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ORAL HISTORY OF DR. HENRY I. KOHN

On September 13, 1994, Ms. Anna Berge of the Lawrence Berkeley Laboratory Archives and Records Office interviewed Dr. Kohn at his residence in Berkeley, California.

Dr. Henry I. Kohn was selected for the oral history project because of the positions he held at Oak Ridge National Laboratory, University of California, San Francisco (UCSF), and Harvard Medical School. This oral interview covers Dr. Kohn's career as a radiologist; he also offers his perspective on the people he worked with and the era he worked in.

Short Biography:

Henry Irving Kohn was born in New York City on August 19, 1909. He was married in 1961; they have two children. He received his A.B. from Dartmouth in 1930 and his Ph.D. in physiology from Harvard in 1935. From 1935 to 1937, Dr. Kohn was a Traveling Fellow, General Education Board in both Stockholm, Sweden and Cambridge, England. From 1937 to 1943, he was an instructor-assistant professor of physiology and pharmacology at Duke University in North Carolina. In 1943, he entered Harvard Medical School and received his M.D. in 1946. He served as a commissioned officer in United States Public Health Service (USPHS); from 1947 to 1953, he was stationed at Baltimore, Maryland, Oak Ridge National Laboratory in Tennessee, and UCSF. He remained at UCSF for ten years and joined the Research Laboratory as a clinical professor of experimental radiology and research radiologist. He left UCSF in 1963 to take the position of Fuller-American Professor of Radiology at Harvard Medical School, and from 1968 to 1976, he was the Gaiser Professor of Radiation Biology. Since 1976, he has been a professor emeritus. During his career, Dr. Kohn has held the following positions:

- * From 1957 to 1960: Scientific Secretary, Advisory Committee on Biology and Medicine for the Atomic Energy Commission.
- * From 1964 to 1979: Director of the Shields Warren Radiation Laboratory at New England Deaconess Hospital.
- * From 1965 to 1969: Member of a radiation study section for the National Institutes of Health.

- * From 1971 to 1976: Director of the Center for Human Genetics at Harvard Medical School.
- * From 1975 to 1979: National Academy of Science Committee on Nuclear and Alternative Energy Systems.
- * From 1982 to 1988: Chairman of the Bikini Atoll Rehabilitation Committee.
- * From 1987 to 1990: Referee for the Rongelap Reassessment Project for the Republic of the Marshall Islands. ←

Dr. Kohn has published more than 150 scientific papers. A few of the topics he has written on are: the biological effectiveness of high energy photons and electrons, the effects of x-ray therapy, nuclear and alternative energy, and the Bikini Atoll rehabilitation.

Kohn

**Questions for Oral Histories
Henry Irving Kohn**

Work as clinical professor of experimental radiology at UCSF, 1953-63:

How did you get position there?

Describe your colleagues

What work did you do with Dr. Stone?

Work as scientific secretary for the advisory committee of biology and medicine, US AEC, 1957-1961:

Director of the Shields Warren Radiation Lab, New England Deaconess Hospital, Boston, 64-79:

Chair of the Bikini Atoll Rehab Committee, US Dept Interior, 1984-1988:

How did you get chosen for this?

What were the duties?

What issues were discussed?

What was the purpose of the committee?

Referee, Rongelap Reassessment Project, Repub Marshall Island, 1988-1990:

same

Any other people to talk to?

Anything else to ask?

Curriculum Vitae

Henry Irving Kohn (b. 8/19/09), S.S. No. 551-64-5080

Residence and Office: 1203 Shattuck Ave., Berkeley, CA 94709 Phone. No. (510) 526-0141

A.B. (Dartmouth 1930); Ph.D. (Harvard 1935); M.D. (Harvard 1946); Diplomate (Therapy), American Board of Radiology (1951).

Traveling Fellow, General Education Board (Stockholm and Cambridge 1935-37); Instructor-Assistant Professor of Physiology & Pharmacology, Duke Medical School (1937-43); Commission Officer USPHS at Baltimore, Oak Ridge National Laboratory & U. of California, San Francisco (1947-53); Clinical Professor of Experimental Radiology & Research Radiologist in Radiological Laboratory, U.C. Medical School, San Francisco (1953-63); Fuller-American Cancer Society Professor of Radiology, Harvard Medical School (1963-68); Gaiser Professor of Radiation Biology (1968-76); Professor Emeritus (1976).

Director, Shields Warren Radiation Laboratory, New England Deaconess Hospital (1964-79); Director, Center for Human Genetics, Harvard Medical School (1971-76).

Scientific Secretary, Advisory Committee on Biology & Medicine, Atomic Energy Commission (1956-60); Associate Editor, Radiation Research (1957-61); Member, Radiation Study Section NIH (1965-69); National Academy of Science Committee on Nuclear & Alternative Energy System (1975-79); chairman, Bikini Atoll Rehabilitation Committee (1982-88); Referee, Rongelap reassessment Project (1987-91?).

Dr., Kohn has published more than 150 scientific papers. some examples are as follows:

Melvold, R.W., Kohn, H.I. and Bailey, D.W. "Interaction of H-2B^b and Mutant Histocompatibility Gene H(KH-11) in the Mouse." *Immunogenetics* 11:597-603, 1980.

Kohn, H.I. Book Review: *The Nuclear Lion*. John Jagger, Plenum, N.Y., 1991, in *Radiation Res.* 129: 115-117, 1992.

Kohn, H.I. and Fry, R.J.M. "Radiation Carcinogenesis." *New England Journal of Medicine*, 310: 504-511, 1984.

Kohn, H.I.: "Radiation Genetics: The Mouse's View." *Radiation Research*, 94: 1-9, 1983.

Zippen, C., Lum, D., Kohn, H.I., and Bailar, J.C. III: "Late Effects of Radiation Therapy for Cancer of the Uterine Cervix." *Cancer Detection & Prevention*. 4: 487-492, 1981.

Committee on Nuclear and Alternative Energy Systems of the National Academy of Sciences: *Energy in Transition*. W.H. Freeman & Co., San Francisco, 1980, 645pp.

Kohn, H.I., Klein, J., Melvold, R.W., Nathenson, S.G., Pious, D., and Shreffler, D.C.: "The First H-2 Mutant Workshop." *Immunogenetics*. 7: 279-294, 1978.

H.I. Kohn

Curriculum Vitae

- Sinclair, W. and Kohn, H.I.: "The Relative Biological Effectiveness of High-energy Photons and Electrons." *Radiology*. 82: 800-815, 1964.
- Kohn, H.I. and Guttman, P.H.: "Age at Exposure and the Late Effects of X-rays: Survival and Tumor Incidence in CAF₁ Mice Irradiated at One to Two Years of Age." *Radiation Research*. 18: 348-373, 1963.
- Bailey, D.W. and Kohn, H.I.: "Inherited Histocompatibility Changes in Progeny of Irradiated and Unirradiated Inbred Mice." *Genetic Research*. 6: 330-340, 1965.
- Kohn, H.I., Gunter, S.E., and Kallman, R.F.: "Relative Biological Efficiency of 1000-kvp and 250-kvp X-ray." *Radiation Research*. 5: 674-714, 1956.
- Gunter, S.E. and Kohn, H.I.: "The Effect of X-rays on the Survival of Bacteria and Yeast." *J. Bacteriol.* 71: 571-581, 1956.
- Kohn, H.I.: "Changes in the Human Leukocyte Count During X-ray Therapy for Cancer and Their Dependence Upon the Integral Dose." *Radiology*. 64: 382-391, 1955.
- Kohn, H.I.: "Antagonists (Excluding P-aminobenzoic Acid) Dynamists and Synergists of the Sulfonamides." *Annals: New York Academy of Sciences*. 44: 503-524, 1943.
- Kohn, H.I.: "Concentration of Coenzyme-like Substance in Blood Following the Administration of Nicotinic Acid to Normal Individuals and Pellagrins." *Biochemistry Journal*. 32: 2075-5083, 1938.
- Kohn, H.I.: "Tyramine Oxidase." *Biochemistry Journal*. 31: 1693-1704, 1937.
- Kohn, H.I.: "Number of Chlorophyll Molecules Acting as an Absorbing Unit in Photosynthesis." *Nature*. 137: 606, 1936.
- Reports of the Bikini Atoll Rehabilitation Committee and the Rongelap Reassessment Project may be found in the biology libraries of the Lawrence Livermore and Brookhaven National Laboratories, the Library of Congress, or the library of the Marshall Islands government.

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KOHN: Those with single large doses of radiation.

[The Marshall Islands]

BERGE: Otherwise, I noticed on your vitae and also I got some information from Who's Who in American Men in Science, that you were on various committees including, which I found rather interesting, the Bikini Atoll Rehabilitation Committee. What was that about?

KOHN: Well, the Bikini Atoll people were asking for money. I suppose I ought to mention that. That was quite a large project. You go to your library at the Lawrence...

BERGE: Berkeley Laboratory.

KOHN: No, no, in the, out in your place Livermore.

BERGE: Uh, huh. I'm at Berkeley.

KOHN: Oh, when I call you on the telephone, I'm calling Berkeley?

BERGE: Yes, yes.

KOHN: Oh, I see. Well, Livermore biology library has a complete set of the reports of the, what is it called, the, that committee.

BERGE: The Bikini Atoll Rehabilitation.

KOHN: That's it. The reports are also in the Library of Congress. Well,

DRAFT

the Bikini Atoll people were asking for money. Millions of dollars to repair their island and make it suitable for them. To inform the U.S. Congress for this purpose, a committee was appointed, the Bikini Atoll Rehabilitation Committee, of which I was the chairman. And we for a number of years reported to the Congress on the progress made by Lawrence-Livermore and by Brookhaven, and what we thought about things in general. So there are a series of reports. I suppose I should have mentioned that. And then I was the referee of the Rongelap Reassessment Project. It's the last thing down on this. And that, the same thing there, that the Rongelap people were requesting money. And so in my reports to Congress I would summarize the work which had been done, or was being done, and then what more needed to be done.

BERGE: Well, uh.

KOHN: Those are finished by the way. I see the Bikini people signed off somewhere around '88. The Rongelap people, I should think signed off around '91, something like that.

BERGE: Well, I think I've asked you about everything that I can think of. If you can think of anything else you want to let me know about, or let posterity know about, please feel free to.

KOHN: All right I will. Let's see. I want to look up Reynold Brown. We have Cooper Brown. We have Harry Brown. We don't have Reynold Brown. Nope. Got a Alice Buck here. Well, I'm going to go upstairs and get you that.

but again, all credit has been given to Lawrence. Lawrence apparently really set a number of people back by doing this, such as Hamilton, Gofman, and Pollycove. There was a certain amount of bitterness and tension.

Lawrence was a brilliant thinker, and he had a lot of very interesting ideas, although he never did an experiment in his life. Experiments were done by others. One of his ideas was, unfortunately, a pituitary irradiation study involving women with breast cancer. It was a failure and resulted in quite a bit of damage. Lawrence's great talent was also in surrounding himself with other brilliant people, but he was never a very good administrator or manager, and he was not good at getting money when money was not flowing freely. As long as science was well-funded, Donner functioned well, but when Ernest died and when money was not so easy to come by, John lost interest and Donner Lab suffered.

worked with the Naval Radiation Defense Laboratory from the 1950's to 1968. He was responsible for analyzing fallout data from various western test sites, including the Marshall Islands. Staff Warren was responsible for using EDTA as a chelating agent on Marshall Islanders exposed to radiation.

mostly undertook studies of products, but on a few occasions, he did study radiation effects on humans. He and a number of his co-workers exposed themselves to short bursts of directed radiation to study the effects of thermal radiation on humans. He also conducted some collaborative studies of patients at the Naval Hospital at Oak Knoll (?) or Oakland (?).

People to talk to: Hal Anger, Wil Siri, Jack Schooley (here from the 1930's), Myron Pollycove, Earl Hyde (dept. director to Sessler and McMillan, worked with Seaborg).

Earl Miller

In 1942, Stone was the head of the UCSF equivalent Department of Medical Physics. He was asked by Compton to head up the safety for the Metallurgical Lab in Chicago, so Earl Miller became the head of the Department. For a time, he was the connection between UCSF and UCB Medical Physics. He was recruited by his good friend Staff Warren to head it up. The work involved 2 1/2 days per week of getting blood counts on people, checking up on dosimeter counts, etc.

Miller did not want to do this again after Stone came back. He did not like being part of a secret project, he didn't like the bureaucracy that went along with it, and the constant writing of reports. The secrecy, however, was necessary during this time because it was imperative that the knowledge of the bomb not fall into enemy hands. Physicians and medical specialists had to conduct secret work, because they were using radioisotopes which were restricted for these reasons (bomb).

Just after the interview with Earl Miller, when tapes were put away, he mentioned that he had been to the monthly meetings in Chicago during the Project 48A-C years, with Stone and Seaborg. He appeared to have enjoyed them.

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