REPORT ON VISIT OF FOREIGN SCIENTISTS, OCTOBER 4, 1971

There were four guests in the group:
Dr.(Prof) Yuri I. Moskalev; Inst. of Biophysics, Ministry of Public Health, Moscow. 6002547

Dr. Alexei A. Moiseev; Central Inst. for Advanced Medical Studies, Moscow

Dr. Jean-Claude Nénot; CEA, Centre D'Etudes Nuclaires, Fontenay-aux-Roses, France.

Dr. R. Masse,; CEA as above.

The four visitors were not traveling together, but by coincidence were participants at the same Transuranium Biology Symposium at Hanford during the week of Sept. 26. They were in San Francisco by chance at the same time and desired to visit Berkeley on the same day.

Mrs. Anne Low-Beer picked up the four guests in San Francisco and brought them to the Donner Laboratory where they were greeted by Dr. John Lawrence. Drs. Donald Van Dyke, James McRae, and Howard Parker took them on a short tour of the Anger camera facility and whole-body counting and scanning equipment. The current uses and potential in medical diagnosis were discussed. Major questions concerned the use of these instruments in monitoring and assessing the extent of persons contaminated with radionuclides in industrial accidents.

Lunch was attended by Dr. Hardin Jones, the four guests, Drs. Van Dyke and Parker, and Dr. Patricia Durbin, who acted as hostess and guide through the day. Topics discussed at lunch were centered about the Transuranium symposium. The efficacy of two new techniques to remove lung contamination by alpha-emitting isotopes was considered. The two techniques are lung lavage and aerosolized chelating agents, particularly DTPA.

A tour of Bldg. 74 followed lunch. Three of the visitors are biologists--Drs. Moskalev and Nénot are physicians, and Dr. Masse is a veterinarian -- and all deal with animal experiments or the interpretation of the results of animal experiments. They were much interested in how one achieved and managed a "biologically clean" rodent colony, in the minimum maintenance rabbit rooms, and the cage-washing facilities. There was some discussion about the 90-Sr-injected monkeys, their exposure levels, years of follow-up, and the essential absence of biological effects at the dose levels in the study.

A two-hour general discussion between and among the four guests and Dr. Durbin followed the building tour. The chief topics discussed were how to explain the observed differences in the metabolism of the transuranic elements among species. The usefulness and verifiability of models of human Pu metabolism were considered at great length. New areas of research in internal emitters problems were considered including the influence of age on local dose and ultimate biological end-points; the usefulness of common experiments with various species particularly those with known variations in iron metabolism, bone formation rates and liver function.

Dr. Durbin proposed a collaborative effort with two of Dr. Moskalev's colleagues. They have collected data on human skeleton weights, but now do not have the time or interest to write up their material. Dr. Durbin has collected all of the 19th century and early 20th century human bone weight data and would like to add the modern Russian material to the set. Dr. Moskalev agreed to propose a joint article with his colleagues looking towards publication in an international journal. He suggested that the original data would be forwarded in any case as soon as it could be copied.

In the late afternoon the visitors toured (briefly) the Bevatron guided by Ralph Thomas; the californium separation facility guided by Francis McCarty; and the Hi-lac guided by Al Ghiorso. Dr. Moiseev, who is a physicist, was very much intrigued by the proposal to make an advanced scientific instrument by joining the Bevatron and the Hi-lac. Dr. Moskalev was not interested in how the machines worked,"physics was not his field"he said, but asked what he as a biologist might do in the nature of radiobiology experiments with such machines.

Dr. Moskalev regretted that it had not been possible to visit with Dr. Tobias. (We could probably have fit in a few minutes or made arrangements for the following day, but I had run them ragged with sight-seeing the day before, Monday was very full, and frankly they were exhausted and needed rest. pwd). They would also have liked to visit the Medical Services group. Mrs. Low-Beer tried to fill them in on the duties and routine of that group.

Comments on money, budgets, problems of communication, demands on time such as committees, etc. ran thpough all of the conversations. Dr. Nenot and Dr. Moiseev spoke English and understood it well. Dr. Moskalev and Dr. Masse understood more English than they could speak. All four are chiefly occupied with radiation protection and especially with problems raised by internal emitters. Dr. Moskalev is his country's representative on the ICRP internal dose committee. They all forsee the development of nuclear power in their countries at a fast pace. This obviously includes, as they were careful to point out, Pu fast breeders, hence the overriding interest in Pu and its transplutonium contaminants.

The Russian visitors will be guests of the AEC Division of Biology and Medicine in Washington. (I feel certain we will receive good marks as hosts and as scientists. pwd).

One further point needs to be added. Although nuclear medicine is not a cuurent specialty in either country, and the use of nuclear medical techniques, especially as diagnostic tools, is very limited, the two physicians indicated thay they personally were much interested, and there was a definite trend in both countries towards more and more use of such tools. "It is coming", they said.

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