

Pan American Health Organization

PAHO/ACMR 15/6
Original: English

FIFTEENTH MEETING OF THE
ADVISORY COMMITTEE ON MEDICAL RESEARCH

Brasília, D.F., Brazil
14-17 June 1976

REVIEW OF THE ACTIVITIES OF THE PAHO/WHO IMMUNOLOGY
RESEARCH AND TRAINING CENTER IN SÃO PAULO

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REVIEW OF THE ACTIVITIES OF THE PAHO/WHO IMMUNOLOGY

RESEARCH AND TRAINING CENTER IN SÃO PAULO*

The PAHO/WHO Immunology Research and Training Center (IRTC) in S. Paulo was established in 1966 in the Department of Microbiology, Immunology and Parasitology of the Escola Paulista de Medicina under the direction of Professor Otto G. Bier. In 1969, following an agreement between WHO, the Secretariat of Health of the State of S. Paulo and the University of S. Paulo, the Center moved its headquarters to the Butantan Institute.

The present staff of the Center is made up by Dr. Ivan Mota, Director, and Associate Professor of the University of S. Paulo, and three full-time immunologists, provided by Instituto Butantan in accordance with the agreement between WHO, the University of S. Paulo and the Secretariat of Health of the State of S. Paulo. The three immunologists are: Dr. Mahasti S. de Macedo, Dr. Adenir Perini and Dr. Harumi Ando Takehara.

At the twelfth meeting of the advisory Committee on Medical Research in 1973 we reviewed the activities of the Center from 1970 to 1973. The present report summarizes the activities of the Center since it was established in 1966, with emphasis on the last 3 years.

*Prepared by Dr. Ivan Mota, PAHO/WHO Immunology Research and Training Center, Butantan Institute, São Paulo, SP, Brazil

OBJECTIVES OF THE CENTER

The principal objective of the Center is to provide candidates from Latin American countries with postgraduate teaching in basic Immunology and to carry on immunological research projects directly or indirectly related to health problems in the region.

TEACHING ACTIVITIES

COURSE ON BASIC IMMUNOLOGY. The S. Paulo IRTC holds annually a 4-month course on basic Immunology given by local and invited visiting-professors. The course is given almost entirely in English and comprises approximately 140 hours of theoretical lectures, 105 hours of seminars and at least 320 hours of laboratory work. Up to the present time the S. Paulo IRTC has held 10 Courses on Basic Immunology. As can be seen in Table I most of the students who attended these Courses are presently working in the field of Immunology.

As a consequence of the Course on Basic Immunologists many distinguished Immunologists have come to S. Paulo, as visiting professors to teach in the Course. During their stay in Brazil these immunologists have the opportunity of getting in contact with Brazilian immunolo-

gists in the state of S. Paulo as well as in other states. In this way they exert a positive influence on many immunology centers beside the S. Paulo IRTC. The following Visiting-Professors have given lectures in the S. Paulo IRTC: J. A. Andrade, Department of Endocrinology, Hospital Tornú, Buenos Ayres, Argentina; Ruth Arnon, Weizman Institute of Sciences, Rehovot, Israel; S. Avrameas, Institut of Recherches Scientifiques Sur le Cancer, Villenuif, France; E. L. Becker, Department of Pathology, The University of Connecticut School of Medicine, Farmington, Conn. U.S.A. ; E. H. Beutner, Department of Bacteriology and Immunology , State University of New York, Buffalo, U.S.A.; Celso Bianco, The Rockefeller University, New York, N.Y., U.S.A.; R. Binaghi, Collège de France, Paris; G. Biozzi, Fondation Curie, Section of Biologie, Paris, France; Joseph Haimovich, Weizman Institute of Science, Rehovot, Israel; W. L. Hale, Department of Bacteriology and Immunology, State University of New York , Buffalo, U.S.A.; J. G. Howard, The Wellcome Research Laboratories Langley Court, Beckenham, Kent; E. A. Kabat, Columbia College of Surgeons, New York, N.Y., U.S.A.; C. Moreno, The Wellcome Research Laboratories, Langley Court, Beckenham, Kent, England; Victor Nussenzweig, Department of Pathology, New York, University, New York, N.Y., U.S.A.; E. Potworowski, Institute Armand-Frapier, Université de Quebec, Quebec, Canada; A. Szenberg, Walter and Elisa Institute of Medical Research , Melbourne, Australia; Ivan Roitt, Department of Immunology, The Middlesex Hospital, London, England; J. L. Turk, Royal College of Surgeons, London, England; Nelson Vaz, The National Asthma

Center, Denver, Ca.; U.S.A.; G. Voisin, Centre of Recherches D'Immuno-Pathologie, Hopital Saint Antoine, Paris, France; B. Waksman, Department of Pathology, Yale University, Connecticut, U.S.A.. In addition to these foreigner immunologists the following distinguished Brazilian professors have collaborating with the IRTC by giving lectures: Willy Beçak, Department of Genetics, Instituto Butantan, S. Paulo, Brazil; O. G. Bier, Director, Instituto Butantan, S. Paulo, Brazil; Mário Camargo, Institute of Tropical Medicine, University of S. Paulo, São Paulo, Brazil; R. G. Ferri, Department of Microbiology and Immunology, Medical School, University of São Paulo, S. Paulo, Brazil; S. F. Lara, Department of Biochemistry, Institute of Chemistry, University of São Paulo, Brazil; A. de Oliveira Lima, Laboratory of Immunology, Medical School, University of Rio de Janeiro, Brazil; C. Fava Neto, Department of Microbiology and Immunology, Medical School, University of São Paulo, S. Paulo, Brazil; Benedito Oliveira, Department of Immunology, State University of Campinas, Campinas, S. Paulo, Brazil; S. Leal Prado, Department of Biochemistry, Escola Paulista de Medicina, S. Paulo, Brazil; L. S. Prigenzi, Department of Immunology, State University of Campinas, Campinas, S. Paulo, Brazil; W. Dias da Silva, Department of Immunobiology, Institute of Medical Sciences, Belo Horizonte, MG, Brazil; Maria Siqueira, Division of Immunology, Instituto Biologico, S. Paulo, Brazil.

Beside the regular Course on Basic Immunology the S. Paulo, IRTC offers occasional courses on local health problems. Thus, a Course on Chagas' disease will be hold

in July 1976 and a Course on "Lymphocyte transformation and macrophage cultivation for South American Research Workers in Leprosy" was held in June, 1974. The following people participated in this Course: Dr. J. O. Almeida , Dept. of Microbiology and Immunology, Medical School of the University of S. Paulo, Ribeirão Preto, S. Paulo , Brazil; Dr. B. Beiguelman, Dept. of Medical Genetics, State University of Campinas, S. Paulo, Brazil; Dr. M. L. Brubaker, Pan American Health Organization; Dr. M. S. Cline, Boyer professor of Medical Oncology, Dept. of Medicine, Los Angeles, California; Dr. S. Froland, Institute of Immunology and Rheumatology, Oslo, Norway; Dr. T. Godal, Immunology, World Health Organization, Geneva, Switzerland; Dr. Gohman Yahr, Instituto Nacional de Dermatologia, Caracas, Venezuela; Dr. R. C. Hastings, U. S. Public Health Service, Caville, Louisiana, U.S.A.; Dr. R. J. W. Rees, National Institute for Medical Research, The Ridgeway, Mill Hill, London, England; Dr. H. Sansarricq, Leprosy Division of Communicable Diseases, WHO; Dr. G. P. Walsh, Gulf South Research Institute and Dr. I. Mota, PAHO/WHO Immunology Research and Training Center, S. Paulo, Brazil. The following students attended the Course: Dr. Edna Thomas, Leprology Laboratory, Rio de Janeiro, Brazil; Dr. M. S. Damasco, Leprology Laboratory, Rio de Janeiro, Brazil; L. Liserre, WHO Reference Center for Serology of Leprosy, Ribeirão Preto, S. Paulo, Brazil; Dr. R. F. M. Lai A. Fat, Para Maribo, Suriname; Dr. R. Pisani, Dept. of Medical Genetics, State University of Campinas, S. Paulo, Brazil ; Dr. A. Corredor, Dept. of Microbiology and Immunology, Ministerio de La Salud Publica, Bogota, Colombia; Dr. P. Pagnano ,

Medical School, Ribeirão Preto, S. Paulo, Brazil; Dr. Ises Abrahamsohn, Laboratory of Immunobiology, Instituto Butantan, S. Paulo, Brazil; Dr. Sonia Jancar, Laboratory of Immunobiology, Instituto Butantan, S. Paulo, Brazil; Dr. E. Fliess, Medical School, Del Salvador University, Buenos Ayres, Argentina; Dr. Maria Pinardi, Medical School, National Institute of Dermatology, Caracas, Venezuela and Dr. H. N. Cabrera, Dermatology Service, Hospital F. J. Múniz, Buenos Ayres, Argentina.

POSTGRADUATED STUDENTS. Due to agreements with the University of São Paulo, (Prof. Celeste Fava Neto) and the Escola Paulista de Medicina (Prof. Nelson Mendes) students on the postgraduate Course in Immunology of both the University of São Paulo and of the Escola Paulista de Medicina (a federal school) are accepted as fellows in the IRTC to carry on their research projects. These students work in the Center doing research for 2 to 3 years and are usually supported with a fellowship from FAPESP, CAPES, or CNPq.. Since 1971 13 students have been accepted to work on their research projects in the IRTC. Four of these students have concluded their stay satisfactorily and have presented the results of their investigations in their Master Degree Thesis.

RESEARCH ACTIVITIES

Although the S. Paulo IRTC has tackled many different research problems since its establishment (see list of published papers), more recently the researches have been concentrated on problems of immediate hypersensitivity and Chagas' disease. For the study of experimental Chagas' disease a laboratory was set up in 1973 and is actively doing research on this problem. Dr. Marumi A. Takehara is the Head of this laboratory.

The following research activities are in progress at the present time:

a) Isolation and characterization of the homocytotropic antibodies of the guinea pig. Work being done by Sergio Marangoni (fellow of FAPESP), Adenir Perini, Benedito de Oliveira Filho (Prof. of Immunology, State University of Campinas, S. Paulo) and I. Mota.

b) Biological properties of the lymphocytosis promoting factor isolated from *Bordetella pertussis*. Work being done by Vilma Trindade (Postgraduate student working in the Center).

c) Role of macrophage in the production of homocytotropic antibodies. Effect of an specific anti-macrophage serum. Work being done by Eugenia Lagos (Student, postgraduate Immunology Course, Escola Paulista de Medicina).

d) Attempts to vaccinate mice against *T. cruzi* with pre-treatment with *Leptomys pessoai*. Work being done by Harumi Ando Takehara. The initial part of this work was made in collaboration with Dr. W. Dias da Silva, from the Laboratory of Immunobiology, Instituto Butantan.

e) Attempts to protect mice against *T. cruzi* with supernatants of lymphoid cells obtained from mice chronically infected with *T. cruzi*. Work being done by Harumi Ando Takehara and Maria Elisa Pupo (Biologist, voluntary assistant in the IRTC).

f) Role of the mononuclear phagocytic system in experimental Chagas' disease. It is known that the effect of many immunostimulants is directed partly upon the antigen processing by the macrophage, a cell that probably has a key role in the immunopathology of Chagas' disease. On the other hand it has been shown recently that drugs capable of raising the levels of intracellular cyclic AMP inhibits phagocytosis whereas drugs capable of reducing the level of the same enzyme system are potent stimulators of phagocytosis. Thus, it was decided to investigate whether such drugs has any

beneficial effect on the course of experimental Chagas' disease.

Work been done by A. Perini, Rodolfo Pereira Mendes and I. Mota.

g) Attempts to immunize mice against a letal dose of *T. cruzi* by pretreatment of the animals with *L. pessoai* plus adjuvants.

Work been done by Maria Eliza Pinheiro and I. Mota.

PAPERS PUBLISHED BY THE S. PAULO IRTC.

L. R. Albuquerque, A. Perini and I. Mota. "Failure of insoluble antigens to elicit anaphylactic reactions". *Int. Arch. Allergy Appl. Immunol.* 41, 797 (1971).

E. H. Beutner, L. Prigenzi, W. Hale, C. A. Leme and O. G. Bier. "Immunofluorescent studies of autoantibodies to intercellular area of epithelia in Brazilian pemphigus foliaceus". *Proc. Soc. Biol. Med.* 127, 81 (1971).

E. H. Beutner, G. W. Wood, T. P. Chrozelski, C. A. Leme and O. G. Bier. "Produção de lesões semelhantes as do penfígo foliácio pela injeção intradérmica em coelhos e macacos, de soro de doentes com título elevado de autoanticorpo. *Mem. Inst. Butantan* 35, 79 (1971).

F. A. Braga. "Anafilaxia cutanea passiva homologa e hetero-
loga induzida pelos anticorpos homocitotropicos do camun-
dongo". Master Degree Thesis, Escola Paulista de Medicina,
1975.

M. Gennari. "Estudo da açãõ do veneno de Bothrops Jararaca
sobre o complemento de cobaio". Master Degree Thesis,
University of São Paulo, 1972.

P. D. Guercio, G. Torlone, F. Braga Andrade, G. Biozzi and
R. Binaghi. "Opsonic, cytophlic and agglutinating activity
of guinea pig γ_2 and γ_M anti-Salmonella antibodies".
Immunology 16, 361 (1969).

Y. Kipnis. "Efeito da esplenectomia na produçãõ de anticorpos
homocitotropicos em cobaias e camundongos". Doctoral Degree
Thesis, University of São Paulo, 1972.

M. Sahihi de Macedo. "Mecanismo de regulaçãõ da formaçãõ de
anticorpos da classe IgE". Master Degree Thesis, Escola
Paulista de Medicina, 1974.

M. Sahihi de Macedo. "Studies on the regulatory mechanisms
of homocytotropic antibody production in mice". Thesis
presented in the Faculty of Science, University of Birmingham,
for the Degree of Master of Science, 1974-1975.

I. Mota and A. Perini. "A heat-labile mercaptoethanol

susceptible homocytotropic antibody in the guinea pig".
Life Sec. 9, 923 1970.

I. Mota and A. Perini. "The effect of a synthetic double-stranded RNA on IgG1 and IgE production by guinea pigs. A comparative study with lipopolysaccharide. Immunology 29, 319 (1975).

I. Mota, A. Perini and V. S. Trindade. "The mechanism of the adjuvant effect of Bordetella pertussis: the substance responsible for the selective enhancement of IgE antibody production". Int. Arch. Allergy Appl. Immunol. 47, 425 (1974).

H. Passos, M. Siqueira, O. C. Martinez and O. G. Bier. "Studies on the nephrotoxic activity of guinea pig gamma-1 and gamma-2 antibodies". Immunology 26, 407 (1974).

A. Perini. "Estudos sobre o efeito adjuvante de endotoxinas e dos ácidos nucleicos na produção de anticorpos da classe IgE em cobaias. Doctoral Degree Thesis, University of São Paulo, Brazil, 1972.

A. Perini and I. Mota. "Heterogeneity of guinea pig homocytotropic antibodies". Immunology 22, 915 (1972).

A. Perini and I. Mota. "The production of IgE and IgG1 antibodies in guinea pigs immunized with antigen and bacterial lipopolysaccharides". Immunology 25, 297 (1973).

H. Ando Takehara. "Doença de Chagas experimental: tentativas de imunização protetora por inoculação prévia com flagelados monoxênicos". Master Degree Thesis, Escola Paulista de Medicina, 1975.

J. Uriel, M. Della Santina and E. Rizzo. "Characterization d'enzymes dans le venin de Bothrops Jararaca par des méthodes d'immunization". Bull. Soc. Chim. Biol. 50, 938 (1968).

PAPERS SUBMITTED FOR PUBLICATION.

F. A. Braga and I. Mota. "Homologous passive cutaneous anaphylaxis (PCA) in mice and heterologous PCA induced in rats with mouse IgE". Submitted for publication in Immunology.

M. Sahihi de Macedo, F. A. Braga and I. Mota. "Control of IgE and IgG1 antibody production in mice". Submitted for publication in Cellular Immunology.

H. Ando Takehara and W. D. da Silva. "Mechanism of resistance against *T. cruzi* in animals vaccinated with *L. pessoai*". To be published in the Proceedings of the PAHO Symposium on Trypanosomiasis.

INFLUENCE OF THE CENTER ON LOCAL IMMUNOLOGY

As a result of the establishment of the IRTC in S. Paulo and of the stimulus provided by the visiting-professors a special interest in Immunology was generated with definite practical consequences. As a result of the solid immunological background acquired in the Course on Basic Immunology many of the students decisively focused their interest in immunology research and some of them were sent abroad for further training in high level laboratories, in Europe and the United States. (unfortunately many of these students did not return to their place of origin). In this way the IRTC is accomplishing its role of selecting good candidates to become future first class researchers in the field of Immunology. As an example of this let us quote one student of the 1968 Course (Dr. Celso Bianco) who is now a well known immunologist and has come for several years to give lectures on Cellular Immunology in the IRTC.

A further indication of the influence exerted by the IRTC in the development of Immunology in S. Paulo is the strong group of immunologists now working at the Instituto Biologico in S. Paulo. In that Institution are being developed research projects on immunogenetics and on immunoglobulins of different animal species with the collaboration of two visiting-professors of the IRTC Immunology Course and of one former member of the permanent staff of the Center.

As further consequences of the establishment of the IRTC in S. Paulo it is still possible to quote:

a) The foundation of the Sociedade Brasileira de Imunologia, SBI (Brazilian Society for Immunology), in 1972. The initial idea, discussions and deliberations for the establishment of the SBI took place in the IRTC. Indeed, presently the SBI has its headquarters provisionally located in the IRTC. With the support of the IRTC and the Brazilian Academy of Sciences, the SBI was able to hold the first National Symposium on Immunology in Rio de Janeiro, in 1973 and a second Symposium in 1974.

b) The establishment of a new laboratory in Instituto Butantan, the Laboratory for Immunobiology. The new laboratory has among its finalities to improve the preparation of immunobiological materials such as vaccines and antisera. This laboratory is functioning in close association with the IRTC taking advantages of the facilities available at the Center to modernize the Butantan Institute's methods of preparation of immunobiological reagents.

Thus, the Immunology Research and Training Center in S. Paulo is accomplishing to the best of its ability the goals of training investigators and stimulating immunology research in Latin American countries.

TABLE I

Students of the Course on Immunology, PAHO/WHO Immunology Research and Training Center, Instituto

Butantan, São Paulo, Brazil

<u>YEAR</u>	<u>STUDENT</u>	<u>COUNTRY</u>	<u>PRESENT ADDRESS</u>
<u>1966</u>	M. Bresil Esteves	Brazil	Division of Immunology, Instituto Biológico, S. Paulo, Brazil.
	M. C. Soares Guimarães	Brazil	Instituto de Medicina Tropical, University of Sao Paulo, S. Paulo, Brazil.
	A. Perini	Brazil	PAHO/WHO Immunology Research and Training Center, Instituto Butantan, S. Paulo, Brazil.
	E. de Rizzo	Brazil	Division of Virology, Instituto Butantan, S. Paulo, Brazil.
	M. Della Santine	Brazil	Division of Immunology, Instituto Biológico, S. Paulo, Brazil.
<u>1967</u>	F. Braga Andrede	Brazil	Division of Immunology, Medical School University of Ceará, Fortaleza, Ceará, Brazil.
	P. Leser	Brazil	Dept. of Immunology, Escola Paulista de Medicina, S. Paulo, Brazil.
	M. M. Montene	Peru	
	H. C. Pesses	Brazil	Division of Immunology, Escola Paulista de Medicina S. Paulo, Brazil.
	L. S. Prigenzi	Brazil	Biological Sciences Institute, State University of Campinas, S. Paulo, Brazil.

1968

Mitsuko Akashi	Brazil	Immunobiology Laboratory, Instituto Butantan, S. Paulo, Brazil.
C. Bianco	Brazil	Rockefeller Institute, New York, N.Y. U.S.A.
G. Finnie	Jamaica	Department of Microbiology, University of West Indies, Jamaica.
W. H. Lay	Brazil	Instituto de Medicina Tropical, University of São Paulo, S. Paulo, Brazil.
A. Takeda	Brazil	Division of Immunology, Instituto Adolpho Lutz, S. Paulo, Brazil.
J. M. Zuniga	Peru	Medical School, University of Trujillo, Peru.

1969

F. Callejas	Uruguay	Depto. de Patologia y Fisiopatologia, Servicio de Fisiologia Obstetrica, Facultad de Medicina, Montevideo, Uruguay.
C. Escajadillo	Peru	Instituto de Medicina Tropical, Lima, Peru.
E. Fuenzalida	Chile	Escuela de Medicina Veterinaria, Universidad de Chile, Santiago, Chile.
C. Hormaeche	Uruguay	Department of Microbiology, Faculty of Medicine, Montevideo, Uruguay.
T. Kipnis	Brazil	Department of Microbiology and Immunology, Faculty of Medicine, University of São Paulo, S. Paulo, Brazil.
A. I. da Silva	Brazil	Hospital do Servidor Público Estadual, S. Paulo, Brazil.

<u>1970</u>	A. Bandieri	Brazil	Wellcome Research Laboratories, Langley Court, Beckenham, England.
	H. Blythman	Argentina	Department of Microbiology, Faculty of Medical Sciences, University of Cuyo, Mendoza, Argentine.
	V. L. Garcia	Brazil	Department of Microbiology and Immunology, Faculty of Medicine, University of São Paulo, S. Paulo, Brazil.
	I. Yoko Ito	Brazil	Instituto de Medicina Tropical, University of São Paulo, S. Paulo, Brazil.
	J. Klotzel	Brazil	Instituto de Medicina Tropical, University of São Paulo, S. Paulo, Brazil.
	O. C. Martinez	Brazil	Division of Immunology, Instituto Biologico, S. Paulo, Brazil.
	M. E. A. Pereira	Brazil	Columbia University, College of Physicians and Surgeons, New York, N.Y. U.S.A.
	S. Pieroni	Brazil	Hospital do Servidor Público. S. Paulo, Brazil.
	A. A. Pinto	Brazil	Dept. of Microbiology and Immunology, Biomedical Sciences Institute, University of Sao Paulo, S. Paulo, Brazil.
	A. Strauss	Brazil	Dept. of Pediatrics, Hospital das Clinicas, University of Sao Paulo, S. Paulo, Brazil.
<u>1971</u>	Geraldo Allo	Uruguay	Department of Biochemistry, Medical School, Uruguay University, Montevideo, Uruguay.
	Humberto Cebrial	Argentina	Institute of Cellular Biology, Cordoba, Argentine.
	S. Jencar	Brazil	Immunobiology Laboratory, Instituto Butantan, S. Paulo, Brazil.

U. P. Miranda	Chile	Institute of Bacteriology, Santiago, Chile.
Sara Rabito	Argentina	Institute of Physiopathology, Medical School, Cuyo National University, Mendoza, Argentina.
M. H. dos Reis	Brazil	Division of Immunology, Instituto Biologico, S. Paulo, Brazil.
O. B. E. Sant'Ana	Brazil	Division of Immunology, Instituto Biologico, S. Paulo, Brazil.
J. Villamil	Uruguay	Department of Biochemistry, Medical School, Uruguay University, Montevideo, Uruguay.
<u>1972</u>		
H. Ando Takehara	Brazil	PAHO/WHO Immunology Research and Training Center, Instituto Butantan, S. Paulo, Brazil.
A. B. Carvalho	Brazil	Medical School, University of Recife, Pe, Brazil.
C. R. Chetto	Uruguay	Medical School, University of Uruguay, Uruguay.
E. Lagos	Brazil	Department of Rheumatology, Medical School, University of São Paulo, S. Paulo, Brazil.
R. Mayol	Brazil	School of Medicine, University of Pennsylvania, Philadelphia, PA. U.S.A.
M. Sahihi de Macedo	Brazil	PAHO/WHO Immunology Research and Training Center, Instituto Butantan, S. Paulo, Brazil.
L. A. Vigoroux	Chile	Dept. of Pathology, New York University, New York, N.Y. U.S.A.
R. C. Zuasti	Uruguay	Medical School, University of Uruguay, Uruguay.

<u>1973</u> R. Belfort	Brazil	Dept. of Ophthalmology, Escola Paulista de Medicina, S. Paulo, Brazil.
E. Burger	Brazil	Dept. of Microbiology and Immunology, Med. School, University of Sao Paulo, S. Paulo, Brazil.
A. C. M. Chiari	Brazil	Dept. of Biochemistry and Immunology, Medical Sciences Institute, Belo Horizonte, MG, Brazil.
I. I. Gomes	Brazil	Immunochemistry Center, Medical School, University of São Paulo, S. Paulo, Brazil.
E. J. Massouh	Uruguay	Department of Microbiology, Faculty of Exact and Natural Sciences, Buenos Ayres, Argentina.
M. C. Megday	Uruguay	Department of Bacteriology and Virology, Medical School, Institute of Hygiene, Montevideo, Uruguay.
M. H. Peluffo	Uruguay	Department of Virology, Institute of Hygiene, Medical School, Montevideo, Uruguay.
V. M. Vila	Uruguay	Department of Hemotherapy, Hospital das Clinicas, Montevideo, Uruguay.
N. G. de Tortosa	Panamá	Dept. of Cellular Biology and Genetics, University of Chile, Chile.
V. S. Trindade	Brazil	Department of Rheumatology, Medical School, University of Sao Paulo, S. Paulo, Brazil.
Y. Weissberger	Brazil	Department of Clinical Allergy, Hospital de Servidor Publico, S. Paulo, Brazil.
F. Zicker	Brazil	National Institute of Rural Endemias, Belo Horizonte, MG, Brazil.

1974

L. S. Black	Peru	Department of Biological Sciences, San Luiz Gonzaga National University, Ica, Peru.
M. C. A. Brito	Brazil	Department of Clinical Allergy, Hospital do Servidor Publico, S. Paulo, Brazil.
I. L. M. Loureiro	Brazil	Department of Clinical Allergy, Hospital das Clinicas, University of Sao Paulo, S. Paulo, Brazil.
E. F. Morato	Brazil	Division of Immunology, Instituto Biologico, S. Paulo, Brazil.
A. M. Nishimura	Brazil	Division of Immunology, State University of Londrina, Pa., Brazil.
E. M. Seronni	Brazil	Department of Clinical Allergy, Hospital do Servidor Publico, S. Paulo, Brazil.

1975

M. A. M. T. de Barros	Brazil	Dept. of Clinical Allergy, Hospital das Clinicas, University of São Paulo, S. Paulo, Brazil.
R. A. Bergamin	Brazil	Division of Immunology, Instituto Adolpho Lutz, S. Paulo, Brazil.
Lain P. de Carvalho	Brazil	PAHO/WHO Immunology Research and Training Center, Instituto Butantan, S. Paulo, Brazil.
H. Goto	Brazil	Dept. of Clinical Allergy, Hospital das Clinicas, University São Paulo, S. Paulo, Brazil.
R. F. Guevão	Brazil	Medical Sciences School, Rio de Janeiro, GB, Brazil.
P. D. Lacer	Chile	Medical School, University of Chile, Chile.
K. S. C. Primavera	Brazil	Dept. of Microbiology and Immunology, School of Pharmacy, University of São Paulo, S. Paulo, Brazil.