



Hunt Institute for Botanical Documentation  
5th Floor, Hunt Library  
Carnegie Mellon University  
4909 Frew Street  
Pittsburgh, PA 15213-3890  
Telephone: 412-268-2434  
Email: [huntinst@andrew.cmu.edu](mailto:huntinst@andrew.cmu.edu)  
Web site: [www.huntbotanical.org](http://www.huntbotanical.org)

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#### *About the Institute*

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

AIR MAIL

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

21 April 1965

Dr. David J. Rogers  
Curator of Quantitative Taxonomy  
The New York Botanical Garden  
Bronx, New York 10458

Dear Dr. Rogers:

Thank you for your letter of 12 April enclosing a revised estimate for the collection of Manihot.

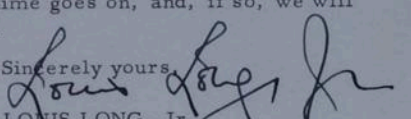
My recollection of our conversation is that Jamaica is the best source of bitter Manihot. Inasmuch as one of the purposes of our research is to determine if there are other cyanogenetic glycosides present in Manihot besides linamarin, our chief interest is in bitter Manihot with as high a cyanogenetic glycosidic content as possible.

It occurs to us from a perusal of the item "Collecting Equipment" in your estimates that you are planning to collect 50-100 samples of Manihot. Our need at present is only for one large sample of approximately ten pounds.

We are still concerned about the high cost of collection. One of the reasons therefor is that we anticipate the possibility of requiring additional quantities of Manihot in the future and would hope that these could be obtained less expensively.

At the moment, the required funds are not available, but, perhaps sufficient funds can be obtained as time goes on, and, if so, we will surely wish to collaborate with you.

Sincerely yours,

  
LOUIS LONG, Jr.  
Head, Organic Chemistry Laboratory  
Pioneering Research Division

AIR MAIL

April 12, 1965

Dr. Louis Long, Jr.  
Head, Organic Chemistry Laboratory  
Pioneering Research Division  
U. S. Army Natick Laboratories  
Natick, Massachusetts

Dear Dr. Long:

Thank you for your letter of April 8 concerning the collection of Manihot specimens.

It has occurred to us that a certain saving of costs could be achieved if the collection of specimens were confined to one site. On this basis I am enclosing a revised estimate which may be more in keeping with your needs. The Yucatan collections would include both "bitter" and "sweet" cultivars of Manihot and would be appropriately documented as we discussed previously.

I look forward to receiving your comments on the program outlined.

Sincerely yours

David J. Rogers  
Curator of Quantitative Taxonomy

DJR: MDF  
Enclosure

## TRANSPORTATION

N. Y.-Miami-Merida-N. Y.	\$234.60
N. Y.-Miami-Merida-N. Y. 100 lbs. excess baggage	135.00
Car hire Merida @ \$10 per diem + 10¢ a mile for 7 days, 250 miles	95.00
Ground transportation to and from airports	20.00

## SUBSISTENCE

15 days @ \$16 per diem	240.00
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## SALARY

15 days @ \$10,000 per annum	415.00
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## AIR FREIGHT

50 lbs., Merida-N. Y.	20.00
Trans-shipment	50.00

## COLLECTING EQUIPMENT

Kerosene stove	20.00
Pressure lantern	10.85
Pick/shovel	2.00
Corrugated aluminum sheets 50 @ 85¢ each	42.50
Red herbarium driers 100 @ \$13.75/100	13.75
Drying frame	15.00
Press lattices 3 @ \$2.50 each	7.50
Webbing straps 4 @ \$2.00 each	8.00
Pruning shears	2.50
U.S.A.F. flight bags 3 @ \$2.50	7.50
Miscellaneous unitemized	30.00

## MEDICAL SUPPLIES

First Aid kit	30.00
Vaccinations, health certificates	20.00

## TRAVEL DOCUMENTATION

Visas, police certificate, photos	20.00
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## MISCELLANEOUS EXPENSES

Telephone and cable charges	15.00
Photographic materials and processing	25.00

## CONSULTATION, Dr. Rogers

2 days at \$100 per day	<u>200.00</u>
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TOTAL	\$1,679.20
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OVERHEAD 25%	<u>419.80</u>
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GRAND TOTAL	\$2,099.00
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AIR MAIL

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

8 April 1965

Professor David J. Rogers  
Curator of Quantitative Taxonomy  
The New York Botanical Garden  
Bronx, New York 10458

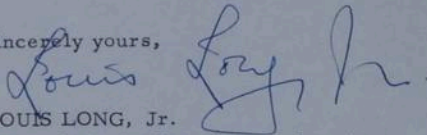
Dear Professor Rogers:

I was sorry to receive your letter of 5 April about our proposed joint effort concerning Manihot esculenta.

May I emphasize that we have never doubted any of the items in your estimate. Our hesitation has been only that the total was much higher than we had anticipated and that, at the moment, the funds are not available. It is our hope that more money will be forthcoming and that, at such time, we can again approach you for assistance.

With kind regards,

Sincerely yours,

  
LOUIS LONG, Jr.  
Head, Organic Chemistry Laboratory  
Pioneering Research Division

AIR MAIL

April 5, 1965

Dr. Louis Long, Jr.  
Assistant Head  
Organic Chemistry Laboratory  
Pioneering Research Division  
U. S. Army Natick Laboratories  
Natick, Massachusetts

Dear Dr. Long:

I am sorry you found our estimate higher than your anticipation. This was indeed arrived at honestly and for the purposes of securing for you the best materials for your testing.

Inasmuch as the materials to be tested are already specimens that we have in our herbarium collection, it would not be a particularly profitable thing for us to recollect the same things.

I am sorry that there is no possibility of a lower figure.

Sincerely yours

David J. Rogers  
Curator of Quantitative Taxonomy

DJR:MDF

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

30 March 1965

Dr. David J. Rogers  
Curator of Quantitative Taxonomy  
The New York Botanical Garden  
Bronx, New York 10458

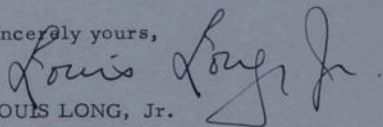
Dear Dr. Rogers:

Thank you for your letter of 19 March.

We have studied your estimate of the requirements to collect Manihot and find that the cost is much higher than we anticipated. It seems to us that a large part of the expense might be accountable to Dr. Jancey's research in your interest and that the actual expenditure for our purposes could be considerably lower.

If you should care to submit a revised estimate we would be glad to consider it, but, for the moment, we cannot authorize you to proceed with the procurement.

Sincerely yours,



LOUIS LONG, Jr.  
Assistant Head  
Organic Chemistry Laboratory  
Pioneering Research Division

## TRANSPORTATION

N.Y.-Miami-Merida-Kingston-N.Y.	\$343.60
N.Y.-Miami-Merida-Kingston-N.Y. 100 lbs. baggage	172.00
Car hire Merida/Kingston @ \$10 per day + 10¢ a mile for 14 days, 500 miles	190.00
Ground transportation to and from airports	40.00

## SUBSISTENCE

30 days @ \$16 per day	480.00
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## SALARY

One month @ \$10,000 per annum	833.33
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## AIR FREIGHT

20 lbs., Merida-N.Y.	10.00
20 lbs., Kingston-N.Y.	8.00
Trans-shipment	100.00

## COLLECTING EQUIPMENT

Kerosene stove	20.00
Pressure lantern	10.85
Pick/shovel	2.00
Corrugated aluminum sheets 100 @ 85¢ each	85.00
Red herbarium driers 200 @ \$13.75/100	27.50
Drying frame	15.00
Press lattices 3 @ \$2.50 each	7.50
Webbing straps 4 @ \$2.00 each	8.00
Pruning shears	2.50
U.S.A.F. flight bags 3 @ \$2.50	7.50
Miscellaneous unitemized	30.00

## MEDICAL SUPPLIES

First Aid kit	30.00
Vaccinations, health certificates	20.00

## TRAVEL DOCUMENTATION

Visas, police certificate, photos	40.00
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## MISCELLANEOUS EXPENSES

Telephone and cable charges	30.00
Photographic materials and processing	50.00

## CONSULTATION, Dr. Rogers

5 days at \$100 per day	<u>500.00</u>
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TOTAL	\$3,062.78
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OVERHEAD 25%	<u>765.50</u>
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GRAND TOTAL	\$3,828.28
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Merida / Kingston

TRANSPORTATION

N.Y.-Miami-Merida-Kingston-N.Y.	\$343.60
N.Y.-Miami-Merida-Kingston-N.Y. 100 lbs. baggage	172.00
Car hire Merida @ \$10 per diem + 10¢ a mile for 14 days, 500 miles	190.00
Ground transportation to and from airports	40.00

SUBSISTENCE

30 days @ \$16 per diem	480.00
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SALARY

One month @ \$10,000 per annum	833.33
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AIR FREIGHT

20 lbs., Merida-N.Y.	10.00
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COLLECTING EQUIPMENT

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Webbing straps 4 @ \$2.00 each	8.00
Pruning shears	2.50
U.S.A.F. flight bags 3 @ \$2.50	7.50
Miscellaneous unitemized	30.00

MEDICAL SUPPLIES

First Aid kit	30.00
Vaccinations, health certificates	20.00

TRAVEL DOCUMENTATION

Visas, police certificate, photos	40.00
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MISCELLANEOUS EXPENSES

Telephone and cable charges	30.00
Photographic materials and processing	50.00

CONSULTATION, Dr. Rogers

5 days at \$100 per <sup>day</sup> <del>hour</del>	500.00
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TOTAL	\$3,062.78
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OVERHEAD 25%	765.50
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GRAND TOTAL	3,828.28
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March 19, 1965

Dr. Louis Long, Jr., Assistant Head  
Organic Chemistry Laboratory, PRD  
U. S. Army Natick Laboratories  
Natick, Massachusetts

Dear Dr. Long:

Enclosed herewith is our estimate of the requirements to collect Manihot according to your needs. We submit herewith the breakdown of these funds, feeling that this would be meaningful and useful to you.

Dr. Jancey will be free to depart on this trip about the 1st of June if this is suitable to you.

Sincerely yours

David J. Rogers  
Curator of Quantitative Taxonomy

DJR:MF  
Enclosure

Dr Louis Long, U.S.A. Natich Lakes.

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AIR MAIL

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

10 February 1965

Dr. David J. Rogers  
The New York Botanical Garden  
Bronx Park  
New York 58, New York

Dear Dr. Rogers:

Thank you for telephoning me yesterday. I must apologize for not having written you sooner thanking you for your kind hospitality on 26 January.

The fact of the matter is that as of 1 February, we submitted a proposal concerning research on Manihot esculenta which, if granted, would assure the necessary funds for the utilization of Dr. Robert Jancey in the collection of the plant.

I had hoped to have a reply to this proposal ere now, and was therefore postponing my letter to you. As it stands, we expect to hear favorably or unfavorably concerning our proposal momentarily.

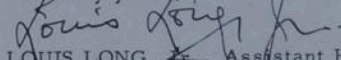
We have done a little exploratory work with the Manioc brought back from New York. The tubers appear to contain at least some cyanogenetic glycoside, since we have obtained a qualitative test for hydrogen cyanide evolution on maceration of a small sample with water. We have extracted 400 g. of the plant with 90% ethanol, with the expectation of applying various fractionation procedures to the concentrate from the extraction.

We look forward to the possibility of working with you.

Please remember us to Dr. Jancey.

With kind regards,

Sincerely yours,



LOUIS LONG, Jr., Assistant Head  
Organic Chemistry Laboratory  
Pioneering Research Division

AIR MAIL

AIR MAIL

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

15 January 1965

Dr. David J. Rogers  
The New York Botanical Garden  
Bronx Park  
New York 58, New York

Dear Dr. Rogers:

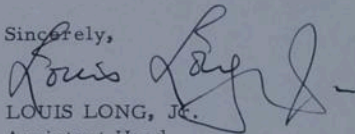
Thank you for your letter of 12 January.

Dr. Clapp and I will plan to come to New York on 26 January. We think that we will reach the Botanical Gardens at some time during the morning and would like to ask you to join us for lunch.

I will telephone you on 25 January to advise you of our time of arrival, which will depend somewhat on our mode of transportation.

We look forward to meeting you on the twenty-sixth.

Sincerely,



LOUIS LONG, JR.  
Assistant Head  
Organic Chemistry Laboratory  
Pioneering Research Division

AIR MAIL

January 12, 1965

Dr. Louis Long, Jr., Assistant Head  
Organic Chemistry Laboratory, PRD  
U. S. Army Natick Laboratories  
Natick, Massachusetts

Dear Dr. Long:

Re: AMXRE-PROC

I hasten to reply to your letter of the 8th concerning the possibilities of studies of the cyanogenetic glycosides of manioc. You have struck a responsive note here, and we are very much interested in helping in anyway that seems appropriate.

Inasmuch as I have made some preliminary efforts in this direction, mostly in terms of the collection of adequate samples for analysis of the HCN, I think maybe I might have something useful to contribute. Certainly I would be able to document the material, have some ideas about the collection of it, etc.

It would be pleased to have a visit from you and Dr. Clapp. If the 26th of January is appropriate for you, it is for us. If you are familiar with the Garden, I am sure there is no need to give you directions for coming. In the event, however, that you have not been in this part of the city before, we are enclosing a brochure which gives directions.

Looking forward to seeing you,

Sincerely

David J. Rogers  
Curator of Quantitative Taxonomy

DJR:MDF  
Enclosure

AIR MAIL

U. S. ARMY NATICK LABORATORIES  
NATICK, MASSACHUSETTS

IN REPLY REFER TO

AMXRE-PRCO

8 January 1965

Dr. David J. Rogers  
New York Botanical Garden  
Bronx Park  
New York 58, New York

Dear Dr. Rogers:

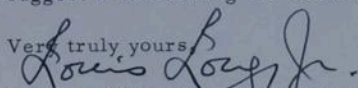
Our organic chemistry group at the U. S. Army Natick Laboratories is planning to undertake a chemical study of certain tropical plant foods, and we have selected manioc as a plant to study initially. We are primarily interested in the isolation and identification of new organic substituents, such as cyanogenetic glycosides, that may be present in small quantity but that may have interesting biological properties.

From your recent publications and papers, as well as from a recent article on taxonomy in the "New Yorker", we have learned of your considerable interest in manioc. We are attempting to learn as much as we can about the plant, and I am writing to inquire if Dr. Clapp of our organic chemistry group and I could arrange to visit you at the Botanical Garden.

As you know, linamarin or phaseolunatin, the principal cyanogenetic glycoside of manioc, has been characterized, although the stereochemical configuration has not been rigorously established. We are planning to use current experimental techniques to look for minor cyanogenetic glycosides or other organic compounds present in small quantity. Several of the latter have been indicated in the early literature but have not been characterized. Our immediate problem is the acquisition of a supply of manioc tubers of which the variety and history are known and which have undergone as little chemical change as possible during shipment.

We would like very much to visit you to discuss the plant generally. If convenient for you, I suggest a date during the week of Jan. 25-29.

Very truly yours,



LOUIS LONG, Jr., Assistant Head  
Organic Chemistry Laboratory, PRD

AIR MAIL