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PATENTS AND LITERATURE

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The objective of this section is to keep readers aware of significant inventions and trends in industrial research, as well as to highlight those areas of research that may lead to new biotechnological opportunities. In addition to immobilized biocatalysts covered in the last issue, four other subject areas will be surveyed in 1985: applied immunology, nucleic acid technology, affinity separation, and bioassays. The subjects of this, the second Patent and Literature Section of 1985, are monoclonal antibodies and immobilized antibodies.

Monoclonal Antibodies and Immobilized Antibodies

Patents

This section identifies and gives a brief description of patents from the US patent literature from January 1983 through February 1985. The two search headings presented are Monoclonal Antibodies and Immobilized (adsorbed, entrapped, encapsulated, microencapsulated, bound, and crosslinked) Antibodies. Both patent titles and abstracts were searched. Copies of US patents can be obtained for $1.00 each from the Commissioner of Patents and Trademarks, Washington, DC 20231.

MONOCLONAL ANTIBODIES

Bieber, C. P., and Howard, F. D.
ANTI-HUMAN T-LYMPHOCYTE MONOCLONAL ANTIBODY

US 4,381,292, April 26, 1983
Assignee: The Board of Trustees of the Leland Stanford Jr. University

Monoclonal antibodies for an antigen diagnostic for thymocytes, normal peripheral T cells, and some null cells. The antibodies that distinguish among subpopulations of T cells find use in assays, cell sorting, and immunosuppression.

Cidlowski, J. A., and Viceps, M. D.
MONOCLONAL ANTIBODIES TO VITAMIN B(6) AND IMMUNOASSAY METHOD
US 4,465,776, April 14, 1984
Assignee: Research Corporation

Continuous hybridoma cell line secreting monoclonal antibodies and having specificity against Vitamin B_6, which is useful for detecting the presence of vitamin B_6 in an animal sample, is described.

Cullor, J. S.
METHOD AND APPARATUS FOR MONITORING BODY PARTS OF ANIMALS
US 4,491,126, Jan. 1, 1985
Assignee: Smith, Wilbur D., Cullor, James, Cullor, James S., and Cullor, Gary W.

Method and apparatus for adding fluids to, or removing fluids from, a body part or organ of an animal to minimize trauma and permit rapid, easy, repeated fluid or low viscosity gels transfers. A syringe is employed to introduce or remove fluids from the body part, through the valve assembly and connected conduit. The invention is useful for introducing and recovering cell lines producing monoclonal antibodies or other biologically active products in large mammals, and facilitates the monitoring of antibody production as well as the administration of nutrients to enhance cell line growth.

David, G. S., and Greene, H. E.
IMMUNOMETRIC ASSAYS USING MONOCLONAL ANTIBODIES
US 4,486,530, Dec. 4, 1984
Assignee: Hybritech, Inc.

A two-site immunometric assay for determination of the presence and/or concentration of antigenic substances in fluids and inhibition assays using complexes of antigens with a monoclonal antibody.

David, G. S., and Greene, H. E.
IMMUNOMETRIC ASSAYS USING MONOCLONAL ANTIBODIES
US 4,376,110, March 8, 1983
Assignee: Hybritech, Inc.

A two-site immunometric assay for determination of the presence and/or concentration of antigenic substances in fluids using monoclonal antibodies. One monoclonal antibody is in a soluble labeled form and a second monoclonal antibody is bound to a solid carrier; the soluble and bound monoclonal antibodies may be the product of either the same or different cell lines.

Donahoe, P. K., Budzik, G. P., and Mudgett, H. M.
METHOD OF PREPARING HYBRIDOMAS AND OF PURIFYING IMMUNOGENIC MATERIALS
US 4,487,833, Dec. 11, 1984
Assignee: The General Hospital Corporation

Preparation of a monoclonal hybridoma secreting antibodies against an immunogenic material. After sensitizing with an immunizing amount of a preparation of the immunogenic material, lymphocytes are fused with an appropriate cell line to thereby form mixed hybridomas. The improvement is that the immunogenic material is present in the immunizing preparation in an amount not larger than 5% by weight. After formation of the mixed hybridomas, but prior to cloning, the method comprises the following steps: raising ascites fluid with the mixed hybridomas, then detecting immune specificity against the immunogenic material in the ascites-raised fluid; and cloning the ascites-raised cells that show immune specificity against the material.

Emery, J. M., and Lam, D. M.
MONOCLONAL ANTIBODIES AGAINST LENS EPITHELIAL CELLS AND PREVENTING PROLIFERATION OF REMNANT LENS EPITHELIAL CELLS AFTER EXTRACAPSULAR EXTRACTION
US 4,432,751, Feb. 21, 1984
Assignee: Baylor College of Medicine

Monoclonal antibodies against lens epithelial cells are produced by continuous cell lines. Human lens epithelial antibody-producing cells are fused with myeloma cells to provide a fused hybrid that is cultured, and antibodies specific to human lens epithelial cells are then collected. Proliferation of remnant lens epithelial cells after extracapsular extraction is prevented by instilling the monoclonal antibodies specific to lens epithelial cells into the anterior chamber of the human eye and allowed to interact with the lens epithelial cells. Complement then causes lysis of the lens epithelial cells, thereby preventing them from multiplying and migrating to cover the surface of the lens capsule left in place. This can be done at the time of extracapsular cataract extraction or later to remove a second cataract. There is no damage to other parts of the eye.

Flashner, M.
PURIFICATION OF MONOCLONAL ANTIBODIES
US 4,469,630, Sept. 4, 1984
Assignee: J. T. Baker Chemical Co.

Chromatographic separation of monoclonal antibody type IgG from mouse ascites fluid utilizing a packing of silica gel bearing bound polyethylenimine functions.

Gansow, O. A., and Strand, M.
METAL CHELATE CONJUGATED MONOCLONAL ANTIBODIES
US 4,472,509, Sept. 18, 1984

Metal chelate-conjugated monoclonal antibodies that emit alpha, beta, or gamma radiation, or positrons, or are fluorogenic or paramagnetic, are prepared and purified. The conjugates are suited for diagnostic and therapeutic uses.

Gansow, O. A., and Strand, M.
USE OF METAL CHELATE CONJUGATED MONOCLONAL ANTIBODIES
US 4,454,106, June 12, 1984

Therapeutic and diagnostic methods are described that employ metal chelate-conjugated monoclonal antibodies in which metals used in therapeutic applications include alpha-particle, beta-particle, or Auger electron emitting isotopes, and in diagnostic methods (in vivo or in vitro) include, inter alia, gamma- or positron-emmiting metals as well as fluorogenic or paramagnetic metals.

Greene, M. I., and Fields, B. N.
SCREENING VACCINES AND IMMUNIZATION PROCESS
US 4,490,358, Dec. 25, 1984
Assignee: President and Fellows of Harvard College

Mammals are vaccinated against infectious organisms and polypeptides are screened for utility as vaccines by a complementing set of monoclonal antibodies, the first of which antibodies binds specifically to the site on the organism that itself binds specifically to a receptor on a host cell of the mammal, and the second of which binds specifically to the first. Vaccination is with the second antibody alone, and screening is done by determining whether the polypeptide binds to the first antibody.

Hampar, B., Zweig, M., Rabin, H., Heilman, C. J., Jr., Hopkins, R. F., III, and Neubauer, R. H.
TEST METHODS EMPLOYING MONOCLONAL ANTIBODIES AGAINST HERPES SIMPLEX VIRUS TYPES 1 AND 2 NUCLEOCAPSIDS PROTEINS
US 4,430,437, Feb. 7, 1984

Assignee: The United States of America as represented by the Department of Health and Human Services

Clinical assays using monoclonal antibodies in the diagnosis of Herpes simplex virus (HSV) infections that can differentiate Herpes Simplex virus types 1 and 2.

Hansen, E. J., Kettman, J. R., and Robertson, S. M.
HYBRID CELL LINES PRODUCING MONOCLONAL ANTIBODIES DIRECTED AGAINST *Hemophilus influenzae*
US 4,455,296, June 19, 1984
Assignee: Board of Regents, the University of Texas System

Continuous hybrid cell lines producing monoclonal antibodies against the outer membrane antigens of *Hemophilus influenzae* type b have been prepared by fusing differentiated lymphoid cells primed with outer membrane antigens of *Hemophilus influenzae* type b with hybridoma cells, The fused cells were cloned and characterized. One hybrid produces a monoclonal antibody that is capable of conferring passive immunity on Hib infected hosts.

Koprowski, H., Steplewski, Z., and Herlyn, M.
DETECTION OF COLORECTAL CARCINOMA
US 4,471,057, Sept. 11, 1984
Assignee: The Wistar Institute

Colorectal carcinoma is detected by testing body fluids for the colorectal carcinoma monosialoganglioside indentified by monoclonal antibodies produced by fused cell hybrid.

Lostrom, M. E.
CELL-DRIVEN VIRAL TRANSFER IN EUKARYOTES
US 4,464,465, Aug. 7, 1984
Assignee: Genetic Systems Corporation

Novel method to transform B lymphocytes to provide immortalization for continuous production of monoclonal antibodies. T cell-free B lymphocytes are combined with an Epstein-Barr virus-transformed cell sensitive to a cytotoxic agent that does not significantly affect the B lymphocytes under conditions where the sensitive EBV transformed cell acting as the transfer agent is killed and efficiently transforms the B lymphocyte recipient cells with EBV. The EBV-transformed B lymphocyte cells are amp lified and cloned, the desired clones isolated in accordance with conventional techniques, and then used for production of monoclonal antibodies.

Milstein, C., and Wright, B. W.
RAT MYELOMA CELL LINES
US 4,472,500, Sept. 18, 1984

Assignee: National Research Development Corporation

A rat myeloma cell line that does not express an immunoglobulin chain is prepared from the cell line via a hybrid myeloma cell line. This cell line, prepared by passaging and/or cloning the line, may be fused with immunocyte cells from an animal sensitized to an immunogen to produce hybrid myeloma cell lines that provide a source of monoclonal antibodies.

Murad, F., and Lewicki, J. A.
TWO-SITE IMMUNOASSAYS USING MONOCLONAL ANTIBODIES OF DIFFERENT CLASSES OR SUBCLASSES AND TEST KITS FOR PERFORMING SAME
US 4,474,892, Oct. 2, 1984
Assignee: Board of Trustees of the Leland Stanford Junior University

Two-site immunometric assays for multideterminant antigens are described in which the antigen is reacted with an immobilized monoclonal antibody directed against one antigen determinant and a second monoclonal antibody that is directed against a distinct antigenic determinant and is of a different class or subclass from the immobilized monoclonal antibody. The second monoclonal antibody is labeled in direct versions of the assay and is reacted with a labeled antibody against it in indirect versions of the assay. The immobilizing medium and antibodies may be selected to reduce the likelihood of nonspecific binding enhance sensitivity and/or permit signal amplification.

Neville, D. M. Jr., and Youle, R. J.
MONOCLONAL ANTIBODY–RICIN HYBRIDS AS A TREATMENT OF MURINE GRAFT-VERSUS-HOST DISEASE
US 4,440,747, April 3, 1984
Assignee: The United States of America as represented by the Department of Health and Human Services

The receptor specificity of toxins can be altered by coupling the intact toxin to monoclonal antibodies directed to the cell surface antigen. Monoclonal antibody is a pretreatment reagent used to eliminate graft-versus-host disease (GVHD) in bone marrow transplants.

Nussenzweig, R. S., Godson, G.N., and Nussenzweig, V.
MALARIA VACCINE
US 4,466,917, Aug. 21, 1984
Assignee: New York University

Antisera and monoclonal antibodies directed against the sporozoite stage of the malaria parasite capable of providing protection against infection in both animals and humans. Further, a purified antigen derived from sporozoites of the malaria parasite suitable for use as a vaccine against malaria infections in both animals and humans has been prepared.

Paul, P. S., and Van-Deusen, R. A.
MONOCLONAL ANTIBODIES TO PORCINE IMMUNOGLOBULINS
US 4,468,346, Aug. 28, 1984
Assignee: The United States of America is represented by the Secretary of Agriculture

Monoclonal antibodies that are heavy-chain specific for porcine Igs are secreted by novel hybrid cell lines produced by fusing myeloma cells with B lymphocytes from mice immunized against porcine Igs.

Reading, C. L.
RECOMBINANT MONOCLONAL ANTIBODIES
US 4,474,893, Oct. 2, 1984
Assignee: The University of Texas System Cancer Center

Antibodies having binding affinity for two desired antigens, produced by a quadroma or a trioma cell, and methods for producing these antibodies are described. A quadroma cell is the fusion product of a hybridoma cell that produces an antibody having specific binding affinity to one desired antigen and a hybridoma cell that produces an antibody having specific binding affinity for another desired antigen. A trioma cell is the fusion product of a hybridoma cell that produces an antibody having specific binding affinity to one desired antigen and a lymphocyte that produces an antibody having specific binding affinity to another desired antigen.

Reinherz, E. L., and Schlossman, S. F.
MONOCLONAL ANTIBODY
US 4,443,427, April 17, 1984
Assignee: Sidney Farber Cancer Institute, Inc.

Monoclonal antibodies to a mature human T-cell surface antigen of molecular weight 120,000 daltons. The monoclonal antibodies are capable of selectively binding mature human T cells rendering them inactive in vivo, failing to induce the proliferation or activation of human lymphocytes.

Ricott, G. C. B. A., and Zeijlemaker, W. P.
METHOD OF CULTURING HYBRIDOMAS
US 4,404,279 Sept. 13, 1983
Assignee: Stichting Vrienden van de Stichting Dr. Karl Landsteiner

A method is described for increasing the production of monoclonal antibodies in vitro by means of a hybridoma technique in which endothelial cells and/or the supernatant of endothelial cells are added to a hybridoma culture.

Royston, I., Handley, H., Seegmiller, J. E., and Thompson, L. F.
IMMUNOGLOBULIN-SECRETING HUMAN HYBRIDOMAS FROM A CULTURED HUMAN LYMPHOBLASTOID CELL LINE
US 4,451,570, May 29, 1984
Assignee: The Regents of the University of California

Human lymphoblastoid cells and derived hybridomas are described. The cells are a HGPRT negative human B-cell line. The cells are readily fusible with lymphoid cells to produce hybridomas that secrete human monoclonal antibodies.

Sadowski, P. L.
PRODUCTION OF MONOCLONAL ANTIBODIES AGAINST BACTERIAL ADHESINS
US 4,443,549, April 17, 1984
Assignee: Molecular Genetics, Inc.

The production of monoclonal antibodies for bacterial surface antigens that act as adhesins between prokaryotic and eukaryotic cells is described. These monoclonal antibodies may be used for the prophylactic and therapeutic treatment of diseases induced by adhesin-bearing pathogens and for the diagnostic indentification of adhesin-bearing bacteria.

Sharp, P. A., Cepko, C. L. and Changelian, P.
PRODUCTION AND USE OF MONOCLONAL ANTIBODIES AGAINST ADENOVIRUSES
US 4,487,829, Dec. 11, 1984
Assignee: Massachusetts Institute of Technology

The isolation of monoclonal antibodies and their producing cell line demonstrating specific reactivity to an antigenic determinant possessed by adenoviruses and the use of such antibodies for diagnostic and therapeutic purposes are disclosed.

Smith, W. L. and DeWitt, D. L.
METHOD FOR THE DETECTION AND/OR DETERMINATION OF A POLYVALENT ANTIGEN USING AT LEAST TWO DIFFERENT MONOCLONAL ANTIBODIES
US 4,471,058, Sept. 11, 1984
Assignee: Board of Trustees operating Michigan State University

A method for the detection of an antigen having at least two separate antigenic determinants using at least two different monoclonal antibodies that bind to the separate sites is described. The method utilizes Protein A with a carrier to immobilize a first monoclonal antibody that, in turn, can bind to one antigenic deteminant on the antigen. The second antibody with a label is provided in a solution and binds to the second antigenic determinant on the antigen. Novel anti-PGH synthase and anti-PG(2) synthase antibodies and hybridoma cells producing such antibodies are described.

Springer, T. A.
METHOD OF MAKING MONOCLONAL ANTIBODIES
US 4,427,653, Jan. 24, 1984
Assignee: President and Fellows of Harvard College

A method of preparing an antigen or mixture of antigens substantially free of antigens specific to at least two monoclonal antibodies involving contacting an antigen mixture with one or more previously isolated monoclonal antibodies to form complexes between those antibodies and antigens present in the mixture specific to the antibodies, removing the complexes from the antigen mixture to yield a partially purified antigen mixture, immunizing an animal with partially purified antigen mixture, fusing spleen cells from the immunized animal to myeloma cells to form hybridomas capable of producing additional monoclonal antibodies, culturing the hybridomas to produce additional monoclonal antibodies, contacting a sample of the partially purified antigen mixture with additional monoclonal antibodies to form complexes between additional monoclonal antibodies and antigens present in the antigen mixture specific to the additional monoclonal antibodies, and removing the complexes from the antigen mixture.

Strande, M.
DIAGNOSIS AND TREATMENT OF FLUKE INFECTIONS WITH MONOCLONAL ANTIBODIES
US 4,416,866, Nov. 22, 1983
Assignee: The Johns Hopkins University

Antibodies and antigens that provide a method of detecting and combating flukes is described. Fluke infections are screened by determining the presence of fluke antigens defined by antibodies produced by hybridomas. Chronic and acute fluke infections are distinguished by determining presence of fluke spine protein. Fluke infections are combated by injecting warm-blooded animals with antibodies produced by hybridomas or with proteins defined by those antibodies.

Trowbridge, I. S.
MONOCLONAL ANTIBODIES SPECIFIC FOR THE HUMAN TRANSFERRIN RECEPTOR GLYCOPROTEIN
US 4,434,156, Feb. 28, 1984
Assignee: The Salk Institute for Biological Studies

Monoclonal antibodies are produced specific for the cell surface transferrin receptor of human cells. Animals are inoculated with purified human transferrin receptor glycoprotein, human hematopoietic cells, or their fragments, and spleen cells obtained are fused with myeloma cells to produce hybridomas. The hybridomas are cultured as clones, and antibodies are obtained from the individual clones. Clones that produce antibodies specific for the receptor and that interfere with or block transferrin

binding are selected for further culturing to produce the antibody. Monoclonal antibodies that block transferrin binding are useful in regulating cell growth and for other therapeutic uses.

Wands, J. R., and Zurawski, V. R., Jr.
PROCESS FOR PRODUCING ANTIBODIES TO HEPATITIS VIRUS AND CELL LINES THEREFOR
US 4,491,632, Jan. 1, 1985
Assignee: The Massachusetts General Hospital

Cell lines producing monoclonal antibodies to hepatitis virus are established by immunizing animal lymphocytes with hepatitis antigen to form antibody producing cells that are then fused with myeloma cells. The resultant hybrids can be clones to produce monoclonal antibodies to individual antigenic determinants unique to hepatitis virus.

IMMOBILIZED ANTIBODIES

Aalberse, R. C.
METHOD AND A KIT FOR THE ASSAY OF ANTIBODIES TO SOLUBLE ANTIGENS
US 4,468,470, Aug. 28, 1984
Assignee: Stichting Central Laboratorium van de Bloedtransfusiedienst van het Nederlandse Rode Kruis

A method for the assay of antibodies to soluble antigens in an aqueous sample (i.e., body fluids) by contacting the sample with an antigen in vitro. If present, antibodies are bound by the antigens. The invention includes a kit for the assay and detection of antigen-specific antibodies. An antigen is used that is modified with a recognizable group, and is soluble in the test sample. The interaction between antigen and antibody then takes place in homogeneous solution.

Colman, G., and Russell, R. R. B.
PROTECTION AGAINST DENTAL CARIES
US 4,448,768, and 4,442,085, May 15, 1984
Assignee: The Secretary of State for Social Services in Her Brittanic Majesty's Government of the United Kingdom of Great Britain and Northern Ireland.

An antigenic protein (antigen A) present on the cell walls of *Streptococcus mutans* is separated from other antigenic proteins to give a preparation that may be used as a vaccine or to raise antibodies for use in protecting against dental caries. Antigen A is one of two major antigenic proteins remaining on cell walls of *S. mutans* genetic group I and may be readily purified by affinity chromatography on immobilized antibody.

Feller, W. F., Kantor, J. A., Chirikjian, J. G., and Phillips, T. M.
REVERSE TRANSCRIPTASE FROM HUMAN MILK, METHOD FOR ITS PURIFICATION, AND ITS USE IN THE DETECTION OF BREAST CANCER
US 4,409,200, Oct. 11, 1983
Assignee: Research Corporation

A method is described for diagnosing mammalian breast cancer by detecting in the physiological fluid an antigen (ACRT) having immune cross-reactivity with human reverse transcriptase, or detecting antibodies against ACRT or detecting antibody–ACRT complexes. The reverse transcriptase is substantially purified and characterized. A process for the purification of reverse transcriptase from human milk is given.

Freedman, H. H.
PROCESS FOR CROSSLINKING POLYAMINES
US 4,4778,938, Oct. 23, 1984
Assignee: The Dow Chemical Company

Polyalkylenepolyamines are crosslinked in a non-anhydrous environment to yield water-swellable, water-insoluble gels. The polyalkylenepolyamine is agitated with a polyisocyanate at a pH 5–8. The process of this invention can be employed to immobilize proteins, enzymes, antibodies, etc.

Hechemy, K. E.
FORCED PRECIPIATION METHOD FOR PREPARING ANTIGEN/ANTIBODY PARTICLES
US 4,397,959, Aug. 9, 1983
Assignee: Research Corporation

Preparation of test reagents is described; these are comprised of antigens or antibodies adsorbed on a surface in which the test material to be adsorbed is dissolved in a solvent in contact with the adsorbing surface and precipitated by the addition of a liquid that is miscible with the solvent, but does not dissolve the test material.

Ikeda, M., and Tomizawa, T.
ARTIFICIAL CARRIER FOR IMMOBILIZATION OF BIOLOGICAL PROTEINS
US 4,416,813, Nov. 22, 1983
Assignee: Fujizoki Pharmaceutical Co., Ltd.

An artificial carrier that is prepared from gelatin, a water-soluble polysaccharide, a sodium metaphosphate, and an aldehyde is disclosed. The carrier can be used to immobilize antibodies, antigens, or enzymes.

Kleinhammer, G., Deutsch, G., Linke, H. F., Stahler, F., and Gruber, W.
DETERMINATION OF THE THYROXINE-BINDING INDEX IN SERUM
US 4,467,030, Aug. 21, 1984
Assignee: Boehringer Mannheim GmbH.

A method is detailed for the determination of the thyroxine-binding index in serum. The serum sample to be determined is mixed thyroxine and a defined amount of a determinable enzyme covalently bound to thyroxine, contacting the resulting solution with antithyroxine antibodies present in the solid phase, separating the liquid and solid phase, and measuring the enzyme activity in on of the phases as a measure of the tyroxine-binding index in the serum sample.

Kondo, K., Iwasa, S., and Yoshida, I.
METHOD FOR ENZYME IMMUNOASSAY AND PRODUCTION OF ANTIBODY
US 4,496,658 Jan. 29, 1985
Assignee: Takeda Chemical Industries, Ltd.

A method is described for immunoassay of human chorionic gonadotropin using an immobilized antibody, and antigen, and an antibody to which a labeling agent has been attached. When the antibody supported on the carrier and the antibody coupled to a labeling agent have no overlap in antigen-determining sites and one of the antibodies is specifically reactive to human chorionic gonadotropin, a high reproducibility of the result of the immunochemical assay is obtained.

Neurath, A. R.
IMMUNOASSAYS USING SUPPORT-CONTAINING SEPARATE ANTIGENS AND ANTIBODIES DERIVED FROM AN IMMUNE COMPLEX
US 4,495,295, Jan. 22, 1985
Assignee: New York Blood Center, Inc.

An antigen or antibody can be detected in a specimen by: (a) contacting the specimen with a substrate having a bound mixture of antigens and antibodies to the speciman, incubating, and washing the contacted substrate; (b) contacting the washed material of step 'a' with a radioactive or enzyme-labeled antibody or antigen, incubating, and washing; and (c) effecting either radioimmunoassay or enzyme-labeled immunoassay.

Platt, K. B., and Reed, D. E.
PURIFIED AND ANTIGENICALLY SELECTIVE VACCINES FOR DOMESTIC ANIMALS
US 4,493,825, Jan. 15, 1985
Assignee: Iowa State University Research Foundation

Purified antigenically selective vaccines for domestic animals are prepared from microorganism cultures containing the immunizing agent by first complexing the immunizing agent with microparticles bearing Protein A having bound IgG antibodies specific for the immunizing agent, separating the resulting complex, and preparing a vaccine directly from the antigen–antibody complex. The complex-containing vaccines provide effective immunization and are particularly useful in preparing viral and bacterial subunit vaccines.

Runge, R. G.
IMMUNOTOXIN CONJUGATE WHICH COMPRISES ARSANILIC ACID, USEFUL FOR TREATING MALIGNANT TUMORS, PARTICULARLY PANCREATIC CANCER
US 4,485,093, Nov. 27, 1984

An immunotoxin conjugate, useful for treating malignant tumors in mammals, consisting of arsanilic acid and tumor-specific antibodies covalently bound to a polyglutamic acid linking agent is described. The conjugate selectively delivers arsanalic acid to a tumor, killing the tumor cells and exhibiting little or no toxicity to normal cells and is effective in treating human pancreatic cancer.

Shimizu, F., Ohmoto, Y., and Imagawa, K.
HUMAN INTERFERON-RELATED PEPTIDES, ANTIGENS, ANTIBODIES AND PROCESS FOR PREPARING THE SAME
US 4,474,754, Oct. 2, 1984
Assignee: Otsuka Pharmaceutical Co., Ltd.

Human interferon-related peptides and derivatives, antigens, antibodies prepared from these and immobilized antibodies to be used for affinity chromatography, and methods for assaying human interferons are described.

Szoka, F. C.
LIPOSOMES WITH GLYCOLIPID-LINKED ANTIBODIES
US 4,483,929, Nov. 20, 1984
Assignee: Liposome Technology Incorporated

Lipid vesicles, labeled with encapsulated reporter compositions and bound to antibodies, comprise a new class of immunoreagent. These may be useful in immunoassays for ligands.

Van-der-Merwe-Kirsten, J., and Polson, A.
CARRIER BOUND IMMUNOSORBENT
US 4,478,946, Oct. 23, 1984
Assignee: South African Inventions Development Corporation

An immunoreactant, either an antigen or an antibody covalently bonded to a crosslinked film, composed of crosslinked protein or peptides, enveloping a carrier body (a solid, nonporous glass bead of 6 mm diameter) is described. The immunologically active parts of the immunoreactant are present on the surface in a form in which they are available for immunosorption. If the immunoreactant is protein (an antibody), it can provide all or part of the film-forming material. The film can carry antibodies against a second type of antibody that is captured immunosorptively to form a "double layer" carrier-bound immunosorbent, the antigen capturing sites of the second type of antibody providing the immunosorption sites of the product. The immunosorbents are used, for example, for RIA or ELISA assays.

LITERATURE

This section surveys literature in the area of Monoclonal Antibodies published from January 1983 to February 1985. This section includes only selected review articles that appeared during this time period.

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