



UNIVERSITY OF MINNESOTA  
TWIN CITIES

October 14, 1977

Laboratory of Physiological Hygiene  
School of Public Health  
Stadium Gate 27  
Minneapolis, Minnesota 55455

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Dr. James M. Iacono  
Deputy Director for Nutrition  
U.S. Department of Agriculture  
338 Administrative Building/ARS  
Washington, D.C. 20250

Dear Doctor Iacono:

I am seated in the sunshine on Dr. Keys' villa discussing together with him the future directions of the Laboratory of Physiological Hygiene. He may have indicated to you that I took his chair in 1972. We have not attempted to fill the tremendous vacuum produced by the loss from active service of Drs. Keys, Anderson, and Grande. However, not only is the Laboratory of Physiological Hygiene our responsibility, but I head a division which includes the School of Public Health Program on Public Health Nutrition and Health Education. The School and my Division are recruiting a Chief of Public Health Nutrition in a very solid position, by which we hope to strengthen our research and teaching base in human nutrition. We also have the active involvement in our Laboratory in the retired status of Dr. Joseph T. Anderson, who was a central figure in the applied nutritional studies carried out over 25 years in the Laboratory, as well as the principal nutritionist who was administrator of those researches, Nedra Foster. We moreover have the consultation and periodic visitation of Professor Keys and have maintained an office for him in the Laboratory. In addition, we have an office for Professor Charlotte Young who has retired in our community. Finally, we have an active comradery of 14 junior staff and postdoctoral fellows, among which there is interest and competence in nutritional researches. The head of our nutrition teaching program in the Laboratory is Dr. Arthur Leon.

Thus, we remain a facility with a firm commitment to applied nutritional research and to applications in controlled demonstration projects and preventive trials in which we have considerable competence and experience in this community and state.

I simply want to let you know of our continued competence and interest in this field as I explore sources of funding for projects that we think need to be undertaken in the next period. I would be very grateful for your putting us on your mailing list for RFP or extramural grant solicitations. I enclose background information to rather solid and, we think, important problems for which we are now seeking funding. I am not particularly sanguine that the Heart Association or the NHLBI continue to maintain a high level of interest in this sort of research and believe that agencies involved in more fundamental aspects of human nutrition might very well be interested. One of

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these studies has to do with defining the type of vegetable in an empiric study with the classic Keys-Anderson-Grande design of simultaneous controls and crossover. The other employs a similar approach to examine the effect of alcohol on the lipid fractions. We also have an interest in weight control, exercise, and salt intake with respect to the distribution of blood pressure in school age children, which has been funded by NHLBI and is getting under way at this moment. Finally, we have a project in which we are assessing the intensity, duration, and frequency of exercise to achieve a given "preventive" metabolic effect in healthy individuals with glucose intolerance.

Thus, we would very much like to stay in touch with you as you develop your extramural programs as a facility with reasonable competence in experimental design and with a good track record in successful completion of researches in human nutrition.

Dr. Keys and I send our regards from Minnelea.

Cordially,



Henry Blackburn, M.D.  
Professor and Director  
Chairman, Division of  
Health and Human Behavior

HB:msh  
Enclosure

*Dictated by Dr. Blackburn in Italy;  
transcribed and sent in his absence.*



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## PROPOSED STUDIES

### *Vegetables and Serum Cholesterol*

It is now recognized that the level of serum cholesterol is the one variable most strongly associated with the risk of developing coronary heart disease. Dietary manipulations to reduce serum cholesterol levels have not to date been very successful, and more information is needed. Several studies have given very suggestive evidence that a diet rich in vegetables has a serum cholesterol lowering effect in excess of that provided by its low fat content.

We intend to select two non-overlapping vegetable supplements of 300 kcals each and a third whole grain supplement of 300 kcals and compare the effect of each of these on serum cholesterol with a fourth sucrose 300 kcal supplement. The three vegetable and grain supplements have components chosen so that in the quantities normally consumed, there is a low, medium, and high fiber supplement. One vegetable supplement is composed of vegetable leaves and flowers (e.g., cabbage, broccoli) and the other legumes and sweet corn. The experimental subjects will be 12 healthy male university students.

It is hoped that this study of foods, as usually consumed, may help to identify those vegetables which have the most potent serum cholesterol lowering effect.

### *The Effect of Alcohol on Serum Lipids*

The effect of alcohol on blood lipids and on the risk of developing coronary heart disease has long been controversial. It is known that there are different types of lipid-protein complexes in the blood, and it has recently been suggested that alcohol may affect some of these in different ways. This study involves a more thorough investigation of the effect of alcohol on total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, very low-density lipoprotein cholesterol, and triglycerides in the blood of 12 male university students. A comparison will be made between blood lipid levels for three-week periods, both on and off the participants' usual intakes of alcohol. The diet will be carefully controlled with respect to dietary fats, carbohydrates, and calories to ensure a fair comparison.