DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO. 9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
C-11, labeled inert gases, gen. bio. pg. 1/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

C-11
pg. 2

722119

LBL Research Review--Fall/Winter
John Lawrence Interview 7/23/87

Copied from originals in The Bancroft Library for reference use only. Copies [illegible] other libraries or [illegible]

John Hundale Lawrence laid the cornerstone for LBL's biology and medicine program when he came to Berkeley more than 50 years ago. Over the next few years he carried out the first biomedical studies using products of the newly developed cyclotron, established Donner Laboratory within LBL as the world's first nuclear medicine laboratory and, with Cornelius Tobias, Joseph Hamilton and Hardin Jones, founded the Division of Medical Physics. He was director of Donner Lab until his retirement in 1970.

Lawrence's association with the University of California and LBL began in 1935 when the young instructor at Yale Medical School paid a summer visit to his older brother, LBL founder Ernest Lawrence, inventor of the cyclotron. Fascinated by the medical possibilities of his brother's invention, John Lawrence began a study of the metabolism of animals using radioactive phosphorous produced in the cyclotron, then the world's only source of radioisotopes. He continued his work the following summer and in 1937 left Yale to become an associate professor of medicine at UC and a research associate at the Radiation Laboratory.

Outstanding scientific and technical achievements highlight Lawrence's career. His many distinguished honors include the 1983 Enrico Fermi Award, presented by the Department of Energy for his "pioneering work and continuing leadership in nuclear medicine."

1160916

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86 c
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
Pg. 2/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions [illegible] mission. Please [illegible] Permission [illegible] obtained in [illegible] Bancroft Library, University of California, Berkeley, California 94720.

In 1970, the Society of Nuclear Medicine recognized a lifetime of accomplishment that included "his pioneering use of radioactive tracers for investigation of metabolism in normal and diseased states; the first therapeutic use of radioactive phosphorus; the first biomedical studies with heavy particles and the demonstration of the greater biological effect of these particles; the demonstration that estrogenic compounds can provide radiation protection (the first such agent discovered); the first use of carbon-11 in breath analysis studies (with LBL's Cornelius Tobias and others); the discovery of the anesthetic property of xenon; the first use of labeled inert gases in humans (with Hardin Jones); studies and treatment of polycythemia ; the measurement of the red-cell life span; and studies of the nature of the anemia occurring with leukemia."

The Society also cited Lawrence for his leadership that resulted in "world-wide renown" for Donner Laboratory and LBL's Biology and Medicine Division.

He served as a regent of the University of California from 1970 to 1983 and was president of the Society of Nuclear Medicine in 1966 and 1967. He has also served on many national committees and has represented the United States on several foreign missions.

John Lawrence is 83 now. Still vigorous and active, he can often be found in his office at Donner Laboratory. His time in the office is busy: he is working on a history of nuclear medicine at Berkeley, reviewing patient charts in his old specialties--Cushing's disease and acromegaly; maintaining a

1160917

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO.
9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO (20)
NOTES
pg. 3/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. [illegible] Bancroft Library [illegible] to reproduce in full or [illegible] must be obtained in writing from the Director, The Bancroft Library, University of California, Berkeley, California 94720.

correspondence with an international roster of colleagues, former students, and friends. This spring, shortly before his departure for Nice, France, to preside over an international meeting on nuclear medicine and the cyclotron, he met with Research Review writer Judith Goldhaber to reminisce about the early days of nuclear medicine.

RESEARCH REVIEW: The history of nuclear medicine is usually said to begin with the trip you made to Berkeley to visit your brother Ernest Lawrence in 1935. But your publications in the field go back even earlier. Can you tell us about what might be called the "pre-history" of nuclear medicine?

JOHN LAWRENCE: Before Ernest came out to Berkeley in 1928, he was an assistant professor of physics at Yale and I was a medical student at Harvard. We used to see each other a lot, and I followed his work and he followed mine.

Condensed & made more clear to these unfamiliar

After graduation I went to Yale to work with Harvey Cushing. He was a famous man and a great surgeon, particularly of the brain and the pituitary gland. I became interested in the disease that he discovered--Cushing's disease--which is caused by a hyperfunction of the pituitary gland.

I wrote a paper with Cushing on this disease, and together we tried to treat it with x-ray radiation. We first worked on rats but could not influence their growth rate with x-rays. Later we irradiated quite a few patients, limiting the x-rays to just a small field on both sides of the skull. But you couldn't get enough radiation in there to do any good, so the treatment wasn't

1160918

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO.
9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
Pg. 4/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. Please return a copy to the Bancroft Library when permission is no longer needed. Permission to reproduce or publish in any form must be obtained in writing from the Bancroft Library, University of California, Berkeley, California, 94720.

very successful. By that time Ernest was in Berkeley, and when I came out here that first summer in 1935 I realized right away that for Cushing's disease the alpha particles produced in Ernest's cyclotron would be ideal. First, because heavy particles have a greater biological effect per unit dose, and, second, because you can place the radiation right where you want it. That, of course, is due to the Bragg Peak effect, the fact that heavy ions deposit most of their energy at the point where they come to rest.

RR: So you replicated the Yale experiments on the pituitary with x-rays? using alpha particles?

JL: Yes, and this time there was a dramatic effect. Soon afterwards my close associate, Cornelius Tobias, joined us, and he and his group did a series of experiments on rats showing that you can actually wipe out the pituitary with alpha particles, something we could not do with x-rays.

RR: So heavy-ion therapy was pioneered by your group and Dr. Tobias's at Berkeley?

JL: Yes, that was really the beginning of the story.

RR: Among your other "firsts" in nuclear medicine was the use of a drug to provide protection against radiation. The drug was estrogen, but the story is not very well known.

JL: That is also work that I did that at Yale before I came out here. We were using x-rays in therapy of Cushing's disease and doing some whole body x-ray radiation for studies of leukemia. We also were attempting to induce leukemia in mice by whole body

1160919

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO.
9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO (20)
NOTES
pg. 5/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. Please return the original Bancroft Library upon completion of the copy. Permission to reproduce in full or in part must be obtained in writing from the Director, The Bancroft Library, University of California, Berkeley, California, 94720.

x-ray radiation. I found that if you gave the animals estrogen shots (we gave it hoping to induce leukemia) a week beforehand, they could withstand about 30 percent more radiation before you reached the lethal dose. As far as I know this discovery has never been used in medicine because x-ray treatment now is limited to small fields. But that was the first drug ever discovered that protects against radiation.

? Conflicts with previous sentence

RR: Early attempts to use neutrons in therapy proved disappointing, but now there seems to be renewed interest in the subject.

JL: Yes, some of our earliest work was with neutrons. I worked with Paul Aebersold, one of Ernest's graduate students who later became a member of the Atomic Energy Commission staff in Washington D.C., and the pioneer in the measurement of heavy-particle radiation. He and I did several series of experiments in 1935 on the biological effect of neutrons in rats. We compared whole body x-ray radiation with neutrons from the 37-inch cyclotron and showed that neutrons are several times more destructive than x-rays per unit dose.

We also did some experiments on animals with cancer, and these showed that neutrons are a little more specifically destructive to cancer cells than normal cells. That attracted the attention of the UC medical school in San Francisco, particularly Dr. Robert Stone, who was then professor of radiology. He treated patients with neutrons for several years until the war ended the program. It was not terribly successful-

1160920

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
COPY
CARTON NO.
(9)
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
Pg. 6/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. Please contact the Bancroft Library with completion of your research. Permission to reproduce, in full or in part, must be obtained in writing from the Director, The Bancroft Library, University of California, Berkeley, California, 94720.

partly, of course, because Dr. Stone selected patients that had the most advanced cases--ones that couldn't be treated successfully with x-rays. Neutron therapy has been taken up again in recent years, and I've seen some of the results. I can't be too enthusiastic about this approach compared to heavy ions.

RR: In those early days of nuclear medicine your own mother was treated by radiation for cancer. What was she treated with, and how did it come about?

JL: In 1937 two Mayo Clinic doctors met with my parents and me and told us she had an inoperable pelvic cancer and that they didn't recommend any therapy. They said this right in front of my father and mother; it was a bit rough. To make a long story short, I wheeled my mother across to the station, got a train to San Francisco, and took her to see Dr. Stone, who decided to treat her with x-rays. This particular x-ray equipment had been developed by a graduate student working with Ernest, David Sloan. It's called the Sloan-Lawrence x-ray tube. I think it was the second if not the first million-volt x-ray tube in the world to be used in therapy. My mother was given an enormous dose of 1-mev x-rays. Over the following many months her cancer just disappeared; it was like a miracle. It took 10 years for me to convince her that she was cured. She died many years later, at the age of 84, after a long and comfortable life.

Condensed

cured?

JL: Did such massive doses of x-rays continue to be used in therapy?

1160921

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87186 C
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 7/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. [illegible] Bancroft Library, University of California, Berkeley, California, 94720.

JL: Yes, they did--but not always so successfully. We were fortunate.

RR: Can you tell us a bit about how the use of radioisotopes in diagnosis and therapy got started?

JL: Joe Hamilton was an intern in San Francisco at about the time that I came out here. He had trained in chemistry at Berkeley before getting his medical degree at UC San Francisco. Joe started using radioactive sodium just to show that you could measure how sodium goes through the body. He would mix up a cocktail with a bit of tracer in it, drink it, and then detect it the radiation with a counter. It was amazing to us how quickly the tracer spread through the body and reached, say, the hand or an organ.

RR: Did you ever drink one of these cocktails?

JL: Yes, I think I drank one. Ernest drank one, too. This kind of tracer work led a few years later to the development of what is called the Anger camera, a device for following the course of radioisotopes through the body. The camera was developed by Hal Anger, who worked with us at Donner Lab for many years. The Anger camera is still used throughout the world, and was a precursor of today's very widely used PET scanners.

While Joe was mixing sodium cocktails, I was using phosphorus-32 in animals--both normal and leukemic--and I started treating patients at about the same time. The first patient I treated was a woman who had chronic leukemia. It was on Christmas Eve, 1936. I treated her with radioactive phosphorus, which concentrated in

1160922

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86 c
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 8/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. [illegible] Bancroft Library upon [illegible] permission to reproduce [illegible] obtained in writing from the Director, The Bancroft Library, University of California, Berkeley, California, 94720.

the bone marrow and inhibited the production of the neoplastic cells. We treated hundreds of patients with leukemia, and many survived five, 10, 15, and more years. There is still no completely successful treatment for leukemia. Bone marrow transplantation has great potential now, but the immune mechanism is a problem.

Soon after that, however, I began treating patients with polycythemia vera, a disease in which you have too many red cells. That turned out to be one of the great successes of this kind of therapy--the results were remarkable.

At about the same time Joe Hamilton teamed up with Mayo Soley in the medical school and treated hyperthyroid patients with radioactive iodine. This method is now used widely throughout the world.

RR: The whole idea of ingesting radioisotopes and letting them work inside the body to release radiation takes a certain amount of daring the first time it's tried. Was this technique controversial at the time? Did anyone say "Don't do that"?

JL: Everyone was afraid of radiation, and they still are, but we were dealing with a serious disease and with low doses of radiation. The patients were worried about it, but when you have a serious problem you're willing to try new things.

RR: Polycythemia vera is quite a rare disease. How did you happen to get drawn into studying it?

JL: Doctors in the community knew me and my work because I talked to medical societies. One of these doctors was a blood

1160923

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO.
9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 9/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission [illegible] Bancroft Library [illegible] permission to reproduce [illegible] obtained in writing from the Bancroft Library, University of California, Berkeley, California, 94720.

specialist, and he said "I'd like to send you a patient." We treated hundreds of patients. The treatment was successful, and the patients emerged with a near-normal life expectancy.

RR: Another field in which you pioneered was radiation protection. You have written before about how you convinced the cyclotroneers to shield their accelerators. It's a good story--would you mind telling it again?

JL: I first put a rat in the 60-inch cyclotron chamber about 1939. After the cyclotron had run, I crawled back in there to see how the rat was doing. When I opened the canister, the rat was dead. It had been in there about two minutes. That scared all the physicists. I later learned that the rat died of suffocation, not radiation, but I didn't spread that news around. The physicists became much more interested in radiation protection after that. Soon the cyclotron was heavily shielded. And the word got around about radiation hazards, because we reported some of our early findings in a paper presented at a meeting in Buenos Aires in 19??. Howard Parker, who later became a leader in this field at UC, was a key man in this research.

revised to clear up some points - is date correct

need a date

RR: So one could say that the earliest standards of radiation protection also come from this Laboratory. In light of this, may I ask you what you think about nuclear power and other related radiation hazards today?

JL: Nuclear power makes sense to me. Not long ago I visited all the nuclear power plants in France. One sometimes hears it said

1160924

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
COPY
CARTON NO. 9
FOLDER NAME
LAWRENCE, JOHN H, BIOGRAPHICAL INFO. (20)
NOTES
pg. 10/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions, nor have express permission. Please refer to the Bancroft Library, University of California, Berkeley, California, 94720.

that the French nuclear industry is superior to ours, but their nuclear plants are no better than ours. The only difference is that the French people believe that nuclear power is safe, and their children are taught that in school. You know that people who work around nuclear power plants in the United States and France get less radiation in their work than they do in many other everyday activities, like making a coast-to-coast flight, or spending a few weeks in a high-altitude city.

RR: You have had the opportunity in your life to do some exciting and unusual things. For example, in 1953 you traveled to Yugoslavia to treat Cardinal Stepinac, who had been imprisoned by Tito. Can you tell us about that?

JL: My wife Amy and I and the children were up at Lake Tahoe, and I got a call from the archbishop of San Francisco, who asked me if I would go to Yugoslavia to treat a patient. I asked "Don't they have any doctors there who could do it?" but he said, "No, they want you." So I came back from Tahoe, flew to Zagreb, and saw the cardinal. He was not in prison; he was in custody, a kind of house arrest.

RR: Was he quite sick?

JL: He had classical polycythemia vera. He was up and around, but wasn't feeling very good. I had breakfast with him several mornings and treated him right there in his home with radioactive phosphorus I had brought with me from Berkeley. The treatment was successful because Stepinac got over his polycythemia and died about 10 years later of a heart attack. After I treated the

1160925

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H. BIOGRAPHICAL INFO. (20)
NOTES
Pg. 11/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference ... Copies may not be deposited in ... Bancroft Library, University of California, 94720

cardinal, Pope Pius invited me to Rome, and I went to see him. My wife Amy was not able to accompany me on this trip, but she came along on many others, including India, Thailand, and Pakistan. She was a great supporter of our work and a close friend of many of my colleagues.

RR: Another unusual bit of research you were involved in was your high-altitude studies in the Andes. How did they come about?

JL: People living at high altitudes have a form of polycythemia vera, too, and I wanted to get some experience with these people. One day, on a train going to the East, I struck up a conversation with Donald McLauglin, who was connected with a silver and gold mining company in Peru. He later became dean of engineering at UC and a regent. I asked Don if he could arrange for me to go down there. I organized an expedition, and my colleague Will Siri went with me. Siri was crazy about mountain climbing (later, of course, he became president of the Sierra Club). I wasn't a mountain climber, but Will was, and he climbed quite a few mountains down there. Will was very effective on these expeditions. We used the techniques that a young fellow by the name of Rex Huff had developed here in Berkeley, using iron-59 to measure red cell production. Rex was one of the great pioneers and innovators in the use of the tracer technique.

in what way. Need to mention his technical expertise

On these expeditions we studied the people who lived at high altitudes, then we'd take them to low altitude and study them there, then we'd take a group of people from low altitude and

1160926

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86 c
COPY
CARTON NO. 9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 12/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries or institutions without express permission. Please further copy this Bancroft Library, University of California, Berkeley, California, 94720.

take them to altitudes as high as 18,000 feet. Some of our subjects were miners, some of them were the local inhabitants. We learned a lot about the polycythemia vera of altitude; in fact, we found out that it's a different disease. High-altitude polycythemia is due to oxygen lack and can be treated by administering oxygen. But polycythemia vera is independent of oxygen availability: it is really a neoplastic disease. In the course of demonstrating, we tried giving 100 percent oxygen to people with polycythemia vera, but it had no effect.

These expeditions to the Andes also led to an important research program on erythropoietin, conducted by the late Joseph Garcia of the Donner Lab. Erythropoietin is the hormone that controls the production of red blood cells. It is hard to detect because it is present in very small amounts, but Garcia developed a very effective radioimmunoassay technique for identifying and studying this hormone in the blood. Garcia was another pioneer--a great investigator.

RR: What did you do during World War II? I gather that you were not involved in the Manhattan Project; you were working on other matters.

JL: I was involved in the Manhattan Project in one way. Ernest asked me to take charge of the health of the workers at the Lab here and also to help at Oak Ridge and Chicago. But he knew I wasn't really interested in doing that; I wanted to continue my research in some way. So instead of accepting, I recruited others to take on those jobs. We got Dr. Stone to go to Chicago,

1160927

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
CARTON NO. 9
COPY
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 13/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries without permission to the Bancroft Library, University of California, 94720.

and we got Louis Hemplemann, who had worked with me in Berkeley, to go to Los Alamos to oversee the health of the workers there. That became a very important job as these programs became so immense, and of course Dr. Hemplemann went on to a very distinguished career in the field of radiation medicine, especially protection. I and my associates were able to make a contribution to the war effort through research, as I had hoped. Col. Randolph Lovelace, director of research for the Air Force at Wright Field in Dayton, Ohio, knew my work, and he got me involved in doing a project for the Air Force. The research involved the pressure in airplane cockpits--that was before there were pressurized cabins. We had our own plane for these studies, and we did a lot of flights at 40,000 feet, using oxygen. Some of this work involved the use of carbon-11 as a tracer--its first use in humans. We also did research on the bends. We built a pressure chamber at Donner to study altitude effects, a facility we continued to use for many years after the war.

RR: You were a UC Regent for many years, from 1970 to 1983. Did you enjoy being on this particular firing line?

JL: Oh yes, I did. I could have stayed on for about three more years, but I decided that a younger fellow should take my place. There was one thing I did as a regent that I feel strongly about. As you know, there was a group of people who were trying to dislodge the university from having anything to do with the Livermore and Los Alamos laboratories. I disagreed with them, and I think I was effective in my speeches on this topic. I was

1160928

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO (20)
NOTES
pg. 14/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other libraries ... Bancroft Library, University of California, Berkeley, 94720.

convinced, and most of the regents agreed with me, that the laboratories are an asset to the nation and to the university, not only in the protection of the nation but also in the basic research that's done there. About one half of the research at these laboratories is basic research, and the other half is crucial to the strength of the nation.

uphated - changed from "over" in original statement

RR: What are you doing now?

JL: I'm not terribly active now. I'm summarizing some of the things we've done, and writing them up. I don't know if you could call it a book; I hope to get it published just for local distribution--a sort of history of nuclear medicine in Berkeley. And I'm still interested in the pituitary and drawing on my years of experience with pituitary diseases. What I'm doing mainly is reading patients' charts and analyzing them. I'm currently working on a paper on Cushing's disease and one on Nelson's disease, and I recently completed a similar paper on acromegaly. The treatment of acromegaly with particle beams was another big success of nuclear medicine. I guess I've seen more patients with this disease than any other doctor.

RR: Have you ever been in private practice as a physician?

JL: No I've never been in private practice. But of course, I treated many patients and formed long-standing relationships with some of them. A few ended up donating money to support our research. Mr. Donner, who provided the initial money for the Donner Laboratory, was not a patient of mine, but he was in the audience when I gave my first paper on the biological effects of

1160929

DOCUMENT SOURCE
University of California at Berkeley
The Bancroft Library/The University Archives, Berkeley CA
RECORDS SERIES TITLE
JOHN HUNDALE LAWRENCE SUBJECT FILES
BANCROFT/UARC ID NO.
87/86c
COPY
CARTON NO.
9
FOLDER NAME
LAWRENCE, JOHN H., BIOGRAPHICAL INFO. (20)
NOTES
pg. 15/15
FOUND BY/DATE FOUND
KAREN HOLMES 11/29/94

Copied from originals in The Bancroft Library for reference use only. Copies may not be deposited in other repositories or other reproduction without the permission of the Bancroft Library. Unauthorized use prohibited. Copies may be obtained in the Bancroft Library, University of California, Berkeley, California 94720.

neutron rays. He was a wealthy man who had made a lot of money in steel, and he was interested in our work. He had lost a son, Joseph Donner, to cancer. He came up to me at that meeting and said he wanted to come out and see the Laboratory--that was in '37 or '38. As a result of that visit, he built us the first wing of the building, which is dedicated to the memory of Joseph Donner. The second wing was later built by his son, Robert, and wife. They also provided funds for a professorship of research medicine at Berkeley.

RR: What's the achievement you're proudest of? What do you feel best about, of all the things you've done?

JL: I think that the opportunities we've made available for young doctors--Ph.D.s and M.D.s--to work in the field of atomic energy in biology and medicine--that's our most important contribution. A lot of talented people have come through Berkeley, and now they're distributed around the country. In San Francisco, most of the people who are in charge of nuclear medicine got their training here, but that's also true in Pittsburgh, New York, all around the country. We've trained a lot of good people, and now they are training the next generation.

1160930