



**TOGETHER**  
*for a sustainable future*

## OCCASION

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**INTERNATIONAL COURSE: "APPLICATIONS OF THE NEW BIOTECHNOLOGIES  
TO AGRICULTURE"**

**I. ACADEMIC REPORT**

**I. Participants:**

Nationals from eleven Latin American countries -comprising Argentina- participate in the course. The final list of participants was as follows:

Gabriela Pagliano (Universidad de la República, Uruguay)  
Ingrid Ramírez Braun (Pontificia Universidad Católica, Chile)  
Luis González Segnana (Universidad Nacional de Asunción, Paraguay)  
Norma Santos Paes (EMBRAPA-CENARGEN, Brasil)  
Vivian Suárez (Instituto de Ingeniería Genética y Biotecnología, Cuba)  
Claret Michelangeli de Clavijo (Universidad Central de Venezuela, Venezuela)  
María Eugenia Aponte de Londoño (CENICAFE, Colombia)  
Néstor Naranjo Jiménez (Instituto Politécnico Nacional-Durango, México)  
Elmer Iquiria Huamaní (Universidad Nacional de San Agustín de Arequipa, Perú)  
Miguel Silva (Ministerio de Asuntos Campesinos y Agropecuarios, Bolivia)  
Andrea Rothschild (IIB - Fundación Campomar, Argentina)  
Ricardo Dewey (Universidad Nacional de La Plata, Argentina)  
Patricia Dallari (Universidad Nacional de Córdoba, Argentina)  
Laura Giarrocco (FIBA, Argentina)  
Mercedes Echeverría (EEA INTA-Balcarce, Argentina)  
Jorge Morre (CEFOBI-CONICET, Argentina)

The theoretical program was presented by six Professors which are specialists in their respective field. Four of them come from abroad and two were Argentinean:

Dr. Pedro Puigdomenech. Centro de Investigación y Desarrollo/CSIC, Barcelona, Spain.  
Dr. Francine Casse-Delbart. INRA/CNRS, Montpellier, France.  
Dr. Catherine Bellini. INRA, Versailles, France.  
Dr. Luis Herrera - Estrella. CINVESTAV, Irapuato, Mexico.  
Dr. Esteban Hopp. IBM/INTA, Castelar, Argentina.  
Dr. Alejandro Mentaberry, INGENI/CONICET, Buenos Aires, Argentina.

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In addition, the practical course was conducted by twelve Teaching Assistants recluted from the research teams of INGEBI-CONICET and IBM/INTA. The list of Teaching Assistants was the following:

**Dr. Fernando Bravo-Almonacid (INGEBI/CONICET)**

**Dr. Liliana Haim (INGEBI/CONICET)**

**Dr. Norberto Jussem (IBM/INTA)**

**Lic. Ximena Ares (INGEBI/CONICET)**

**Lic. Silvia Cabral (INGEBI/CONICET)**

**Lic. Paula Cramer (IBM/INTA)**

**Ing. Agr. Sergio Feingold (IBM/INTA)**

**Ing. Agr. Diego Lijavetzky (IBM/INTA)**

**Lic. Dalia Lewi (IBM/INTA)**

**Lic. Susana Marcucci (IBM/INTA)**

**Lic. Pablo Rabinowicz (INGEBI/CONICET)**

**Biol. Florencia Rodriguez (INGEBI/CONICET)**

## **2. Development of the course:**

The course was developed along the lines that were originally proposed without major modifications. A complete day-by-day outline of the respective activities can be found in the guide enclosed with this report. The course was yield on a six day by week calendar amounting for a total period of 20 days. November 15 was totally dedicated to participation in the workshop on genetic transformation organized by PROCISUR in parallel to the course. PROCISUR is an instance of coordination comprising the institutions on agronomic research of the South Cone of Latin America promoting collaboration between participating countries. In addition there were three Seminars devoted to discussion of current scientific literature. The papers discussed in these Seminars are included in the guide. Finally, visits to different Argentinean laboratories, including one belonging to a company involved in massive plant micropropagation, were organized for all participants.

## **3. Balance of the course:**

A consult made to participants on their opinions of the course showed that all of them considered fully accomplished the original objectives of the course. The consult reflected also heterogeneity of the group regarding previous training in the different fields. In overall balance, it can be considered that their previous expectatives were satisfied and that they consider this course useful to their future activity. Conferences and practical work were ranked between "good and very good". A number of observations -dealing with the development of the practical work and possible topics for future courses- were made.

The generalized opinion among Professors and Assistants is that the course offered a good introduction to the present landscape of plant biotechnologies and that, in this condition, is worth to be repeated. Even though a number of additional topics could be included in future

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activities, this was not considered so crucial as a more careful selection of students. A conclusion that could already be advanced is that two well-defined categories of demand in this kind of training activities were detected: a) a group of students just arriving to the field and requiring introductory concepts and a general information, and b) an emerging group that is already involved in research projects and required more specialized training.

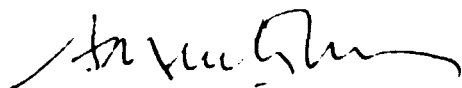
## II. FINANCIAL REPORT

In total US\$ 20,500 were received from UNIDO [16,000] and UNU/BIOLAC [4,500]. A total of US\$ 5,500 [UNIDO: US\$ 4,000; UNU/BIOLAC: US\$ 500] will be received against acceptance of respective final reports.

Hotel (fifteen students, 315 days in total, \$ 20/day in average*)	6,300
Daily allowances (fifteen students, 300 days in total, \$20/day)	6,000
Hotel (four foreign professors, 28 days in total, \$ 70/day)**	1,960
Daily allowances (four foreign professors, 28 days in total, \$ 60/day)**	1,680
Air ticket Dr. Catherine Bellini, Paris-Buenos Aires-Paris)**	1,300
Air ticket Dr. Francine Casse-Delbart, Montpellier-Buenos Aires, Montpellier)**	1,600
Air ticket Dr. Pedro Puigdomenech (Barcelona-Buenos Aires-Barcelona)**	1,800
Air ticket Dr. Luis Herrera-Estrella (Irapuato-Buenos Aires-Irapuato)**	1,400
Consumables (SIGMA invoice # 93-281-0030)	2,309
Xeroxcopies guide of the course	543
Bank transfer fees	127
<b>Total</b>	<b>25,019</b>

\* Single, double and triple occupancy were contracted according conveniences.

\*\* Hotel, daily allowances and air tickets were reimbursed directly to the participating professors.



Dr. Alejandro Mentaberry  
Research Scientist CONICET

Buenos Aires, November 22, 1993.