

Office Memorandum .

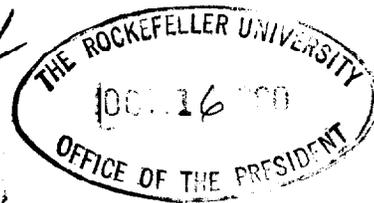
United States Senate

TO : President Harvey L. Silbert,
Officers, Directors and Friends of FIBER

DATE: October 1, 1980

FROM : Alan Cranston

SUBJECT: Developing a Human Protein Index



I enclose a copy of a remarkable letter I received in July from Dr. Norman G. Anderson, Argonne National Laboratory, stating that it is now possible to begin building a national data base for mapping gene proteins, the most elemental units of human life.

A combination of new technologies allow researchers, for the first time, to see and analyze the basic working parts of cells and genes. This development, in Dr. Anderson's words, "Will allow us to rewrite pathology and much of medicine at the molecular level."

FIBER and I responded to Dr. Anderson's letter swiftly, and some remarkable developments have ensued.

On August 25 FIBER arranged a meeting in my office. Dr. Anderson and a team of five scientists outlined the technical feasibility and significance of the human protein index to leaders from the Executive Branch and Congress, from science industry and major philanthropic organizations.

Here is what has happened since that meeting:

-- A task force, chaired by Dr. Anderson, has begun an accelerated planning phase to confirm the technical feasibility of the proposal and to develop a coherent plan of action for national leadership.

(Those who have agreed to serve on the task force are: Dr. Edwin C. Whitehead, President of Technicon Corp.,; Dr. Walsh McDermott, of the Robert Wood Johnson Foundation; Dr. Gerald Soffen, of NASA; Dr. William F. Raub, National Institutes of Health; Dr. Robert Stevenson, President of American Type Culture Collection; Dr. Irving Johnson, Vice President of Eli Lilly; and Dr. Lewis Thomas, Chancellor of Memorial Sloan-Kettering Cancer Center.)

-- NASA Administrator Robert Froesch met with Dr. Anderson for two hours and has begun a search for agency personnel and equipment which might be applied to this project. Landsat resources and computer image analysis capacities may be considered standby resources for the protein index project. NASA is particularly interested in potential applications in the Manned Space Flight Program.

-- Dr. Vincent DeVita, Director of the National Cancer Institute invited Dr. Anderson to present his proposal at NCI and later wrote Anderson: "You are onto something extraordinarily important and, it seems to me, it is unlikely to proceed expeditiously without some help."

-- Both the White House Office of Science and Technology Policy and the National Academy of Sciences requested separate briefings on the proposal. Dr. Anderson returned to Washington for that purpose September 19.

-- The planning phase that is underway is estimated to cost \$50,000 in the next four months. FIBER is the official coordinating group for planning funds. To date FIBER has received contributions for this purpose from Eastman Kodak and Electro-Nucleonics, Inc., and pledges of contributions from Dupont and Eli Lilly.

-- The March of Dimes Birth Defects Foundation plans to pay \$25,000 to the American Type Culture Collection (the largest frozen cell bank in the nation) to prepare cell lines for analysis using the 2-D electrophoretic mapping technique described by Anderson. The objective is to identify a specific protein "thumbprint" of genetic diseases, such as cystic fibrosis, muscular dystrophy, etc.

-- There will be a special report on the human protein index, mentioning FIBER's role in bringing this to the attention of science and government leaders, in the January issue of Science "80 magazine. The piece will be written by Albert Rosenfeld, a noted science writer.

-- A reporter for Science magazine attended the August 25 meeting in my office and now has visited Anderson's laboratory in Chicago. An article in Science can be anticipated in the weeks to come.

-- Efforts are now underway to raise additional funds for the planning effort among individuals, private foundations and some government agencies. In the latter category, interest in eventual applications has been expressed by officials of the U.S. Department of Energy, the Center for Disease Control and the Environmental Protection Agency.