

# MITTEILUNGEN

des Komitees für wissenschaftliche  
Zusammenarbeit mit Kuba

OKTOBER 1974

## BEILAGE ZU NR. 9

### INFORMATIONEN DER FACHGRUPPE BIOLOGIE / BIOCHEMIE / CHEMIE / LANDWIRTSCHAFT

ANNUAL REPORT OF THE SPECIALIST GROUP : BIOLOGY -  
BIOCHEMISTRY - CHEMISTRY - MEDICINE - AGRICULTURAL SCIENCES

Secretaries of the Specialist Group: Dr. Gerhild Schwoch  
Dr. Alf Hamann

In the following we wish to present our report on terminated activities till December 1973 and the projects planned for the year 1974. Since this report is not more than a survey, it was tried to present the necessary information as compressed as possible. On request more detailed information is available from the secretary.

I Summer Courses performed till December 1973:

Specialty	University	Assistant from KOWIZUKU	Year
Biology	La Habana	Dr. Helga Jantzen	1971
Biochemistry	La Habana	Dr. Siegfried Janssen Dr. Friedhelm Diehl Dr. Eva Klapp	1972
Biochemistry	La Habana	Dr. Siegfried Janssen	1973

II Projects terminated till May 1974

Project Nr.: BioChAgM 1/73

Nr.	Keyword	Initiat.	Supported Cub. Group	Aims	Products of work	Material	Start	End	Responsible
	Summercourse Biochemistry of Carbo- hydrates	Univ. La Habana	Scientists from diff. cub. ins- tituts	Support of bio- chemical research	Summer- course	Chemical and biochemical reagents, glassware, books, photo copies	Dec. 71	Sept. 72	Sigrid Janssen Friedhelm Diehl Eva Klapp

## 2. Description of the project

a) Short description: The aim of the summer-course was to make the participants familiar with practical, biochemical work in the field

of carbohydrate metabolism. We used microorganisms as living system in which certain important steps of carbohydrate catabolism were studied by the students. Microorganisms are in two

Die Arbeit des Komitees wächst schneller als seine Finanzkraft. Deshalb bittet das Komitee dringend um Spenden - Spenden für die Förderung der Wissenschaft in

KUBA - WO DIE WISSENSCHAFT DEM VOLKE DIENST.

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ways important in this field of research a) they are a good tool to learn biochemical methods and b) microorganisms are responsible for degradation of sugar after harvesting and during the process of refinement.

There were a number of experiments which we had prepared and which the participants of the summercourse were doing itself.

The experiments were selected by the aspect of a) to show and to learn different biochemical methods b) to learn to handle with microorganisms and c) to plan biochemical research.

During the summercourse we had also some seminars either the whole group or in small groups. The speaker of the seminars was normally a Cuban student.

A part of this summercourse program was later accepted for the curriculum of Biochemistry in the Escuela Biochimica Farmaceutica.

b) Origin of the Project and Cuban Interest:

The French Committee was asked in Nov./Dec. 71 by the responsables of the Escuela Biochimica Farmaceutica of the University La Habana for a summercourse with the title: Carbohydrates. But at this moment the French Committee had no biochemist familiar with carbohydrates, by this and the fact that Helga Jantzen had accompanied a French group for a summercourse in the Escuela

Biochimica Farmaceutica in 1971 the responsibility for this course was given to us.

The title "carbohydrates" is very general and we offered a proposal for a program of a summercourse to the Cuban responsables. But we got no answer and therefore we prepared the summercourse by own risk.

c) Supported Cuban Group: The participants of this summercourse came from different Cuban institutes like Minal, Ica, Cira and of course from different Escuelas of the University of La Habana. Most of all the members of the section of carbohydrates of the Escuela Biochimica Farmaceutica were supported.

d) Participation of the KOWIZUKU: The realization of the summercourse was only possible because all chemical and biochemical reagents for the course were paid by the KOWIZUKU. The equipment of the Escuela is more or less poor, but the section of carbohydrates was experimental work of the scientists in this section with glassware and biochemical reagents.

Also the KOWIZUKU spent money for some books. Two master theses of Cuban biochemists were supervised. These participants of the summercourse were working at their thesis in the field of Juvenil diabetes respectively of adult and old people. A detailed research program was discussed with the students.



Project Nr.: BioChAgM 2/73

Nr.	Keyword	Initiat.	Supported Cub.Group	Aims	Products of work	Material	Start	End	Responsible
	Summercourse Biochemistry of Carbohydrates	Univ.La Habana	Scientists from diff. cub. instituts	Support of biochemical research	Summercourse	Chemical and biochemical reagents, books, photocopies	Dec.72	Sept73	Sigrid Jannsen Jürgen Weber

2. Description of the project

a) Short description: In Cuba there are a lot of Chemists, Biologists and Agronomists working in the field of sugarcane research. They made big effort and had good success in enlarging the sugar production especially by correct maturing in different soil. There are many biochemical problems to be solved for optimal sugar production. Biochemists take part in answering questions like these: which enzyme pattern indicates maturation of sugarcane or the influence of temperature, illumination and storage time on the summercourse the participants got a short introduction into the biology and enzymology of the synthesis and splitting of sucrose

and starch and optimal conditions of their production in plants. Some key-enzymes and their products involved in the metabolism of sucrose and starch in sugarcane were assayed. The experiments were done dependent on the age of the leaves, temperature and illumination on the activity of the leaf-enzymes.

Main point of this summercourse was to make the participants familiar with biochemical research in sugarcane plants.

b) Origin of the Project and Cuban Interest:

At the end of the summercourse "Biochemistry of Carbohydrates" in 1972 I had a discussion with the responsables of the Escuela Biochimica

Farmaceutica and the section Carbohydrates of this Escuela about a second summercourse in carbohydrates. We agreed to prepare a summercourse concerning the biochemistry of carbohydrates in plants.

It is already said that there is a necessity for help in biochemical research.

c) Supported Cuban Group: Like in the first summercourse the participants came from different instituts and all of them had finished their studies.

d) Participation of the KoWiZuKu: The realization of this summercourse - like the first one - was only possible because the main part of chemicals and biochemicals was paid by the KOWIZUKU. Also the KOWIZUKU spent money for books.

During this stay in La Habana the two students working about diabetis finished their work.

I had to judge the two master thesis and was also member of the examination committee.

Terminated Project BioChAgM 3/73

No.	Keyword	Initiative	Supp.Cub.Group	Products of work	Assistance	Materials	Price	Start	End
1	foundation of a department of medical genetics(I phase)	Faculty of Medical Sciences Univ.La Habana, KOWIZUKU	Faculty of Medical Sciences La Habana	<ul style="list-style-type: none"> <li>- supply with instrumental equipment</li> <li>- initiative for 4 research programs</li> <li>- elaboration of educational programs</li> <li>- several scientific publications</li> <li>- organization of a fotocopy service</li> <li>- developement of an electrophoretic system patented in Cuba</li> </ul>	Klaus Altland	<ul style="list-style-type: none"> <li>Journals</li> <li>Books</li> <li>Instrum.</li> <li>Chemicals</li> </ul>	<ul style="list-style-type: none"> <li>3091,-</li> <li>1850,-</li> <li>43800,-</li> <li>2000,-</li> <li>50741,-</li> <li>DM</li> </ul>	Spring 1972	April 73

a) Short description of the project:

With the reduction of the incidence of infectuous diseases in Cuba there was a rising interest in the proper handling of inherited diseases by therapy, genetic counselling and preventive activities. Although there had been a series of efforts in this field by various hospitals for several years medical students received a rather poor education in medical genetics. Thus a special department charged with the education and researchwork in this specialty became more and more necessary. Since there had been - opposite to other specialties - no tradition in this field it became necessary to import the missing know how by several summer courses and the invitation of foreign human genetisists for a long term stay. This stay of one of us was well prepared with respect of the study of Cuban needs so that there arised no major problems starting from the very beginning of the work with experimental research on projects defined according to the priority of social needs.

Sicklemlia and Cystic Fibrosis the most frequent inherited diseases with fatal consequences in Cuba were the first objects of research programs with the aim to develop preventive means for the reduction of their incidence. Although there was an intensive fight against a series of difficulties it was possible to complete the one years stay with a very useful contribution in the field of primary prevention of sicklemlia (see below) and the motivation of more than 10 postgraduates to become specialists in several disciplines of medical genetics so that there remains the justified hope that in a few years Cuba may have a qualified group sufficient to take care of an independant own developement. After the stay in La Habana the support of the projekt has been continued by the supply with literature, a fotocopy service and small laboratory equipment.

b) Results obtained by the project:

1. Contribution of the KOWIZUKU:

- The department has been supplied with equipment and literature thus making possible efficient research and theoretical training in the specialty
- Initiative for the performance of research programs on:
  - developement of techniques for a large scale screening to detect carriers of the sickle cell trait
  - developement of methods for the prenatal diagnosis of sicklemlia and the detection of the disease in newborns
  - developement of techniques to detect gene carriers for Cystic Fibrosis in the population
  - developement of a preventive program for emphysema due to inherited alfa<sub>1</sub>-antitrypsine deficiency

(These programs are also defined as titles of Theses which will be presented by different coworkers of the department)

- fotocopy service on papers not available in Cuba

2. Cuban contribution:

- provide the department with sufficient postgraduates and technicians (starting from zero more than 10 postgraduates are now working in the department or in close cooperation with it)
- performance of an international workshop on sicklemlia and it primary prevention
- formation of a national commission for the coordination of efforts to prevent sicklemlia in Cuba

- enlightenment of the population on sickle cell anemia by television programs

3. Common products of work:

- development of an economic high speed electrophoretic mass screening system for hemoglobin variants patented in Cuba ( commercial production has been started)
- screening of 15 000 individuals with this system in La Habana
- presentation of the results at the I Latin American Congress of Hematology in La Habana, 1973, and by a paper in an international journal (3 more papers are in preparation)
- development of educational plans for the specialization of postgraduates in biochemical genetics, clinical genetics and cytogenetics

c) Materials provided within the project

- Biochemical Genetics	1973	135,--	DM
- Clinical Genetics	1973	135,--	DM
- Humangenetik	1973	128,--	DM
- Annals of Human Genetics	1973	105,--	DM
- Cytogenetics	1973	180,--	DM
- N.E.J.Medicine	1973	75,--	DM
- Annales de Génétique	1973	50,--	DM
- Annual Rev.Genetics	1973	80,--	DM
- J.Med.Genetics	1973	60,--	DM
- Biology of the Neonate	1973	183,--	DM
- Current Contents (Life Science)	1973-75	1240,--	DM
- Weekly Subject Index	1973-75	770,--	DM

Journals : 3141,-- DM

Books:

- Bailey,N.: Statistical Methods in Biology	10,--	DM
- Gellis & Feingold:Atlas of Mental Retard.	28,--	DM
- Carter: ABC of Medical Genetics	18,--	DM
- Warkany: Congenital Malformations	240,--	DM
- Gardner: Principles of Genetics	32,--	DM
- Bergsma:Birth Defects.Atlas &Compendium	80,--	DM
- 20 Volumes of the Series:Birth Defects	1153,90	DM
- McKusick:Mendelian Inheritance in Man	29,--	DM
- Stanbury,Wyngarden:Metab.Basis of Inh.Dis.	180,--	DM

1848,90 DM

Instruments:

- 1 lathe for home workers	1480,52	DM
- 1 Camara with macroobjective (Asahi)	940,--	DM
- 1 Gradient mixer	830,--	DM
- 1 Typewriter (Gabriele 35)	420,--	DM
- 1 universal current tester	115,95	DM
- 10 Thermos flasks	82,40	DM
- 2 Microlitersyringes (Hamilton)	266,--	DM
- 1 Membrane Pump	660,--	DM
- 1 Capillary Centrifuge	894,--	DM
- Diverse Home Worker Tool (Metabo)	1269,27	DM
- 1 Chryostate (MC 3 , Colora)	2515,--	DM
- 1 Set of Microliter Syringes(Eppendorf)	1510,--	DM
- 1 Magnetic Stirrer	242,--	DM
- 1 Wirl Mixer	342,--	DM
- 1 Laboratory Centrifuge	373,20	DM
- 1 Peristaltic Chromatography Pump	1804,--	DM
- 2 Conductivitymeters	3274,--	DM
- 1 Slide-Projector	926,--	DM
- 1 Fraction-Collector(Ultrorac)	7600,--	DM
- 1 Gradient-Mixer (Ultrograd)	11000,--	DM
- 2 Microflow-Sterilfilter	6000,--	DM
- 3 Dictaphones	1211,--	DM

43755,36 DM

Chemicals:

Chemicals of different Kind , together: 2000,-- DM

d) Difficulties during the performance of the project:

The only major problem was that it was almost impossible to obtain missing equipment within an acceptable space of time with the consequence that parts of the project were paralysed. A quick communication with a scientific Committee which is able to help and has some

financial possibilities to buy urgent material without a time consuming decision process would provide a highly effective help to reduce this problem.

e) Comment:

At the end of the 1 year's stay at the university of La Habana the work done was honored by the medical faculty in the following way:

FACULTAD DE CIENCIAS MEDICAS

acuerdo no. 38/73

El Consejo de la Facultad de Ciencias Médicas de la universidad de La Habana tomando en cuenta la meritoria labor que durante un año ha desempeñado el Dr. Klaus Altland en la organización y puesta en marcha del Laboratorio de Genética Médica de la Facultad.

Acuerda:

Primero: Hacer público reconocimiento y dejar constancia escrita de la actitud ejemplar del Dr. Klaus Altland, en el desarrollo de su trabajo como Asesor en Genética Médica.

Segundo: Otorgar al Dr. Klaus Altland la Medalla de la Universidad de La Habana.

Dado en la Facultad de Ciencias Médicas de la Universidad de La Habana, a las diez y seis días del mes de abril de mil novecientos setenta y tres "Año del XX Aniversario".

Dr. Angel Fernández Vila  
Decano - Facultad de Ciencias Médicas



Estudiar para avanzar



## centro nacional de investigaciones científicas.

Terminated Project BioChAgM 4/73

### Summary

No.	Keyword	Initiative
2	completion of a library	CENIC, KOWIZUKU

Supported Cub.Group	Aims
Library of the CENIC	complete the library of the CENIC with missing volumes of scientific journals

Material	Costs
Various volumes of scientific journals	8.901,--DM

Start	End
April 73	May 74

Assistance
Gerlinde Supplitt

### a) Description of the project.

The library of the "Centro Nacional de Investigaciones Científicas" (CENIC) has been completed with volumes of journals missing due to discontinuation of subscriptions in recent years.

### b) Cuban interest.

A major problem of the Cuban libraries is that the ordinary subscriptions of journals have suffered from the economic blockade in many instances. Additionally, there emerged a series of difficulties when it was tried to overcome the problem by indirect subscriptions. Especially one variant of the blockade, e.g. the incomplete delivery of subscribed journals has made the search for complete information impossible in many instances. This handicap accounts for the high interest in the completion of the journals by their missing volumes. The dependency on a foreign fotocopy service can thus be reduced.

### c) Interpretation of the KOWIZUKU's contribution.

Since the economic blockade especially by the US still is continued missing volumes can only be obtained through an indirect way, e.g. mediated by orders from a capitalist country. Therefore, this project is best effected by a committee for scientific collaboration.

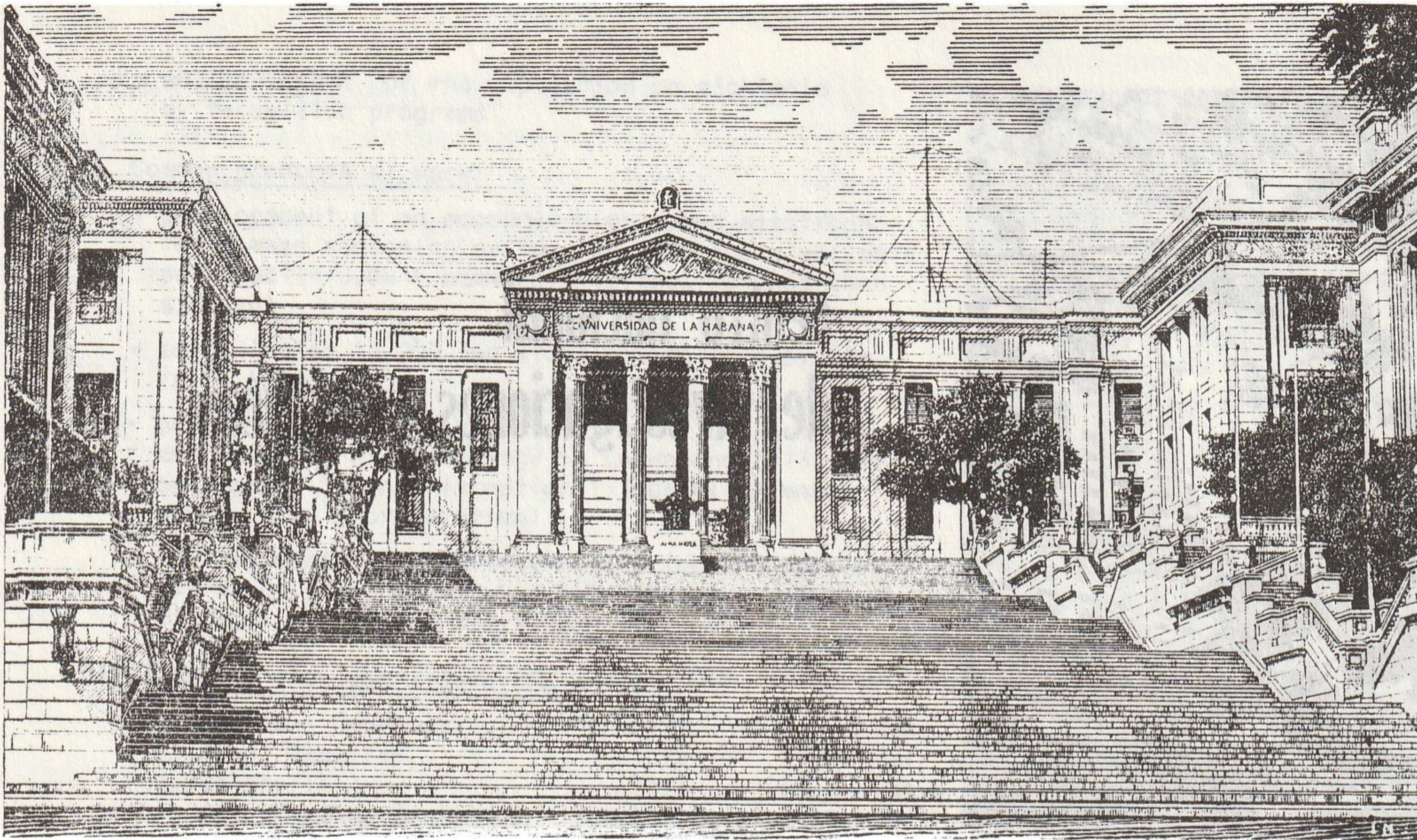
### d) Aspects of long term continuation of the project.

The problem which should be overcome by this project is a general problem of most Cuban libraries. Therefore, similar projects should follow in order to support other libraries in the same way.

### e) Material sent to the CENIC.

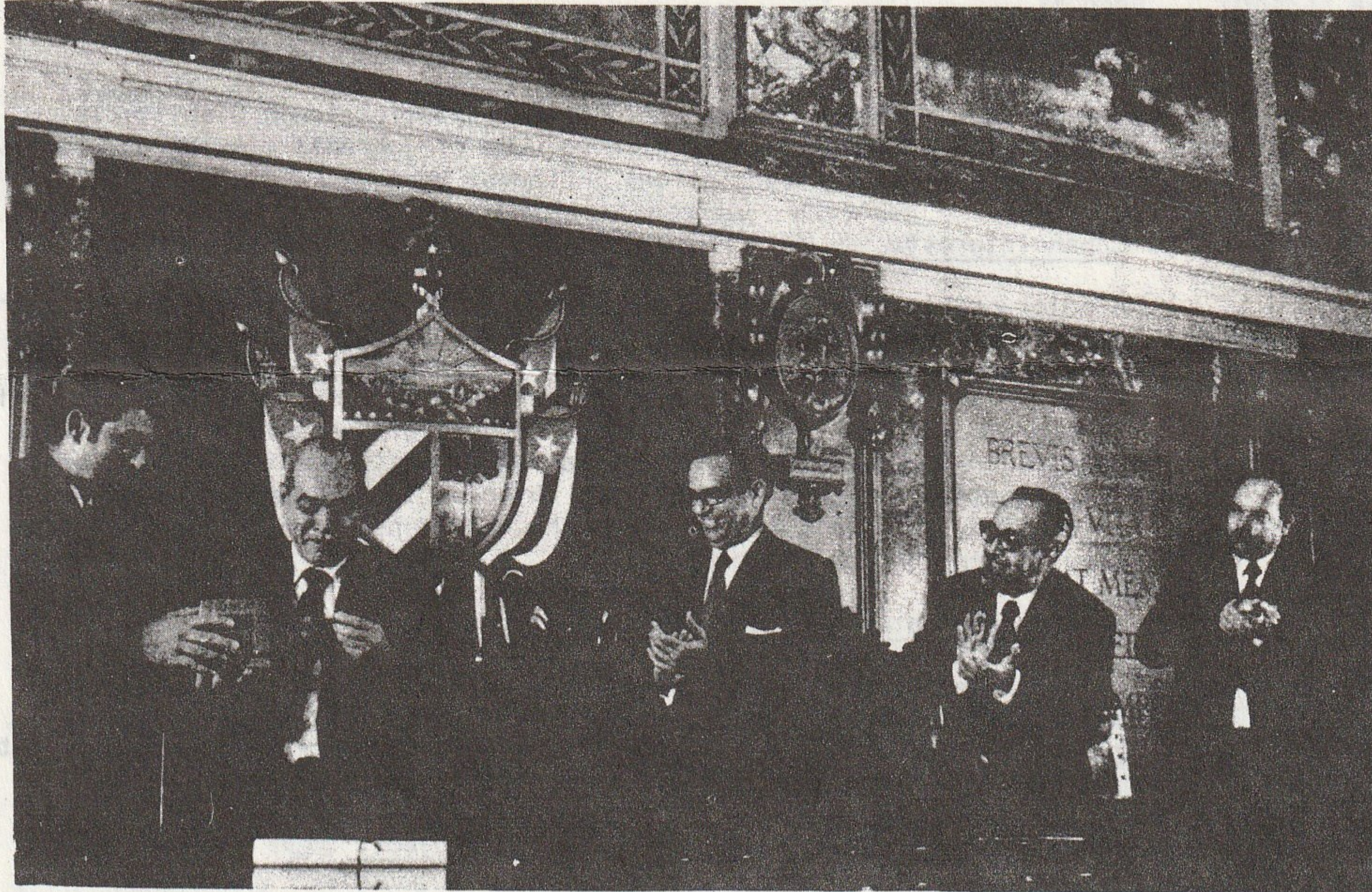
	Volumes	Costs
Journal of Bacteriology	87,89,90	900,- DM
Biochim.Biophys.Acta	94 - 129	2400,- DM
Enzymologia,Acta biocatalytica	33 - 41	530,- DM
Neuroscience Res.Progr.Bull.	from 1971	95,--DM
J.Mol.Biology	(1965)	390,- DM
Int.Rev.Neurobiology	1 - 7	280,- DM
J.Biochemistry	59 - 60	392,- DM
Biochemical J.	(1961-1964)	200,- DM
J.Immunology	105 No.4	15,- DM
Acta Pathologica Microbiol.	(1968-1969)	84,- DM
J.Virology	1(1968)	120,- DM
Genetics	58-60,61 No.2	300,- DM
Adv.Enzymol.	9-10	100,-DM
Comprehensive Biochemistry	23-28	240,- DM
Phytochemistry	2,8	260,- DM
Blood	25-29	420,- DM
Cold Spring Harbor Symp.Quant.Biol.	28-36	591,- DM

8.901,- DM  
=====



Die Universität von La Habana ist ein Schwerpunkt der Arbeit des Kowizuku. Vor dem Sieg der Revolution war sie der Ort zahlreicher Kämpfe zwischen Studenten und der Polizei des Batista-Regimes. Die Figur der "alma mater" vor der neoklassizistischen Kulisse, die Wertfreiheit der Wissenschaft beschwörend, konnte die Studenten nicht davon abhalten, die Interessen des kubanischen Volkes zu den eigenen zu machen.

Heute arbeiten die Wissenschaftler in denselben Mauern nicht mehr gegen das Volk, sondern für das Volk und immer mehr mit dem Volk. Ehrungen und Auszeichnungen der Universität werden nicht mehr "unter Kollegen" verschoben. Mit der Ehrung der besten Söhne der Arbeiterklasse und ihrer Verbündeten bekräftigt die Universität ihren Willen, sich nicht mehr von den Interessen des Volkes lösen zu lassen.



## UNIVERSITY OF HAVANA CONFERS HONORARY DEGREE IN LAW ON BLAS ROCA

President Osvaldo Dorticós presides over ceremony

● IN A solemn ceremony presided over by Dr. Osvaldo Dorticós Torrado, President of the Republic and member of the Political Bureau of the Central Committee of the Party, Comrade Blas Roca, member of the Secretariat of the Central Committee of the Party and President of the Secretariat of the Law Study Commission, was awarded an Honorary Degree in Law from the University of Havana.

Present at the ceremony, which took place in the main hall of the two-century old university, on the night of September 25, were Carlos Rafael Rodríguez, Antonio Pérez Herrero, Jorge Risquet and Isidoro Malmierca, all members of the Secretariat of the Central Committee of the Party; Belarmino Castilla and Flavio Bravo, Deputy Prime Ministers; Raúl Roa, Juan Marinello, Secundino Guerra and Fabio Grobart, members of the Central Committee of the Party; Dr. Armando Torres, Minister of Justice; Hermes Herrera, rector of the University of Havana; and members of the Diplomatic Corps.

Rector Hermes Herrera read out the Rectoral Resolution No. 171 of 1974 and informed those gathered at the ceremony that it was the unanimous decision of the University Council on June 18 to confer an Honorary Degree in Law from the University of Havana to Blas Roca.

Herrera declared that the decision was reached by virtue of the "great work and unimpeachable political and revolutionary

history of Comrade Blas Roca, corroborated by over half a century of unshakeable and dedicated militancy, in his work for the Revolution, in defense of the workers' rights and socialist law."

Dr. Carlos Rafael Rodríguez spoke of the revolutionary background of Comrade Blas Roca and, in a moving way, of the selfless and tireless militant work on the part of Blas, a humble shoemaker who embarked on the revolutionary struggle and eventually came "to hold the highest post in the first Communist Party in Cuba," only a few months before "that January of 1934 when his people mourned the death of Rubén Martínez Villena."

Comrade Blas Roca thanked those present for the high distinction conferred on him by the University of Havana and declared that he received the honor in the name of those comrades who had worked with him, those comrades "of my youth and those of present years, because they and the Party have trained me, educated me in the school of life, in Marxist-Leninist principles; they, through their teaching, made it possible for me to carry out those tasks for which I have been awarded this Degree...."

● Roberto Alvarez Quiñones  
Photo: Beruvides  
PUBLISHED: 9/26/74

**Granma**