material so collected should be deposited in the concerned national repository/bureau and given an indigenous collection accession number. This collected and documented resource can, then, be used in the collaborative research project.
36. Projects aiming at conservation and restoration of habitat(s) and species should be approved after a systematic review and appraisal is made in regard to environmental concerns.

#### X. Not allowed

1. The bio-resources, which could be used for biological warfare/high risk group/sensitive for bio security shall not be exported or imported.

#### XI. Outside the scope of the guidelines

1. These guidelines do not address the economic (agricultural, forestry, aquaculture, traditional knowledge based local occupations), human health and cultural impacts caused by collaborative research if any.
2. The collaborating parties shall immediately report to the NBA any difficulties it encounters in complying with the guidelines/agreements when the project is in progress.

## XII. Closing Statements

This policy is effective from \_\_\_\_\_ and will remain in force until cancelled in writing by the National Biodiversity Authority.

The National Biodiversity Authority shall regularly review this policy statement and its implementation in order to ensure that its mission is achieved.

### **The Authority is requested to approve**

**The members of the authority felt that the draft guidelines need through improvements and after further interactions with experts and with a legal touch by the Legal Consultant of NBA this may be brought to the authority for approval.**

## **ACTION: MEMBER SECRETARY**

<p><b>6.MEETING ON FINALISATION OF AGREEMENTS ON 17<sup>TH</sup> Jan 2006</b></p>
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### **Members Present:**

1. **Mr Vishwanath Anand, Chairman of the Committee**
2. **Dr D Chandramohan, Senior Scientist, NIO, Goa**
3. **Mr GK Muthukumaar, Advocate, Anand and Anand**
4. **Dr JRB Alfred, Director, ZSI, Kolkata**
5. **Dr M. Sanjappa, Director, Botanical Survey of India, Kolkata**
6. **Dr V Arivudai Nambi, MSSRF, Chennai**
7. **Mr Yeshwanth Shneoy, Legal Consultant, NBA**

**APPROVAL AGREEMENT FOR ACCESS TO BIOLOGICAL RESOURCES  
(Commercial Purposes)**

This Agreement is entered into as of the ..... day of ....., year.....

**Between**

**National Biodiversity Authority** (Hereinafter referred to as "the **NBA**") having its office at 475,9th South Cross Street, Kapaleeswar Nagar, Neelankarai, Chennai - 6000041.

And

..... (Hereinafter referred to as "the **Manufacturer/Company/Institute/ Individual**")

Hereinafter, the NBA and the **Manufacturer/Company/Institute/ Individual** shall collectively be referred to as "the Parties" and individually as "Party".

**WHEREAS:**

NBA has been established by the Government of India under the powers granted to it by section 8 of the Biological Diversity Act 2002 (Act 18 of 2003). Under the said Act, NBA is the authority to permit access to any biological resources found within the territory of India.

Manufacturer is a Company .....and having business interests in the manufacturing of products which requires certain biological resources as a raw materials.

Manufacturer has made an application in Form I, under Rule 14 of the Biological Diversity Rules 2004 to seek approval from the NBA to access the biological resources for the purposes of Commercial Utilisation of the same.

**The Parties hereto agree as follows:**

**1. Definitions**

In this Agreement:

**Act** means the Biological Diversity Act 2003 (Act 18 of 2003) and includes the Rules/Regulations/guidelines/notifications made under it.

**Biological Resources:** means biological resources as defined in the Act, (As defined in Section 2 c) which the Manufacturer desires to access for the purposes of Commercial Utilisation and which is more fully described in Schedule A to this Agreement.

**Commercial Utilisation** means any use as described in the Act and limited to the actual use as described in Schedule B to this Agreement.

[Additions to this clause to be made in accordance with the needs on a case to case basis]

**2. Interpretations**

Unless expressed to the contrary, in this Agreement:

- (a) words in the singular include the plural and vice versa;
- (b) any gender includes the other genders;
- (c) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
- (d) a reference to:
  - (i) a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;
  - (ii) any legislation or subordinate legislation includes any corresponding later legislation or subordinate legislation;
  - (iii) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
  - (iv) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes fax transmission; and
  - (v) this Agreement includes all schedules and annexures to it;
- (g) if the date on or by which any act must be done under this document is not a Business Day, the act must be done on or by the next Business Day.
- (h) All headings in this Agreement have been inserted as a matter of convenience and for reference only and in no way define, limit, enlarge, modify the scope or meaning of the Agreement or any of its provisions.

### **3. Grant of Approval**

3.1 The APPLICANT requests for approval and the NBA hereby grants the approval to access the Biological Resources for the purposes of Commercial Utilisation subject to the terms and conditions set forth in this Agreement.

3.2 Any activities/use involving the Biological Resources that are not expressly authorized by the provisions of this Agreement and any annexures hereto shall be deemed to be expressly prohibited.

3.3 The APPLICANT hereby agrees that this Agreement shall not in any way constitute or be presumed to constitute a partnership, joint venture or joint enterprise in any way or for any purpose between the Parties hereto or make them in any way liable as partners of or as agents for one another.

3.4 No Party has the authority to act for or to assume any obligation or responsibility on behalf of the other Party and the relationship between the Parties is that of a person and a statutory authority competent to approve certain actions under the Act.

#### **4. Assignment**

4.1 Without the prior written consent (which consent shall entirely be the sole discretion of the NBA) of the NBA in each instance, neither this Agreement nor the rights granted hereunder shall be transferred or assigned in whole or in part by the Manufacturer to any person whether voluntarily or involuntarily, by operation of law or otherwise. Failure of the Manufacturer to obtain the prior written consent of the NBA to any such transfer or assignment shall be deemed to be a material breach of this Agreement and result in the immediate termination of this Agreement, without notice.

4.2 This Agreement is strictly personal and is granted to the Manufacturer (as per the description detailed in Schedule C) and this Agreement will be treated as terminated in the event of any substantial changes in the management or shareholding of the Manufacturer including the changes brought by a merger, demerger or any other kind of corporate restructuring. Any such substantial changes shall deem the Manufacturer as a new entity.

4.3 Any such substantial changes as mentioned in clause 4.2, which transforms the Manufacturer into a deemed new entity, shall have to make a fresh application as required under the Act to access the Biological Resources permitted under this Agreement. For the removal of doubts, it is made clear that any activity undertaken by the deemed new entity under the approvals granted under this Agreement will be deemed illegal.

#### **5. Conditions for Access to Biological Resources**

5.1 The Manufacturer shall submit a written undertaking before accessing any Biological Resources to the effect that the Biological Resources can be used sustainably (as defined in the Act Section 2(o)).

5.2 The Manufacturer shall have access only to ..... (quantity) of Biological Resources and undertakes to access the same in accordance with the directions given by the NBA (as delegated to SBB or BMC or any other governmental agencies)

5.3 The Manufacturer shall designate any authorized employee who shall be responsible for the safe custody of the Biological Resources. The Manufacturer undertakes that it shall not allow any persons other than its authorized employees and agents under its direct control and supervision to have access to the Biological Resources.

5.4 The Manufacturer undertakes to comply with all the laws in force in the territory of India and respect and abide by the principles of the Convention on Biological Diversity, 1992, International treaty on Plant Genetic Resources for Food and Agriculture

(PGRFA), 2003 and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The approval given under this agreement is without prejudice to any other approvals that may be required to be taken from any other authorities. Failure to do so shall be a material breach of this Agreement.

## **6. No Transfer of Biological Resources or Associated Knowledge**

6.1 The Manufacturer shall not distribute, transfer or part with the Biological Resources in any manner without obtaining the prior written consent of the NBA under the provisions of the Act. Nothing contained in this Agreement shall be construed as an authorization from the NBA for the transfer of Biological Resources or any associated knowledge by the Manufacturer.

6.2 The Manufacturer undertakes to protect the Biological resources at least as well as it protects its own valuable tangible personal property and shall take measures to protect the Biological Resources from any claims by third parties including creditors and trustees appointed by the court or other authorities in certain legal proceedings like bankruptcy, winding up etc.

## **7. Fees, Royalty and other Benefit Sharing**

7.1 The Manufacturer shall pay to the NBA a sum of .....Rupees as non refundable license fee/milestone payment/licence fee/one time payment/and or kind payment upon execution of this Agreement.

7.2 The Manufacturer shall pay a sum of .....Rupees as conservation fee, which shall be deposited in the National Biodiversity Fund.

7.3 The Manufacturer shall pay to the NBA, on or before 31<sup>st</sup> of March every year, during the term of this Agreement a royalty of.....% as agreed of the total sales of the Product.

7.4 In the event of large amounts of raw material being required for production, the Manufacturer/User will investigate the mass propagation (cultivation) of the material in India. Consideration will be given to sustainable harvest of the material while conserving the biological diversity of the region, and involvement of the local population in the planning and implementation stages, so as to generate employment to the local people.

## **8. Reports and Audit**

8.1 The Manufacturer shall submit to NBA within sixty days after each half year ending September 30 and March 31, a report setting forth the following:

- (a) the quantity of Biological Resources accessed.

- (b) the total quantity of the Products produced by the use of the Accessed Biological Resource.
- (c) the total billings of such Products (ex factory)
- (e) any other information sought by the NBA by a written notice.

8.2 The Manufacturer shall keep accurate records (together with supporting documentation) appropriate to determine all amounts due to NBA. Such records shall be retained for at least three (3) years following the end of the reporting period to which they relate.

8.3 The records mentioned in clause 8.2 should be made available during normal business hours for audit by any person authorised by NBA, for the sole purpose of verifying reports and payments hereunder. In conducting audits pursuant to this clause, such person shall have access to all records which he reasonably believes to be relevant to the calculation of royalties.

8.4 The audit by such authorized person shall be at the expense of NBA, except that if such audit shows an underreporting or underpayment in excess of five percent (5%) for any twelve (12) month period, then Manufacturer/such other person shall pay the cost of such examination as well as any additional sum that would have been payable to NBA had the Manufacturer/such other person reported correctly, plus interest on said sum at the rate of three per cent (3%) more than the then prevailing rate of Interest in a nationalized bank per month from the date of the incorrect reporting.

## **9. Liabilities and Indemnification**

9.1 The NBA makes no warranties of any kind, express or implied, under domestic or international laws as to the safety of the Biological Resources, nor as to the accuracy or correctness of any passport data or any other data provided by the NBA or any other person or agency. The NBA does not make any warranties as to quality, viability or purity (genetic or otherwise) of the Biological Resources.

9.2 The Manufacturer shall be solely responsible for any claims by third parties arising from the Manufacturer's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible for any such claims by third parties.

9.3 The Manufacturer indemnifies and save harmless NBA and its employees from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Manufacturer, its employees or agents, (whether by reason of negligence or otherwise) in the performance by the Manufacturer of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.



9.4 The Manufacturer shall be liable if he fails to ensure proper flow of benefit sharing and other fees mentioned in clause 8 under this Agreement or other agreements, which are the direct or indirect result of this Agreement. The Manufacturer undertakes to make good all such losses as determined by the NBA in its yearly audits, within 15 days from the date any such order is communicated to the Manufacturer.

## **10. Term and Termination**

10.1 This Agreement, unless terminated as provided herein, shall remain in effect for a period of ..... years (case to case basis) from the date on which the Manufacturer made its first access to the Biological Resources under this Agreement.

10.2 NBA may terminate this Agreement as follows:

(a) If the Manufacturer does not make a payment due hereunder and fails to cure such non-payment within forty-five (45) days after the date of notice in writing of such non-payment by NBA.

(b) If the Manufacturer becomes insolvent or shall have a petition in bankruptcy, winding up filed for or against it. Such termination shall be effective immediately upon NBA giving written notice to the Manufacturer.

(c) If an audit conducted pursuant to clause 8.3 shows an underreporting or underpayment by the Manufacturer in excess of 20% for any twelve (12) month period.

(d) Except as provided in subparagraphs (a), (b) or (c) above, if the Manufacturer defaults in the performance of any obligations under this Agreement and the default has not been remedied within sixty (60) days after the date of notice in writing of such default by NBA.

(e) On the happening of any of the events mentioned in Rule 15 of Biological Diversity Rules 2004.

10.3 The Manufacturer may terminate this Agreement by giving sixty (60) days advance written notice of termination. Upon termination, the Manufacturer shall submit a final Royalty/milestone payment/license fee/one time payment report to NBA and any royalty payments invoiced by NBA shall become immediately payable.

10.4 Upon termination of this Agreement, the Manufacturer shall cease all use of the Biological Resources and shall, upon request, return or destroy (at the option of NBA) all Biological Resources under its control or in its possession.

10.5 Clause 9.3 of this Agreement shall survive termination.

## **11. Notice**

11.1 Wherever in this Agreement, it is required or permitted that a communication, notice or demand be given or served by either Party to or on the other Party, such communication, notice or demand will be in writing and will be validly given or sufficiently communicated if forwarded by Registered mail acknowledgement due, e-mail, telegram, telex or facsimile as follows:

The addresses for delivery are:

To the NBA:

The Chairperson, National Biodiversity Authority, 475, 9<sup>th</sup> South Cross Street, Kapaleeswarar Nagar, Neelangarai, Chennai – 600041

e-mail:..... fax:.....

To the Manufacturer:

.....

11.2 Notice will be deemed to have been delivered:

- (a) if delivered by hand, upon receipt;
- (b) if sent by electronic transmission, 48 hours after the time of transmission, excluding from the calculation weekends and public holidays;
- (c) if sent by certified mail, four (4) days after the mailing thereof, provided that if there is a postal strike or other disruption such notice will be delivered by hand or electronic transmission.

11.3 The Parties may change their respective addresses for delivery by delivering notice of change as provided in this paragraph.

## **12. Dispute Resolution**

### **12.1 Good Faith Negotiation**

12.1.1 If any controversy, question, dispute or difference (hereinafter referred to as a 'Dispute') between the Parties hereto arises under this Agreement, any Party may give the other Party a written notice of Dispute adequately identifying and providing details of the Dispute. On receipt of such notice by the other Party, the Parties shall try to settle the Dispute amicably between them by negotiating in good faith within 30 days of the receipt of the notice of Dispute by the other Party.

12.1.2 All aspects of such negotiation, except the fact of its occurrence, will be privileged and no Party shall be allowed to rely on the records of such negotiation before any arbitration or proceedings in any court.

## **12.2 Arbitration**

12.2.1 If the Dispute is not resolved by such good faith negotiation within the period mentioned, the Parties agree to settle the Dispute through arbitration conducted by the sole arbitrator appointed by the NBA. The arbitration shall be governed by the Arbitration and Conciliation Act, 1996. The place of arbitration shall be Chennai, India. The language to be used in the arbitration proceedings shall be in English or as mutually agreed between Parties.

12.2.2 The parties hereto agree that the award and determination of the arbitrator shall be final and binding on both parties hereto.

12.2.3 During the progress of arbitration, the Parties hereto shall continue to perform their obligations under this Agreement.

## **12.3 Attorney Fees**

The Parties hereto agree that in the event that this Agreement becomes subject to litigation (either in Courts or before Arbitration) between the Parties hereto, the prevailing Party shall be entitled to an award of attorney's fees, costs, and interest at the rate of 15% from the other Party. The interest shall be calculated from the date of notice of the Dispute given in accordance with the terms of this Agreement.

## **13. Governing Law and Jurisdiction**

This Agreement is governed by and is to be construed in accordance with the laws of the Republic of India without regard for conflicts of laws principles. The Parties irrevocably and unconditionally submits to the exclusive jurisdiction of the courts in Chennai, India and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

## **14. Waiver**

The Waiver by NBA, of any breach of any terms of this Agreement made by the Manufacturer shall not prevent the subsequent enforcement of that term and shall not be deemed a waiver of any subsequent breach.

## **15. Severability**

If any part of this Agreement is declared or held invalid by a court for any reason, the invalidity of that part will not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.

## **16. Modification**

No amendment or modification of this Agreement shall be valid or binding upon the Parties, unless agreed upon by both Parties, made in writing, and signed on behalf of each of the Parties by their duly and legally authorized signatories.

## **17. Entire Agreement**

17.1 This Agreement constitutes the entire understanding between the parties as to the subject matter of this Agreement. This Agreement sets forth all representations forming part of or in any way affecting or relating to the subject matter of this Agreement.

17.2 The Parties acknowledge that there are no representations either oral or written, as regards the subject matter of this Agreement, between the NBA and the Manufacturer other than those expressly set out in this Agreement. All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this Agreement are merged in and superseded by this document and are of no effect.

For the removal of doubts, 'subject matter of this Agreement' is the transfer of results of research on any biological resource obtained from India.

## **18. Representations**

18.1 Either Party represent to each other Party that it has the legal right and power to enter into this Agreement and to perform its obligations under the terms of this Agreement and the execution, delivery and performance of this Agreement by it has been duly and validly authorized by all necessary corporate action or Government action on its part.

18.2 The Parties further represent that this Agreement is valid and binding agreement of it, enforceable in accordance with its terms and the execution and performance of this Agreement by it does not, and other transactions contemplated by this Agreement do not, violate or conflict with or result in a breach of or constitute a default under its constitution or laws.

18.3 No implied terms or obligations of any kind by or on behalf of either of the Parties shall arise from anything in this Agreement. The express covenants and agreements herein contained and made by the Parties are the only covenants and agreements upon which any rights against either of the Parties may be founded as to the subject matter of this Agreement.

The documents attached hereto as Schedules forms an integral part of this Agreement as fully as if it were set forth herein *in extenso*, and consists of:

Schedule A: Details of the Biological Resources

Schedule B: Details of the Commercial Utilisation

Schedule C: Details of the constitution of the Manufacturer

Schedule D: Application Form I

and any other Appendix that may be added subsequently under the provisions of this Agreement.

This Agreement has been executed in Duplicate. Each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

**IN WITNESS WHEREOF** this Agreement has been executed by duly authorized representatives of the Parties on the day and the year first mentioned

For National Biodiversity Authority:

For the Manufacturer:

**APPROVAL AGREEMENT FOR ACCESS TO BIOLOGICAL RESOURCES  
(Research/Bio-survey)**

This Agreement is entered into as of the ..... day of ....., 2005

**By and Between**

**National Biodiversity Authority** (Hereinafter referred to as "the **NBA**") having its office at 475,9th South Cross Street, Kapaleeswar Nagar, Neelankarai, Chennai - 6000041.

and

..... (Hereinafter referred to as "the Researcher").

Hereinafter, the NBA and the shall collectively be referred to as "the Parties" and individually as "Party".

**WHEREAS:**

NBA has been established by the Government of India under the powers granted to it by section 8 of the Biological Diversity Act 2002 (Act 18 of 2003). Under the said Act, NBA is the authority to permit access to any biological resources found within the territory of India.

Researcher is a Company/University/Individual, who/which is involved in the investigation of plants, animals and micro organisms, both terrestrial and marine, for the purpose of .....

Researcher has made an application in Form I, under Rule 14 of the Biological Diversity Rules 2004 to seek approval from the NBA for access to the Biological Resources for the purpose of Research/Bio-survey.

**The Parties hereto agree as follows:**

**1. Definitions:** In this Agreement:

**Act** means the Biological Diversity Act 2003 (Act 18 of 2003) and includes the Rules/Regulations made under it.

**Biological Resources:** means biological resources as defined in the Act (and includes any associated knowledge) to which the Researcher seeks access to and is described in detail in Schedule A.

Research means any activity referred to in clauses (d) and (m) of section 2 of the Act but limited to the description provided in Schedule B to this Agreement.

[Additions to me made in accordance with the needs on a case to case basis]

## 2. Interpretations

Unless expressed to the contrary, in this Agreement:

- (a) words in the singular include the plural and vice versa;
- (b) any gender includes the other genders;
- (c) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
- (d) a reference to:
  - (i) a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;
  - (ii) any legislation or subordinate legislation includes any corresponding later legislation or subordinate legislation;
  - (iii) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
  - (iv) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes fax transmission; and
  - (v) this Agreement includes all schedules and annexures to it;
- (g) if the date on or by which any act must be done under this document is not a Business Day, the act must be done on or by the next Business Day.

(h) All headings in this Agreement have been inserted as a matter of convenience and for reference only and in no way define, limit, enlarge, modify the scope or meaning of the Agreement or any of its provisions.

### **3. Grant of Approval**

3.1 The Researcher requests for approval and the NBA hereby grants the approval to access the Biological Resources for the purposes of Research subject to the terms and conditions set forth in this Agreement.

3.2 Any activities involving the Biological resources that are not expressly authorized by the provisions of this Agreement and any annexures hereto shall be deemed to be expressly prohibited.

3.3 The Researcher hereby agrees that this Agreement shall not in any way constitute or be presumed to constitute a partnership, joint venture or joint enterprise in any way or for any purpose between the Parties hereto or make them in any way liable as partners of or as agents for one another.

3.4 No Party has the authority to act for or to assume any obligation or responsibility on behalf of the other Party and the relationship between the Parties is that of a person and a statutory authority competent to approve certain actions under the Act.

### **4. Assignment**

4.1 Without the prior written consent (which consent shall entirely be the sole discretion of the NBA) of the NBA in each instance, neither this Agreement nor the rights granted hereunder shall be transferred or assigned in whole or in part by the to any person whether voluntarily or involuntarily, by operation of law or otherwise.

4.2 This Agreement is strictly personal and is granted to the Researcher (as per the description detailed in Schedule C) and this Agreement will be treated as terminated in the event of any substantial changes in the management or shareholding of the including the changes brought by a merger, demerger or any other kind of corporate restructuring. Any such substantial changes shall deem the Researcher as a new entity.

4.3 Any such substantial changes as mentioned in clause 4.2, which transforms the Researcher into a deemed new entity, shall have to make a fresh application as required under the Act to transfer the Lead as permitted under this Agreement. For the removal of doubts, it is made clear that any activity undertaken by the deemed new entity under the approvals granted under this Agreement will be deemed illegal.

## **5. Conditions for Access to Biological Resources**

5.1 The Researcher shall have access only to ..... (quantity) of Biological Resources and undertakes to extract the same in accordance with the directions given by the NBA (this may be delegated to SBB or BMC). The Researcher undertakes to make a statement in writing that none of the activities related to access to Biological Resources or the access itself will adversely affect the ecosystem or the environment.

5.2 The Researcher shall designate any person who shall be responsible for the safe custody of the Biological Resources. The Researcher undertakes that it shall not allow any persons other than its employees and agents under its direct control and supervision to have access to the Biological Resources.

5.3 The Researcher undertakes to comply with all the laws in force in the territory of India and respect and abide by the principles of the Convention on Biological Diversity and Convention on International Trade in Endangered Species of Wild Fauna and Flora. The Researcher shall obtain any other authorizations or permits which may be required under any other law in force and this approval is without prejudice to any other such authorizations or permits that may be required to legally carry out the activities under this Agreement. Failure to do so shall be a material breach of this Agreement.

5.4 The Researcher undertakes to submit half yearly reports on the progress of the Research to the NBA. The Researcher shall collaborate with an Indian research Institution/Universities and shall transfer knowledge, expertise and technology developed during the Research to that Indian entity subject to mutually acceptable guarantees for the protection of intellectual property associated with such technology. The Researcher shall deposit the voucher specimen/Type specimen in the designated repositories of India in culture collection in accordance with the guidelines/directions given by NBA.

## **6. No Transfer of Biological Resources or Associated Knowledge**

6.1 The Researcher shall not distribute, transfer or part with the Biological Resources in any way without obtaining the prior written consent of the NBA under the provisions of the Act. Nothing contained in this Agreement shall be construed as an authorization from the NBA for the transfer of Biological Resources or any associated knowledge by the Researcher.

6.2 The Researcher undertakes to protect the Biological Materials at least as well as it protects its own valuable tangible personal property and shall take measures to protect the Biological Resources from any claims by third parties including creditors and trustees appointed by the court or other authorities in certain legal proceedings like bankruptcy, winding up etc.



## **7. Payment of Fees**

7.1 The shall pay a sum of .....Rupees as interest free deposit, which shall be refunded on the termination of this Agreement subject to deductions, if any.

7.2 The shall pay to the NBA a sum of .....Rupees as a sharing fee for the sharing of traditional knowledge by the .....community/person and the NBA undertakes to transfer the said fee to such community/person without delay. [*Only if TK was shared*]

7.3 The shall pay to the NBA a sum of .....Rupees as non refundable license fee upon execution of this Agreement.

## **8. Liabilities and Indemnification**

8.1 The Researcher shall be solely responsible for any claims by third parties arising from the Researcher's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible for any such claims by third parties.

8.2 The Researcher shall indemnify and save harmless NBA and its employees from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Researcher, its employees or agents, (whether by reason of negligence or otherwise) in the performance by the Researcher of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

## **9. Term and Termination**

9.1 This Agreement, unless terminated as provided herein, shall remain in effect for a period of two years from the date on which the made its first access to the Biological Resources under this Agreement.

9.2 NBA may terminate this Agreement as follows:

(a) If the Researcher does not make a payment due hereunder and fails to cure such non-payment within forty-five (45) days after the date of notice in writing of such non-payment by NBA.

(b) If the Researcher becomes insolvent or shall have a petition in bankruptcy, winding up filed for or against it. Such termination shall be effective immediately upon NBA giving written notice to the Researcher.

(c) Except as provided in subparagraphs (a) and (b) above, if the Researcher defaults in the performance of any obligations under this Agreement and the default has not been remedied within sixty (60) days after the date of notice in writing of such default by NBA.

9.3 The Researcher may terminate this Agreement by giving sixty (60) days advance written notice of termination to the NBA and paying a termination fee of..... Rupees. Upon termination, the Researcher shall submit a final Report of the entire research and results obtained from it to the NBA.

9.4 Upon termination of this Agreement, the Researcher shall cease all use of the Biological Resources and shall, upon request, return or destroy (at the option of NBA) all Biological Resources under its control or in its possession.

9.5 Clause 8.2 of this Agreement shall survive termination.

## **10. Confidentiality**

10.1 The NBA agree to treat as confidential any and all Confidential Information obtained from the marked as “CONFIDENTIAL” and to that end further agree that information disclosed pursuant to this Agreement relating to the Formulations, including efforts to commercialize the Formulations, shall be deemed Confidential Information.

10.2 Notwithstanding clause 10.1, Confidential Information may be disclosed to the extent required by any law or regulation of any governmental authority having jurisdiction over any of the Parties, with appropriate efforts made to maintain confidentiality.

10.3 Both Parties shall maintain Confidential Information in confidence, for as long as the confidential information does not fall within the Public Domain.

10.4 All information exchanged between the Parties under this Agreement or during the negotiation of this Agreement, marked ‘CONFIDENTIAL’ by the Party, is confidential and may not be disclosed to any person except to the Party’s professional advisers on condition that they agree to be bound by the terms of this clause

10.5 Notwithstanding anything contained in this clause, the NBA shall not be restricted to make any disclosure of any confidential information, if in its reasonable opinion such disclosures become important to deal with any emergency conditions.

## **11. Force Majeure**

The Researcher will not be liable for performance delays or for non-performance due to causes beyond its reasonable control.

## **12. Notice**

12.1 Wherever in this Agreement, it is required or permitted that a communication, notice or demand be given or served by either Party to or on the other Party, such communication, notice or demand will be in writing and will be validly given or

sufficiently communicated if forwarded by Registered mail acknowledgement due, e-mail, telegram, telex or facsimile as follows:

The addresses for delivery are:

To the NBA:

The Chairperson, National Biodiversity Authority, 475, 9<sup>th</sup> South Cross Street, Kapaleeswarar Nagar, Neelangarai, Chennai – 600041

e-mail:..... fax:.....

To the Researcher :

.....

12.2 Notice will be deemed to have been delivered:

- (a) if delivered by hand, upon receipt;
- (b) if sent by electronic transmission, 48 hours after the time of transmission, excluding from the calculation weekends and public holidays;
- (c) if sent by certified mail, four (4) days after the mailing thereof, provided that if there is a postal strike or other disruption such notice will be delivered by hand or electronic transmission.

12.3 The Parties may change their respective addresses for delivery by delivering notice of change as provided in this paragraph.

**13. Dispute Resolution**

**13.1 Good Faith Negotiation**

13.1.1 If any controversy, question, dispute or difference (hereinafter referred to as a ‘Dispute’) between the Parties hereto arises under this Agreement, any Party may give the other Party a written notice of Dispute adequately identifying and providing details of the Dispute. On receipt of such notice by the other Party, the Parties shall try to settle the Dispute amicably between them by negotiating in good faith within 30 days of the receipt of the notice of Dispute by the other Party.

13.1.2 All aspects of such negotiation, except the fact of its occurrence, will be privileged and no Party shall be allowed to rely on the records of such negotiation before any arbitration or proceedings in any court.

## **13.2 Arbitration**

13.2.1 If the Dispute is not resolved by such good faith negotiation within the period mentioned, the Parties agree to settle the Dispute through arbitration conducted by the sole arbitrator appointed by the Chairperson, NBA. The arbitration shall be governed by the Arbitration and Conciliation Act, 1996. The place of arbitration shall be Chennai, India. The language to be used in the arbitration proceedings shall be English.

13.2.2 The parties hereto agree that the award and determination of the arbitrator shall be final and binding on both parties hereto.

13.2.3 During the progress of arbitration, the Parties hereto shall continue to perform their obligations under this Agreement.

## **13.3 Attorney Fees**

18.1 The Parties hereto agree that in the event that this Agreement becomes subject to litigation (either in Courts or before Arbitration) between the Parties hereto, the prevailing Party shall be entitled to an award of attorney's fees, costs, and interest at the rate of 15% from the other Party. The interest shall be calculated from the date of notice of the Dispute given in accordance with the terms of this Agreement.

## **14. Governing Law and Jurisdiction**

This Agreement is governed by and is to be construed in accordance with the laws of the Republic of India without regard for conflicts of laws principles. The Parties irrevocably and unconditionally submits to the exclusive jurisdiction of the courts in Chennai, India and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

## **15. Waiver**

The Waiver by NBA, of any breach of any terms of this Agreement made by the Manufacturer shall not prevent the subsequent enforcement of that term and shall not be deemed a waiver of any subsequent breach.

## **16. Severability**

If any part of this Agreement is declared or held invalid by a court for any reason, the invalidity of that part will not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.

## 17. Modification

No amendment or modification of this Agreement shall be valid or binding upon the Parties, unless agreed upon by both Parties, made in writing, and signed on behalf of each of the Parties by their duly and legally authorized representative officers.

## 18. Entire Agreement

18.1 This Agreement constitutes the entire understanding between the parties as to the subject matter of this Agreement. This Agreement sets forth all representations forming part of or in any way affecting or relating to the subject matter of this Agreement.

18.2 The Parties acknowledge that there are no representations either oral or written, as regards the subject matter of this Agreement, between the NBA and the other than those expressly set out in this Agreement. All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this Agreement are merged in and superseded by this document and are of no effect.

For the removal of doubts, 'subject matter of this Agreement' is the transfer of results of research on any biological resource obtained from India.

## 19. Representations

19.1 Either Party represent to each other Party that it has the legal right and power to enter into this Agreement and to perform its obligations under the terms of this Agreement and the execution, delivery and performance of this Agreement by it has been duly and validly authorized by all necessary corporate action or Government action on its part.

19.2 The Parties further represent that this Agreement is valid and binding agreement of it, enforceable in accordance with its terms and the execution and performance of this Agreement by it does not, and other transactions contemplated by this Agreement do not, violate or conflict with or result in a breach of or constitute a default under its constitution or laws.

19.3 No implied terms or obligations of any kind by or on behalf of either of the Parties shall arise from anything in this Agreement. The express covenants and agreements herein contained and made by the Parties are the only covenants and agreements upon which any rights against either of the Parties may be founded as to the subject matter of this Agreement.

The documents attached hereto as Schedules forms an integral part of this Agreement as fully as if it were set forth herein *in extenso*, and consists of:

Schedule A: Details of the Biological Resources

Schedule B: Details of the Research

Schedule C: Details of the constitution of the

and any other Appendix that may be added subsequently under the provisions of this Agreement.

This Agreement has been executed in Duplicate. Each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

**IN WITNESS WHEREOF** this Agreement has been executed by duly authorized representatives of the Parties on the day and the year first mentioned

For National Biodiversity Authority:

For the Researcher :

### **APPROVAL AGREEMENT FOR RESEARCH RESULTS**

This Agreement is entered into as of the ..... day of ....., 2005

#### **By and Between**

**National Biodiversity Authority** (Hereinafter referred to as "the **NBA**") having its office at 475,9th South Cross Street, Kapaleeswar Nagar, Neelankarai, Chennai - 6000041.

and

..... (Hereinafter referred to as "the **Technologist**").

Hereinafter, the NBA and the Technologist shall collectively be referred to as "the Parties" and individually as "Party".

#### **WHEREAS:**

NBA has been established by the Government of India under the powers granted to it by section 8 of the Biological Diversity Act 2002 (Act 18 of 2003). Under the said Act, NBA is the authority to permit access to any biological resources found within the territory of India.

Technologist is a Company/University/Individual, who/which has accessed the biological resources (and the associated knowledge) under the provisions of the Biological Diversity Act 2002 for the purposes of research/bio-survey and bio-utilisation. The Technologist has obtained certain 'Leads', which has got certain commercial value in the market.

Technologist has made an application in Form II, under Rule 17 of the Biological Diversity Rules 2004 to seek approval from the NBA to transfer these 'Leads' to a User.

**The Parties hereto agree as follows:**

#### **1. Definitions**

In this Agreement:

**Act** means the Biological Diversity Act 2003 (Act 18 of 2003) and includes the Rules/Regulations made under it.

**Biological Resources:** means biological resources as defined in the Act (and includes any associated knowledge) (Section 2 subsection c) to which the Technologist had access to and was a component in the research for which a Lead had been obtained. The Biological Resources are more fully described in Schedule A to this Agreement.

**Commercial Utilisation** means as defined in the Section 2 subsection f of the Act.

**Lead** means the results of research relating to the Biological Resources, which the Technologist seeks to transfer and has been elaborately described in Schedule B to this Agreement.

**User** means the person to whom the Lead is intended to be transferred and the details of whom are elaborately mentioned in Schedule C to this Agreement.

*[Additions to me made in accordance with the needs]*

## 2. Interpretations

Unless expressed to the contrary, in this Agreement:

- (a) words in the singular include the plural and vice versa;
- (b) any gender includes the other genders;
- (c) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
- (d) a reference to:
  - (i) a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;
  - (ii) any legislation or subordinate legislation includes any corresponding later legislation or subordinate legislation;
  - (iii) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
  - (iv) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes fax transmission; and

- (v) this Agreement includes all schedules and annexures to it;
- (g) if the date on or by which any act must be done under this document is not a Business Day, the act must be done on or by the next Business Day.
- (h) All headings in this Agreement have been inserted as a matter of convenience and for reference only and in no way define, limit, enlarge, modify the scope or meaning of the Agreement or any of its provisions.

### **3. Grant of Approval**

3.1 The Technologist requests for approval and the NBA hereby grants the approval to transfer the Lead subject to the terms and conditions set forth in this Agreement.

3.2 The Technologist hereby agrees that this Agreement shall not in any way constitute or be presumed to constitute a partnership, joint venture or joint enterprise in any way or for any purpose between the Parties hereto or make them in any way liable as partners of or as agents for one another.

3.3 No Party has the authority to act for or to assume any obligation or responsibility on behalf of the other Party and the relationship between the Parties is that of a person and a statutory authority competent to approve certain actions under the Act.

### **4. Assignment and Transfer**

In the event of any assignment or transfer of this Agreement in whole or in part by the Technologist to any person whether voluntarily or involuntarily, by operation of law or otherwise, all obligations under this Agreement shall accrue on such assignee or transferee. The Technologist undertakes to include this Agreement as an appendix to the instrument making the assignment or transfer of this Agreement.

### **5. Transfer of the Lead**

5.1 The NBA encourages the Technologist to obtain any kind of legal protection to the Lead, including obtaining intellectual property rights or maintaining it as a trade secret as deemed appropriate by the Technologist before transferring the Lead.

5.2 If the Lead is being transferred for further research and commercialization as a product, the agreement licensing the Lead to the User shall contain all the provisions of this Agreement. Such licensing/sub licensing agreement shall mention the existence of this Agreement and shall require such such licensor/sub-licensor to enter into agreement with the NBA as appropriate so as to ensure the proper flow of benefit to the benefit claimers. Modify this



5.3 All Licenses and sub licenses granted by the Technologist or User for Commercial Utilisation shall ensure the flow of benefits to the benefit claimers and other stakeholders in India.

5.4 The Technologist, while applying for any legal protection for the Lead, undertakes to declare that the Biological Resources were obtained from India and in the event of the use of any associated knowledge obtained from a traditional healer or community, their permission will be sought and a proper acknowledgement of their contribution shall also be declared by the Technologist.

## **6. No Transfer of Biological Resources or Associated Knowledge**

6.1 The Biological Materials will not be distributed to any person for any purpose without the prior written consent of NBA obtained under the provisions of the Act. Nothing contained in this Agreement shall be construed as an authorization from the NBA for the transfer of Biological Resources or any associated knowledge by the Technologist.

6.2 If the User/any other person obtaining the Lead as a direct or indirect result of this Agreement, desires to use the Biological Resources for Commercial Utilisation, or indirectly in research designed to identify or produce materials with commercial value, the User/such person agrees to make an application under the appropriate provisions and forms under the Act for access to Biological Resources.

## **7. Undertaking**

7.1 The Technologist/User/any other person will seek to utilize bioresources of India as its first source of supply and/or cultivation for raw materials (Biological Resources) required for use connected with the exploitation of the Lead or improvements made on it, if such material can be made available in quantities and quality sufficient for use by the Technologist/User/such person at a mutually agreeable fair price. If such material must be cultivated, the Technologist/User/such person agrees to utilize territory under the control of the Republic of India as its first source of such cultivation efforts.

7.2 The NBA makes no warranties as to the safety of the Lead, nor as to the accuracy or correctness of any results of the research conducted on the Biological resource. The Technologist assumes full responsibility for complying with the rules and regulations for a legal transfer of the Lead.

## **8. Fees, Royalty and other Benefit Sharing**

8.1 The Technologist shall pay to the NBA a sum of .....Rupees as a sharing fee for the sharing of traditional knowledge by the .....community/person and the NBA undertakes to transfer the said fee to such community/person without delay. *[Only if TK was shared]*

8.2 The Technologist shall pay to the NBA a sum of .....Rupees as non refundable approval fee upon execution of this Agreement.

8.3 The Technologist shall pay a conservation fee of .....Rupees. (This fee will be decided by the NBA taking several factors like whether the Technologist has been successful in selecting India as source country for raw material procurement) (Conservation fee will be used to meet the expenses associated with conservation of endangered species)

8.4 The Technologist shall pay to the NBA, by the 31<sup>st</sup> of March every year, during the term of this Agreement a royalty of.....% of the royalty it gets from direct or indirect Commercial Utilisation of the Lead, which shall promptly be transferred by the NBA to the benefit claimers in accordance with the Act.

8.5 The Technologist undertakes to use his best endeavours to transfer the technology to any Indian entity and shall also inspect the feasibility of Commercial Utilisation of the Lead in India involving the local people.

8.6 In the event of large amounts of raw material being required for Commercial Utilisation of the Lead, the Technologist/User/such person using the Lead will investigate the mass propagation of the material in India. Consideration will be given to sustainable harvest of the material while conserving the biological diversity of the region, and involvement of the local population in the planning and implementation stages, so as to generate employment to the local people.

## **9. Reports and Audit**

9.1 The Technologist shall submit to NBA within sixty days after each half year ending September 30 and March 31, a report setting forth the following:

- (a) the number of agreements entered in to as a direct or indirect result of this Agreement.
- (b) the amount of royalty received by the Technologist as a result of such agreements.
- (c) any Product that is sold on the market as a result of the Lead or improvements made on it
- (d) the total billings of such Products (ex factory)
- (e) any other information sought by the NBA by a written notice.

9.2 The Technologist shall keep, and shall require all other persons with which it has entered into agreements as a direct or indirect result of this Agreement, accurate records (together with supporting documentation) required to determine the amount of royalties

due to NBA. Such records shall be retained for at least three (3) years following the end of the reporting period to which they relate.

9.3 The records mentioned in clause 9.2 should be made available during normal business hours for audit by any person authorised by NBA, for the sole purpose of verifying reports and payments hereunder. In conducting audits pursuant to this clause, such person shall have access to all records which he reasonably believes to be relevant to the calculation of royalties. Such authorized person shall not disclose to NBA any information other than information relating to the accuracy of reports and payments made hereunder.

9.4 The audit by such authorized person shall be at the expense of NBA, except that if such audit shows an underreporting or underpayment in excess of five percent (5%) for any twelve (12) month period, then Technologist/such other person shall pay the cost of such examination as well as any additional sum that would have been payable to NBA had the Technologist/such other person reported correctly, plus interest on said sum at the rate of twelve per cent (12%) per month from the date of the incorrect report.

## **10. Liabilities and Indemnification**

10.1 The Technologist shall be solely responsible for any claims by third parties arising from the Technologist's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible for any such claims by third parties.

10.2 The Technologist shall indemnify and save harmless NBA and its employees from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to, occasioned by or attributable to, any acts or conduct of the Technologist, its employees or agents, (whether by reason of negligence or otherwise) in the performance by the Technologist of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

10.3 The Technologist shall be deemed to be in material breach of this Agreement, if he fails to ensure proper flow of benefit sharing and other fees mentioned in clause 8 under this Agreement. The Technologist undertakes to make good all such losses as determined by the NBA in its yearly audits, within 15 days from the date of any notice to that effect is communicated to the Technologist.

10.4 The Technologist undertakes to pay a sum of .....rupees for any material breach of this Agreement and further undertakes to pay such sum of .....rupees as determined by NBA as the loss incurred by the Republic of India or the stake holders involved.

10.5 Notwithstanding anything contained in this clause, the NBA shall not be restricted to make any disclosure of any confidential information, if in its reasonable opinion such disclosures become important to deal with any emergency conditions.

## 11. Term and Termination

11.1 This Agreement shall remain in force until the Technologist transfers the Lead or further improvements on it to the User and such User enters into an agreement with the NBA.

## 12. Confidentiality

12.1 The NBA agree to treat as confidential any and all Confidential Information obtained from the Technologist marked as “CONFIDENTIAL” and to that end further agree that information disclosed pursuant to this Agreement relating to the Formulations, including efforts to commercialize the Formulations, shall be deemed Confidential Information.

12.2 Notwithstanding clause 12.1, Confidential Information may be disclosed to the extent required by any law or regulation of any governmental authority having jurisdiction over any of the Parties, with appropriate efforts made to maintain confidentiality.

12.3 NBA shall maintain Confidential Information in confidence, for as long as the confidential information does not fall within the Public Domain.

12.4 The Technologist undertakes to use its best endeavors to maintain the confidentiality of the Lead in such a manner that the benefits under this Agreement flows to the benefit claimers to the longest possible period.

12.5 All information exchanged between the Parties under this Agreement or during the negotiation of this Agreement, marked ‘CONFIDENTIAL’ by the Party, is confidential and may not be disclosed to any person except:

- (a) if it is necessary for the Technologist to disclose the information to a person in the course of negotiating a licence/Sublicence or other agreement concerning Commercial Utiliisation with the person, on condition that the person agrees to be bound by the terms of this clause; or
- (b) to the Party’s professional advisers on condition that they agree to be bound by the terms of this clause

## 13. Force Majeure

The Researcher will not be liable for performance delays or for non-performance due to causes beyond its reasonable control.

## 14. Notice

14.1 Wherever in this Agreement, it is required or permitted that a communication, notice or demand be given or served by either Party to or on the other Party, such communication, notice or demand will be in writing and will be validly given or sufficiently communicated if forwarded by Registered mail acknowledgement due, e-mail, telegram, telex or facsimile as follows:

The addresses for delivery are:

To the NBA:

The Chairperson, National Biodiversity Authority, 475, 9<sup>th</sup> South Cross Street, Kapaleeswarar Nagar, Neelangarai, Chennai – 600041

e-mail:..... fax:.....

To the Technologist:

.....

14.2 Notice will be deemed to have been delivered:

- (a) if delivered by hand, upon receipt;
- (b) if sent by electronic transmission, 48 hours after the time of transmission, excluding from the calculation weekends and public holidays;
- (c) if sent by certified mail, four (4) days after the mailing thereof, provided that if there is a postal strike or other disruption such notice will be delivered by hand or electronic transmission.

14.3 The Parties may change their respective addresses for delivery by delivering notice of change as provided in this paragraph.

## 15. Dispute Resolution

15.1 The Parties agree that any dispute, claim, or controversy concerning this Agreement or the termination of this Agreement, or any dispute, claim, or controversy arising out of or relating to any interpretation, construction, performance or breach of this Agreement, shall be settled by good faith negotiation between the Parties.

15.2 If the Parties fail to reach a settlement by a good faith negotiation within thirty days from the date on which such difference or dispute arose, such difference or dispute shall be settled by arbitration by a sole arbitrator to be appointed by the Chairperson of the NBA. The arbitration shall be governed by the Arbitration and Conciliation Act, 1996.

The place of arbitration shall be Chennai, India. The language to be used in the arbitration proceedings shall be English.

15.3 The Arbitrator shall decide the matter in dispute within six months from the date such reference was made to him and the decision of the arbitrator shall be final, conclusive and binding on the Parties.

15.4 The Parties hereto agree that in the event that this Agreement becomes subject to litigation (either in Courts or before Arbitration) between the Parties hereto, the prevailing Party shall be entitled to an award of attorney's fees, costs, and interest at the rate of 15% from the other Party. The interest shall be calculated from the date of notice of the Dispute given in accordance with the terms of this Agreement.

## **16. Governing Law and Jurisdiction**

16.1 This Agreement is governed by and is to be construed in accordance with the laws of the Republic of India without regard for conflicts of laws principles. The Parties irrevocably and unconditionally submits to the exclusive jurisdiction of the courts in Chennai, India and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

## **17. Waiver**

The Waiver by NBA, of any breach of any terms of this Agreement made by the Manufacturer shall not prevent the subsequent enforcement of that term and shall not be deemed a waiver of any subsequent breach.

## **18. Severability**

If any part of this Agreement is declared or held invalid by a court for any reason, the invalidity of that part will not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.

## **19. Modification**

No amendment or modification of this Agreement shall be valid or binding upon the Parties, unless agreed upon by both Parties, made in writing, and signed on behalf of each of the Parties by their duly and legally authorized representative officers.

## **20. Entire Agreement**

20.1 This Agreement constitutes the entire understanding between the parties as to the subject matter of this Agreement. This Agreement sets forth all representations forming part of or in any way affecting or relating to the subject matter of this Agreement.

20.2 The Parties acknowledge that there are no representations either oral or written, as regards the subject matter of this Agreement, between the NBA and the Technologist other than those expressly set out in this Agreement. All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this Agreement are merged in and superseded by this document and are of no effect.

For the removal of doubts, 'subject matter of this Agreement' is the approval granted by the NBA to the Technologist to transfer the Lead described in Schedule B.

## **21. Representations**

21.1 Either Party represent to each other Party that it has the legal right and power to enter into this Agreement and to perform its obligations under the terms of this Agreement and the execution, delivery and performance of this Agreement by it has been duly and validly authorized by all necessary corporate action or Government action on its part.

21.2 The Parties further represent that this Agreement is valid and binding agreement of it, enforceable in accordance with its terms and the execution and performance of this Agreement by it does not, and other transactions contemplated by this Agreement do not, violate or conflict with or result in a breach of or constitute a default under its constitution or laws.

21.3 No implied terms or obligations of any kind by or on behalf of either of the Parties shall arise from anything in this Agreement. The express covenants and agreements herein contained and made by the Parties are the only covenants and agreements upon which any rights against either of the Parties may be founded as to the subject matter of this Agreement.

The documents attached hereto as Schedules forms an integral part of this Agreement as fully as if it were set forth herein *in extenso*, and consists of:

Schedule A: Details of the Biological Resources

Schedule B: Details of the Lead

Schedule C: Details of the User

and any other Appendix that may be added subsequently under the provisions of this Agreement. The application made in Form II mentioned in the recitals of this Agreement shall also form a part of this Agreement.

This Agreement has been executed in Duplicate. Each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF this Agreement has been executed by duly authorized representatives of the Parties on the day and the year first mentioned

For National Biodiversity Authority:

For the Technologist:

**APPROVAL AGREEMENT FOR SEEKING INTELLECTUAL PROPERTY RIGHTS**

This Agreement is entered into as of the ..... day of ....., 2005

**By and Between**

**National Biodiversity Authority** (Hereinafter referred to as "the **NBA**") having its office at 475, 9th South Cross Street, Kapaleeswar Nagar, Neelankarai, Chennai - 6000041.

and

..... (Hereinafter referred to as "the **Applicant**", and includes the legal heirs, assigns, successors and administrators).

Hereinafter, the NBA and the Applicant shall collectively be referred to as "the Parties" and individually as "Party".

**WHEREAS:**

NBA has been established by the Government of India under the powers granted to it by section 8 of the Biological Diversity Act 2002 (Act 18 of 2003). Under the said Act, NBA is the authority to permit access to any biological resources found within the territory of India.

Applicant is a Company/University/Individual, who/which has accessed the biological resources (and the associated knowledge) under the provisions of the Biological Diversity Act 2002 for the purposes of research/bio-survey and bio-utilisation. The Applicant claims the use of the accessed biological resources and desires to obtain intellectual property rights over the same.

Applicant has made an application in Form III, under Rule 18 of the Biological Diversity Rules 2004 to seek approval from the NBA prior to obtaining the intellectual property rights on the invention involving the use of the accessed biological resource.

**The Parties hereto agree as follows:**

**1. Definitions**

In this Agreement:

**Act** means the Biological Diversity Act 2003 (Act 18 of 2003) and includes the Rules/Regulations made under it.

**Biological Resources:** means biological resources as defined in the Act (and includes any associated knowledge) to which the Applicant had access to and which finds mention in



the application seeking intellectual property rights made to the appropriate authority and which is more fully described in Schedule A to this Agreement.

**Invention** means the invention which the Applicant seeks to protect by applying for the intellectual property right and has been sufficiently described in Schedule B to this Agreement.

**IPR** means the intellectual property right granted to the Invention by the appropriate authority.

*[Additions to me made in accordance with the needs]*

## **2. Interpretations**

Unless expressed to the contrary, in this Agreement:

- (a) words in the singular include the plural and vice versa;
- (b) any gender includes the other genders;
- (c) if a word or phrase is defined, its other grammatical forms have corresponding meanings;
- (d) a reference to:
  - (i) a person includes a partnership, joint venture, unincorporated association, corporation and a government or statutory body or authority;
  - (ii) any legislation or subordinate legislation includes any corresponding later legislation or subordinate legislation;
  - (iii) an obligation includes a warranty or representation and a reference to a failure to comply with an obligation includes a breach of warranty or representation;
  - (iv) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes fax transmission; and
  - (v) this Agreement includes all schedules and annexures to it;
- (g) if the date on or by which any act must be done under this document is not a Business Day, the act must be done on or by the next Business Day.
- (h) All headings in this Agreement have been inserted as a matter of convenience and for reference only and in no way define, limit, enlarge, modify the scope or meaning of the Agreement or any of its provisions.

### **3. Grant of Approval**

3.1 The Applicant requests for approval and the NBA hereby grants the approval to seek intellectual property rights protection over the Invention in the territories mentioned in Schedule C subject to the terms and conditions set forth in this Agreement.

3.2 The Applicant agrees to take prior approval of NBA in the event of seeking intellectual property rights protection in any other territory not mentioned in Schedule C.

3.3 The Parties hereby agree that this Agreement shall not in any way constitute or be presumed to constitute a partnership, joint venture or joint enterprise in any way or for any purpose between the Parties hereto or make them in any way liable as partners of or as agents for one another.

3.4 No Party has the authority to act for or to assume any obligation or responsibility on behalf of the other Party and the relationship between the Parties is that of a person and a statutory authority competent to approve certain actions under the Act.

### **4. Assignment and Transfer**

In the event of any assignment or transfer (by way of licensing or any other means) of the IPR in whole or in part by the Applicant to any person whether voluntarily or involuntarily, by operation of law or otherwise, all obligations under this Agreement shall accrue on such assignee or transferee. The Applicant undertakes to attach this Agreement as an appendix to the instrument making the assignment or transfer of IPR.

### **5. Obligations of the IPR holder**

5.1 The Applicant undertakes to:

- A. notify in writing to the NBA on the grant of IPR, within thirty days from the grant..
- B. Keep NBA informed of any commercialization made on the IPR granted
- C. Share benefits obtained as a result of obtaining the IPR with the different Stakeholders as directed by the NBA
- D. employ local people, in the event the Applicant chooses to set up his/its own business unit in India to exploit the IPR granted.

5.2 The Applicant will seek to utilize India as its first source of supply and/or cultivation for raw (natural product) materials required for exploitation of the IPR, if such material can be made available in quantities and quality sufficient for use by the Applicant at a mutually agreeable fair price. If such material must be cultivated, the Applicant agrees to seek to utilize territory under the control of the Republic of India as its first source of such cultivation efforts.

5.3 All Licenses and sub-licenses granted by the Applicant for exploiting the IPR shall contain such clauses from this Agreement which ensures the flow of benefits to the benefit claimers and other stakeholders in India, more particularly to utilize India as first source of supply and/or cultivation for raw materials (Biological Resources) required for exploitation of the IPR.

## **6. No Transfer of Biological Resources or Associated Knowledge**

6.1 The Approval granted under this Agreement shall not be construed as an approval granted to the Applicant for transfer, distribute or part with in any manner, the Biological Materials obtained by the Applicant.

6.2 If the Applicant desires to use the Biological Materials for commercial purposes to exploit the IPR, the Applicant agrees to make an application under the appropriate provisions and forms under the Act for access to Biological Resources as a raw material for commercial production.

## **7. Fees, Royalty and other Benefit Sharing**

7.1 The Applicant shall pay to the NBA a sum of .....Rupees as a sharing fee for the sharing of traditional knowledge by the .....community/person and the NBA undertakes to transfer the said fee to such community/person without delay. [Only if TK was shared]

7.2 The Applicant shall pay to the NBA a sum of .....Rupees as non refundable approval fee upon execution of this Agreement.

7.3 The Applicant shall pay a conservation fee of .....Rupees. (This fee will be decided by the NBA taking several factors like whether the Technologist has been successful in selecting India as source country for raw material procurement) (Conservation fee will be used to meet the expenses associated with conservation of endangered species)

7.4 The Applicant shall pay to the NBA, by the 31<sup>st</sup> of March every year, during the term of this Agreement a royalty of.....% of the royalty it gets from the direct or indirect exploitation of the IPR, which shall promptly be transferred by the NBA to the benefit claimers in accordance with the Act.

7.5 The Applicant undertakes to use his best endeavours to transfer the technology to any Indian entity and inspect the feasibility to carry on large scale production of the Product in India involving the local people.

7.6 In the event of large amounts of raw material being required for exploiting the IPR, the Applicant will investigate the mass propagation of the material in India. Consideration will be given to sustainable harvest of the material while conserving the biological diversity of the region, and involvement of the local population in the planning and implementation stages, so as to generate employment to the local people.

## **8. Reports and Audit**

8.1 The Applicant shall submit to NBA within sixty days after each half year ending September 30 and March 31, a report setting forth the following:

- (a) the number of agreements entered in to for the commercial exploitation of the IPR
- (b) the amount of royalty received by the Applicant as a result of such agreements.
- (c) any Products manufactured by the Applicant, based on the IPR or improvements made on it and made available in the market.
- (d) the total billings of such Products (ex factory)
- (e) any other information sought by the NBA by a written notice.

8.2 The Applicant shall keep accurate records (together with supporting documentation) required to determine the amount of royalties due to NBA. Such records shall be retained for at least three (3) years following the end of the reporting period to which they relate.

8.3 The records mentioned in clause 8.2 should be made available during normal business hours for audit by any person authorised by NBA, for the sole purpose of verifying reports and payments hereunder. In conducting audits pursuant to this clause, such person shall have access to all records which he reasonably believes to be relevant to the calculation of royalties. Such authorized person shall not disclose to NBA any information other than information relating to the accuracy of reports and payments made thereunder.

8.4 The audit by such authorized person shall be at the expense of NBA, except that if such audit shows an underreporting or underpayment in excess of five percent (5%) for any twelve (12) month period, then Applicant shall pay the cost of such examination as well as any additional sum that would have been payable to NBA had the Applicant reported correctly, plus interest on said sum at the rate of twelve per cent (12%) per month from the date of the incorrect report.

## **9. Liabilities and Indemnification**

9.1 The Applicant shall be solely responsible for any claims by third parties arising from the Applicant's acts or omissions in the course of performing this Agreement and under no circumstances shall the NBA be held responsible for any such claims by third parties.

9.2 The Applicant indemnifies and save harmless NBA and its employees from and against all claims, demands, losses, damages, costs (including attorney fees), actions, suits or other proceedings, all in any manner based upon, arising out of, related to,

occasioned by or attributable to, any acts or conduct of the Applicant, its employees or agents, (whether by reason of negligence or otherwise) in the performance by the Applicant of the provisions of this Agreement or any activity undertaken or purported to be undertaken under the authority or pursuant to the terms of this Agreement.

9.3 The Applicant shall be deemed to be in material breach of this Agreement, if he fails to ensure proper flow of benefit sharing and other fees mentioned in clause 7 under this Agreement. The Applicant undertakes to make good all such losses as determined by the NBA in its yearly audits, within 15 days from the date of any such notice to that effect is communicated to the Applicant.

9.4 The Applicant undertakes to pay a sum of .....rupees for any material breach of this Agreement and further undertakes to pay such sum of .....rupees as determined by NBA as the loss incurred by the Republic of India or the stake holders involved.

## **10. Term and Termination**

This Agreement shall remain in force until the validity of the IPR that gives a market monopoly to the Applicant. There shall be no termination of this Agreement prior to the period mentioned above.

## **11. Confidentiality**

11.1 The NBA agree to treat as confidential any and all Confidential Information obtained from the Applicant marked as “CONFIDENTIAL” and to that end further agree that information disclosed pursuant to this Agreement relating to the Formulations, including efforts to commercialize the Formulations, shall be deemed Confidential Information.

11.2 Notwithstanding clause 12.1, Confidential Information may be disclosed to the extent required by any law or regulation of any governmental authority having jurisdiction over any of the Parties, with appropriate efforts made to maintain confidentiality. Confidential Information may also be disclosed to the Party’s professional advisers, if it becomes necessary, on condition that they agree to be bound by the terms of this clause

11.3 Both Parties shall maintain Confidential Information in confidence, for as long as such confidential information does not fall within the Public Domain.

## **12. Notice**

12.1 Wherever in this Agreement, it is required or permitted that a communication, notice or demand be given or served by either Party to or on the other Party, such communication, notice or demand will be in writing and will be validly given or sufficiently communicated if forwarded by Registered mail acknowledgement due, e-mail, telegram, telex or facsimile as follows:

The addresses for delivery are:

To the NBA:

The Chairperson, National Biodiversity Authority, 475, 9<sup>th</sup> South Cross Street, Kapaleeswarar Nagar, Neelangarai, Chennai – 600041

e-mail:..... fax:.....

To the Applicant:

.....

12.2 Notice will be deemed to have been delivered:

- (a) if delivered by hand, upon receipt;
- (b) if sent by electronic transmission, 48 hours after the time of transmission, excluding from the calculation weekends and public holidays;
- (c) if sent by certified mail, four (4) days after the mailing thereof, provided that if there is a postal strike or other disruption such notice will be delivered by hand or electronic transmission.

12.3 The Parties may change their respective addresses for delivery by delivering notice of change as provided in this paragraph.

**13. Dispute Resolution**

13.1 The Parties agree that any dispute, claim, or controversy concerning this Agreement or the termination of this Agreement, or any dispute, claim, or controversy arising out of or relating to any interpretation, construction, performance or breach of this Agreement, shall be settled by arbitration by a sole arbitrator to be appointed by the Chairperson of the NBA.

13.2 The arbitration shall be governed by the Arbitration and Conciliation Act, 1996. The place of arbitration shall be Chennai, India. The language to be used in the arbitration proceedings shall be English.

13.3 The Arbitrator shall decide the matter in dispute within six months from the date such reference was made to him and the decision of the arbitrator shall be final, conclusive and binding on the Parties.

13.4 The Parties hereto agree that in the event that this Agreement becomes subject to litigation (either in Courts or before Arbitration) between the Parties hereto, the prevailing Party shall be entitled to an award of attorney's fees, costs, and interest at the

rate of 15% from the other Party. The interest shall be calculated from the date of notice of the Dispute given in accordance with the terms of this Agreement.

#### **14. Governing Law and Jurisdiction**

This Agreement is governed by and is to be construed in accordance with the laws of the Republic of India without regard for conflicts of laws principles. The Parties irrevocably and unconditionally submits to the exclusive jurisdiction of the courts in Chennai, India and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought in those courts.

#### **15. Waiver**

The Waiver by NBA, of any breach of any terms of this Agreement made by the Manufacturer shall not prevent the subsequent enforcement of that term and shall not be deemed a waiver of any subsequent breach.

#### **16. Severability**

If any part of this Agreement is declared or held invalid by a court for any reason, the invalidity of that part will not affect the validity of the remainder which will continue in full force and effect and be construed as if the Agreement had been executed without the invalid portion.

#### **17. Modification**

No amendment or modification of this Agreement shall be valid or binding upon the Parties, unless agreed upon by both Parties, made in writing, and signed on behalf of each of the Parties by their duly and legally authorized representative officers.

#### **18. Entire Agreement**

18.1 This Agreement constitutes the entire understanding between the parties as to the subject matter of this Agreement. This Agreement sets forth all representations forming part of or in any way affecting or relating to the subject matter of this Agreement.

18.2 The Parties acknowledge that there are no representations either oral or written, as regards the subject matter of this Agreement, between the NBA and the Applicant other than those expressly set out in this Agreement. All previous negotiations, understandings, representations, warranties, memoranda or commitments concerning the subject matter of this Agreement are merged in and superseded by this document and are of no effect.

For the removal of doubts, 'subject matter of this Agreement' is the approval from the NBA to the Applicant to seek intellectual property rights in the territories mentioned in Schedule C for the Invention described in Schedule B.

## 19. Representations

19.1 Either Party represent to each other Party that it has the legal right and power to enter into this Agreement and to perform its obligations under the terms of this Agreement and the execution, delivery and performance of this Agreement by it has been duly and validly authorized by all necessary corporate action or Government action on its part.

19.2 The Parties further represent that this Agreement is valid and binding agreement of it, enforceable in accordance with its terms and the execution and performance of this Agreement by it does not, and other transactions contemplated by this Agreement do not, violate or conflict with or result in a breach of or constitute a default under its constitution or laws.

19.3 No implied terms or obligations of any kind by or on behalf of either of the Parties shall arise from anything in this Agreement. The express covenants and agreements herein contained and made by the Parties are the only covenants and agreements upon which any rights against either of the Parties may be founded as to the subject matter of this Agreement.

The documents attached hereto as Schedules forms an integral part of this Agreement as fully as if it were set forth herein *in extenso*, and consists of:

Schedule A: Details of the Biological Resources

Schedule B: Details of the Invention

Schedule C: Details of the territories where intellectual property rights over the Invention is sought to be taken.

and any other Appendix that may be added subsequently under the provisions of this Agreement. The application made in Form III mentioned in the recitals of this Agreement shall also form a part of this Agreement.

This Agreement has been executed in Duplicate. Each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

**IN WITNESS WHEREOF** this Agreement has been executed by duly authorized representatives of the Parties on the day and the year first mentioned

For National Biodiversity Authority:

For the Applicant:

### **MATERIAL TRANSFER AGREEMENT**

This Agreement is entered into as of the ..... day of ....., 2005



**By and Between**

**National Biodiversity Authority** (Hereinafter referred to as "the **NBA**") having its office at 475,9th South Cross Street, Kapaleeswar Nagar, Neelankarai, Chennai - 6000041.

And

..... (Hereinafter referred to as "the **Transferor**")

Hereinafter, the NBA and the Transferor shall collectively be referred to as "the Parties" and individually as "Party".

**WHEREAS:**

NBA has been established by the Government of India under the powers granted to it by section 8 of the Biological Diversity Act 2002 (Act 18 of 2003). Under the said Act, NBA is the authority to permit access to any biological resources found within the territory of India.

The Transferor is a Company/individual/.....and has accessed the Biological Resources for the purposes of Commercial Utilisation/Research and now is interested in transferring the accessed Biological Resources to the Transferee.

The Transferor has made an application in Form IV, under Rule 19 of the Biological Diversity Rules 2004 to seek approval from the NBA to transfer the accessed biological resources to the Transferee for the purposes of Commercial Utilisation/Research.

**The Parties hereto agree as follows:****1. Definitions**

In this Agreement:

**Act** means the Biological Diversity Act 2003 (Act 18 of 2003) and includes the Rules/Regulations made under it.

**Biological Resources:** means biological resources as defined in the Act, [As defined in Section 2(c)] which the Transferor accessed for the purposes of Commercial Utilisation/Research and which is more fully described in Schedule A to this Agreement.

**Transferee:** means the person/Company to which the Transferor intends to transfer the Biological Resources.

**GRANT OF APPROVAL**

The Transferor requests for approval to transfer the Biological Resource and the NBA hereby grants the approval subject to the terms and conditions set forth in this Agreement and compliance with all other laws in force in India.

The Transferor shall transfer the Biological Resources only on the execution of a written agreement with the Transferee. The Agreement shall impose a mandatory obligation on the Transferee to comply with all the terms and conditions imposed on the Transferor by

the approval agreement executed on ..... Day of .....2005, which agreement shall be attached as an appendix to the written agreement between the Transferor and Transferee.

Provided that, in the absence of any agreement between the NBA and the Transferor, the Transferor shall attach the standard agreement (in accordance with the purpose of the transferee) as available with the NBA and all clauses therein shall be binding on the Transferee.

The Transferee shall have no rights to directly access the Biological Material other than from the Transferor.

The Transferor shall indemnify NBA for any breach of the clauses of this agreement or for any breach made by the transferee of any of the clauses of the agreement attached as an appendix to the agreement between the Transferor and the Transferee.

### **Term**

This Agreement, unless terminated as provided herein, shall remain in effect for a period of one year from the date on which the approval is given by the NBA to the Transferor for the transfer of the Biological Resources.

All Clauses of the agreement attached as an appendix to the agreement between the Transferor and the Transferee shall apply in all aspects where this contract is silent.

This Agreement has been executed in Duplicate. Each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

**IN WITNESS WHEREOF** this Agreement has been executed by duly authorized representatives of the Parties on the day and the year first mentioned

For National Biodiversity Authority:

For the Transferor:

### **The Authority is requested to approve**

**The Authority informed that before being finally sent to the Administrative Ministry for notification the Chairman of the Evaluation Committee may be consulted for finalization.**

**ACTION: MEMBER SECRETARY**

**7. MINUTES OF THE MEETING ON EC ON ENDEMIC,  
ENDANGERED AND THRETNED SPECIES ON 18<sup>TH</sup> Jan 2006**

**National Biodiversity Authority**

First meeting of the Expert Committee on Threatened, Endangered and Endemic Species  
Chennai, January 18, 2006

**AGENDA**

- **Present background and discuss major issues with regard to:**
  - rare, threatened, endangered and endemic species
    - guidelines
    - existing information and gaps
    - notification and denotification
  - priority areas in taxonomy
  - alien and invasive species and genetically modified organisms
- **Discuss methodology**
  - outline steps to achieve the terms of reference
  - examine existing information to achieve objectives and identify gaps
  - discuss contributions of individuals and institutions in the committee
  - identify other individuals and institutions and processes

**Tentative Schedule**

10.00 AM Welcome address by Dr. K Venkataraman  
 10:05 AM: Introduction by Chairman, Dr. T.N. Ananthakrishnan  
 10:15 – 10:30 AM: Presentation by Dr. R. Uma Shaanker, University of Agricultural Sciences, Bangalore on ‘Rare, Endangered and Threatened Species’  
 10:30 – 11:15 AM: Discussion on ‘Rare, Endangered and Threatened Species’  
 11:30 – 12:30 AM: Discussion on ‘Priority Areas in Taxonomy’  
 12:30 – 1:00 PM: Discussion on ‘Alien, invasive and genetically modified species’  
 1:00 – 1.25 PM: Discuss methodology and Concluding remarks  
 1.25 PM Vote of Thanks by Dr Kartik Shankar

**The Authority is requested to approve**

**The Authority approved the minutes of the minutes of the above meeting.**

**ACTION: MEMBER SECRETARY**

## Appendix 1: ATTENDANCE OF MEMBERS PRESENT

### OFFICIAL MEMBERS PRESENT

**1. Dr R K Rai**, Addl Director, Ministry of Environment and Forests  
Paryavaran Bhavan, New Delhi (**Nominee of Shri D D Verma, JS, MoEF, New Dehi**)

**2. Dr.B.R.Subramaniam**

Advisor and Project Director, Department of Ocean Development  
NIOT campus; Pallikaranai, Chennai 601 302  
(**Nominee of Joint Secretary, DOD, New Delhi**)

**3. Shri A.J.Kurian**

Director, Department of Science and Technology, Technology Bhavan; New  
Meharauli Road, New Delhi 110 001  
(**Nominee of Mr Sajeew Nair (JS Rank) Department of Science and  
Technology**)

### Leave of absence granted to Official Members

**Shri Rajeev Kumar**, J.S., Ministry of Tribal Affairs, New Delhi

**Shri Nikhilesh Jha**, J.S., Ministry of Science and Technology, New Delhi

**Dr. S. Natesh**, Advisor, Department of Biotechnology, CGO Complex, Block No. 2,  
Lodhi Road, New Delhi 110003, (**nominee of Shri U.N. Behara, Joint Secretary,  
DBT**).

**Shri R P S Katwal**, Additional Director General of Forests (Wild Life), Ministry of  
Environment and Forests, New Delhi 110 003

**Dr M A Kumar**, Deputy Advisor – Siddha, Ministry of Health and Family Welfare,  
201, Indian Red Cross Building; Parliament Streetl, New Delhi 110 001  
(**Nominee of Shri Tara Dutt, J.S., Department of Indian Systems of Medicine and  
Homeopathy, New Delhi**)

**Smt. Sushama Nath, AS (D) and Secretary**, Dept of Agri. Res. Edu., Ministry of  
Agri., Govt of India, New Delhi 110 001.

**Dr J S Mishra, ADG**, Ministry of Agriculture, Deptt. of Agriculture and Cooperation,  
Krishi Bhavan, Dr. Rajendra Prasad Road, New Delhi – 110001.  
(**Nominee of Shri Satish Chandra, Joint Secretary,**)

**NON-OFFICIAL MEMBERS PRESENT****Prof. L. Kannan,**

Director of Research,  
Centre for Advanced Study in Marine Biology,  
Parangipettai - 608 502

**Dr A. K. Ghosh,**

Director, Centre for Environment and Development,  
329, Jodhpur Park, Kolkata -700 068.

<b>Leave of absence granted to non official members</b>
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**Prof. Raghavendra Gadagkar**

Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012

**Dr. P. Pushpangadan**

National Botanical Research Institute, Rana Pratap Marg, Lucknow – 226001

**Prof Anil Gupta**

Indian Institute of Management, Ahmedabad 380 015