

MICHAEL G. HANNA, JR., Ph.D.

CHAIRMAN AND CHIEF EXECUTIVE OFFICER, VACCINOGEN, INC.

EDUCATION

Ph.D., Experimental Pathology and Immunology, University of Tennessee, 1964.

M.S., Biology, Notre Dame, 1960.

B.S., Biology, Baldwin-Wallace College, 1958.

BACKGROUND

2007 – Present	Chairman and Chief Executive Officer, Vaccinogen, Inc.
2002 – 2007	Chairman (Emeritus) and Chief Scientific Officer, Intracel Resources LLC (Reorganization of Intracel Corporation)
1998 - 2002	Chairman of the Board, President and Chief Scientific Officer, Intracel Corporation (Merge of PerImmune, Inc., and Intracel Corporation)
1994 - 1998	President and Chief Executive Officer, PerImmune, Inc. (Formerly, Organon Teknika/Biotechnology Research Institute)
1992 - 1994	Chief Operating Officer, Organon Teknika/Biotechnology Research Institute, Sr. Vice President, Organon Teknika Corporation, Rockville, Maryland.
1985 - 1992	Sr. Vice President, Organon Teknika Corporation; Director, Biotechnology Research Institute (formerly Litton Bionetics, Inc.), Rockville, Maryland.
1982 - 1985	Director, Litton Institute of Applied Biotechnology, Litton Bionetics, Inc., Rockville, Maryland.
1979 - 1982	Director, National Cancer Institute, Frederick Cancer Research Facility (NCI-FCRF), Operations Division, Litton Bionetics, Inc., Frederick, Maryland.

- 1975 - 1979 Director, Cancer Biology Program; Head, Host-Tumor Interaction Section, Cancer Biology Program, National Cancer Institute, Frederick Cancer Research Facility (NCI-FCRF), Frederick, Maryland.
- 1968 - 1975 Director, Immunobiology of Carcinogenesis Group, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- 1964 - 1968 Research Biologist, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- 1962 - 1964 Predoctoral Fellow, Oak Ridge Institute of Nuclear Studies, University of Tennessee, Knoxville, Tennessee.
- 1961 - 1962 Public Health Service Fellowship, University of Tennessee, Knoxville, Tennessee.
- 1960 - 1961 Teaching Fellowship, University of Tennessee, Knoxville, Tennessee.
- 1959 - 1960 AEC Research Fellowship, Notre Dame University, South Bend, Indiana.
- 1958 - 1959 Teaching Fellowship, Notre Dame University, South Bend, Indiana.

MEMBERSHIPS

- Society of Experimental Pathology
- American Association of Cancer Research
- American Association of Immunologists
- American Association of the Advancement of Science
- Reticuloendothelial Society
- Sigma Xi

HONORS

Delafield Lecturer, Columbia University College of Physicians and Surgeons, 1972.

General Editor, Contemporary Topics in Immunology, 1971-present.

Scientific Program Committee, American Association Cancer Research, 1972-1973.

Organizer, American Association of Immunologists' Annual Survey Course in Immunology, 1975-1981.

Co-chairman, Education Committee, American Association of Immunologists, 1978-1980.

Chairman, Education Committee, American Association of Immunologists, 1980-1982.

AAAS-Newcomb Cleveland Prize Selection Committee, 1981-1982.

Distinguished Oncologist Lecturer, Dayton Oncology Society, 1982.

Wadsworth Memorial Lecturer, Rush-Presbyterian-St. Luke's Medical Center, Rush Medical College, 1983.

Associate Editor, Cancer Research.

Editorial Board, Immunopharmacology.

Editorial Board, Journal of Metastases.

Editorial Board, Journal of Biological Response Modifiers.

International Editorial Board, "Advances in Immunity and Cancer Therapy," Springer-Verlag, New York, 1984.

Charles B. Thornton Advanced Technology Achievement Award, 1984.

Member, Board of Overseers, Center for Advanced Research in Biotechnology, 1984-1988.

Chairman, U.S. Dept. of Commerce, Biotechnology Advisory Committee, 1984-1986.

Member, U.S. Dept. of Commerce, Biotechnology Advisory Committee, 1984-1989.

Member, U.S. Dept. of Defense, Technology Working Group in Biotechnology, 1984-1989.

Member of Scientific Committee of the Society for Biological Therapy, 1987.

Elected to the Council of the International Society of Immunopharmacology, 1991-present.

Editor-in-Chief, *Vaccine Research*, 1991-1998.

Editorial Board Member, *Biotechnology and Applied Biochemistry*, 1995-present.

Trustee, Baldwin Wallace College Governing Board, 1999-present.

Honoree Doctor of Science Award and Commencement Speaker, Baldwin Wallace College, 2002.

Associate Editor, *Human Vaccines*, January 2005-present.

ISSUED PATENTS

Inventors: Nicholas Pomato, Ebo S. Bos, Janet H. Ransom, Michael G. Hanna, Jr.,
For: CTAA 28A32, The Antigen Recognized by MCA 28A32
Filed: April 1, 1993
Assignee: Akzo, N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,521,285 on May 28, 1996

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Active Specific Immunotherapy
Filed: November 1, 1993
Assignee: Akzo, N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,484,596 on January 16, 1996

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Tumor Associated Monoclonal Antibodies Derived from Human B- Cell
Line
Filed: April 15, 1987
Assignee: Akzo, N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 4,997,762 on March 5, 1991.

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Tumor Specific Monoclonal Antibodies
Filed: January 31, 1985
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 4,828,991 on May 9, 1989.

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Tumor Specific Monoclonal Antibodies
Filed: January 25, 1989
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,106,738 on April 21, 1992.

Inventors: Alvaro Morales (Kingston, Canada) and Michael G. Hanna, Jr. (Organon and Organon Teknika)
For: Urethral Catheter and Catheterization Process
Filed: Sept. 28, 1992
Serial No.: 589,721
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,120,316 on June 9, 1992.

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Tumor Specific Monoclonal Antibodies
Filed: January 22, 1991
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,180,814 on January 19, 1993.

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Antigen Recognized by MCA 16-88
Filed: August 13, 1992
Assignee: Akzo N.V., Velperweg, The Netherlands
Present Status: Issued as U.S. Patent 5,338,832 on August 16, 1994.

Inventors: Michael G. Hanna, Jr., et al. (Organon and Organon Teknika)
For: Tumor Associated Monoclonal Antibody 81AV/78
Filed: July 20, 1993
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,348,880 on September 20, 1994.

Inventors: Michael G. Hanna, Jr., Martin V. Haspel, Herbert C. Hoover, Jr., Marie Elana Dembinsky, Barry J. Kobrin
For: Tumor Associated Monoclonal Antibodies
Filed: July 19, 1995
Assignee: Akzo N.V., Arnhem, The Netherlands
Present Status: Issued as U.S. Patent 5,474,755 on December 12, 1995

Inventors: Martin V. Haspel, Nicholas Pomato, Michael G. Hanna, Jr.
For: Sterile Immunogenic Non-Tumorigenic Tumor Cell Compositions and Methods
Filed: February 21, 2003
Assignee: Intracel Resources, LLC
Present Status: Serial No. 10/370,081

PENDING PATENTS

Inventors: Nicholas Pomato, Michael G. Hanna, Jr.
For: A High Throughput Method for the Production and Manufacture of Heptavalent De-Speciatiated Equine Serotherapeutic for Botulinum Neurotoxin Intoxication
Filed:
Assignee: Intracel Resources, LLC
Present Status: Pending

EXPERIENCE

Dr. Michael G. Hanna, Jr., presently serves as Chairman and Chief Executive Officer of Vaccinogen, Inc. Dr. Hanna formed the Company and successfully licensed/acquired the OncoVAX related assets from Intracel in October 2007. Dr. Hanna is the founder of the OncoVAX technology which is the first vaccine to demonstrate efficacy for the post-surgical treatment of Stage II colon cancer. The Company is planning to initiate a pivotal Phase III clinical trial for OncoVAX for Stage II colon cancer and a Phase III trial for OncoVAX in combination with chemotherapy for Stage III colon cancer. Based upon the results of the Phase III clinical trials, the Company is preparing a Biologics License Application (BLA) for its OncoVAX cancer vaccine for the post-surgical treatment of Stage II colon cancer, the most common form of colon cancer.

Dr. Hanna served as Chairman (Emeritus) and Chief Scientific Officer of Intracel Resources, LLC (reorganization of Intracel Corporation) from 2002 to March 2007. Dr. Hanna previously served as Founder, Chairman and Chief Scientific Officer of Intracel Corporation, a biotechnology company with corporate headquarters in Rockville, Maryland, and manufacturing facilities in Issaquah, Washington. In January 1998, PerImmune, Inc. merged with Intracel Corporation.

Intracel was an integrated biopharmaceutical company focused on the development and commercialization of cancer vaccines and immunotherapeutic and diagnostic products for cancers and infectious diseases. In addition, the Company marketed a portfolio of in vitro diagnostic products and introduced a number of new diagnostic products for detecting and monitoring various cancers, AIDS and heart disease.

Under Dr. Hanna's direction the following progress was made regarding:

Business Strategy:

Restructured to focus on the development of immunotherapy products for the treatment of solid tumors.

Commercial manufacturing capability for autologous tumor vaccine products.

Progress during 2005 and 2006:

Established sterile manufacturing process for autologous cell-based products.

Received approval for a cGMP manufacturing facility by Dutch and Swiss Health Authorities.

Commercially launched OnxoVAX in Switzerland.

Completed pharmacoeconomic analysis, i.e., pricing below or competitive with approved therapies in colon cancer treatment.

Established a clear path to a pivotal study based on recent FDA meetings, i.e., revised clinical protocol with a three-year endpoint and automated FACS-based potency, identity and product characterization assays and release specifications in place.

FDA granted Intracel Special Protocol Assessment for a pivotal corroborative phase III study in Stage II colon carcinoma.

FDA granted Intracel Fast Track Designation for the Development its colon cancer vaccine.

Dr. Hanna served as Chief Operating Officer of Organon Teknika/Biotechnology Research and Sr. Vice President of Organon Teknika Corporation a subsidiary of Akzo Nobel, N.V., The Netherlands. This industry-supported internal research and development program is an instrument for technology transfer in the areas of molecular biology, genetic engineering, and immunology. It was established in 1982.

From July 1996 to January 1998, Dr. Hanna was the President and Chief Executive Officer of PerImmune, Inc. PerImmune was established through a management buy-out from Organon Teknika, a subsidiary of Akzo Nobel, N.V., The Netherlands. The Management buy-out executed by Dr. Hanna provided an extraordinary level of management ownership and company control. The buy-out was executed with a high

level of flexibility in collateral agreements including fixed assets being free and clear after a short-term note is paid off and the ownership of all intellectual property including 24 U.S. issued patents and 17 U.S. Patent applications pending. These patents cover all technology products in PerImmune's development pipeline.

Under Dr. Hanna the following technological and commercial accomplishments have occurred:

The preclinical and clinical development of the concept of active specific immunotherapy for colon cancer, including completion of a prospectively randomized phase II study and establishment and completion of two multicenter phase III studies. Results aimed toward submission of a new treatment BLA to the FDA. Application for other tumors (renal cell and melanoma) underway.

Securing the license for Tice BCG from the University of Illinois, renovation, and regulatory approval of the manufacturing facility, and submission of PLA for Tice BCG for treatment of CIS bladder cancer to the FDA. Worldwide registration was achieved in 1991 and it is a licensed product reaching \$40 million in annual sales.

Development, screening, production, and phase I-III clinical testing of a variety of human monoclonal antibodies to several solid cancers. Application for radioimmunoscintigraphy of colorectal cancer completed with registration applications to be submitted in 1997. European approval obtained in 1998 with FDA approval expected in 1998. Phase I and phase II clinical studies presently underway with radioisotope and drug-conjugated human monoclonal antibodies for other in vivo diagnostic and therapeutic application.

Development of Salmonella, Listeria, and hemorrhagic E. Coli EIA tests for the food industry. Present market 6 million in sales in 1995.

Basic research and genetic engineering of a novel anti-cancer cytokine (Leukoregulin).

Establish over \$10 million in government and corporate contracts, \$3 million in product sales, and over \$10 million in IR&D operation.

Prior to this position, Dr. Hanna served as the Director of the Frederick Cancer Research Facility (NCI-FCRF), located in Frederick, Maryland, a position he assumed in 1979. As Director, he was principal investigator of an internationally recognized center for cancer research founded in 1972, which grew to a unique complex of laboratories with a broad base of activities ranging from fundamental investigator-initiated research to developmental and applied research. The facility, operated for the National Cancer

Institute, NIH, by Litton Bionetics, Inc., had approximately 800 full- and part-time employees, among whom 132 held doctorate degrees.

Under Dr. Hanna's leadership, several accomplishments in the operation of the NCI-FCRF occurred:

Renovation and occupancy of an additional 120,915 square feet of laboratory, animal holding, and administrative office space, bringing the total to 813,208 square feet at the Frederick facility, maintained and operated by Litton Bionetics, Inc.

Development and implementation of a strong Intramural Support Program capable of accommodating the NIH/NCI Intramural programs at Frederick.

Expansion of the Fermentation Laboratories, both physical plant and labor effort, for the production of daunorubicin and interferon.

Strengthening of centralized finance function which developed operation budgets for the second and third year operations at a flat \$23.7 million with no decrease in the scientific level of effort, despite a high inflation rate.

Received Facility-wide AAALAC accreditation for the NCI-FCRF Animal Production and Animal Holding Facilities.

Developed centralized media production and serum distribution programs at Frederick that resulted in substantial cost savings.

Developed a laboratory-wide cost savings incentive program financially sponsored by Litton Bionetics for the identification of cost-effective and/or more efficient methods of operation.

Installation of the Biological Response Modifiers Program which placed heavy demands on the support activities at Frederick for the renovations of building 567, the subcontract with the Frederick Memorial Hospital, and the procurement of major scientific and clinical equipment within a short time.

Prior to this position, he was Director of the Cancer Biology Program, NCI-FCRF, an appointment which came about as a result of a 1973 decision by the National Cancer Advisory Board (NCAB). An NCAB subcommittee, created to review the NCI-FCRF, recommended that a strong commitment to basic research be made at the Facility under the "direction of a scientist of high repute and acknowledged leadership in cancer research." Dr. Hanna was selected for this position and became the Director of Basic Research at the NCI-FCRF in 1975. In this position, Dr. Hanna successfully recruited and implemented at the NCI-FCRF a basic cancer research program consisting of approximately 200 professionals, which rapidly became internationally recognized as a

center of "research excellence." He held this position until 1979 when he became Director of the Facility.

In addition to being Director of the NCI-FCRF, Dr. Hanna was also a principal investigator and Head of the Immunotherapy Section of the Cancer Metastasis and Treatment Laboratory. His personal research developed from basic immunology and experimental pathology. His laboratory investigations on relevant animal model studies have provided an understanding of the mechanisms of host control of tumors and are the basis for clinical trials of immunotherapeutic approaches by collaborators in several medical institutions.

Before his arrival in Frederick, Dr. Hanna was the Head of the Immunobiology of Carcinogenesis Group at the Oak Ridge National Laboratory, having been a research immunologist in the Biology Division at Oak Ridge from 1964 to 1968.

PUBLICATIONS

Hanna, M.G., Jr. An autoradiographic study of the germinal centers in white spleen pulp during early intervals of the immune response. *Lab. Invest.* 13:95, 1964.

Hanna, M.G., Jr. An autoradiographic and histologic study of spleen white pulp germinal centers during early intervals of the primary immune response. ORNL-3595, UC-48-Biology and Medicine: 1-102, 1964. Doctoral Dissertation, University of Tennessee, Knoxville, 1964.

Hanna, M.G., Jr. Germinal center changes and plasma cell reaction during the primary immune response. *Int. Arch. Allergy*, 26:230, 1965.

Hanna, M.G. Jr., Wust, C.J. Actinomycin D effect on the primary immune response in mice. *Lab Invest.*, 14:272, 1965.

Swartzendruber, D.C., Hanna, M.G., Jr. Electron microscopic autoradiography of germinal center cells in mouse spleen. *J. Cell Biol.*, 25:109, 1965.

Wust, C.J., Hanna, M.G., Jr. Time relationship of injection of Actinomycin D and antigen to the immune response. *Proc. Soc. Exp. Biol. Med.*, 118:1027, 1965.

Kastenbaum, M.A., Hanna, M.G., Jr. Statistical analysis of autoradiographic and histologic data. *Arch. Pathol.*, 79:462, 1965.

Hanna, M.G., Jr., Swartzendruber, D.C., Congdon, C.C. Morphologic changes in spleen lymphatic tissue during antibody production. *Exp. Mol. Pathol.*, 3:75, 1966.

Hanna, M.G., Jr., Congdon, C.C., Wust, C.J. Effect of antigen dose on lymphatic tissue germinal center changes. *Proc. Soc. Exp. Biol. Med.*, 121:286, 1966.

Wust, C.J., Hanna, M.G., Jr. The effect of Actinomycin D on the immune response to two antigens given in sequence. *J. Reticuloendothel. Soc.*, 3:415, 1966.

Congdon, C.C., Hanna, M.G., Jr. Comparison of existing theories on the function of germinal centers. *In* *Germinal Centers in Immune Responses*. H. Cottier, N. Odartchenko, R. Schindler, C.C. Congdon, eds. Springer-Verlag, 1967, pp. 1-3.

Hanna, M.G., Jr., Makinodan, T., Fisher, W.D. Lymphatic tissue germinal center localization of ¹²⁵I-labeled heterologous and isologous macroglobulin. *In* *Germinal Centers in Immune Responses*. H. Cottier, N. Odartchenko, R. Schindler, C.C. Congdon, eds. Springer-Verlag, 1967, pp. 86-94.

Hanna, M.G., Jr., Swartzendruber, D.C., Congdon, C.C. Morphological and autoradiographic studies of spleen white pulp germinal centers after antigen injection. *In* *Germinal Centers in Immune Responses*. H. Cottier, N. Odartchenko, R. Schindler, C.C. Congdon, eds. Springer-Verlag, 1967, pp. 181-198.

Hanna, M.G., Jr., Nettesheim, P., Ogden, L., Makinodan, T. Reduced immune potential of aged mice: Significance of morphological changes in lymphatic tissue. *Proc. Soc. Exp. Biol. Med.*, 125:822, 1967.

Hanna, M.G., Jr., Nettesheim, P., Fisher, W.D., Peters, L.C., Francis, M.W. Serum alpha globulin fraction: Survival-and-recovery effect in irradiated mice. *Science*, 157:1458, 1967.

Szkal, A.K., Hanna, M.G., Jr. The ultrastructure of antigen localization and virus-like particles in mouse spleen germinal centers. *Exp. Mol. Pathol.*, 8:75, 1968.

Hanna, M.G., Jr., Francis, M.W., Peters, L.C. Studies of ¹²⁵I-labeled antigen localization in mouse spleen germinal centers: Effects of competitive injection of specific or non-crossing-reacting antigen. *Immunology*, 15:75, 1968.

Nettesheim, P., Hanna, M.G., Jr., Fisher, W.D. Further studies on the effect of serum - macroglobulin on regeneration of hemopoietic tissue after X-irradiation. *Radiat. Res.*, 35:378, 1968.

Hanna, M.G., Jr., Szkal, A.K. Localization of ¹²⁵I-labeled antigen in germinal centers of mouse spleen: Histologic and ultrastructure autoradiologic studies of the secondary immune reaction. *J. Immunol.*, 101:949, 1968.

Hanna, M.G., Jr., Nettesheim, P., Walburg, H.E., Jr. A comparative study of the immune reaction in germfree and conventional mice. *In* *Advances in Experimental Medicine and Biology*, Vol. 3. *Gnotobiology: Experimental and Clinical Aspects*. E.S. Mirand, N.W. Back, eds., Plenum Press, 1968, pp. 237-248.

Hanna, M.G., Jr., Szakal, A.K., Walburg, H.E., Jr. The relation of antigen and virus localization to the development and growth of lymphoid germinal centers. *In* *Advances in Experimental Medicine and Biology*, Vol. 5: *Lymphatic Tissue and Germinal Centers in Immune Response*. L. Fiore-Donati, M.G. Hanna, Jr., eds. Plenum Press, 1969, pp. 149-165.

Nettesheim, P., Hanna, M.G., Jr. Radiosensitivity of the antigen-trapping mechanism and its relation to the suppression of the immune response. *In* *Advances in Experimental Medicine and Biology*, Vol. 5: *Lymphatic Tissue and Germinal Centers in Immune Response*. L. Fiore-Donati, M.G. Hanna, Jr., eds. Plenum Press, 1969, pp. 167-175.

Hanna, M.G., Jr., Nettesheim, P., Francis, M.W. Requirement for continuous antigenic stimulation in the development and differentiation of antibody forming cells: The effect of passive antibody on the primary and secondary response. *J. Exp. Med.*, 129:953, 1969.

Hanna, M.G., Jr., Francis, M.W. Specific inhibition of immunocompetence. *Nature*, 223:1161, 1969.

Hanna, M.G., Jr., Szakal, A.K., Tyndall, R.L. Murine leukemia virus localization in lymphatic germinal centers: Relation between immune response and leukemo-genesis. *In* *Immunity and Tolerance in Oncogenesis*. L. Severi, ed. Div. Cancer Res., Perugia, 1970, pp. 661-685.

Hanna, M.G., Jr., Peters, L.C. The effect of antigen competition on both the primary and secondary immune capacity in mice. *J. Immunol.*, 104:166, 1970.

Liebo, S.P., Farrant, J., Mazur, P., Hanna, M.G., Jr., Smith, L.H. Effects of freezing on marrow-stem cell suspensions: Interactions of cooling and warming rates in the presence of PVP, sucrose, or glycerol. *Cryobiology*, 6:315, 1970.

Mazur, P., Liebo, S.P., Farrant, J., Chu, E.H.Y., Hanna, M.G., Jr., Smith, L.H. Interactions of cooling rate, warming rate, and protective additive on the survival of frozen mammalian cells. *In* *The Frozen Cell*, CIBA Symp. 70. G.E.W. Wolstenholme, ed. Churchill, 1970, pp. 69-88.

Hanna, M.G., Jr., Szakal, A.K., Tyndall, R.L. Histoproliferative effect of Rauscher leukemia virus on lymphatic tissue. I. Histologic and ultrastructural studies of germinal centers and their relation to leukemogenesis. *Cancer Res.*, 30:1748, 1970.

Nettesheim, P., Hanna, M.G., Jr., Doherty, D.G., Newell, R.F., Hellman, A. Effects of chronic exposure to artificial smog and chromium oxide dust on the incidence of lung tumors in mice. *In* Inhalation Carcinogenesis. Proceedings of a Conference held in Gatlinburg, Tennessee, October 8-11, 1969. AEC Symposium Series No. 19 (CONF-691001). M.G. Hanna, Jr., P. Nettesheim, J.R. Gilbert, eds., 1970, pp. 305-317.

Hanna, M.G., Jr., Walburg, H.E., Jr., Tyndall, R.L., Snodgrass, M.J. Histoproliferative effect of Rauscher leukemia virus on lymphatic tissue. II. Antigen-stimulated germfree and conventional BALB/c mice. *Proc. Soc. Exp. Biol. Med.*, 134:1132, 1970.

Snodgrass, M.J., Hanna, M.G., Jr. Histoproliferative effect of Rauscher leukemia virus on lymphatic tissue: III. Alterations in the thymic-dependent area induced by the passenger lactic dehydrogenase virus. *J. Natl. Cancer Inst.*, 45:741, 1970.

Nettesheim, P., Hanna, M.G., Jr., Doherty, D.G., Newell, R.F., Hellman, A. Effect of chronic exposure to air pollutants on the respiratory tracts of mice: Histopathological findings. *In* Morphology of Experimental Respiratory Carcinogenesis. AEC Symposium Series No. 21. P. Nettesheim, M.G. Hanna, Jr., J.W. Deatherage, Jr., eds., 1970, pp. 437-448.

Hanna, M.G., Jr., R.L. Hunter. Localization of antigen and immune complexes in lymphatic tissue with special reference to germinal centers. *In* Advances in Experimental Medicine and Biology, Vol. 12: Morphological and Functional Aspects of Immunity. K. Lindahl-Kiessling, G. Alm, M.G. Hanna, Jr., eds. Plenum Press, 1971, pp. 257-280.

Hanna, M.G., Jr., Nettesheim, P., Snodgrass, M.J. Decreasing immune competence and development of reticulum cell sarcomas in lymphatic tissue of aged mice. *J. Natl. Cancer Inst.*, 46:809, 1971.

Hanna, M.G., Jr., Peters, L.C. Requirement for continuous antigenic stimulation in the development and differentiation of antibody-forming cells: Effect of antigen dose. *Immunology*, 20:707, 1971.

Hanna, M.G., Jr., Tennant, R.W., Coggin, J.H., Jr. Suppressive effect of immunization with mouse fetal antigens on growth cells infected with leukemia virus and on plasma cell tumors. *Proc. Natl. Acad. Sci. USA*, 68:1748, 1971.

Hanna, M.G., Jr., Nettesheim, P., Peters, L.C. Evidence of functional micro-environments in lymphatic tissue response to antigen. *Nature New. Biol.*, 232:204, 1971.

Nettesheim, P., Hanna, M.G., Jr., Doherty, D.G., Newel, R.F., Hellman, A. Effect of calcium chromate dust, influenza virus infection and 100 R whole-body X-irradiation on lung tumor incidence in mice. *J. Natl. Cancer Inst.*, 47:1129, 1971.

Hanna, M.G., Jr., Tennant, R.W., Coggin, J.H., Treber, J. Immunization with mouse fetal antigens: Suppressive effect on growth of leukemia virus infected cells and on plasma cells tumors. *In Proc. First Conference and Workshop on Embryonic and Fetal Antigens in Cancer*. N.G. Anderson, J.H. Coggin, Jr., eds. USAEC, 1971, pp. 267-278.

Tennant, R.W., Hanna, M.G., Jr., Thompson, S.A. Cytotoxicity of fetal-primed spleen cells against cell cultures infected with Moloney leukemia virus. *In Proc. First Conference and Workshop on Embryonic and Fetal Antigens in Cancer*. N.G. Anderson, J.H. Coggin, Jr., eds. USAEC, 1971, pp. 249-256.

Hanna, M.G., Jr., Szakal, A.K., Tennant, R.W. Interaction of RNA tumor viruses and the immune system. *Proc. 2nd Int. Congress for Virology, 1971*. J.L. Melnick, ed., Karger, AGT, Basel, 1972, pp. 312-315.

Ada, G.L., Hanna, M.G., Jr. The fate of antigens *in vivo*. *In Progress in Immunology. Proc. 1st Int. Congress of Immunology, 1971*. Academic Press, 1972, pp. 1165-1168.
Snodgrass, M.J., Lowrey, D., Hanna, M.G., Jr. Changes induced by lactic dehydrogenase virus in thymus and thymus-dependent areas of lymphatic tissue. *J. Immunol.*, 108:877, 1972.

Hanna, M.G., Jr., Zbar, B., Rapp, H.J. Histology of tumor regression following intralesional injection of Mycobacterium bovis (BCG). I. Tumor growth and metastasis. *J. Natl. Cancer Ins.*, 48:1441, 1972.

Hanna, M.G., Jr., Zbar, B., Rapp, H.J. Histopathology of tumor regression following intralesional injection of Mycobacterium bovis (BCG). II. Comparative effects of vaccinia virus, oxazolone and turpentine. *J. Natl. Cancer Inst.*, 48:1697, 1972.

Hanna, M.G., Jr., Tennant, R.W., Yuhas, J.M., Clapp, N.K., Batzing, B.L., Snodgrass, M.J. Autogenous immunity to endogenous RNA-tumor virus antigens in mice with a low natural incidence of lymphoma. *Cancer Res.*, 32:2226, 1972.

Zbar, B., Bernstein, I.D., Bartlett, G.L., Hanna, M.G., Jr., Rapp, H.J. Immunotherapy of cancer: Regression of intradermal tumors and prevention of growth of lymph node metastases after intralesional injection of living Mycobacterium bovis (Bacillus Calmette-Guerin). *J. Natl. Cancer Inst.*, 49:119, 1972.

Salinas, F.A., Smith, J.A., Hanna, M.G., Jr. Modification of the spleen colony-forming assay to demonstrate immunologic cross-reactivity of antigens common to tumor and fetal cells. *In Embryonic and Fetal Antigens in Cancer, Vol. 2.*, N.G. Anderson, J.H. Coggin, Jr., E. Cole, J.W. Holleman, eds., USAEC, 1972, pp. 187-191.

Salinas, F.A., Smith, J.A., Hanna, M.G., Jr. Immunologic cross-reactivity of antigens common to tumor and fetal cells. *Nature*, 240:41, 1972.

Hanna, M.G., Jr., Snodgrass, M.J., Zbar, B., Rapp, H.J. Histopathology of *Mycobacterium bovis* (BCG)-mediated tumor regression. *Natl. Cancer Inst. Monogr.*, 35:345, 1972.

Szkal, A.K., Hanna, M.G., Jr. Immune suppression and carcinogenesis in hamsters during topical application of 7,12-dimethylbenz[*a*]anthracene. *Natl. Cancer Inst. Monogr.*, 35:173, 1972.

Hanna, M.G., Jr., Snodgrass, M.J., Tennant, R.W., Yuhas, J.M., Batzing, B.L. The interaction of RNA tumor viruses and the immune system: Immune capacity and pathogenesis. *In* *Virus Tumorigenesis and Immunogenesis*. W.S. Ceglowski, H. Friedman, eds. Academic Press, 1973, pp. 59-89.

Snodgrass, M.J., Yuhas, J.M., Hanna, M.G., Jr. Histoproliferative effect of Rauscher leukemia virus on lymphatic tissue. IV. Lactic dehydrogenase virus and erythropoietin potentiation of the erythroid response. *J. Natl. Cancer Inst.*, 50:735, 1973.

Snodgrass, M.J., Hanna, M.G., Jr. Ultrastructural studies on histiocyte-tumor cell interactions during tumor regression after intralesional injection of *Mycobacterium bovis*. *Cancer Res.*, 33:701, 1973.

Batzing, B.L., Hanna, M.G., Jr. Localization of endogenous C-type virus in the glomerular basement membrane of aged AKR mice. *J. Immunol.*, 110:1189, 1973.

Yuhas, J.M., Tennant, R.W., Hanna, M.G., Jr., Clapp, N.K. Radiation-induced immunosuppression: Demonstration of its role in radiation leukemogenesis in the intact RF mouse. *In* *Radionucleotide Carcinogenesis*, 12th Hanford Biol. Symp. AEC Symposium Series No. 29. C.L. Sanders, R.H. Busch, J.E. Ballou, D.D. Mahlum, eds., 1973, pp. 312-321.

Hanna, M.G., Jr., Snodgrass, M.J., Zbar, B., Rapp, H.J. Histologic and ultra-structural studies of tumor regression in inbred guinea pigs after intralesional injection of *Mycobacterium bovis* (BCG). *Natl. Cancer Inst. Monogr.*, 39:71, 1973.

Ihle, J.N., Yurconic, M., Jr., Hanna, M.G., Jr. Autogenous immunity to endogenous RNA tumor virus: Radioimmune precipitation assay of mouse serum antibody levels. *J. Exp. Med.*, 138:194, 1973.

Hanna, M.G., Jr., Nettesheim, P., Richter, C.B., Tennant, R.W. The variable influence of the host microflora and intercurrent infections on immunologic competence and carcinogenesis. *Isr. J. Med. Sci.*, 9:229, 1973.

Hanna, M.G., Jr., Snodgrass, M.J., Zbar, B., Rapp, H.J. Histopathology of tumor regression after intralesional injection of Mycobacterium bovis. IV. Development of immunity to tumor cells and to BCG. J. Natl. Cancer Inst., 51:1897, 1973.

Szkal, A.K., Hanna, M.G., Jr. Cell-mediated immune response of hamsters to alloantigen and tumor antigens of isologous and autochthonous origin during chemical carcinogenesis. Cancer Res., 34:138, 1973.

Hersh, E.M., Gutterman, J.U., Mavligit, G., Gschwind, C.R., Hanna, M.G., Jr.: Human immune response to Rauscher leukemia virus. In: Modern Trends in Human Leukemia. R. Neth, ed., J.F. Lehmanns-Verlag, 1974, pp. 119-128.

Batzing, B.L., Yurconic, M., Jr., Hanna, M.G., Jr.: Autogenous immunity to endogenous RNA tumor virus: Chronic humoral immune response to virus envelope antigens in B6C3F1 mice. J. Natl. Cancer Inst., 52:117, 1974.

Salinas, F.A., Hanna, M.G., Jr.: Host response to tumor associated fetal antigens. J. Immunol., 112:1026, 1974.

Ihle, J.N., Hanna, M.G., Jr., Roberson, L.E., Kenney, F.T.: Autogenous immunity to endogenous RNA tumor virus: Identification of antibody reactivity to select viral antigens. J. Exp. Med., 139:1568, 1974.

Peters, L.C., Hanna, M.G., Jr., Gutterman, J.U., Mavligit, G.M., Hersh, E.M.: Modulation of the immune response of guinea pigs by repeated BCG scarification. Proc. Soc. Exp. Biol. Med., 147:344, 1974.

Fortner, G.W., Hanna, M.G., Jr., Coggin, J.H., Jr.: The differential effects of two strains of BCG on transplantation immunity to SV40-induced tumors in hamsters. Proc. Soc. Exp. Biol. Med., 147:62, 1974.

Tennant, R.W., Hanna, M.G., Jr., Farrelly, J.G.: Polyadenylic acids effect autogenous immunity and susceptibility to RNA tumor virus oncogenesis in vivo. Proc. Natl. Acad. Sci. USA, 71:3167, 1974.

Hanna, M.G., Jr.: Immunologic aspects of BCG-mediated regression of established tumors and metastasis in guinea pigs. In: Seminars in Oncology. J.W. Yarbrow, R.S. Bornstein, M.J. Mastrangelo, eds., Grune and Stratton, 1974, pp. 319-335.

Hersh, E.M., Hanna, M.G., Jr., Gutterman, J.U., Mavligit, G., Yurconic, M., Jr., Gschwind, C.R.: Human immune response to active immunization with Rauscher leukemia virus. II. Humoral immunity. J. Natl. Cancer Inst., 53:327, 1974.

Lee, J.C., Hanna, M.G., Jr., Ihle, J.N., Aaronson, S.A.: Autogenous immunity to endogenous RNA tumor virus: Differential reactivities of IgM and IgG to virus envelope antigens. *J. Virol.*, 14:773, 1974.

Bucana, C., Hanna, M.G., Jr.: Immunoelectron microscopic analysis of surface antigens common to *Mycobacterium bovis* (BCG) and tumor cells. *J. Natl. Cancer Inst.*, 53:1313, 1974.

Wheelock, E.F., Hanna, M.G., Jr.: Immunology of oncogenic viruses. *In*: Progress in Immunology. L. Brent, J. Holborow, eds. North Holland, 1974, pp. 385-389.

Hanna, M.G., Jr., Salinas, F.A., Coggin, J.H., Jr.: Fetal antigens in neoplasia. *In*: Immunological Aspects of Neoplasia. Williams and Wilkins, 1975, pp. 439-457.

Hanna, M.G., Jr., Peters, L.C.: Efficacy of intralesional BCG-therapy in guinea pigs with disseminated tumor. *Cancer*, 36:1298, 1975.

Hanna, M.G., Jr., Szakal, A.K., Peters, L.C.: The balance of host immunocompetence in chemical carcinogenesis and "nonspecific" immunotherapy. *In* Recent Results in Cancer Research. E. Grundmann, R. Gross, Eds., Springer-Verlag, 1975, pp. 114-136.

Hanna, M.G., Jr., Bucana, C.: Possible mechanisms of BCG immunotherapy: Tumor-specific immunity and cross-reacting antigens of BCG and tumor cell surface. *In* Neoplastic Immunity: Theory and Application. R.G. Crispin, ed., Institute for Tuberculosis Research, 1975, pp. 65-85.

Hanna, M.G., Jr., Ihle, J.N., Batzing, B.L., Tennant, R.W., Schenley, C.K.: Assessment of reactivities of natural antibodies to endogenous RNA tumor virus envelope antigens and virus-induced cell surface antigens. *Cancer Res.*, 35:164, 1975.

Ihle, J.N., Hanna, M.G., Jr., Schafer, W., Hunsmann, G., Bolognesi, D.P., Huper, G.: Polypeptides of mammalian oncornaviruses. III. Localization of p15 and reactivity with natural antibody. *Virology*, 63:60, 1975.

Ihle, J.N., Lee, J.C., Longstreth, J., Hanna, M.G., Jr.: Characterization of virion and cell surface reactivities of natural immune sera to murine leukemia viruses. *In* Tumor Virus Infections and Immunity. R. Crowell, H. Friedman, J.E. Prier, eds. University Park Press, 1975, pp. 197-213.

Hanna, M.G., Jr.: Tumor immunology--Interaction between lymphocytes, antibodies and neoplastic cells: A summary. *In* Immune Reactivity of Lymphocytes: Development,

Expression, and Control. M. Feldman, A. Globersen, eds., Plenum Press, 1976, pp. 513-517.

Hanna, M.G., Jr., Ihle, J.N., Lee, J.C.: Autogenous immunity to endogenous RNA tumor virus: Humoral immune response to virus envelope antigens. *Cancer Res.*, 36:608, 1976.

Ihle, J.N., Lee, J.C., Hanna, M.G., Jr.: Characterization of natural antibodies in mice to endogenous leukemia virus. *In* *The Biology of Radiation Carcinogenesis*. J.M. Yuhas, R.W. Tennant, J.B. Regan, eds., Raven Press, 1976, pp. 261-273.

Hanna, M.G., Jr., Peters, L.C., Gutterman, J.U., Hersh, E.M.: An evaluation of BCG administered by scarification for immunotherapy of metastatic hepatocarcinoma in the guinea pig. *J. Natl. Cancer Inst.*, 56:1013, 1976.

Longstreth, J.D., Ihle, J.N., Hanna, M.G., Jr.: Autogenous immunity to endogenous RNA tumor virus: Virion and virus-induced cell surface antigens. *Ann. N.Y. Acad. Sci.*, 276:343, 1976.

Hanna, M.G., Jr., Peters, L.C., Fidler, I.J.: The efficacy of BCG-induced tumor immunity in guinea pigs with regional and systemic malignancy. *Cancer Immunol. Immunother.*, 1:171, 1976.

Fidler, I.J., Budmen, M., Hanna, M.G., Jr.: Characterization of *in vitro* reactivity by BCG-treated guinea pigs to syngeneic line-10 hepatocarcinoma. *Cancer Immunol. Immunother.*, 1:179, 1976.

Granatek, C.H., Hanna, M.G., Jr., Hersh, E.M., Gutterman, J.U., Maglavit, G.M., Chandler, E.L.: Fetal antigens in human leukemia. *Cancer Res.*, 36:3464, 1976.

Ihle, J.N., Collins, J.J., Lee, J.C., Fischinger, P.J., Moennig, V., Schafer, W., Hanna, M.G., Jr., Bolognesi, D.P.: Characterization of the immune response to the major glycoprotein (gp71) of Friend leukemia virus. I. Response in BALB/c mice. *Virology*, 75:74, 1976.

Ihle, J.N., Lee, J.C., Collins, J.J., Fischinger, P.J., Pazmino, N.H., Moennig, V., Schafer, W., Hanna, M.G., Jr., Bolognesi, D.P.: Characterization of the immune response to the major glycoprotein (gp71) of Friend leukemia virus. II. Response in C57BL/6 mice. *Virology*, 75:88, 1976.

Ihle, J.N., Collins, J.J., Lee, J.C., Fischinger, P.J., Pazmino, N., Moennig, V., Schafer, W., Hanna, M.G., Jr., Bolognesi, D.P.: Characterization of the immune response to the major glycoprotein (gp71) of Friend leukemia virus. III. Influence on endogenous MuLV-mediated pathogenesis. *Virology*, 75:102, 1976.

Hanna, M.G., Jr., Bucana, C., Hobbs, B., Fidler, I.J.: Morphologic aspects of tumor cell cytotoxicity by effector cells of the macrophage-histiocyte compartment: In vitro and in vivo studies in BCG-mediated tumor regression. In Macrophage in Neoplasia. M. Fink, ed., Academic Press, 1976, pp. 113-133.

Jessup, J.M., Brandhorst, J.S., Peters, L.C., Hanna, M.G., Jr.: The splenic influence on BCG-mediated therapy in a syngeneic guinea pig tumor model. In Immunoaspects of the Spleen. J.R. Battisto, ed., North Holland, 1976, pp. 391-400.

Bucana, C., Hoyer, L.C., Hobbs, B., Breesman, S., McDaniel, M.C., Hanna, M.G., Jr.: Morphological evidence for the translocation of lysosomal organelles from cytotoxic macrophages into the cytoplasm of tumor target cells. *Cancer Res.*, 36:4444, 1976.

Fidler, I.J., Kataoka, T., Hanna, M.G., Jr.: A comparison of in vitro cell-mediated reactivity against syngeneic tumor cells by various lymphoid cell populations from BCG-tumor-cured, tumor-sensitized, tumor-bearing and normal inbred guinea pigs. *Cancer Res.*, 36:4459, 1976.

Bucana, C., Hobbs, B., Hoyer, L.C., Hanna, M.G., Jr.: A technique for sequential examination of in vitro macrophage-tumor interaction using LM, SEM and TEM. Proceedings of 34th Annual EMSA Meeting. G.W. Bailey, ed., Claitor's Publishing, 1976, pp. 350-351.

Smith, H.G., Harmel, R.P., Hanna, M.G., Jr., Zwillig, B.S., Zbar, B., Rapp, H.J.: Regression of established intradermal tumors and lymph node metastases in guinea pigs after systemic transfer of immune lymphoid cells. *J. Natl. Cancer Inst.*, 58:1315, 1977.

Ihle, J.N., Hanna, M.G., Jr.: Natural immunity to endogenous oncornaviruses in mice. In Contemporary Topics in Immunobiology, Vol. 6. Immunobiology of Oncogenic Viruses. M.G. Hanna, Jr., F. Rapp, eds., Plenum Press, 1977, pp. 169-193.

Hanna, M.G., Jr., Rapp, F., eds.: Contemporary Topics in Immunobiology, Vol. 6. Immunobiology of Oncogenic Viruses. Plenum Press, 1977.

Jessup, J.M., Riggs, C.W., Hanna, M.G., Jr.: The influence of pre-existing tumor immunity on Bacillus Calmette-Guerin immunotherapy of guinea pigs with both regional and disseminated tumor. *Cancer Res.*, 37:2565, 1977.

Hanna, M.G., Jr., Escobar, M.R., Coulston, F.: Introduction to symposium: The role of environmental agents on host defense mechanisms. *J. Reticuloendothel. Soc.*, 22:215, 1977.

Ihle, J.N., Longstreth, J.D., Pazmino, N.H., McLellan, W.L., Jr., Hanna, M.G., Jr.: AKR-MuLV-associated cell surface antigens. *Med. Microbiol. Immunol.*, 164:179, 1977.

Hanna, M.G., Jr., Peters, L.C.: Immunotherapy of established micrometastases with Bacillus Calmette-Guerin tumor cell vaccine. *Cancer Res.*, 38:204, 1978.

Hunter, J.T., Meltzer, M.S., Ribí, E., Fidler, I.J., Hanna, M.G., Jr., Zbar, B., Rapp, H.J.: Glucan: Attempts to demonstrate therapeutic activity against five syngeneic tumors. *J. Natl. Cancer Inst.*, 60:419, 1978.

Hanna, M.G., Jr., Ferrone, S.: Properties and significance of tumor-associated antigens. In *Progress in Immunology III.*, T.E. Mandel, et al., eds. North Holland, 1978, pp. 796-798.

Hanna, M.G., Jr., Jessup, J.M., Peters, L.C., Brandhorst, J.S.: A model system for analyzing immunotherapeutic responses. In *Progress in Immunology III.*, T.E. Mandel, et al., eds. North Holland, 1978, pp. 111-129.

Hanna, M.G., Jr., Peters, L.C.: Specific immunotherapy of established visceral micrometastases by BCG-tumor cell vaccine alone or as adjunct to surgery. *Cancer*, 42:2613, 1978.

Hanna, M.G., Jr., Peters, L.C.: BCG immunotherapy: Efficacy of BCG-induced tumor immunity in guinea pigs with regional tumor and/or visceral micrometastases. In *Immunotherapy of Human Cancer*. Raven Press, 1978, pp. 111-129.

Hart, I.R., Fidler, I.J., Hanna, M.G., Jr., Cardy, R.H., Gutterman, J.U., Hersh, E.M.: The effects of intravenous administration of methanol extraction residue (MER) of tubercle bacille in the dog. *Cancer Immunol. Immunother.*, 3:229, 1978.

Marchalonis, J.J., Bucana, C., Hoyer, L., Warr, G.W., Hanna, M.G., Jr., Szenberg, A.: Visualization of a guinea pig T-lymphocyte surface component cross-reactive with immunoglobulin. *Science*, 199:433, 1978.

McCoy, J.L., Brandhorst, J., Hanna, M.G., Jr.: Leukocyte migration inhibition of tumor antigen and PPD reactivity in guinea pigs sensitized to line 10 hepatocarcinoma and BCG. *J. Natl. Cancer Inst.*, 60:693, 1978.

Peters, L.C., Brandhorst, J.S., Hanna, M.G., Jr.: Preparation of immunotherapeutic autologous tumor cell vaccines from solid tumors. *Cancer Res.*, 39:1353, 1979.

Hanna, M.G., Jr.: Macrophages in tumor immunity. In *Macrophages and Lymphocytes*, Part B. M. Escobar, H. Friedman, eds., Plenum Press, 1979, pp. 353-359.

Hanna, M.G., Jr.: Active specific immunotherapy of residual micrometastases: A comparison of postoperative treatment with BCG-tumor cell vaccine to preoperative intratumoral BCG injection. In Immunobiology and Immunotherapy of Cancer. W.D. Terry, Y. Yamamura, eds., Elsevier/North Holland, 1979, pp. 331-350.

Hanna, M.G., Jr., Bucana, C.: Active specific immunotherapy of residual micrometastases: The acute and chronic inflammatory response to induction of tumor immunity by BCG-tumor cell immunization. *J. Reticuloendothel. Soc.*, 26:439, 1979.

Hanna, M.G., Jr., Brandhorst, J.S., Peters, L.C.: Active specific immunotherapy of residual micrometastasis: An evaluation of sources, doses and ratios of BCG with tumor cells. *Cancer Immunol. Immunother.*, 7:165, 1979.

Bucana, C., Hoyer, L.C., Plentovich, D., Hanna, M.G., Jr.: Identification of cellular components of dissociated granuloma by sequential SEM-TEM technique. In 37th Ann. Proc. Electron Microscopy Soc., Amer., G.W. Bailey, ed., Claitor's Publishing, 1979, pp. 90-91.

Yarkoni, E., Peters, L., Rapp, H., Hanna, M.G., Jr., Hunter, J.T.: Treatment of guinea pigs with dermal and visceral tumor implants by injection of myco-bacterial vaccines into the skin tumors. Comparison of BCG cell wall vaccine with living BCG. *Infect. Immun.*, 24:565, 1979.

Hanna, M.G., Jr., Peters, L.C., Brandhorst, J.S.: Active specific immunotherapy of residual micrometastasis: Conditions of vaccine preparation and regimen. In Tumor Progression. R.G. Crispen, ed., Elsevier/North Holland, 1980, pp. 59-81.

Peters, L.C., Hanna, M.G., Jr.: Active specific immunotherapy of established micrometastasis: Effect of cryopreservation procedures on tumor cell immunogenicity in guinea pigs. *J. Natl. Cancer Inst.*, 64:1521, 1980.

Hanna, M.G., Jr., Bucana, C.D., Pollack, V.A.: Immunological stimulation in situ: The acute and chronic inflammatory responses to the induction of tumor immunity. In Contemporary Topics in Immunobiology, Vol. 10: In situ Expression of Tumor Immunity. I. Witz, M.G. Hanna, Jr., eds., Plenum Press, 1980, pp. 267-296.

Witz, I.P., Hanna, M.G., Jr.: Contemporary Topics in Immunobiology, Vol. 10: In Situ Expression of Tumor Immunity. Plenum Press, 1980.

Hanna, M.G., Jr., Peters, L.C., Brandhorst, J.S., Pollack, V.A.: Post-operative, specific immunotherapy for residual micrometastases: Results from an experimental model. *Schwerpunkt Medizin*, 3:67, 1980.

Pollack, V.A., Brandhorst, J.S., Hanna, M.G., Jr.: Separation of guinea pig peripheral blood lymphocytes by discontinuous density of gradient centrifugation using Ficoll-metrizoate. *J. Immunol. Methods*, 41:29, 1981.

Hoover, H.C., Jr., Peters, L.C., Brandhorst, J.S., Hanna, M.G., Jr.: Therapy of spontaneous metastasis with an autologous tumor vaccine in a guinea pig model. *J. Surg. Res.*, 30:409, 1981.

Fidler, I.J., Hanna, M.G., Jr.: New approaches to specific and nonspecific immunotherapy of established cancer metastases. *In* *Fundamental Mechanisms in Human Cancer Immunology*. J.P. Saunders, J.C. Daniels, eds., Elsevier/North Holland, 1981, pp. 425-437.

Key, M.E., Hanna, M.G., Jr.: Mechanism of action of BCG-tumor cell vaccines in the generation of systemic tumor immunity. I. Synergism between BCG and L10 tumor cells in the induction of an inflammatory response. *J. Natl. Cancer Inst.*, 67:853, 1981.

Key, M.E., Hanna, M.G., Jr.: Mechanism of action of BCG-tumor cell vaccines in the generation of systemic tumor immunity. II. Influence of the local inflammatory response on immune reactivity. *J. Natl. Cancer Inst.*, 67:863, 1981.

Hanna, M.G., Jr., Peters, L.C.: Morphological and functional aspects of active specific immunotherapy of established pulmonary metastases in guinea pigs. *Cancer Res.*, 41:4001, 1981.

Key, M.E., Hanna, M.G., Jr.: Antigenic heterogeneity of the guinea pig line 10 hepatocarcinoma. Implications for active specific immunotherapy. *Cancer Immunol. Immunother.*, 12:211, 1982.

Hanna, M.G., Jr., Pollack, V.A., Peters, L.C., Hoover, H.C.: Active specific immunotherapy of established micrometastases with BCG plus tumor cell vaccines: Effective treatment of BCG side effects with isoniazid. *Cancer*, 49:659, 1982.

Key, M.E., Hoyer, L., Bucana, C., Hanna, M.G., Jr.: Mechanisms of macrophage-mediated tumor cytolysis. *In* *Advances in Experimental Biology and Medicine* 146. Mechanisms of Cell Mediated Cytotoxicity. W. Clark, P. Golstein, eds., Plenum Press, 1982, pp. 265-310.

Hanna, M.G., Jr., Key, M.E.: Immunotherapy of metastases enhances subsequent chemotherapy. *Science*, 217:367, 1982.

Nieuwenhuis, P., van den Broek, A.A., Hanna, M.G., Jr., eds.: Advances in Experimental Medicine and Biology, 149. In Vivo Immunology. Plenum Press, 1982.

Hanna, M.G., Jr.: Introduction: Non-lymphoid cells and factors in immune reactions. In Vivo Immunology. P. Nieuwenhuis, A.A. van den Broek, M.G. Hanna, Jr., eds., Plenum Press, 1982, pp. 373-374.

Key, M.E., Bernhard, M.I., Hoyer, L.C., Foon, K.A., Oldham, R.K., Hanna, M.G., Jr.: Guinea pig line 10 hepatocarcinoma model for monoclonal antibody serotherapy. In vivo localization of a monoclonal antibody in normal and malignant tissues. J. Immunol., 130:1451, 1983.

Key, M.E., Brandhorst, J.S., Hanna, M.G., Jr.: Synergistic effects of active specific immunotherapy and chemotherapy in guinea pigs with disseminated cancer. J. Immunol., 130:2987, 1983.

Key, M.E., Brandhorst, J.S., Bucana, C., Hanna, M.G., Jr.: Development of a model of chronic lymphocytic leukemia in inbred strain 2 guinea pigs. JNCI, 70:1139, 1983.

Bernhard, M.I., Foon, K.A., Oeltmann, T.N., Key, M.E., Hwang, K.M., Clark, G.C., Christensen, W.L., Hoyer, L.C., Hanna, M.G., Jr., Oldham, R.K.: Guinea pig line 10 hepatocarcinoma model: Characterization of monoclonal antibody and in vivo effect of unconjugated antibody and antibody conjugated to diphtheria toxin A chain. Cancer Res., 43:4420, 1983.

Bernhard, M.I., Hwang, K.M., Foon, K.A., Keenan, A.M., Kessler, R.M., Frincke, J.M., Tallam, D.J., Hanna, M.G., Jr., Peters, L.C., Oldham, R.K.: Localization of ¹¹¹In- and ¹²⁵I-labeled monoclonal antibody in guinea pigs bearing line 10 hepatocarcinoma tumors. Cancer Res., 42:4429, 1983.

Hanna, M.G., Jr., Key, M.E., Oldham, R.K.: Biology of cancer therapy: Some new insights into adjuvant treatment of metastatic solid tumors. J. Biol. Response Modifiers, 2:295, 1983.

Foon, K.A., Bernhard, M.I., Oeltmann, T.N., Hoyer, L.C., Hanna, M.G., Jr., and Oldham, R.K.: Monoclonal antibodies conjugated to naturally occurring toxins. In Proceedings of Symposium on Discovery and Development of Naturally Occurring Antitumor Agents, pp. 39-42, 1983.

Hoover, H.C., Jr., Surdyke, M., Dangel, R., Peters, L.C., Hanna, M.G., Jr.: Delayed cutaneous hypersensitivity to autologous tumor cells in colorectal cancer patients immunized with an autologous tumor cell-Bacillus Calmette Guerin vaccine. Cancer Res., 44:1671, 1984.

Key, M.A., Brandhorst, J.S., Hanna, M.G., Jr.: More on the relevance of animal tumor models: Immunogenicity of transplantable leukemias of recent origin in syngeneic strain 2 guinea pigs. *J. Biol. Response Modifiers*, 3:359-365, 1984.

McCabe, R.P., Lamm, D.L., Haspel, M.V., Pomato, N., Smith, K.O., Thompson, E., Hanna, M.G., Jr.: A diagnostic-prognostic test for bladder cancer using a monoclonal antibody-based enzyme-linked immunoassay for detection of urinary fibrin(ogen) degradation products. *Cancer Res.*, 44:5886-5893, 1984.

Ransom, J.H., Evans, C.H., McCabe, R.P., Pomato, N., Heinbaugh, J.A., Chin, M., Hanna, M.G., Jr.: Leukoregulin, a direct-acting anticancer immunological hormone that is distinct from lymphotoxin and interferon. *Cancer Res.*, 45:851-862, 1985.

Hoover, H.C., Jr., Surdyke, M.G., Dangel, R.B., Peters, L.C., Hanna, M.G., Jr.: Prospectively randomized trial of adjuvant active-specific immunotherapy for human colorectal cancer. *Cancer*. 55:1236-1243, 1985.

Hanna, M.G., Jr., McCabe, R.P., Oldham, R.K.: Immunotherapy of Cancer. *Clinical Immunology Newsletter*, 1985.

Hanna, M.G., Jr., Hoover, H.C., Jr.: Active specific immunotherapy as an adjunct to the treatment of metastatic solid tumors. *In* *Immunity to Cancer*. A.E. Reif and M.S. Mitchell, ed., Academic Press, pp. 429-442, 1985.

Key, M.E., Hoover, H.C., Jr., Hanna, M.G., Jr.: Active specific immunotherapy as an adjunct to the treatment of metastatic solid tumors: Present and future prospects. *In* *Advances in Immunology and Cancer Therapy*, pp. 195-219. P.K. Ray, ed., Springer-Verlag, New York, 1985.

Ransom, J.H., Evans, C.H., McCabe, R.P., Hanna, M.G., Jr.: The mechanism of leukoregulin enhancement of target cell susceptibility to NK-mediated cytotoxicity in humans. *In* *Mechanisms in Cell-Mediated Cytotoxicity*, Henkart, P., Martz, E. (ed.), Plenum Publishing Corp., New York, NY, pp. 281-287, 1985.

Haspel, M.V., McCabe, R.P., Pomato, N., Janesch, N.J., Knowlton, J.V., Peters, L.C., Hoover, H.C., Jr., Hanna, M.G., Jr.: Generation of tumor cell reactive human monoclonal antibodies using peripheral blood lymphocytes from actively immunized colorectal carcinoma patients. *Cancer Res.*, 45:3951-3961, 1985.

Haspel, M.V., McCabe, R.P., Pomato, N., Hoover, H.C., Jr., Hanna, M.G., Jr.: Human monoclonal antibodies: Generation of tumor cell reactive monoclonal antibodies using peripheral blood lymphocytes from actively immunized colorectal carcinoma patients. *In* *Monoclonal Antibodies and Cancer Therapy*. UCLA Symposia on Molecular and

Cellular Biology, New Series, Volume 27, pp. 505-522, R.A. Reisfeld and S. Sell (eds.) Alan R. Liss, Inc., New York, 1985.

Salinas, F.A., Hanna, M.G., Jr., eds.: Contemporary Topics in Immunobiology, Vol. 10: Immune Complexes and Human Cancer. Plenum Press, 1985.

Hanna, M.G., Jr., Hoover, H.C., Jr., Peters, L.C., Key, M.E., Haspel, M.V., McCabe, R.P., and Pomato, N.: Fundamental and applied aspects of successful active specific Immunotherapy of cancer, In Principles of Cancer Biotherapy. R.K. Oldham (ed.), Raven Press, New York, 1987.

Hanna, M.G., Jr., Hoover, H.C., Jr.: Basic and applied principles of active specific immunotherapy in the treatment of metastatic solid tumors. In Immune Responses to Metastases, Vol. 2. R. Herberman, R. Witrou, and E. Gorelik (eds.), Boca Raton, Florida, CRC Press Inc., 95-115, 1987.

Ransom, J.H., Pomato, N., Cleveland, L., McCabe, R.P., and Hanna, M.G., Jr.: Letter to the Editor. Cancer Res. 47:916-917, 1987.

McCabe, R.P., Peters, L.C., Haspel, M.V., Pomato, N., Hanna, M.G., Jr., and Lamm, D.L.: Monoclonal antibodies in the detection of bladder cancer. In: Immunology: In Vitro Diagnosis of Human Tumors Using Monoclonal Antibodies, H. N. Rose and H.Z. Kupchik (ed.), Marcel Dekker, Inc., New York, NY, pp. 1-29, 1988.

McCabe, R.P., Peters, L.C., Haspel, M.V., Pomato, N., Carrasquillo, J.A., and Hanna, M.G., Jr.: Development and characterization of human monoclonal antibodies and their application in the radioimmunodetection of colon carcinoma. In Radiolabeled Monoclonal Antibodies for Imaging and Therapy: Potential, Problems and Prospects. Proceedings of a NATO Advanced Studies Institute held at Castelvecchio Pascoli, Italy, Srivastava, S.C. (Ed.), Plenum Press, pp. 75-94, 1988.

McCabe, R.P., Peters, L.C., Haspel, M.V., Pomato, N., Carrasquillo, J.A., and Hanna, M.G., Jr.: Preclinical studies on the pharmacokinetic properties of human monoclonal antibodies to colorectal cancer and their use for detection of tumors. Cancer Res. 48:4348-4353, 1988.

Pomato, N., Murray, J.H., Bos, E., Haspel, M.V., McCabe, R.P., and Hanna, M.G., Jr.: Biochemical characterization of a human colon tumor associated antigen identified by a tumor discriminating human monoclonal antibody. Presented at the UCLA Symposium Conference on Human Tumor Antigens and Specific Tumor Therapy, April 1987.

Hoover, H.C., Jr., and Hanna, M.G., Jr.: Active specific immunotherapy of colorectal cancer. Metastasis Congress, Heidelberg, Germany, 1988.

Schulof, R.S., Mai, D., Nelson, M.A, Paxton, H.M., Cox, J.W., Jr., Turner, M.L., Mills, M., Hix, W.R., Nochomovitz, L.E., Peters, L.C., and Hanna, M.G., Jr.: Active specific immunotherapy with an autologous tumor cell vaccine in patients with resected non-small cell lung cancer. Robert K. Oldham (Ed), *Molecular Biotherapy*, Vol. 1, No. 1, 1988.

McCabe R.P., Peters, L.C., Haspel, M.V., Pomato, N., and Hanna, M.G., Jr.: Monoclonal antibodies in the detection of bladder cancer. In: *Cancer Diagnosis In Vitro Using Monoclonal Antibodies*. Kupchik N.Z., eds., Marcel Dekker, Inc., New York, 1988.

Hanna, M.G., Jr., Peters, L.C., Hoover, H.C., Jr.: Fundamentals of active specific immunotherapy of cancer using BCG-tumor cell vaccines. BCG in Superficial Bladder Cancer, Alan R. Liss, Inc., NY. pp. 51-65, 1989.

Reitsma, D.J., Guinan, P., Khanna, O.P., Brosman, S.A., deKernion, J.B., Williams, R.D., Simpson, G., and Hanna, M.G., Jr.: Long-term effect of intravesical Bacillus Calmette-Guerin (BCG) on flat carcinoma in situ of the bladder. BCG in Superficial Bladder Cancer, Alan R. Liss, Inc., NY. pp. 171-185, 1989.

Haspel, M. V., McCabe, R.P., Pomato, N., Hoover, H.C., Jr., Hanna, M.G., Jr.: Coming full circle in the immunotherapy of colon cancer: Vaccination with autologous tumor cells ... human monoclonal antibodies ... active specific immunotherapy with generic tumor associated antigens. In: Human Tumor Antigens and Specific Tumor Therapy, Metzger, R., Mitchell, M., (eds.), Alan R. Liss, New York, pp 335-344, 1989.

Pomato, N., Murray, J. H., Bos, E., Haspel, M.V., McCabe, R.P., and Hanna, M.G., Jr.: Identification and characterization of a human colon tumor antigen, CTAA 16-88, recognized by a human monoclonal antibody. In: *Human Tumor antigens and specific tumor therapy*, Metzger, R., Mitchell, M., (eds.), New York, Alan R. Liss, pp 127-136, 1989.

McCabe, R.P., Peters, L.C., Haspel, M.V., Carrasquillo, J. A., Steis, R.G., Pomato, N., Paris, E.M., Reynolds, J. C., Hanna, M.G., Jr.: Potential of human tumor vaccines and human monoclonal antibodies in the diagnosis and treatment of cancer. In: Immunology in New Drug Development, Sinkule, Joseph (ed.), Pergammon Press Inc., Elmsford, NY, 1989.

Lamm, D.L., Steg, A., Boccon-Gibod, L., Morales, A., Hanna, M.G., Jr., Pagano, F., Alfthan, O., Brosman, S., Fisher, H.A.F., Jakse, G., Chisholm, G.D., van der Meijden, A.P.M., and Debruyne, F.M.J.: Complications of Bacillus Calmette-Guerin immunotherapy: Review of 2,473 patients and comparison of chemotherapy complications. In: *BCG in Superficial Bladder Cancer*, Alan R. Liss, Inc., New York, pp. 335-355, 1989.

Hoover, H.C., Jr. and Hanna, M.G., Jr.: Active Immunotherapy in Colorectal Cancer. Seminars in Surgical Oncology, American College of Surgeons, 5:000-000, Alan R. Liss, Inc., 1989.

Guinan, P., Brosman, S., DeKernion, J., Lamm, D., Williams, R., Richardson, C., Reitsma, D., Hanna, M. G., Jr.: Intravesical Bacillus Calmette-Guérin and Second Primary Malignancies. Urology, May 1989, Vol. XXXIII, No. 5.

McCabe, R.P., Haspel, M.V., Pomato, N., Steis, R.G., Carrasquillo, J.A., and Hanna, M.G., Jr.: Human monoclonal antibodies: concepts in the development and application to colon cancer. In Colon Cancer Cells, M. P. Moyer and G.N. Poste (eds.), Academic Press, pp. 497-518, Orlando, FL, 1990.

Steis, R.G., Carrasquillo, J.A., McCabe, R., Bookman, M., Reynolds, J.C., Larson, S., Smith, J.W. II, Clark, J., Dailey, V., Vecchio, S.D., Shuke, N., Pinsky, C., Urba, W., Haspel, M., Perentesis, P., Paris, B., Longo, D.L., Hanna, M.G., Jr.: Toxicity, immunogenicity, and tumor radioimmunodetecting ability of two human monoclonal antibodies in patients with metastatic colorectal carcinoma. Journal of Clinical Oncology, Vol. 8, No. 3, pp. 476-490, March 1990.

Hanna, M.G., Jr., Peters, L. C., Hoover, H.C., Jr.: Immunotherapy by active specific immunization: Basic principles and preclinical studies. Biologic Therapy of Cancer Principles and Practice, ed. V. T. DeVita, S. Hellman, and S. R. Rosenberg, J. P. Lippincott, Co., 1991.

Hoover, H.C. Jr. and Hanna, M.G., Jr.: Immunotherapy by active specific immunizations: Clinical application. Biologic Therapy of Cancer Principles and Practice, ed. V. T. DeVita, S. Hellman, and S. R. Rosenberg, J. P. Lippincott, Co., 1991.

Guinan, P., Richardson, C., Hanna, M., and Rubenstein, M.: BCG in the management of superficial bladder cancer. In: Therapeutic Progress in Urological Cancer, Alan R. Liss, Inc., 1989, pg. 447-453.

Subramanian, R., Paik, C.H., McCabe, R.P., Quadri, S.M., Kim, H.J., Pomato, N., Haspel, M.V., Reba, R.C., and Hanna, M.G., Jr.: Tissue distribution of In-111 labeled human monoclonal antibody (16.88) in nude mice bearing tumor xenografts: Effect of diester linkage. Antibody, Immunoconjugates, and Radiopharmaceuticals, Vol. 3, No. 2, pp. 127-136, March 1990.

McCabe, R. P., Haspel, M. V., Carrasquillo, J. A., Steis, R. G., Subramanian, R., Pomato, N., Paris, E. M., Hanna, M. G. Jr.: Recent developments and perspectives on the future of human and murine monoclonal antibodies in the diagnosis and treatment of cancer.

Biotherapy. In: From Clone to Clinic, Crommelin, D.J.A., and Schellekens, H. (Eds.) Kluwer Academic Publishers, Boston, MA, pp. 175-188, 1990.

Hanna, M. G., Jr., Hoover, H. C., Jr., Peters, L. C., Haspel, M. V., McCabe, R. P., and Pomato, N.: Fundamental and applied aspects of successful active specific immunotherapy of cancer: II. In: Principles of Cancer Biotherapy, ed., R. K. Oldham, Raven Press, Ltd., New York, pp. 253-283, 1991.

Hanna, M. G., Jr., Haspel, M. V., McCabe, R. P., Murray, J. H., and Pomato, N.: Development and application of human monoclonal antibodies. In: Antibody, Immunoconjugates, and Radiopharmaceuticals, 4:67-75, 1991.

De Jager, R., Guinan, P., Lamm, D., Khanna, O., Brosman, S., De Kernion, J., Williams, R., Richardson, C., Muenz, L., Reitsma, D., and Hanna, M.G., Jr.: Long-term complete remissions in bladder carcinoma in situ with intravesical TICE™ Bacillus Calmette Guerin: Overview analysis of six phase II clinical trials. Urology Vol. XXXVIII, 6:507-513, December 1991.

Hanna, M. G., Jr., Haspel, M. V., McCabe, R. P., Pomato, N., Hoover, H. C., Jr.: Specific immunotherapy of colon cancer: Active immunization with autologous tumor cell vaccine to human monoclonal antibodies to development of a generic tumor vaccine. 100th Anniversary Cold Spring Harbor Symposium. Origins of Human Cancer: A Comprehensive Review, Cold Spring Harbor Laboratory Press, p. 617-622, 1992.

Ransom, J.H., Pelle, B., Hanna, M.G., Jr.: Expression of class II major histocompatibility complex molecules correlates with human colon tumor vaccine efficacy. Cancer Research 52:3460-3466, June 1992.

Hanna, M.G., Jr., De Jager, R., Guinan, P., Crispen, R., Lamm, D., Khanna, O., Brosman, S., De Kernion, J., Williams, R., Richardson, C., Muenz, L., Reitsma, D.: Bacillus Calmette-Guerin (BCG) vaccine for tuberculosis: Anti-tumor effect in Experimental Animals and Man. Vaccine Research 1:69-91, 1992.

Hoover, H.C., Jr., Brandhorst, J., Peters, L., Surdyke, M.G., Carpenter, R.A., Takeshita, Y., Muenz, L.R., and Hanna, M.G., Jr.: Adjuvant active specific immunotherapy for human colorectal cancer -- 6.5-year median follow-up of a phase II prospectively randomized trial. Journal of Clinical Oncology, Vol. 11, No. 3 p. 390-399 (March) 1993.

Ransom, J.H., Pelle, B.A., Hubers, H., Keynton, L.M., Hanna, M.G., Jr., and Pomato, N.: Identification of colon tumor associated antigens by T cell clones derived from tumor infiltrating lymphocytes and peripheral blood lymphocytes from patients immunized with an autologous tumor cell/Bacillus Calmette-Guerin vaccine. International Journal of Cancer, 54:734-740, 1993.

Subramanian, R., Colony, J., Shaban, S., Sidrak, H., Haspel, M.V., Pomato, N., Hanna, M.G., Jr., and McCabe, R.P.: New chelating agent for attaching Indium-III to monoclonal antibodies: In vitro and in vivo evaluation. *Bioconjugate Chemistry* 3:248-255, 1992.

Taddei-Peters, W.C., Haspel, M.V., Vente, P., Murray, J.L., Cleary, K.R., Levin, B., Paris, E.M., Pomato, N., Murray, J.H., Weidman, D., Hanna, M.G., McCabe, R.P.: Quantitation of human tumor-reactive monoclonal antibody 16.88 in the circulation and localization of 16.88 in colorectal metastatic tumor tissue using murine antiidiotypic antibodies. *Cancer Research* 52:2603-2609, 1992.

Hawkins, G.A., McCabe, R.P., Kim, C-H., Subramanian, M.R., Bredehorst, R., McCullers, G.A., Vogel, C-W., Hanna, Jr., M.G., N. Pomato: Delivery of radionuclides to Pretargeted Monoclonal Antibodies Using Dihydrofolate Reductase and Methotrexate in an Affinity System. *Cancer Research* 53, 2368-2373, May 1993.

De Jager, R., Abdel-Nabi, H., Serafini, A., Pecking, A., Klein, J.L., and Hanna, Jr., M.G.: Current status of cancer immunodetection with radiolabeled human monoclonal antibodies. *Seminars in Nuclear Medicine*. *Seminars in Nuclear Medicine*, Vol. XXIII, No. 2, April 1993, pp. 165-179.

Hanna, Jr., M.G., Ransom, J.H., Pomato, N., Peters, L., Bloemena, E., Vermorken, J.B., and Hoover, Jr., H.C.: Active specific immunotherapy of human colorectal carcinoma with an autologous tumor cell/Bacillus Calmette Guerin vaccine. *Annals of the New York Academy of Sciences*, The New York Academy of Sciences. August 12, 1993.

Ransom, J.H., Pelle, B.A., Brandhorst, J.S., Avis, F.P., Galligioni, E., Fenton, R.G., Hoover, Jr., H.C., Vermorken, J.B., Hanna, Jr., M.G.: HLA-DR and ICAM-1 expression on human colon carcinoma vaccines predict clinical response: Application to predicting response to melanoma and renal cell carcinoma vaccines. *Vaccine Research*, Vol. 2, No. 2, 1993, pp 65-78.

Bloemena, E., Gall, H., Ransom, J.H., Pomato, N., Murray, J.H., Bos, E., Scheper, R.J., Meijer, C.J.L.M., Hanna, Jr., M.G., Vermorken, J.B.: Delayed type hypersensitivity reactions to tumor-associated antigens in colon carcinoma patients immunized with an autologous tumor cell/Bacillus Calmette-Guerin vaccine. *Cancer Research*, 53:456-459, February 1993.

Erdi, A.K., Wessels, B.W., De Jager, R., Erdi, Y.E., Atkins, F.B., Yorke, E.D., Smith, L., Huang, E., Smiddy, M., Murray, J., Varma, V.J., McCabe, R., McNellis, R., John, C., Ney, A., Nochomovitz, L., and Hanna, Jr., M.G.: Tumor activity confirmation and isodose curve display for patients receiving I-131-16.88 human monoclonal antibodies. *Cancer*, 73(3):932-944, 1994.

Erdi, Y.E., Wessels, B.W., De Jager, R., Erdi, A.K., Der, L., Cheek, Y., Shiri, R., Yorke, E.D., Hedges, L.K., Altemus, R., Varma, V.J., Smith, L.E., Hanna, Jr., M.G.: A new fiducial alignment system to overlay abdominal CT or MR anatomical images with radiolabeled antibody spect scans. Presented at the Fourth Conference on Radioimmunodetection and Radioimmunotherapy of Cancer, Princeton, NJ, September 17-19, 1992. *Cancer*, 73(3):923-931, 1994.

Klein, J.L., De Jager, R.L., Stiekema, J.C.J., Haspel, M.V., Pomato, N.P., Subramanian, R., Hanna, Jr., M.G.: Human monoclonal antibodies: Application in radioimmunotherapy. Ed. David M. Goldenberg, In: *Cancer therapy with radiolabeled antibodies*, pp. 271-281, CRC Press 1995.

Moffat, F.L. Jr., Vargas-Cuba, R.D., Serafini, A.N., Sfakianakis, G.N., Sittler, S.Y., Robinson, D.S., Crichton, V.Z., Subramanian, R., Murray, J.H., Klein, J.L., Hanna, M.G., Jr., De Jager, R.L.: Preoperative scintigraphy and operative probe scintimetry of colorectal carcinoma using a human anti-cytokeratin ^{99m}Tc-immunoconjugate. *The Journal of Nuclear Medicine*, Vol. 36, No. 5, pp. 738-745, 1994.

Ratliff, T.L., Ritchey, J.K., Brandhorst, J., Hanna, M.G., Jr. Time dependent aggregation of reconstituted BCG vaccine. *Journal of Urology*, Vol. 152:2147-2150, 1994.

Pomato, N.A., Ransom, J.H., Chin-Carlson, M., Bos, E., Murray, J.H., Butman, B.T., Hanna, M.G., Jr.: Identification, Characterization, and Determination of Vaccine Efficacy of CTAA 28A32, a Colon Tumor-Associated Antigen Recognized by Human Monoclonal Antibody 28A32. *Vaccine Research*, Vol. 3 No. 3, pp 145-161, 1994.

Pecking, A.P., Bertrand, F.J., Lokiee, F.M., Murray, J.H., Subramanian, R., Boudinet, A., Floiras, J.L., Haspel, M.V., Klein, J.L., Hanna, M.G., Jr., De Jager, R. L.: Radioimmuno-lymphoscintigraphy in the preoperative staging of primary breast cancer using a human monoclonal antibody (LiLo-16.88). *International Journal of Oncology*. 9:654-667, 1996.

Subramanian, R., Vallabhajoshula, S., Lipszyc, H., Zhao, Q., Murray, J., Shaban, S., Machac, J., and Hanna, M.G. Jr.: Indium-III Labeled IgM, A Human Monoclonal Antibody for Infection Imaging: Preclinical Studies in Pats and Rabbits. Submitted to *Journal of Nuclear Medicine*, May 1996.

Fenton, R.G., Steis, R.G., Madara, K., Zea, A.H., Ochoa, A.C., Janik, J.E., Smith II, J.W., Gause, B.L., Sharfman, W.H., Urba, WJ., Hanna, M.G., DeJager, R.L., Coyne, M.X., Crouch, R.D., Gray, P., Beveridge, J., Creekmore, S.P., Holmlund, J., Curti, B.D., Sznol, M., and Longo, D.L.: A Phase I Randomized Study of Subcutaneous Adjuvant IL-2 in Combination with an Autologous Tumor Vaccine in Patients with Advanced Renal Cell Carcinoma. *Journal of Immunotherapy*, 19(5) 354-374, July 1996.

Subramanian, R., Vallabhajoshula, S., Lipszyc, H., Zhao, Q., Murray, J., Shaban, S., Machac, J., Hanna, M.G. Jr.: Preclinical Studies of Indium-111-Labeled IgM: A Human Monoclonal Antibody for Infection Imaging. *The Journal of Nuclear Medicine*, Vol. 38 No. 7, p. 1054-1059, July 1997.

Serafini, A.N., Klein, J.L., Wolff, B.G., Baum, R., Chetanneau, A., Fischman, A., Wynant, G.E., Subramanian, R., Goroff, D.K., Hanna, M.G. Jr.: Radioimmunoscintigraphy of Recurrent, Metastatic, or Occult Colorectal Cancer with Technetium 99m-Labeled Totally Human Monoclonal Antibody 88BV59: Results of Pivotal, Phase III multicenter Studies. *Journal of Clinical Oncology*, Vol. 16, NO. 5, May 1998, pp. 1777-1787.

Wolff, B.G., Bolton, J., Baum, R., Chetanneau, A., Pecking, A., Serafini, A., Fischman, A., Hoover, Jr., H.C., Klein, J.L., Wynant, G.E., Subramanian, R., Goroff, D.K., Hanna, M.G. Jr.: Radioimmunoscintigraphy of Recurrent Metastatic, or Occult Colorectal Cancer with Technetium Tc 99m 88BV59H21-2V67-66 (HumaSPECT®-Tc), a Totally Human Monoclonal Antibody (Patient Management Benefit from a Phase III Multicenter Study. *Diseases of the Colon & Rectum*, August 1998, 41:953-962.

Vermorken, J.B., Claessen, A.M.E., van Tinteren, H., Gall, H.E., Ezinga, R., Meijer, S., Scheper, R.J., Meijer, C.J.L.M., Bloemena, E., Ransom, J.H., Hanna, M.G. Jr., Pinedo, H.M.: Active Specific Immunotherapy for Human Colon Cancer: A Prospectively Randomized Trial in Stage II and III Disease. *The Lancet*, Vol. 353, No. 9150, 345-350 January 1999.

Schmetter, B.S., Habicht, K.K., Lamm, D.L., Morales, A., Bander, N.H., Grossman, H.B., Hanna, M.G. Jr., Silberman, S.R. and Butman, B.T.: A Multicenter Trial Evaluation of the Fibrin/Fibrinogen Degradation Products Test for Detection and Monitoring of Bladder Cancer. *The Journal of Urology*, Vol. 158, 801-805, September 1997.

Harris, J.E., Ryan, L., Hoover, H.C. Jr., Stuart, R.K., Oken, M.M., Benson, A.B., Mansour, E.G., Haller, D.G., Manola, J. and Hanna, M.G. Jr., Adjuvant Active Specific Immunotherapy of Stage II and III Colon Cancer with an Autologous Tumor Cell Vaccine: ECOG Study E5283. *Journal of Clinical Oncology*, Vol. 18, 148-157, January 2000.

Hoover, H.C. Jr. and Hanna, M.G. Jr., Vaccine Therapy for Colon Cancer. *Current Treatment Options in Gastroenterology*, Vol. 2, No. 5, 344-348, October 1999.

Hanna, Jr., M.G., Hoover, Jr., HC, Vermorken, J.B., Harris, J.E., Pinedo, H.M., Adjuvant Active Specific Immunotherapy of Stage II and Stage III Colon Cancer with an Autologous Tumor Cell Vaccine: First Randomized Phase III Trials Show Promise. *Vaccine*, Vol. 19 (2001), 2576-2582.

Uyl-de-Groot, C.A., Vermorken, J.B., Hanna, Jr., M.G., Verboom, P., Groot, M.T., Bonsel, G. J., Meijer, C.J.L., Pinedo, H.M. Immunotherapy with Autologous Tumor

Cell-BCG Vaccine in Patients with Colon Cancer: A Prospective Study of Medical and Economic Benefits. *Vaccine*, Vol. 23 (2005), 2379-2387.

Hanna, M.G., Jr., Hoover, H.C., Jr., Pinedo, H.M., Finer, M. Active Specific Immunotherapy with Autologous Tumor Cell Vaccines for Stage II Colon Cancer: Logistics, Efficacy, Safety and Immunological Pharmacodynamics. *Human Vaccines* 2:4, 185-191, July/August 2006.