MEMORANDUM

DATE: June 16, 1998

TO: Tom Bell, Mohandas Bhat, Frank Hawkins, Ruth Neta, Ed Podolak, Joe Weiss, and Libby White

FROM: Barrett Fountos

SUBJECT: Trip Report of the Second Annual Site Visit to Ukraine Concerning the Ukraine American Ocular Cataract Study

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The major purpose of this trip to Kiev, Ukraine from June 8 through 13, 1998 was to discuss the progress of the Ukrainian investigators involved in the Ukraine American Ocular Cataract Study in Chernobyl Liquidators. This memo summarizes the outcomes of meetings.

Summary of Findings:

Overall, I left Kiev with a positive impression. Within the last eight months, the investigators made two major accomplishments: successfully overcoming two bureaucratic obstacles related to participation of ophthalmologists and obtaining the Ukrainian liquidator registry; and adding two new centers for liquidator eye examinations.

First, investigators obtained official permission from the Ukrainian Ministry of Health which allows, in addition to their regular responsibilities, the participation of ophthalmologists during working hours. Ophthalmologists, like most medical staff, are employed by the Ukrainian government. This agreement permits them to perform eye examinations for the study during working hours, and the supplemental salary support provided under the grant to the Institute for Occupational Health pays for the additional eye examinations.

Second, investigators obtained the list of liquidators needed to assemble the cohort from the Ukrainian government. Delays of several months by the government hindered identifying liquidators needed to assemble the cohort.

Third, investigators added two more clinics from the Eastern Ukrainian cities of Slavutich and Rivno (for a total of 9 cities). This will enable them to more readily recruit required number of subjects to achieve the cohort. Training ophthalmologists from the new cities currently is underway. The investigators are continuing to recruit members of the first year's cohort of 6,000 and have assured me that they will accomplish by September 31 the milestone of achieving ocular examinations for at least 80% of the cohort (4,800).

The Ukrainians continue to be enthusiastic about the study. I am confident that the strong professional and personal bonds between American and Ukrainian scientists will be able to make

the study successful, and I feel that the Department's money is being well spent. I recommend that the cataract study continue to be funded to its completion.

Key Players:

There are three major components to the cataract study: epidemiology, ophthalmology, and dosimetry. Scientists and physicians in each of these areas are technically competent, professional, and dedicated to the research. Also, there is good interaction among scientists of the three components as well as integration of scientific concepts among the three groups.

American Principal Investigator: Basil Worgul, Ph.D., Director, Eye Radiation and Environmental Research Laboratory, Columbia University, New York. Dr. Worgul, with Professor Kundiev, shares responsibility for the conduct of the study.

Ukrainian Principal Investigator: Academician Professor Yuri Kundiev, M.D., Ph.D., D.Sc., Director, Institute for Occupational Health, Kiev, Ukraine. Professor Kundiev is an expert medical toxicologist who, with Dr. Worgul, shares responsibility for the conduct of the study. He has overall responsibility for Ukrainian investigators and specializes in the epidemiology component of the study.

Ukrainian Epidemiologist: Peter Vitte, M.D., Ph.D., Institute for Occupational Health, assists Professor Kundiev in the epidemiology component of the study as well as in general study logistics and computer support.

Ukrainian Chief Ophthalmologist: Nikolai Sergienko, M.D., Ph.D., Chief Ophthalmologist for the Ministry of Health of Ukraine, is an expert in eye microsurgery.

Ukrainian Dosimetrist: Vadim Chumak, M.D., Ph.D., Director of the Department of Dosimetry of the Ukrainian Radiation Protection Institute, has the lead role in dosimetry.

Ukrainian Ophthalmologist: George Parkhomenko, M.D., Ph.D., is the lead ophthalmologist responsible for training the other ophthalmologists in the use of the Scheimpflug slit lamp.

Throughout my visit, I observed how well Dr. Worgul interacted with Ukrainian investigators, and how well the Ukrainian team functioned. The Ukrainian team is led by Professor Kundiev, who is the heart of the project. Dr. Worgul provided both the glue and the external energy for this project. Dr. Chumak impressed me with his in-depth knowledge of radiation dosimetry. He interacts well with the Ukrainian epidemiologists. The Ukrainians demonstrated a high technical competency in the fields of toxicology, radiation medicine, ophthalmology, and dosimetry. They also demonstrated strong personal motivation to have the study completed, for both professional, and I believe for personal reasons, in that their fellow Ukrainians were severely impacted by the Chernobyl catastrophe.

Preliminary Meetings

Upon arrival, I went to the Institute for Occupational Health for a preliminary meeting with Professor Kundiev, Dr. Vitte, Dr. Chumak, and his boss, Dr. Ilya Likhtaryev. They updated me on the status of the cohort assembly and number of examinations.

These meetings continued in greater detail on Thursday with the arrival of Dr. Worgul from France. I stressed the importance of achieving the milestones by the end of the fiscal year, and received Professor Kundiev's assurances that the milestones would be achieved.

I discussed my comments with Dr. Worgul on his draft work plan and budget for FY 1999. He will make revisions and submit the package to me within the next few weeks.

Site Visit to Slavutich

On Wednesday, I accompanied Dr. Vitte and Dr. Andre Ruban, an ophthalmologist, to Slavutich, a town built after the Chernobyl accident near the 30-km exclusion zone. Many liquidators live there, so its inclusion in the study as a participating examination center will enhance the number and speed with which liquidators in the cohort can be examined.

There is a large, new hospital complex there for the treatment of liquidators. Dr. Victor Shilenko, Chief of the Hospital, took me on a tour of the main medical center.

In addition, I met one of the new ophthalmologists participating in the study. I had an opportunity to observe a patient with both a traumatic cataract (a five-pointed star) and a posterior subcapsular cataract (radiation cataract) in the same eye.

Meeting with Dr. Chumak and Dr. Likhtaryev

On Friday, I met with Dr. Chumak and Professor Likhtaryev at the Radiation Protection Institute. The purpose of the meeting was to discuss cohort assembly and dosimetry in support of the cataract study. The two steps are to formulate criteria concerning which liquidators have the most complete and un-falsified data and to send letters to prospective participants sorted by oblast. Dr. Chumak and staff are in the process of sending 3,000 questionnaires to the next group of liquidators in the registry. Those who agree to participate will then be examined for cataracts and complete a questionnaire on potential confounding variables. At my request, Dr. Chumak explained various methods of dose reconstruction. In addition, Dr. Chumak and Professor Likhtaryev also explained the dosimetry in support of the thyroid and leukemia studies.

For anyone interested, I have 7 pages of hand-written notes concerning dosimetric methods and graphs pertaining to the cataract and thyroid dosimetry.

Meeting with Dr. Sergienko

Dr. Sergienko invited me to tour the Eye Microsurgery Center and he showed me videos of his cataract surgery techniques. He is seeking funds for new equipment. I suggested that he contact humanitarian organizations in the United States for possible support.

Concluding Meetings

At the closing meeting suggested that Professor Kundiev and Dr. Chumak prepare their annual work plans and budgets for fiscal year 1999 and to submit them, if possible, by July 15.