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ICGEB Training Courses Programme 1995

ICGEB Practical Course:
GENE TRANSFER for PLANT BREEDING IMPROVEMENT
10-21 October, 1995, Kostinbrod, Bulgaria

Contract No. 95/040
Project No.: GE/GLO/90/004

FINAL REPORT

The Paractical Course have been held as scheduled from 9 to 20 of October 1995. 16 participants from 10 countries, selected out of more then 100 applicants attended the course (Appendix 1). The course contained an indroductional lectures part (2 days) during which 19 lectures on most advanced achievements have been presented by leading experts (Appendix 2 and 3). The rest of the course programme was devoted to experimental work, which covered all of the planned topics (Appendix 4). All of the experiments were successfully presented by IGE's instructors (Appendix 5). The last day of the course the participants have been given the opportunity to present the activities of their institutions and their reserch.

The organization of the course was good.

A particular success of the course is the genuine interest which the students expresed in both lectures and experimental work.

Appendix:

1. List of Participants
2. Lectures Presented
3. List of the Lecturers
4. Course Programme and Topics Covered
5. List of the Instructors and Topics Covered
6. Financial Statement
7. Course Manual

Appendix 1

LIST of the PARTICIPANTS

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Appendix 2

LECTURES PRESENTED

LECTURERS	TITLE
	10 October
1. Prof. Dirk Inze	How can stress tolerance in crop plants be improved?
2. Prof. W. Friedt	Biotechnology for broadening genetic variation of oil crops via interspecific hybridization
3. Prof. R. W. Goldbach	Prospects of engineered resistance to TSWV
4. Prof. Yury Gleba	Achievements of biotechnology in Ukraine
5. Prof.Dr. Ab van Kammen	Pathogen derived resistance against cowpea mosaic virus in transgenic Nicotiana benthamiana plants
6. Prof. M. Jacobs	Genetic manipulation of the aspartate-derived aminoacids biosynthesis: a way to improve nutritional quality of crops
7. Dr. Keith Edwards	Molecular markers in the study of genome organization
8. Prof. Jacques-Henry Weil	Organization and expression of the plant mitochondrial genome
9. Dr. Avi Perl	Development of embryogenesis and transformation of grape
10. Dr. V. Glish'n	Bacterial gram negative Penicillin amidases (eucariotic genes) expressed in yeast.
	11 October
1. Prof. M. Nc na	Recent topics on plant biotechnology of Japan Tobacco Inc.
2. Dr. A. Berville	Gene expression pattern during the mid-maturation stage of embyos in Helianthus annuus. Storage proteins and oil gene expression in Helianthus annuus
3. Prof. P. Ivanov	Biotechnological investigations at the Institute of Wheat and Sunflower
4. Dr. W. Michalek	Yeast artificial chromosomes as a part of a strategy towards the positional cloning of disease resistance genes in barley
5. Dr. J. Hille	Molecular genetic characterisation of the fungal disease resistance gene Asc in tomato
6. Dr. M. Spassova	Molecular basis of CMS in sunflower
7. Dr. L. Carlier	The quality of forage crops
8. Dr. T. Liharska	DNA marker aplication for mapping and gene isolation in plants
9. Dr. Elena Deineko	Inheritance and stability of transgene expression in the progenies of transgenic tobacco plants

Appendix 3

LIST OF LECTURERS

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Appendix 4

LABORATORY SCHEDULE

	12 October	13 October	14 October	16 October	17 October	18 October	19 October	20 October
8.30-10.00	Plant transformation Dr. Stoeva, Dr. Batchvarova	Checking of DNA for restriction E. Todorovska, S. Atanassova	Southern blotting of DNA E. Todorovska, S. Atanassova	NPTII assay, Dr. R. Batchvarova, Dr. P. Stoeva	Stringency washes after hybridization E. Todorovska S. Atanassova	HPLC Dr. A. Ivanova	HPLC Dr. A. Ivanova	ELISA assay Dr. M. Yankulova
10-10.30	Coffee break							
11.30-12.30	Plant transformation Dr. Stoeva, Dr. Batchvarova	GUS assay Dr. R. Batchvarova, Dr. P. Stoeva	GUS assay detection Dr. R. Batchvarova, Dr. P. Stoeva	Prehybridization E. Todorovska, S. Atanassova	Somatic embryogenesis Dr. M. Vlahova	HPLC Dr. A. Ivanova	ELISA assay Dr. M. Yankulova	ELISA assay Dr. M. Yankulova
12.30-1.30	Lunch							
13.30-14.30	PCR T. Liharska	PCR T. Liharska			Somatic embryogenesis Dr. M. Vlahova	HPLC Dr. A. Ivanova	HPLC Dr. A. Ivanova	Sightseeing Sofia
14.30-15.30	Somatic embryogenesis Dr. M. Vlahova	Somatic embryogenesis Dr. M. Vlahova	NPT II assay Dr. R. Batchvarova, Dr. P. Stoeva	DNA hybridization, labeling of the probe E. Todorovska, S. Atanassova	Blocking, antibody incubations and washes of the membrane, Autoradiography			
15.30-16.00		Overnight electrophoresis of DNA E. Todorovska, S. Atanassova		Somatic embryogenesis Dr. M. Vlahova	E. Todorovska S. Atanassova			
16-16.30	Coffee break							
16.30-17.30	DNA restriction E. Todorovska, S. Atanassova	PCR T. Liharska			Developing of the autoradiograms E. Todorovska S. Atanassova	Course participants presentations	Course participants presentations	
17.30-18.00			Southern blotting of DNA E. Todorovska, S. Atanassova		HPLC Dr. A. Ivanova			

Appendix 5

INSRUCTORS AND TOPICS

1. Dr. M. Vlahova, A. Yantcheva	Somatic embryogenesis of alfalfa
2. Dr. P. Stoeva, Dr. R. Batchvarova	Genetic transformation of plants by *Agrobacterium* vector system
3. Dr. R. Batchvarova, Dr. P. Stoeva	Assaying chimeric genes in plants-GUS gene
4. Dr. R. Batchvarova, Dr. P. Stoeva	Detection of neomycin phosphotransferase II activity in transformed plant tissues
5. E. Todorovska, S. Atanassova	Isolation of high molecular weight plant DNA
6. E. Todorovska, S. Atanassova	Southern blotting of DNA
7. E. Todorovska, S. Atanassova	Hybridization of plant DNA using ECL random prime labeling system
8. T. Liharska	Isolation of molecular markers using random amplified polymorphic DNA
9. Dr. Aneta Ivanova	Determination of endogenous content of cytokinins in plant material
10. Dr. M. Yankulova	Identification of viruses and nucleocapsid protein by ELISA

The instructors are from
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Appendix 6

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Financial Statement of the expences incurred (in USD).

	ICGEB	IGE
International lecturers staff		
Travel costs	2,000	1,500
Subsistance costs	2,500	500
Participants		
Travel costs	2,000	300
Subsistance costs	5,000	700
Secretarial assistance	1,000	
Management costs	1,000	
Expendable	1,000	1,000
Minor not expendable	500	1,000
Total	15,000	5,000
Grant total	**20.000**	

Prof. Atanas Atanassov date
Organizer

Mrs. Margarita Stoyanova date
Senior Accountant