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REPORT OF THE
INTERNATIONAL COURSE
'TECHNIQUES OF HUMAN GENOME
RESEARCH'

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SANTIAGO, CHILE

18 JUNE TO 6 JULY 1990

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Santiago de Chile, June 28th - 29th, 1990

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"CURSO INTERNACIONAL: TÉCNICAS PARA EL ANÁLISIS DEL GLIOMA HUMANO"

Santiago, Junio 18 - Julio 6, 1990

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Report on the International Course in

"Techniques of Human Genome Research"

1. List of Course Participants:

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2. List of Course Professors:

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	Thomas J. WHITE	Emeryville, CA	USA

b) <u>Chilean:</u>	<u>Name</u>	<u>Dept. & Faculty</u>	<u>University</u>
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	Pilar CARVALLO	Biochemistry - Medicine	Chile
	Juan OLATE	Biochemistry - Medicine	Chile
	Omar ORELLANA	Biochemistry - Medicine	Chile

3. Course Program.

a) Practical Experiments:

Monday, June 18 to Friday, June 22 - Experimental work in PCR.

Monday, June 25 to Wednesday, June 27 - Experimental work in RFLP.

Monday, July 2 to Friday, July 6 - Experimental work in PFGE.

b) Theoretical:

1) Classes (daily from 5-6 p.m.):

- | | |
|---|--------------------|
| June 18 - PCR for the study of evolution. | C. Orrego |
| 19 - Application of PCR to disease diagnosis. | T.J. White |
| 20 - DNA recombinant techniques: new powerful tools. | S. Gustincich |
| 21 - Loss of uricase in human beings: an evolving gain against disease. | H. Barrera-Saldaña |
| 22 - Use of DNA probes for the study of human papilloma virus infections. | J.M. Ojeda |
| 25 - DNA polymorphisms: applications to human disease. | Pragna I. Patel |
| 26 - Genic structure of G proteins. | J. Olate |
| 27 - YAC libraries and the application of PFGE to long range mapping and to YAC cloning. | E.M. Southern |
| 28-29 - Symposium: program on following page. | |
| July 2 - Technical strategies for human gene mapping. | Cassandra L. Smith |
| 3 - PFGE and the technology of large DNA molecules. | J. Sainz |
| 4 - Statistical methods for gene analysis. | R. Chakraborty |
| 5 - Construction of physical maps of bacterial genomes. | O. Orellana |
| 6 - Perspectives of the Human Genome Project - short introduction by..... J.E. Allende and meeting with the Unesco Director General Prof. Federico Mayor. | |

2) International Symposium "Molecular Genetics and the Human Genome Project: Perspectives for Latin America" - June 28-29, 1990.

Inaugural Ceremony

Opening Lecture - E.M. Southern (U.K.) "Structure and sequence organisation of the human Y chromosome with particular emphasis on telomeres and centromeres."

Session I: Gene Structure - Chairperson: M. Krauskopf (Chile)

- H.A. Barrera-Saldaña (México) "The human placental lactogen (hPL)-growth hormone (hGH) genes loci: molecular dissection."
- R. Lisker (México) "Reassessment of G-6-PD Castilla, Distrito Federal and Tepic by direct DNA analysis."
- S.D. Pena (Brazil) "Non-isotopic studies of hypervariable minisatellites."

Session II: Oncogenes - Chairperson: J.M. Ojeda (Chile)

- S. Gustinich (Italy) "Negative regulation of cell growth."
- F. Barriga (Chile) "Molecular characterization of Burkitt's lymphoma (BL): Chromosome 8 breakpoints (CHR.8 BKP) & Epstein Barr virus (EBV) association."

Session III: Cytogenetics and Chromosome Structure -

Chairperson: A. Spotorno (Chile)

- M. Drets (Uruguay) "Progress and quantitative detection of bands, SCEs and other chromosome features through computer graphics assisted cytogenetics."
- Lidia Vidal-Rioja (Argentina) "Methylation patterns in expressed and silent human genes."
- H. Villalobos (Venezuela) "Molecular genetics project for the state of Zulia, Venezuela."

Session IV: Population Genetics - Chairperson: F.M. Salzano (Brazil)

- R. Chakraborty (U.S.A.) "Search for genes causing susceptibility to complex diseases: A review of statistical methods."
- R. Barrantes (Costa Rica) "Genetics of the Costa Rican populations and the Human Genome Project."
- C. Orrego (U.S.A.) "Asian tag in Amerindian mitochondrial DNA."
- C.Y. Valenzuela (Chile) "Chilean molecular sociogenetic cline."

- F.M. Salzano (Brazil) "Reconstructing history: The Amazonian Mura indians."
- Berta Ibarra (México) "Brief experience on human molecular genetics in Northwestern Mexico."

Session V: Molecular Pathology - Chairperson: R. Cruz-Coke (Chile)

- P. León-Azofeifa (Costa Rica) "Molecular genetics of inherited human diseases in Costa Rica."
- Pragna I. Patel (U.S.A.) "Strategies for the identification of the Charcot-Marie-Tooth disease genes."
- Silvia Castillo (Chile) "Mapping the Y chromosome using DNA from XX males."
- F. Rothhammer (Chile) "Chagas disease: A genetic approach."
- C.E. Argaraña (Argentina) "Human metabolic inherited diseases detected in Córdoba, Argentina: Perspectives for molecular genetics research."

Closing Lecture - Cassandra L. Smith (U.S.A.) "Mapping the human genome."

4. Comments by the Organizers: We consider that the course was highly successful. A very important factor was the high quality and motivation of the students. Although the students had a heterogeneous background (classical geneticists, biochemists, cytogeneticists) all of them were genuinely interested in the molecular genetics techniques demonstrated in the course.

The second factor was that the Visiting Professors and the local teaching staff were very enthusiastic and eager to communicate all the knowledge and information they had. The course required a lot of work from both students and professors but the atmosphere was extremely friendly and all the experimental demonstrations gave positive results.

Many of the students made plans to carry out the techniques demonstrated in the course once back in their own countries and several participants set up collaborative experiments with both professors and fellow-students.

The international symposium that was organized concurrent with the course was excellent in its scientific level and fulfilled its objective of presenting a compendium of the work being done in Latin America in human genetics as well as presenting to the Latin American participants an in depth description of the international Human Genome Initiative. As a result of this meeting, a Committee was organized to establish a regional Latin American Human Genome project.

The participation of Prof. Federico Mayor, Director General of Unesco, in a meeting with the students and in the closing ceremony of the course, was highly stimulating to all participants.

5. Attachments:

- a) Book of Protocols.
- b) Symposium Book of Abstracts.