

Dr. Alina Szumlewicz
3752 Beech Avenue
Baltimore 11, Md.

January 29, 1961.

Dr. Javier Malagón,
Technical Secretary,
OAS Fellowship Program,
Pan American Union,
Washington 6, D. C.

Dear Dr. Malagón :

This is to enclose my report covering the studies over the third three-month period under the fellowship granted by the Organization of American States.

In accordance with your instructions of January 5, 1961, this report describes the relevant studies in some detail.

I left at the National Institutes of Health two of the three forms for reference statements I obtained from you..The third one, to be mailed by Dr. McElroy is delayed due to his temporary absence from the University. Dr. McElroy is expected back from Jamaica this week.

I am looking forward to hearing about the extension of the fellowship so as to be able to sign up for the required studies possibly soon (there are very few vacancies).

With kindest personal regards,

Alina Szumlewicz

Szumlewicz Alina: Born (Perlowagora) Dec. 18, 1911, Poland; married 1938; naturalized Brazilian. Ph. D. (natural sciences, majored in animal & plant physiol. and org. chem.), Warsaw University, 1933; advanced course in serology and immunology, Nat. Institute of Hygiene, Warsaw, 1933; Med. student, Med. Sch. of Warsaw University, 1935-1939 - studies interrupted due to outbreak of World War II.

Res. Physiol., Inst. of Human Physiol., Warsaw Univ. & Academy of Physical Education, Warsaw, 1933-1939. Respiratory exchange during work in humans. Compensatory processes at rest and during work under conditions of lowered oxygen tension.

Res. serologist and immunologist in yellow fever, Rockefeller Foundation Laboratory, Rio de Janeiro, Brazil, 1942-1949. Studies on the usefulness of serological tests in the diagnosis of yellow fever and in yellow fever epidemiology.

Res. biologist in Instituto Nacional de Endemias Rurais, Rio de Janeiro and Belo Horizonte, Brazil, 1949-; Studies on the biology of the vector of Chagas Disease and of the intermediate host of schistosomiasis. Screening of insecticides and of molluscicides under laboratory and seminatural conditions.

Fellow, WHO, NIAID, NIH, Bethesda, Md., 1956. Studies on the oxygen consumption of A. glabratus eggs and of young A. glabratus.

Fellow, Pan.Am.Union, 1960-1962. Radiation Physics Sec. NIH, 1960. Isotopes and Radiation Safety. Auditor, Dept. of Biology, Johns Hopkins, 1961. Biochem. & Genetics. Visit.Sci. & Guest Worker, Lab. of Parasitic Dis. NIAID, NIH, Bethesda, Md. Studies on the effect of radiation on the biology of the intermediate host of schistosomiasis. On the role of cercariae attenuated by radiation in acquired resistance against S. mansoni, 1962-1963.

Travel abroad. Field trips, Puerto Rico and Venezuela, in connection with control of schistosomiasis and Chagas disease, 1956. Int. Congress of Trop. Med. & Malaria, Lisbon, Portugal, 1958. Expert Panel Molluscicides, WHO, Geneva, 1959. Symposium on Schistosomiasis, Ciba Foundation, Cairo, Egypt, 1962.

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R e p o r t

on studies covering the third three-month period
(November 1, 1960 - January 29, 1961) of the fellowship
granted by the Organization of American States

The first semester of the current academic year (1960-1961) ended on 25 January 1961 and, consequently, the two courses I signed up for at its beginning, namely Cytogenetics under Professor K. Swanson, and General Procedures in Biochemistry under Professor W. D. McElroy. As the latter course constituted my main interest in accordance with the program submitted when applying for the fellowship, a summary of the techniques studied follows :

1. Under Dr. Ballantine :

- (a) Determination of the precision of pipettes and pipetting by direct weighing, by the method of duplicate difference, and by the method of acid-base titration,
- (b) utilization of small-sample statistics in the treatment of data as used in biochemistry,
- (c) paper partition chromatography of amino-acids,
- (d) quantitative determination of protein by the biuret reaction,
- (e) identification of peptides by determination of terminal DNP-amino acids and free amino acids.

2. Under Dr. Bessman :

- (a) Isolation of P³² labeled nucleotides from bacterial nucleic acids,
- (b) separation and identification of mononucleotides present in RNA by ion-exchange chromatography and paper electrophoresis,
- (c) enzyme kinetics : Preparation of yeast dehydrogenase, and performance of the reaction catalyzed by yeast alcohol dehydrogenase.

3. Under Dr. Yegendorf :

- (a) Establishing micronutrient deficiency in plants,
- (b) manometric techniques leading to the experiment of oxidative phosphorylation involving rat liver mitochondria.

4. Under Dr. Susskind : Immunochemical methods :

- (a) Quantitative determination of antienzyme activity,
- (b) detection and quantitative detection of cross reaction between structural related proteins,
- (c) the Ouchterlony Petri plate double-diffusion procedure for studying the specific precipitation of antigen-antibody complexes in agar-gel.
- (d) immunization of animals.

It is quite apparent that a variety of problems have been handled in a relatively short period of time. In previous years,

the general course in biochemical techniques lasted two semesters. This year, it was limited to one semester, only thus affording more time to specialize in one or two of the methods that might be of special interest to individuals involved in defined research.

I hope that the extension of the fellowship for its second year (starting May 1, 1961) will give me the opportunity to carry out the full program as submitted to the OAS Fellowship Program. This would enable me to complete my training in immunochemistry and oxidative phosphorylation, the need for which is pressing in connection with planned studies on resistance acquired by the intermediate hosts of insect borne diseases in Brazil.

Furthermore, I would be able to go back to the National Institutes of Health for the required period of time in order to resume studies on the use of radioisotopes in biology I was compelled to interrupt in August 1960 in connection with the beginning of the academic year in the Johns Hopkins University.

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