



**MEMORANDUM OF UNDERSTANDING  
BETWEEN**

**THE UNIVERSITY OF TRIESTE, ITALY**

**AND**

**THE INDONESIAN AGENCY FOR AGRICULTURAL RESEARCH  
AND DEVELOPMENT OF THE MINISTRY OF AGRICULTURE OF  
THE REPUBLIC OF INDONESIA**

**CONCERNING**

**TECHNICAL AND SCIENTIFIC COOPERATION**

The Indonesian Agency for Agricultural Research and Development of the Ministry of Agriculture of the Republic of Indonesia (hereinafter referred to as IAARD) c.o. Indonesian Coffee and Cocoa Research Institute (hereinafter referred to as ICCRI), and the University of Trieste, Italy c.o. Dipartimento di Biologia (hereinafter referred to as DipBio), collectively hereinafter referred to as **"the Parties"**;

**Considering** that ICCRI conducts research on coffee and maintain a germplasm collection of coffee plants suitable for breeding and research programs.

**Considering** that the DipBio conduct research on genomics and biotechnology of coffee.

**Desiring** their common interest to collaborate and exchange information and materials in the field of Arabica coffee genomics and biotechnology;

**Pursuant** to the prevailing laws and regulations in Indonesia and Italy.

**HAVE AGREED AS FOLLOWS :**



## **ARTICLE I OBJECTIVES**

The objectives of the cooperation are to conduct research on coffee and maintain a germplasm collection of coffee plants suitable for breeding and research programs.

## **ARTICLE II SCOPE OF COLLABORATION**

1. DipBio will host research fellow(s) of ICCRI and provide his/their research expenses in obtaining academic degree, training or post doctorate research. Expenses for travel and allowance as well as insurance for the fellow(s) will be obtained by both Parties.
2. Transfer of planting materials and/or DNA from ICCRI to DipBio as agreed upon by the Parties.
3. The general field of research to be carried on in collaboration is reported in the Annex.
4. The detailed program of collaboration will be agreed annually directly by ICCRI and DipBio.

## **ARTICLE III FIELD AND PROGRAM OF COLLABORATION**

1. The field of collaboration activities under this Memorandum of Understanding shall be reported in the Annex.
2. The detailed program of collaboration will be agreed annually directly by ICCRI and DipBio.

## **ARTICLE IV ICCRI CONTRIBUTIONS**

ICCRI, subject to the availability of resources and as mutually agreed upon, shall :

1. Provide scientists and necessary supporting staffs for the joint program;
2. Undertake necessary arrangements for clearances of ICCRI scientists to participate in training or post doctorate research in DipBio;



3. Facilitate the international exchange of germplasm for the implementation of the collaboration;
4. Subject to existing intellectual property restrictions and bio-safety regulations, make materials and/or DNA available to support collaborative activities as well as transfer of planting, materials and/or DNA.

## **ARTICLE V**

### **DipBio CONTRIBUTIONS**

DipBio, subject to the availability of resources and as mutually agreed upon, shall:

1. Arrange for Indonesian scientists to undertake degree and non-degree training at DipBio;
2. Provide backstopping support to collaborative research activities;
3. Give free access to the databank [www.coffeeDNA.net](http://www.coffeeDNA.net) to any scientists of ICCRI who will apply for access to it;
4. Allow ICCRI to use [www.coffeeDNA.net](http://www.coffeeDNA.net) as databank for its own data;
5. Establish and implement the administrative rights in coffee DNA for adding/modifying the data inputs for the ICCRI laboratory

## **ARTICLE VI**

### **PROTECTION OF INTELLECTUAL PROPERTY RIGHTS**

1. The Parties agree that any intellectual property arising under the implementation of this Memorandum of Understanding will be jointly owned in consideration of mutual contributions, fair and equitable sharing, and :
  - a. Each Party shall be allowed to use such intellectual property for the purpose of maintaining, adapting and improving the relevant property;
  - b. Each Party shall be liable for any claim made by any third party on the ownership and legality of the use of the intellectual property rights which is brought in by the aforementioned Party for the implementation of the cooperation activities under this Memorandum of Understanding.
2. If either Party wishes to disclose confidential data and/or information resulted from the cooperation activities under this Memorandum of Understanding to any third party, the disclosing Party must obtain prior consent from the other Party before any disclosure can be made;
3. In the event that the intellectual property is used by either Party and/or



integral part of this Memorandum of Understanding.

## ARTICLE X ENTRY INTO FORCE, DURATION AND TERMINATION

1. This Memorandum of Understanding shall enter into force on the date of its signing and shall remain in force for a period of 5 (five) years;
2. This Memorandum of Understanding may be extended or terminated by either Party by giving written notice to the other Party at least 6 (six) months in advance;
3. The termination of this Memorandum of Understanding shall not affect the validity and duration of any on-going activities or projects made under this Memorandum of Understanding until the completion of such activities or projects.

**IN WITNESS WHEREOF**, the undersigned, have signed this Memorandum of Understanding.

**DONE** in duplicate at Trieste on this ninth day of April in the year two thousand and eight, in English language, both texts being equally authentic.

For the Indonesian Agency for  
Agricultural Research and  
Development

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## ANNEX

### Field collaboration between ICCRI and DIPBIO

The Laboratory of Genetics, Department of Biology, University of Trieste is working on the molecular genetics of *Coffea arabica* since 1995 and, recently, the studies have been extended to *Coffea canephora*. Most of the results are publicly available at the web site <http://www.coffeedna.net> which has been developed and maintained by the Laboratory itself. Here are proposed fields collaboration with ICCRI.

1) **Arabica varieties identification and characterization for the development of new Arabica cultivars.**

Department of Biology, University of Trieste developed about 300 microsatellites which can be used for several practical applications as reported below. (see <http://www.coffeedna.net/polymorphism.php?url=ssr>)

- 1a) Assessment of genetic diversity among cultivars or single plants. This technique will be used for speeding up breeding programmes and selecting very diverse progenitors. ICCRI could use this technique for breeding programme in Indonesia.
- 1b) Certification of a specific cultivar or of a gourmet coffee. Certification of the DNA of a given cultivar or of a gourmet coffee could allow for a higher price of the green coffee and a corresponding benefit to the producer. This approach can be applied for characterize almost any commercial cultivar of Arabica coffee. ICCRI have the special licence for using these markers in Indonesia.

2) **Development of a genetic map of Arabica.**

At the moment there is no reliable genetic map of *C. arabica* and, besides the microsatellites, we have developed other polymorphism, which can be used