

November 1990

CURRICULUM VITAE

NAME: Kelly Hardenbrook Clifton

SOCIAL SECURITY #: [REDACTED]

OFFICE ADDRESS:

Departments of Human Oncology and Radiology  
University of Wisconsin Clinical Cancer Center  
K4/330, Clinical Science Center  
600 Highland Avenue  
Madison, WI 53792

PERSONAL

BIRTHDATE: [REDACTED]

MILITARY SERVICE:

United States Coast Guard, [REDACTED]

MARITAL STATUS: [REDACTED]

CHILDREN: [REDACTED]

UNDERGRADUATE EDUCATION:

University of Montana, Missoula, [REDACTED]

Major: Zoology, Minor: Chemistry

B.A., with Honors, [REDACTED] (Duniway Scholastic Award, Kappa Tau Senior Scholastic Society)

GRADUATE EDUCATION:

University of Wisconsin, Madison, [REDACTED]

Major Professor: Roland K. Meyer, Zoology (Endocrinology)

Minor Professor: C.A. Baumann, Biochemistry

Research Assistant, [REDACTED] 1950-1951

Predoctoral Fellow, National Cancer Institute, [REDACTED] 1951-1954

Research Administrative Assistant to Roland Meyer, [REDACTED] 1954-1955

Portion's Ex 6 B/5

EX 6

Teaching Assistant to Professor Meyer in Endocrinology, 1953-1954  
M.S., [REDACTED]  
Ph.D., [REDACTED] Thesis: The Effect of Chronic Estrogen Administration  
on the Cytology, Hormone Secretion and Proteinase Activity of the  
Rat Anterior Pituitary Gland

ACADEMIC AND PROFESSIONAL POSITIONS:

The Children's Cancer Research Foundation, 1955-1959  
Research Fellow, American Cancer Society, 1955-1956  
Sponsor: Dr. Jacob Furth, Experimental Pathology Section  
Research Associate, Experimental Pathology Section, 1956-1959  
Research Fellow, Department of Pathology, Harvard Medical School,  
1957-1959

University of Wisconsin

Assistant Professor of Radiology, 1959-1963  
Associate Professor of Radiology, 1963-1967  
Professor of Radiology, 1967-1968  
Professor of Radiology and Pathology, 1968-1975  
Professor of Human Oncology and Radiology, 1975-

Karolinska Institute, Institute for Tumor Biology, Stockholm, Sweden.  
Special Research Fellow, National Cancer Institute, 1970-1971

Radiation Effects Research Foundation, Hiroshima and Nagasaki, Japan  
Member-in-Residence, Board of Directors and Chief of Research, 1980-1982

FELLOWSHIPS AND HONORS

BA with Honors, University of Montana, [REDACTED] EX 6  
National Cancer Institute Predoctoral Fellowship, 1951-1954  
American Cancer Society Postdoctoral Fellowship, 1955-1956  
National Cancer Institute Special Fellowship, 1970-1971  
National Cancer Institute MERIT Grant Award, 1987-1992  
Sigma Xi National Lectureship, 1990-1992

## ADMINISTRATION

University of Wisconsin

Head, Radiobiology Section, 1959-1972, 1976-1980

Chairman, Biology Core Curriculum, 1967-1970

Assistant Dean for Pre-Medical Affairs, 1971-1977

Acting Chairman of Pathology, 1977-1978

Associate Director for Laboratories, Wisconsin Clinical Cancer Center,  
1979-1980

Chairman, Human Oncology Graduate Steering Committee, 1983-

Program Director, Graduate and Postdoctoral Training Program Grant in  
Human Cancer Biology, 1984-

Radiation Effects Research Foundation, Hiroshima and Nagasaki, Japan  
Chief of Research, 1980-1982

## RESEARCH INTERESTS

Radiation effects on normal tissues in vivo: Radiation and endocrine carcinogenesis.

Current grants:

Principal Investigator:

National Cancer Institute (MERIT): "Radiation in vitro: Mammary neoplasia." R37-CA13881-16-20, 12/1/87-11/30/92, \$828,469 direct costs.

National Cancer Institute: "Training in Human Cancer Biology." 5T32-CA09471, 5/1/89-4/30/94, \$1,082,418 direct costs.

Department of Energy: "Radiogenic neoplasia in thyroid and mammary clonogens." DE-AC02-87ER60507, 1/1/90-12/31/92, \$609,505.

University of Wisconsin Graduate School: Unrestricted research grant, 7/1/86-6/30/91, \$15,000 direct costs.

## UNIVERSITY COMMITTEES:

Elective:

Secretary, Graduate Biology Division, 1965-1966

Member, Faculty Assembly, 1967-1969

Executive Committee, Faculty Division of Biological Sciences, 1972-1975  
(Chairman, 1974-1975)  
University Committee, the Executive Committee of the Faculty Senate,  
1983-1986

**Medical School Committees:**

Radiation Safety, 1961-1965  
Research Animal Resources, 1963-1968 (Chairman, 1967-1968), 1972-1974,  
1975-1979  
Investigations Involving Humans, 1968-1970  
Admissions Committee, 1971-1975 (Chairman, 1974-1975)  
Promotions Committee, 1977-1980 (Chairman, 1979-1980)  
Research Committee, 1977-1980  
Subcommittee on Facilities, Self-Evaluation Committee, 1987  
Academic Awards, 1989-

**University Committees:**

Biology Core Curriculum, 1967-1970 (Chairman, 1967-1970)  
Undergraduate Education, 1971-1972  
Radiological Safety Committee (TRIGA Reactor), (Chairman, 1971-1974)  
Molecular Biology Undergraduate Committee, 1974-1980  
Campus Planning, 1983-1986  
Space and Remodelling Policy Committee, 1983-1986  
Allied Health Dean Search, 1983-1984  
Ad Hoc Appeals Committee, Academic Staff, 1986-1987  
Chancellor Search and Screen Committee, 1986-1987  
Panel of Examiners and Reviewers (Academic Staff Appeals), 1987-

**Graduate School Committees:**

Cancer Research, 1966-1970  
Research, 1971-1972  
Administrative Advisory, 1975-1980, 1989-

**Human Oncology Department Committees and UWCCC Groups:**

Human Oncology Graduate Steering Committee, (Chairman, 1982-)  
UWCCC Cancer Education Committee, 1985-  
Physician/Scientist Training Program, 1988-  
UWCCC Breast Cancer Group  
UWCCC Radiation Oncology Group  
UWCCC Etiology and Prevention Group

**PROFESSIONAL SOCIETIES:**

Society for Experimental Biology and Medicine (Chairman, Wisconsin Section,  
1963-1964)

American Association for Cancer Research  
Radiation Research Society  
Sigma Xi  
American Society for Experimental Pathology (resigned 1979)  
Animal Care Panel - Madison Branch (President, Madison Branch, 1964-1966)  
(resigned 1970)  
Public Representation Organization of the Faculty Senate (PROFS), University  
of Wisconsin, President 1984-1986  
PROFS Steering Committee 1986-1989

OTHER PROFESSIONAL ACTIVITIES:

Participating consultant, eight-week institute to develop science teaching materials for African primary schools under the auspices of Educational Services, Incorporated, of Waltham, Mass., in Dar-es-Salaam, Tanzania, Summer, 1966  
Editorial Advisory Board (1965-1968), Associate Editor (1968-1971), Cancer Research  
Member, Committee on Radiology, National Research Council, 1968-1971  
Organizing Committee Member, Argonne University Associates - Argonne National Laboratory Annual Symposium, 1974  
U.S. Organizing Committee Member, International Atomic Energy Agency Symposium, Chicago, 1975  
Consultant, Division of Biology and Medicine, Argonne National Laboratory, Argonne, Illinois, 1973-1978  
Associate Editor, Radiation Research, 1977-1980  
Board of Editors, Proceedings of the Society for Experimental Biology and Medicine, 1976-1985  
Member, Program Committee, American Association for Cancer Research, 1979-1980  
Member, Study Section Committee on Prevention, Detection and Therapy, American Cancer Society, 1977-1980  
Member, Site Selection Committee, Radiation Research Society, 1984-1986  
Chairman, Nominating Committee, Radiation Research Society, 1985-1986  
Member, Advisory Board on Radiation Biology, 14th International Cancer Congress, 1985  
Member, Health and Environmental Research Advisory Committee, Office of Energy Research, Department of Energy, 1986-  
Member, Biological Effects of Ionizing Radiation Committee (BEIR V), National Research Council, 1986-1989  
Member, Radiation Advisory Committee, Science Advisory Board, U.S.

Environmental Protection Agency, 1990-

GENERAL CONSULTANT SERVICE:

- Scientific Advisory Committee, Consultant, Medical Division, Brookhaven National Laboratory, 1976
- Scientific Review Committee Member, Norris Cotton Cancer Center, Dartmouth University, 1976
- Consultant, Search Committee on Radiation Biology, University of Iowa, 1976
- Consultant to the Committee on Federal Research into the Biological Effects of Ionizing Radiation of the NIH, 1979-1980
- External Advisory Committee Member, Cancer Center, Roger Williams General Hospital, Brown University, 1979, 1983
- Member, Interlaboratory Working Group for Research in Radiation Carcinogenesis, U.S. National Laboratories, 1982-
- Member, Bevatron/Bevalac Biomedical Program Advisory Committee, Lawrence Berkeley Laboratory, University of California, Berkeley, 1984-1987 (Chairman, 1986-1987)
- Member, Board of Directors, Madison General Hospital Medical and Surgical Foundation, 1984-
- Member, Madison General Hospital Joint Institutional Review Board, 1984-
- Member, Panel for Evaluation of Radiobiological Research, U.S. National Laboratories, Office of Health and Environmental Research, Department of Energy, 1985
- Member, Radiobiology Sub-committee, Health and Environmental Research Advisory Committee, Office of Energy Research, Department of Energy, 1985-1987
- Member, Review Panel for Radon Program, OHER, DOE, 1987
- Member, Review Panel for Radiobiology Archives, Pacific Northwest Laboratory, DOE, 1989
- Member, Program Committee and Chair, US Liaison Committee, Workshop on Cell Transformation Systems Relevant to Radiation-Induced Cancer in Man. U.S. Department of Energy-Commission of the European Communities, Dublin, Ireland, 1988-1989

TEACHING AND RELATED ACTIVITIES:

Radiological Sciences Graduate Program:

Helped establish (with Prof. H. Vermund and J.R. Cameron) the program in 1960; organizer and now occasional lecturer in Radiation Biology (now

Human Oncology 410, Medical Physics 410).

**Human Cancer Biology Graduate Program:**

Helped establish (with Profs. M.N. Gould and others) the program 1979-1982; Chairman, Graduate Steering Committee. Program Director, NIH Training Grant "Training in Human Cancer Biology", 5/1/84-4/30/89, \$571,382.

**Current Lecturing:**

Occasional lectures in Human Oncology 402, 410, 610. Lectures in animal reproduction, Biocore 323. Occasional lectures in radiation effects and carcinogenesis in other courses on campus (Nuclear Engineering, Pharmacology, Toxicology, Letters and Sciences general).

**Past Teaching:**

Shared responsibility for general histology for medical students 1959-1960. Lectured in several areas of physiology in Biocore 323, 1967-1970, 1971. Director, Biocore 101, 1967-1969.

**STUDENTS SUPERVISED:**

**1. M.S. Degrees supervised**

<u>Trainee</u>	<u>Year</u>	<u>Current Position</u>
Donald Carlson	1962	Associate Professor, Univ. Texas, Dallas
William Summers	1962	Prof., Radiol. and Biophysics, Yale University
Neil Hoffman	1965	Pathologist in private practice
Helen Stone	1968	Asst. Prof., Radiobiology, Univ. Calif., San Francisco
Jacque Mitchen	1970	Specialist, U.W. Medical School
Steven Stoddard	1970	Orthopedics practice, Wausau, WI
Robert DeMott	1978	Ob-Gyn. practice, Ladysmith, WI
Dawn Church	1990	Specialist, Dept. Human Oncology, U. Wisconsin

**2. Ph.D. Degrees supervised**

A.L. Wiley	1972	Professor, Radiation Oncology, East Carolina University
R.L. Jirtle	1976	Assoc. Prof., Radiobiology, Duke University
M.N. Gould	1977	Professor, Human Oncol. & Med. Physics, UW-Madison
R.T. Mulcahy	1979	Assoc. Prof., Human Oncology, UW-Madison
K.M. Groch	1990	Postdoctoral Trainee, Dept. Human Oncology, University of Wisconsin

3. Current Graduate Students

Frederick Domann  
Nam Deuk Kim

4. Ph.D. Committees

Marco Gottardis 1989  
Catherine Murphy 1990  
Rong Zhang 1990  
Lih-Ching Hsu  
Bingcheng Wang  
Janice Schultz

5. Postdoctoral Trainees

E.B. Douple	1972-73	Assoc. Prof., Radiology, Dartmouth
P.A. Mahler	1977-81	Chief Resident, Radiation Oncology, Univ. Wisconsin
B.N. Sridharan	1973-76	Xerox Corp., Sales, Madison, WI
H. Watanabe	1979-82	Assoc. Prof., Cancer Res., Hiroshima Univ., Japan
K. Kamiya	1982-87	Scientist, Hiroshima University, Japan
T. Hiraoka	1984-86	Staff Scientist, RERF, Hiroshima, Japan
M. Tanimoto	1989-90	Scientist, Hiroshima University, Japan

INVITED SYMPOSIA AND MAJOR LECTURES

- 1957 Gordon Research Conference on Hormones and Cancer
- 1960 Symposium on Cancer Etiology, Fourth National Cancer Conference (Bibl. #20)
- 1961 Symposium on Hormones and Cancer, Meeting on the International Union Against Cancer, Warsaw (Bibl. #22)
- 1969 Symposium on Experimental Radiotherapy, International Congress on Radiology, Tokyo
- 1975 Symposium on Mechanisms of Carcinogenesis, Argonne University Associates - Argonne National Laboratory

- 1975 Symposium on Biological and Environmental Effects of Low-Level Radiation, International Atomic Energy Agency at Chicago (Bibl. #38)
- 1977 Symposium on Late Effects, Radiation Research Society, San Juan, Puerto Rico
- 1979 32nd M.D. Anderson Symposium on Fundamental Cancer Research, Houston (Bibl. #68)
- 1979 Symposium on Carcinogenesis, Sixth International Congress of Radiation Research, Tokyo (Bibl. #69)
- 1979 Symposium on Radiogenic Cancer, International Association of Late Effects Groups, Hiroshima
- 1980 Principal address, Chugoku Regional Group to Study Radiation Effects, Hiroshima (Bibl. #73)
- 1981 Dedication address, Cold Spring Harbor Workshop on Cell Growth in Defined Media
- 1983 Colloquium, Sandia National Laboratory, Albuquerque, NM
- 1984 Symposium on Assessment of Risk from Low Level Exposure to Radiation and Chemicals: A Critical Overview. Brookhaven National Laboratory (Bibl. #83)
- 1985 Twelfth L.H. Gray Conference, Manchester, England (Bibl. #88).
- 1986 14th International Cancer Congress Symposium C-13 on "Mechanisms of Radiation Carcinogenesis: Experimental Data". Budapest, Hungary. (Symposium Chairman). (Bibl. #90)
- 1989 Workshop on Cell Transformation Systems Relevant to Radiation-induced Cancer in Man. US Department of Energy - Commission of the European Communities, Dublin, Ireland, 4-7 April. (Program Committee) (Bibl. #95).
- 1989 Conference on Mathematical Modeling: Statistical Issues in Cancer Risk Assessment. Societal Institute for the Mathematical Sciences. Snowbird, Utah, 17-22 July (Bibl. #97).
- 1989 The Conference on Chemically Induced Cell Proliferation; Implications for Risk Assessment. University of Texas M.D. Anderson Cancer Center, Austin, Texas, 30

November - 2 December (Bibl. #98).

1990 Japanese Radiation Research Society Symposium "Radiation Carcinogenesis in the Whole Body System", Tokyo, Japan, 4-7 December 1990.

## PUBLICATIONS

NOTE: \* indicates invited chapters and reviews; \*\* indicates symposia or colloquia.

1. Clifton, K.H., Meyer, R.K. Mechanism of anterior pituitary tumor induction by estrogen. *Anat. Rec.* 125:65-81, 1956.
2. Meyer, R.K., Clifton, K.H. Effect of diethylstilbestrol on the quantity and intracellular distribution of pituitary proteinase activity. *Arch. Biochem. Biophys.* 62:198-209, 1956.
3. Clifton, K.H., Meyer, R.K. Effect of food intake on the secretion of thyrotropin. *Endocrinology* 58:681-685, 1956.
4. Meyer, R.K., Clifton, K.H. Effect of diethylstilbestrol induced tumorigenesis on the secretory activity of the rat anterior pituitary gland. *Endocrinology* 58:686-693, 1956.
5. Furth, J., Clifton, K.H., Gadsden, E.L., Buffett, R.F. Dependent and autonomous mammotropic pituitary tumors in rats: Their somatotrophic features. *Cancer Res.* 16:608-616, 1956.
6. Furth, J., Gadsden, E.L., Clifton, K.H., Anderson, E. Autonomous mammotrophic pituitary tumors in mice: Their somatotrophic features and responsiveness to estrogens. *Cancer Res.* 16:600-607, 1956.
7. Clifton, K.H., Bloch, E., Upton, A.C., Furth, J. Transplantable Leydigcell tumors in mice. *A.M.A. Arch. Path.* 62:354-368, 1956.
8. Bates, R.W., Clifton, K.H., Anderson, E. Prolactin and thyrotropin content of functional transplantable pituitary tumors. *Proc. Soc. Exp. Biol. Med.* 93:525-527, 1956.
- \*9. Furth, J., Clifton, K.H. Experimental pituitary tumors and the role of pituitary hormones in tumorigenesis of the breast and thyroid. *Cancer* 10:842-853, 1957.

10. Clifton, K.H., Furth, J. Hormonal influences on growth and somatotropic actions of autonomous mammotropes. *Proc. Soc. Exp. Biol. Med.* 94:809814, 1957.
- \*\*11. Furth, J., Clifton, K.H., Buffett, R.F. An evaluation of pituitary and other hormonal factors in growth and development of the mammary gland and mammary tumors. In: *II International Symposium on Mammary Cancer, Perugia: University of Perugia Publications*, pp. 513-516, 1957.
- \*\*12. Furth, J., Clifton, K.H. Experimental pituitary tumors. In: *Twelfth Ciba Foundation Colloquium on Endocrinology. G.W.W. Wolstenholme and M. O'Connor, eds., J. and A. Churchill, Ltd., London*, pp. 3-17, 1958.
- \*13. Furth, J., Clifton, K.H. Experimental observations on mammotropes and the mammary gland. In: *Endocrine Aspects of Breast Cancer, A.R. Currie and C.F.W. Illingworth, eds., E. and S. Livingstone, Ltd., Edinburgh*, pp. 276-282, 1958.
- \*\*14. Furth, J., Clifton, K.H. Screening techniques and problems of hormone-responsive tumors. *Ann. N.Y. Acad. Sci.* 76:681-688, 1958.
- \*15. Clifton, K.H. Problems in experimental tumorigenesis of the pituitary gland, gonads, adrenal cortices and mammary glands: A review. *Cancer Res.* 19:2-22, 1959.
16. Kim, U., Clifton, K.H., Furth, J. A highly inbred line of Wistar rats yielding spontaneous mammosomatotropic pituitary and other tumors. *J. Natl. Cancer Inst.* 24:1031-1055, 1960.
17. Clifton, K.H., Furth, J. Ductoalveolar growth in mammary glands of adrenalectomized male rats bearing mammatropic pituitary tumors. *Endocrinology* 66:893-897, 1960.
18. Furth, J., Kim, U., Clifton, K.H. On evolution of the neoplastic state: Progression from dependence to autonomy. *Natl. Cancer Inst. Monograph* 2:148-177, 1960.
19. Kim, U., Furth, J., Clifton, K.H. Relation of mammary tumors to mammotropes. III. Hormone responsiveness of transplantable mammary tumors. *Proc. Soc. Exp. Biol. Med.* 103:646-650, 1960.
- \*\*20. Clifton, K.H. Hormones and experimental oncogenesis: Mammary and mammatropic tumors. In: *Proceedings of the Fourth National Cancer Conference, J.B. Lippincott Co., Philadelphia*, pp. 41-50, 1960.

21. Clifton, K.H., Furth, J. Changes in hormone sensitivity to pituitary mammotropes during progression from normal to autonomous. *Cancer Res.* 21:913-920, 1961.
- \*\*22. Clifton, K.H. Experimental hypophyseal neoplasia: A review of recent results. *Acta Union International Contra Cancer* 18:293-301, 1962.
23. Clifton, K.H., Vermund, H. Radioorthophosphate uptake into DNA, autoradiography and histology during radiation-induced regression and regrowth of mouse mammary adenocarcinomas. *Radiat. Res.* 18:516-527, 1963.
24. Clifton, K.H., Vermund, H. Acute effects of roentgen radiation on mouse mammary adenocarcinoma: Radioorthophosphate uptake by deoxyribonucleic acid. *Radiat. Res.* 18:528-539, 1963.
25. Clifton, K.H., Syzbalski, W., Heidelberger, C., Gollin, F.E., Ansfield, F.J., Vermund, H. Incorporation of I<sup>125</sup> labelled iododeoxyuridine into the deoxyribonucleic acid of murine and human tissues following therapeutic doses. *Cancer Res.* 23:1715-1723, 1963.
26. Clifton, K.H. Tumor induction in hypophyseal grafts in radiothyroidectomized mice: Hypothalamic-hypophyseal relationships. *Proc. Soc. Exp. Biol. Med.* 114:559-565, 1963.
27. Clifton, K.H., Draper, N.R. Survival curves of solid transplantable tumor cells irradiated *in vivo*: A method of determination and statistical evaluation: Comparison of cell survival and <sup>32</sup>P-uptake into DNA. *Int. J. Radiat. Biol.* 7:515-535, 1963.
28. Summers, W.C., Clifton, K.H., Vermund, H. X-irradiation of the tumor bed: A study of the indirect actions of radiation on transplantable tumors. *Radiology* 82:691-703, 1964.
- \*29. Furth, J., Clifton, K.H. Experimental pituitary tumors. In: *The Pituitary Gland*, Vol. 2, G.W. Harris and B.T. Donovan, eds., Butterworths, Ltd., London, pp. 460-468, 1966.
30. Clifton, K.H. Cell population kinetics during induction of thyrotropic pituitary tumors. *Cancer Res.* 36:374-381, 1966.
31. Clifton, K.H., Briggs, R.C., Stone, M.B. Quantitative radiosensitivity studies of solid carcinomas *in vivo*: Methodology and effect of anoxia. *J. Natl. Cancer*

Inst. 36:965-974, 1966.

32. Hoffman, N.A., Gollin, F.F., Clifton, K.H. Acquired radioresistance of transplantable mammary adenocarcinoma in inbred mice after serial irradiation. *Radiology* 88:568-575, 1967.
33. Toda, J.K., Yatvin, M.B., Clifton, K.H. Source of stimulation of tumor inocula by lethally irradiated cells. *Proc. Soc. Exp. Biol. Med.* 133:1123-1128, 1970.
34. Clifton, K.H., Yatvin, M.B. Cell population growth and cell loss in the MTG-B mouse mammary carcinoma. *Cancer Res.* 30:658-664, 1970.
35. Jirtle, R., Clifton, K.H. On carcinoma growth and vascular supply: A study of mouse mammary carcinoma strain MTG-B. *Proc. Soc. Exp. Biol. Med.* 138:267-269, 1971.
36. Cohn, N.K., Clifton, K.H. Aspects of the biology and radiation response of cloned C3H mouse mammary carcinoma cells *in vitro* and *in vivo*. *Europ. J. Cancer* 7:505-514, 1971.
37. Clifton, K.H., Cooper, J.M. Re-utilization of thymidine and iododeoxyuridine by mouse mammary carcinoma strain MTG/B. *Proc. Soc. Exp. Biol. Med.* 142:1145-1151, 1973.
38. Jirtle, R.L., Clifton, K.H. Effect of pre-irradiation of the tumor bed on the relative vascular space of mouse gastric adenocarcinoma 328 and mammary adenocarcinoma CA755. *Cancer Res.* 33:764-768, 1973.
39. Wiley, A.L., Vogel, H.P., Clifton, K.H. The effect of variations in LET and cell cycle on radiation hepatocarcinogenesis. *Radiat. Res.* 54:284-293, 1973.
- \*40. Furth, J., Ueda, G., Clifton, K.H. The pathophysiology of pituitaries and their tumors: Methodological advances. In: *Methods in Cancer Research*, Vol. 10, H. Busch, editor, Academic Press, New York, pp. 201-277, 1973.
- \*\*41. Yatvin, M.B., Stone, H.B., Clifton, K.H. Further studies of the mechanism of tumor growth stimulation by radiation killed cells. In: *Multiple Primary Malignant Tumors. 5th Perugia Quadrennial International Conference on Cancer*, L. Severi, ed., Perugia: The University of Perugia Publications, pp. 1021-1033, 1973.
- \*\*42. Clifton, K.H., Yatvin, M.B. Hypothalamic-hypophyseal relationships in induction of

- thyrotropic pituitary tumors: Further studies. In: Multiple Primary Malignant Tumors. 5th Perugia Quadrennial International Conference on Cancer, L. Severi, ed., Perugia: The University of Perugia Publications, pp. 1035-1045, 1973.
- \*43. Clifton, K.H., Sridharan, B.N. Endocrine factors and tumor growth. In: Cancer, A Comprehensive Treatise, Vol. 3, F.F. Becker, ed., Plenum Press, New York, pp. 249-285, 1975.
44. Clifton, K.H., Sridharan, B.N., Duple, E.B. Mammary carcinogenesis-enhancing effect of adrenalectomy in irradiated rats with pituitary tumor MtT-F4. J. Natl. Cancer Inst. 55:485-487, 1975.
45. Clifton, K.H., Jirtle, R.L. Mammary carcinoma cell population growth in pre-irradiated and unirradiated transplant sites: Viable tumor growth, vascularity and the tumor bed effect. Radiology 117:459-465, 1975.
46. Siracka, E., Littbrand, B., Clifton, K.H., Revesz, L. Variations in sensitivity of synchronized Chinese hamster cells to oxic and anoxic x-ray exposures. Neoplasma 22:647-653, 1975.
47. Clifton, K.H., Duple, E.B., Sridharan, B.N. Effects of grafts of single anterior pituitary glands on the incidence and type of mammary neoplasm in neutron- or gamma-irradiated Fischer female rats. Cancer Res. 36:3732-3735, 1976.
- \*\*48. Clifton, K.H., Sridharan, B.N., Gould, M.N. Risk of mammary oncogenesis from exposure to neutrons or gamma rays: Experimental methodology and early findings. In: Biological and Environmental Effects of Low Level Radiation (IAEA-SM-202/211), International Atomic Energy Agency, Vienna, pp. 205-211, 1976.
- \*49. Clifton, K.H. The physiology of endocrine therapy. In: Cancer, A Comprehensive Treatise, Vol. 5, F.F. Becker, ed., Plenum Press, New York, pp. 573-597, 1977.
50. Gould, M.N., Biel, W.F., Clifton, K.H. Morphological and quantitative studies of gland formation from inocula of monodispersed rat mammary cells. Exper. Cell Res. 107:405-416, 1977.
51. Gould, M.N., Clifton, K.H. The survival of mammary cells following irradiation in vivo: A directly generated single-dose-survival curve. Radiat. Res. 72:343-352, 1977.
52. Gould, M.N., Jirtle, R.L., Crowley, J., Clifton, K.H. Reevaluation of the number of

- cells involved in the neutron induction of mammary neoplasms. *Cancer Res.* 38:189-192, 1978.
53. Gould, M.N., Clifton, K.H., Crowley, J. Effects of endocrinologic conditions associated with acute versus chronic lactation on the incidence of mammary carcinomas in irradiated rats: Brief communication. *J. Natl. Cancer Inst.* 60:469-471, 1978.
  54. Clifton, K.H., Crowley, J. Effects of radiation type and role of glucocorticoids, gonadectomy and thyroidectomy in mammary tumor induction in MtT-grafted rats. *Cancer Res.* 38:1507-1513, 1978.
  55. Jirtle, R.L., Clifton, K.H. The effect of tumor size and host anemia on tumor cell survival after irradiation. *Int. J. Radiat. Oncol.* 4:395-400, 1978.
  56. Jirtle, R.L., Clifton, K.H., Rankin, J.H.G. Measurement of tumor blood flow in unanesthetized rats. *J. Natl. Cancer Inst.* 60:881-886, 1978.
  57. Jirtle, R.L., Clifton, K.H., Rankin, J.H.G. Effects of several vasoactive drugs on the vascular resistance of MT-W9B tumors in W/Fu rats. *Cancer Res.* 3:2385-2390, 1978.
  58. Gould, M.N., Clifton, K.H. The quantitative transplantation of subpopulations of rat mammary gland cells separated on renographin gradients. *Exper. Cell Res.* 114:451-454, 1978.
  59. Gould, M.N., Clifton, K.H. The survival of rat mammary cells following irradiation *in vivo* under different endocrinological conditions. *Int. J. Radiat. Oncol.* 4:629-632, 1978.
  60. Jirtle, R.L., Rankin, J.H.G., Clifton, K.H. X-irradiation of the tumor bed: Its effect on tumor blood flow and vascular response to drugs. *Br. J. Cancer* 37:1033-1038, 1978.
  61. Jirtle, R.L., Clifton, K.H. Erythrokinetics in mice bearing tumors in either preirradiated or unirradiated tissue. *Cell Tissue Kinetics* 11:581-596, 1978.
  62. Gould, M.N., Clifton, K.H. Evidence for a unique *in situ* component of the repair of radiation damage. *Radiat. Res.* 77:149-155, 1979.
  63. Clifton, K.H., DeMott, R.K., Mulcahy, R.T., Gould, M.N. Thyroid gland formation

from inocula of monodispersed cells: Early results on quantitation, function, neoplasia and radiation effects. *Int. J. Radiat. Oncol.* 4:987-990, 1978.

64. DeMott, R.K., Mulcahy, R.T., Clifton, K.H. The survival of thyroid cells following irradiation: A directly generated single-dose-survival curve. *Radiat. Res.* 77:395-403, 1979.
- \*65. Clifton, K.H. Animal models of breast cancer. In: *Endocrinology of Cancer*, D.P. Rose, ed., CRC Press, Inc., Cleveland, 1979.
- \*66. Clifton, K.H., Furth, J. Mammotropin effects in tumor induction and growth. In: *Hormonal Proteins and Peptides*, Vol. 8, C.H. Li, editor, Academic Press, New York, pp. 75-103, 1979.
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