

January 6, 1964

Dr. Flaminio Fidanza
Istituto di Fisiologia della Universita
S. Andrea delle Dame 8
Napoli, Italy

Dear Flaminio and Alessandro:

There is no change in the initial form "Formulario Inziale" for application on follow-up studies. The F. E. V. 1" sec. as well as 3/4 sec. should be measured, however, in the spirometry tracing. I suggest it be reported on page two column 16, and we will calculate the ratios and indices here, by machine.

It is not yet clear whether I will arrive for the onset at Crevalcore. If so, I will stay a week or so and return, to come back in time for Venice. In the meantime I would like for Alessandro to train, in the classic London manner which he has no doubt learned, the other clinicians to be involved.

There should be a small series of subjects for you to examine for systematic differences in blood pressure measurement, and cardiac murmurs recording, as well as practice with the chest, leg, and respiratory questionnaires.

I will shortly send you forms for those, abbreviated from the ones you gave me in Milano. In addition, decisions about special examinations, tape recording, etc. will be made in a few days and relayed for your suggestions.

Best regards,

Henry Blackburn, M. D.

HB/cjh

cc: Dr. Keys
Dr. Menotti

A. S. DONTAS, M.D.

10, NEOF. VAMVA STREET
ATHENS - 138
TEL. 716.199

January 10, 1965

Dr. Henry Blackburn
Laboratory of Physiological Hygiene
Stadium, Gate 27
Minneapolis, Minn. 55455
U. S. A.

Dear Henry:

Thanks for your letter of December 22, and your Christmas wishes, as well as for the enclosed print from Finland. I have delayed answering you, since I wanted to have direct news from Crete.

I am now told that both Castelli and Thrapsano, the two headquarters for our study, have 24-hour power supply (220 V, 50 cycles). This represents a substantial improvement over the 1960 situation.

Therefore, you can plan on no difficulty from this point of view, and only the problem of personnel and transportation might be a block to your plans.

Send me a word about your plans this year. Are you going to be in Italy this spring?

Sincere regards,

Audy.

A. S. Dontas, M. D.

*Regards to Nellie + children
+ the friends at the Lab.*

REPUBLIČKI ZAVOD ZA ZAŠTITU ZDRAVLJA
INSTITUTE OF PUBLIC HEALTH

drRB/L

Ročefellerova 7
ZAGREB I, YUGOSLAVIA 6 April 1964

Dr Henry Blackburn
Laboratory of Physiological Hygiene
University of Minnesota
Stadium Gate 27
Minneapolis, Minn., USA

Dear Henry,

I have to apologize for not having answered your letter of January 31, 1964. The reason is that Ivan wanted to make the measurements suggested in your letter but when he really set to work it turned up that it would take one month or so at least and for the moment he could not spare this time owing to his other duties. So, now we are where we were before and in order not to lose any more time I am sending the whole material to you. I am very sorry for this delay but life simplicity seems to vary according to meridional distribution.

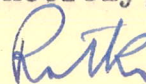
I am now about to finish the statistical work on the data of the dietary studies and hope the clinical study will be ready for publication soon. The 1963 clinical forms will be sent to you before long.

A parcel for Mary Klinger arrived a few days ago; she has already taken it and will write to you directly.

I am anxious to receiving the recordings of your own band.

With best regards,

Sincerely,



Ratko Buzina, M.D.
Dept. of Nutrition

July 8, 1964

Dr. Esko Orma
Institute of Occupational Health
Haartmaninkatu 1
Helsinki, FINLAND

Dear Esko:

Pentti mentions I should be hearing from you, but I haven't. We are now systematically handling the initial clinical data in all areas, the objects being:

- 1) To audit all area history and physical forms and punch items comparably
- 2) Print out and return to areas the frequencies of history and physical items for whatever disposition they wish
- 3) Identification, by clinical criteria, of a group of "normals" for follow-up, as well as various clinical classes of abnormals

I know you went to the trouble to translate your clinical forms into the clinical code devised by Dr. Keys. We would like, however, to punch individual items and need the originals or microfilmed editions as soon as possible.

For the follow-up exams, I suggest you let us punch from the originals which we then will return to you with tabulations. This sort of thing goes very efficiently here now and will not delay any studies you might have in mind.

Shortly Pentti and I will have the ECG routine clearly enough in mind to write you our specific needs. He mentioned you planned bicycle exercise. I hope, for the sake of consistency, we can have a conventional ECG routine exactly as before with paper 12 lead rest ECG supine, 3 minute step test, supine 8 lead I, II, aVL, aVF, V₃₋₆, post-exercise ECG. Imbimbo or Mohacek can be responsible for this. At that station we will probably add radiotelemetry during exercise with a single bipolar lead and recording on a small tape deck.

Page 2
July 8, 1964
Dr. Esko Orma

The operation of Pentti and myself, should be a separate station, and hopefully Blomqvist later, in which we will record 2 types of orthogonal leads, McFee and Frank. Here, if you agree to the double exercise, you could do the bicycle work and we could record one system of orthogonal leads during and after work, which we are most anxious to evaluate. Depending on whether you use a single load or step-up load, that station would require slightly more time than the conventional ECG operation.

Keep in touch.

Regards,

Henry Blackburn, M.D.

HB/cjh

cc: Dr. Keys
Dr. Karvonen

P.S. On discussing this with Henry Taylor he suggests you let us know promptly the condition of the bicycle exercise you desire and we will reproduce them here to see whether a preceding 3 minute single step test (20 to 30 minutes) before the bicycle test significantly affects the work pulse rate.

Women stop test
bike
20-30"

~~SB~~ (long)

TYÖTERVEYSLAITOS

INSTITUTE OF OCCUPATIONAL HEALTH - L'INSTITUT DE MÉDECINE DU TRAVAIL - INSTITUT FÜR ARBEITSMEDIZIN

HAARTMANINKATU 1 — HELSINKI — FINLAND

DIR. PROF. LEO NORO, M.D.

Pulse during
same
instead
of ECG
Pulse sitting before test

July 17, 1964

A.S.G.

Dr. Henry Blackburn
Laboratory of Physiological Hygiene
Stadium Gate 27
University of Minnesota
Minneapolis 14, Minnesota
USA

Dear Henry:

(70 kg men?)

I have been thinking more the loads in the bicycle ergometer. Perhaps the values I wrote you are too high in your country, at least. It seems possible that the load of 600 kilobond meters per min. is best in the group aged 44-63 and 900 for ordinary students and 1200 for only young subjects with reasonable high habitual physical activity. As you know, sub-maximal exercise only is proper for the test. The load which increases the heart rate to 140 (older) or 150 (young) should be the best. I feel that it is important to inform you about this my second thought because if the test has to be stop e.g. because of too heavy load, it does not provide any useful information.

You will hear more in few days. I think that now testing of the interaction between two exercise tests should be OK.

Sambora Co.

2310

Living
San Francisco

Regards,

E. Orma

E. Orma, M.D.

P + BP
902

REPUBLIČKI ZAVOD ZA ZAŠTITU ZDRAVLJA
INSTITUTE OF PUBLIC HEALTH

drRB/L

Rockefellerova 7
ZAGREB I, YUGOSLAVIA 23 January 1964

Dr Henry Blackburn
Laboratory of Physiological Hygiene
University of Minnesota
Stadium Gate 27
Minneapolis 14, Minn., USA

Dear Henry,

Please attached find the results of electrocardiographical examinations for the survey of last fall in Makarska and Dalj. The results were coded partly by Dr Imbimbo and partly by Dr Mohaček who has controlled them all. There is a certain number of subjects who did not turn up for clinical examination last fall. We shall try to get them for the examination next spring when a small team will spend some time in both areas again. At the same time we shall try to collect as much information as possible about people who have moved from their villages and are living now in some other place. A few of them are still living in the coastal area and I think we shall see them as well.

Now Dr Mohaček is very eager to get the results of ECG examinations statistically analyzed since he would like to use them in preparing his theses for a Sc.D. diploma. We would therefore be very indebted to you if you could look after it, if possible and let us know when the data can be processed, compared with those of the 1958 study and the results sent to us.

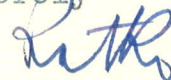
The other day I received from Dr Keys the coded results of the 1958 clinical examinations. The 1963 clinical forms are still with us and please let me know if I should ship them to you. Do you want the ECG recordings to be shipped to you too? There are in addition about twenty recordings taken in young subjects here; Do you need them?

I spent very pleasant and useful ten days with Dr Keys and Flaminio in Naples. It was one of the rare opportunities to talk to Dr Keys in a relaxed atmosphere and I have appreciated it. I spoke to him about the low priority which is currently given to the preparation of data for publication and he was not very happy; I do not know what he has done about it.

Hope you had a nice Christmas and New Year's Eve.

Kindest regards,

Sincerely



Ratko Buzina, M.D.
Dept. of Nutrition

SCHOOL OF PUBLIC HEALTH
LABORATORY OF PHYSIOLOGICAL HYGIENE
STADIUM GATE 27, MINNEAPOLIS 14

Parco Grifeo 30 (i)
Naples, Italy
11 March, 1964

Dr. Henry Blackburn
Lab. of Physiological Hygiene
Stadium Gate 27
Minneapolis, Minn. 55455
U. S. A.

Dear Henry:

Prof. Djordjevic is anxious to have the code for clinical diagnosis which, I take it, should now be ready. As soon as he has the code, he will apply it to their records of the men of Velika Krsna, Zrenjanin and their new series, the men of the faculty of the University of Belgrade (N = 620).

Also, Djordjevic is anxious to have returned without delay (air express?) the original documents for Velika Krsna. At the same time he should be sent a tab run print-out (Norris S) of the Velika Krsna data unless this has been sent to him already.

The Serbs are doing the serum cholesterols from Zrenjanin and as soon as these are done they will put the data on the forms and send the lot to Minnesota for card punching etc.

Please tell Joe Anderson that the Serbians have another series of diet samples which they will analyze for water, ash, total lipid and nitrogen but will need G.L.C. fatty acid values. They will send lyophilized samples as before (From Simic). I hope the G.L.C. machines are working, in which case this should be no great job. Cost of technician time can be paid from my international budgets.

Regards,

Sincerely,



Ancel Keys, Director.

*I think I
showed you
this earlier
Thank you,
Joe*


SCHOOL OF PUBLIC HEALTH
LABORATORY OF PHYSIOLOGICAL HYGIENE
STADIUM GATE 27, MINNEAPOLIS 14

Then there is also the question of whether the development of our cooperation with the Serbs would be promoted by your stopping off for a couple of days in Serbia to look in on the follow-up work at Velika Krena or Zrnanjin which would be arranged to coincide. If you agree, I will try to get to Djordjevic, copy to me, and look at time tables.

Parco Grifeo 30 (1)
Naples, Italy
June 22, 1964

Dr. Henry Blackburn best,
Lab. of Physiological Hygiene
University of Minnesota As ever,
Minneapolis, Minn. 55455
Stadium Gate 27
Minnesota
U.S.A.

Dear Henry:



Enclosed is a copy of one letter and two copies of another addressed to Bill Goldwater. The latter, bearing the notation "In reference to HE-04697, travel" should be processed by the U. of Minnesota (Dean? Business Office?) and the resulting endorsement that this is correct and proper should be sent to Goldwater. I think that is the required current procedure but the Business Office will know.

I think you know that I propose to cover parts of travel costs for Finland by indirection through agreements (appointments)--Ivan Mohacek, Bruno Imbimbo, Andy Dontas, D. Lekos). I shall prepare these agreements here and have the signed copies sent to the Lab. in good time before hand.

If my U.S.P.H.S. travel money balance is too low to cover the suggested expenditures -- \$1340 + \$1480 + \$450 + \$450 + \$405 = \$4125 -- I can use money from my A.H.A. International Grant.

You will, of course, check over this matter with Henry Taylor; I send this material to you because you are more directly involved and informed. It will be too late for me to handle these matters myself when I get back to Minneapolis on August 7th; anyway my 9 days in Minnesota before leaving for Prague will be too full of things to do.

In regard to your own time table, I have considered the likelihood that you ought to spend a few days in Crete or Corfu with Christ Aravanis and either Lekos or Andy Dontas. The point is to do what can be done to improve their recording of data re deaths and serious illnesses, to learn something about the local peculiarities and to advise about the 5-year re-do on Crete in September - November 1965. Our Greek friends were enthusiastic about this suggestion and indicated that the second half of September would be fine for them. But Aravanis should be informed about your plans.

UNIVERSITY OF Minnesota

Then there is also the question as to whether the development of our cooperation with the Serbs would be promoted by your stopping off for a couple of days in Serbia to look in on the follow-up work at Velika Krsna or Zrenjanin which would be arranged to coincide. If you agree, drop a note to Djordjevic, copy to me, and look at time tables.

Dr. Henry H. All the best,

Lab. of Physiological Hygiene

University of Minnesota

Minneapolis, Minn. 55455

Audubon Gate 27

Minnesota

U.S.A.

As ever,



Dear Henry:

Enclosed is a copy of one letter and two copies of another addressed to Bill Ancel Keys, Director, bearing the notation "In reference to HE-04697, travel" should be processed by the U. of Minnesota (Dean? Business Office?) and the resulting endorsement that this is correct and proper should be sent to Goldwater. I think that is the required current procedure but the Business Office will know.

I think you know that I propose to cover parts of travel costs for Finland by indirection through agreements (appointments)--Ivan Mchacek, Bruno Labiako, Andy Duntas, D. Lekos). I shall prepare these agreements here and have the signed copies sent to the Lab. in good time before hand.

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2) Henry Blackburn, about August 20 - Oct. 5, 1964--Minneapolis-Helsinki (via Prague?) - Joensuu - Helsinki - Minneapolis, with possible brief stops in Holland and/or Yugoslavia and/or Italy to meet with the local electrocardiographers and clinicians who are involved in the International Cooperative Study on Heart Disease. Dr. Blackburn will be responsible for sessions on exercise theory and applications to epidemiological studies, but is to act as chief cardiologist and coordinate in connection with the 5-year re-examination in Dalmatia, near Zadar, as referee and adviser on electrocardiographic classification and of cardiac diagnosis for epidemiological purposes, but will be mainly occupied in the field in Finland in working with Dr. P. Rautaharju on the application of tape-computer systems to exercise test in which all clinically healthy subjects will participate. Air fare \$110, 40 days per diem \$510, misc. \$40, total = \$1480.

Parco Grifeo 30 (i)
Naples, Italy
June 22, 1964

Dr. William H. Goldwater
National Heart Institute
National Institutes of Health
Bethesda 14, Maryland
U. S. A.

In reference to HE-04697,
Travel

Dear Bill:

3) Dr. Pentti Rautaharju, about August 20 - October 1, 1964--Halifax, N.S. - At this distance from my real office and files, I must ask you advice about travel authorizations for which I may have some answers in Minnesota. First, what is the dollar amount in the travel category for HE 04697 available for the job in Finland? Second, may I now ask for specific authorization to make each of the travel expenditure items?

There are the needs:

- 1) Ancel Keys, August 16 - September 16, 1964--travel Minneapolis-Helsinki via Prague, Helsinki - Joensuu (Finland), Helsinki-Minneapolis via Rome-Naples. The main reason for this travel is the 5-year re-examination work in Finland but efficient and economical scheduling also provides, at small extra cost, for
 - a) participation in the technical conference on physical activity in relation to cardiovascular disease (Helsinki, Aug. 27-29),
 - b) meeting with collaborators in the International Cooperative Study on Epidemiology of Heart Disease to review mss. for publication, agree on schedules of work for 1965, examine 5-year follow-up data from Dalmatia and Slavonia, discuss possibilities of 10-year follow-up re-examinations, etc. (Aug. 23-27), c) participate in European Congress on Cardiology and associated meeting of Research Committee of the International Society of Cardiology (Prague Aug. 18-23) local per diem not to be charged to U.S. P.H.S.), d) continue overseeing laboratory work in branch laboratory HQ at Naples and work on program for 5-year re-examination at Crevalcore and Montegiorgio, Italy, in the first half of 1965 e) possible brief stops en route Helsinki - Rome in Holland and/or Yugoslavia to meet with local committees and collaborators in this same overall program. Air fare, ca. \$930, 25 days per diem \$375, misc. \$35, total = \$1340.

- 2) Henry Blackburn, about August 20 - Oct. 5, 1964--Minneapolis-Helsinki (via Prague?) - Joensuu - Helsinki - Minneapolis, with possible brief stops in Holland and/or Yugoslavia and/or Italy to meet with the local electrocardiographers and clinicians who are involved in the International Cooperative Study on Heart Disease. Dr. Blackburn will have an important role in the conference on physical activity (he and Dr. Rautaharju will be responsible for sessions on exercise tests and on computer-EKG theory and applications to epidemiological studies), but the primary mission is to act as chief cardiologist and coordinator on internal medicine in connection with the 5-year re-examinations in Karelia (Ilomantsi, near Joensuu) and in West Finland. Dr. Blackburn acts as referee and adviser on all questions of electrocardiographic classification and of cardiac diagnosis for epidemiological purposes, but will be mainly occupied in the field in Finland in working with Dr. P. Rautaharju on the application of tape-computer systems to exercise test in which all clinically healthy subjects will participate. Air fare ca. \$930, 40 days per diem \$510, misc. \$40, total = \$1480.
- 3) Dr. Pentti Rautaharju, about August 20 - October 1, 1964--Halifax N.S. - Helsinki - Joensuu and return. Dr. Rautaharju's actual travel expenses will be largely borne by other funds but an item for subsistence at the rate of \$15 per diem in Helsinki (5-6 days) and \$12 per diem in Ilomantsi should be provided, the total of Joensuu being not over \$450.
Dr. Rautaharju is one of the world leaders in modern tape-computer developments in electrocardiographic theory and applications. He had the main E.C.G. responsibility in the initial examinations of the men in Finland in 1959 but in the 1964 program he will be concentrated on the tape-computer work and telemetered exercise tests to be applied to all subjects, bringing with him from Halifax and Minneapolis a large amount of newly developed equipment for this work. The regular E.C.G. responsibilities in the program, including recording and classifying the 12-lead E.C.G. on every man, will be shared by Dr. Kallio of Finland, Dr. Ivan Mohacek of Zagreb, Dr. Bruno Imbimbo of Naples and others (the non-Finnish doctors are unable to be away from their regular positions in their own countries for more than a few weeks each).
- 4) Dr. Ivan Mohacek, August 25 - Oct. 1, 1964--Zagreb - Helsinki - Joensuu and return. As in the case of Dr. Rautaharju, it is proposed that only field subsistence costs be provided for Dr. Mohacek, i.e. not over \$450 for a total of about 35 days. Dr. Mohacek's responsibilities were mentioned above. Next to Dr. Blackburn, Dr. Mohacek has had more experience than everyone else in the recording and objective classification (Minnesota Code) of the electrocardiogram, having taken a major responsibility in this program in Crevalcore (1960) and Corfu (1961), besides the work in Dalmatia and Slavonia in 1958 and 1963.

5) Dr. Bruno Imbimbo, about October 1, - Nov. 5, 1964--Naples-Helsinki - Turku and return. It is planned that Dr. Imbimbo have the same responsibility in West Finland that Dr. Mohacek will have in Karelia and that, similarly, only field subsistence and not transportation cost will be charged for a total of 3 days in Helsinki, at \$15 per diem, and 30 days in West Finland at \$12 per diem, or a total of \$405. Dr. Imbimbo discharged these responsibilities very well for 3 weeks in Dalmatia in the 1963 follow-up and has had extensive experience in this E.C.G. recording and classification in our program in Italy as well as in the U.S.A.

You will note that I have long had agreement with the Business Office of the University of Minnesota to provide \$15 per diem for stay in major cities and 12\$ per diem in villages and small towns where hotels are cheaper. These provisions will be maintained in the travel mentioned above.

May I take it that above I have provided what is necessary to request authorization for such travel? I am sending a copy of this letter to my office in Minneapolis so that endorsement, if needed, may be given by the officers of University of Minnesota.

Sincerely,
As this letter goes to your office and files, I must ask you advice about travel authorizations for which I may have some answers in Minnesota. First, what is the dollar amount in the travel category for MS 2459, available for this job in Finland? Second, may I now ask for specific authorization to make each of the travel expenditure items?

There are the needs:

- 1) Ansel Keys, August 26 - September 15, 1964--travel Minneapolis-Helsinki via Prague, Helsinki - Joensuu (Finland), Helsinki-Minneapolis via Rome. Ansel Keys, Director
is the 5-year re-examination work in Finland but efficient and economical scheduling also provided, at small extra cost, for a) participation in the technical conference on physical activity in relation to cardiovascular disease (Helsinki, Aug. 27-29), b) meeting with collaborators in the International Cooperative Study of Epidemiology of Heart Disease to review progress for publication, agree on schedules of work for 1965, examine 5-year follow-up data from Dalmatia and Slavonia, discuss possibilities of 10-year follow-up re-examinations, etc. (Aug. 23-27), c) participate in European Congress on Cardiology and associated meeting of Research Committee of the International Society of Cardiology (Prague Aug. 15-23; local per diem not to be charged to U.S. P.H.S.), d) continue overseeing laboratory work in branch laboratory H4 at Naples and work on program for 5-year re-examination at Crevolcore and Montegiorgio, Italy, in the first half of 1965, e) possible brief stops en route Helsinki - Rome in Holland and/or Yugoslavia to meet with local committees and collaborators in this same overall program. Air fare, ca. \$930, 25 days per diem \$375, misc. \$15, total = \$1340.