as well as of humans with HEV. The recombinant HEV capsid protein may also be useful in the vaccination of humans and animals against infection with HEV strains.

Oligonucleotides Which Specifically Bind Retroviral Nucleocapsid Proteins

A Rein, J Casas-Finet, R Fisher, M Fivash, LE Henderson (NCI)
PCT/US97/08936 filed 19 May 97 (claiming priority of USSN 60/017,128 filed 20 May 96)
Licensing Contact: J. Peter Kim, 301/496–7056 ext. 264

The human immunodeficiency virus (HIV) is the causative agent of acquired immunodeficiency syndrome (AIDS). A retroviral protein species, the gag polyprotein, is involved in the assembly of retrovirus particles and capable of specific interactions with nucleic acids. After the virion is released from the cell, the polyprotein is cleaved by the virus-encoded protease. One of the cleaved products, the nucleocapsid (NC) protein, then binds to genomic RNA, forming the ribonucleoprotein core of the mature particle. The interaction between gag and genomic RNA is known to involve the NC domain of the polyprotein.

The present invention relates to retroviral proteins, such as NC and the gag precursor, and their ability to bind to specific nucleic acid sequences with high affinity. Accordingly, the invention provides for oligonucleotides which bind to nucleocapsids proteins with high affinity, molecular decoys for retroviral nucleocapsid proteins which inhibit viral replication, targeted molecules comprising high affinity oligonucleotides, assays for selecting molecules which inhibit the specific interaction between retroviral proteins and high affinity oligonucleotides, and related kits.

Compositions for the Prevention or Retardation Of Cataracts

JS Zigler Jr., P Russell, S Tumminia, C Qin, CM Krishna (NEI)
PCT/US97/01105 filed 24 Jan 97 (claiming priority of USSN 60/010,637 filed 26 Jan 96)
Licensing Contact: David Sadowski, 301/496–7735, ext. 288

Oxidative stress is becoming recognized as a major problem, and free radicals and activated oxygen species are recognized as agents of tissue damage associated with a number of conditions. Aging-related cataract is a disease of multifactorial origin involving many of the same processes which characterize the process of aging in other tissues. It appears that once cataractogenesis has begun, the process of cataract development may proceed via one or more common pathways or processes. The subject invention focuses on intervening at the level of these common pathways in hopes of stopping or slowing the progression of the disease process. The present invention provides methods and compositions for the prevention and treatment of cataract formation which comprise a nitroxide free radical compound or its hydroxylamine and a thiol reducing agent.

Methods for Enhancing Oral Tolerance and Treating Autoimmune Disease Using Inhibitors Of IL–12

W Strober, Brian Kelsall, T Marth (NIAID)
PCT/US96/16007 filed 11 Oct 96 designating AU, US, CA, JP (no rights in EPO); published as WO 98/16248 on 23 Apr 98
Licensing Contact: Jaconda Wagner, 301/496–7735 ext. 284

Oral tolerance is the immunologic mechanism by which the mucosal immune system maintains unresponsiveness to the myriad of antigens in the mucosal environment which might otherwise induce untoward immune responses. Recent studies have shown that it is mediated by several distinct, yet interacting mechanisms including the generation of suppressive T cells producing antigen nonspecific cytokines and the induction of clonal deletion and/or anergy. This invention provides two methods: 1) for enhancing oral tolerance to an antigen and 2) for treating an autoimmune disease. By orally administering an antigen associated with an autoimmune disease, allergic disease or graft versus host (GvH) disease along with an inhibitor of IL–12, oral tolerance can be enhanced. The diseases can also be treated using virtually the same method.

Method for Protecting Bone Marrow Against Chemotherapeutic Drugs Using Transforming Growth Factor Beta 1

JR Keller, FW Ruscetti, R Wiltrout (NCI)
U.S. Patent 5,278,145 issued 11 Jan 94
Licensing Contact: Jaconda Wagner, 301/496–7735 ext. 284

This invention provides a method for protecting hematopoietic stem cells from the myelotoxicity of chemotherapeutic drugs or radiation therapy. Chemotherapeutic agents destroy the body's ability to make granulocytes thereby exposing patients to potentially lethal microorganisms. Previous attempts to alleviate this problem focused on the use of growth factors to accelerate recovery from myelotoxicity. This invention details a method for administering TGF–β1 in conjunction with the administration of chemotherapeutic drugs in order to reduce the number of stem cells killed thereby reducing myelotoxicity which is an improvement to the previous method.

Dated: October 13, 1998.

Jack Spiegel, Ph.D.

Director, Division of Technology Development and Transfer, Office of Technology Transfer.

[FR Doc. 98–27959 Filed 10–16–98; 8:45 am]
BILLING CODE 4140–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, Public Health Service, DHHS.

ACTION: Notice.

SUMMARY: The inventions listed below are owned by agencies of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

ADDRESSES: Licensing information and copies of the U.S. issued patents and patent applications listed below may be obtained by contacting Carol Salata, Ph.D., at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852–3804; telephone: 301/496–7057 ext. 232; fax: 301/402–0220; e-mail: SalataC@od.nih.gov. A signed Confidential Disclosure agreement will be required to receive copies of the patent applications.

Dimeric Naphthylisoquinoline Alkaloids and Synthesis Methods Thereof

G Bringmann, S Harmsen, MR Boyd (NCI)
Serial No. 08/279,339 filed 22 Jul 94 (U.S. Patent 5,571,919 issued 05 Nov 96) and Serial No. 08/674,359 filed 01 Jul 96 (U.S. Patent 5,789,594 issued 04 Aug 98)

This invention embodies the synthesis and novel compounds comprising homodimeric and heterodimeric napthylisoquinoline

alkaloids and derivatives. The methods presented in the invention are advantageous because they permit, for the first time, the *in vitro* synthesis of compounds for which the only known natural source is the rare tropical vine, *Ancistrocladus korupensis* of Central Africa. This class of compounds has been demonstrated to be effective in inhibiting the ability of HIV to replicate and infect cells. The compounds also have antimalaria activity. Therefore, the dimeric alkaloids appear to comprise a novel class of antiviral and antiparasitic drugs that may be very useful by themselves or in combination with other treatments.

Dimeric Arylisoquinoline Alkaloids and Synthesis Methods Thereof

G Bringmann, MR Boyd, R Gotz, TR Kelly (NCI)
Serial No. 08/363,684 filed 23 Dec 94 (U.S. Patent 5,578,729 issued 26 Nov 96) and Serial No. 08/721,084 filed 24 Sep 96 (U.S. Patent 5,786,482 issued 28 Jul 98)

The present invention relates to novel compounds and to a new method of chemical synthesis of known and new dimeric arylisoquinoline alkaloids. These compounds are members of a general class known as naphthylisoquinoline alkaloids. These dimeric alkaloids have been found to be effective inhibitors of HIV replication in human immune cells. The compounds also have antimalarial activity. The method of this invention provides access not only to known but also heretofore unknown medically useful compounds. The invention also provides for new dimeric arylisoquinoline compounds and derivative thereof.

Monomeric Naphthylisoquinoline Alkaloids and Synthesis Methods Thereof

G Bringmann, R Gotz, MR Boyd (NCI)
Serial No. 08/279,291 filed 22 Jul 94 (U.S. Patent 5,552,550 issued 03 Sep 96) and Serial No. 08/674,362 filed 01 Jul 96 (U.S. Patent 5,763,613 issued 09 Jun 98)

Monomeric naphthylisoquinoline alkaloids and their derivatives are medically useful for the treatment of parasitic infections including malaria. However, these particular alkaloids are available in a limited supply since they are obtained from scarce plants which have a limited geographic distribution. This invention embodies methods for the preparation of monomeric naphthylisoquinoline alkaloids, including the antiparasitic korupensamines and related compounds, as well as non-korupensamines. New, medically useful, naphthylisoquinoline compounds and derivatives are also described.

Monomeric and Dimeric Arylisoquinoline Alkaloids and Derivatives Thereof

G Bringmann, MR Boyd, M Wenzel (NCI)
Serial No. 09/001,801 filed 31 Dec 97

The present invention provides new monomeric derivatives of the C-8′-7 linked naphthylisoquinoline alkaloid dioncophylline D. The invention also provides new C–4 substituted monmeric arylisoquinoline alkaloid derivatives. The present invention furthermore provides novel dimeric arylisoquinoline alkaloids comprised of coupled first and second arylisoquinoline monomers, wherein either or both of said monomer(s) is (are) monomeric compound(s) of the present invention.

Monomeric and dimeric compounds of the present invention have medically useful properties, such as antimicrobial properties, more specifically antimalarial and antiviral properties. Monomeric compounds of the present invention are also useful as building blocks or intermediates for synthesis of novel dimeric arylisoquinoline alkaloids.

Michellamine Antiviral Agents, Compositions, and Treatment Methods

MR Boyd, JH Cardellina, KP Manfredi, JW Blunt, LK Pannell, JB McMahon, RJ Gulakowski, GM Cragg, G Bringmann, D Thomas, J Jato (NCI)
Serial No. 08/049,824 filed 19 Apr 93 (U.S. Patent 5,455,251 issued 03 Oct 95) and Serial No. 08/457,677 filed 01 Jun 95 (U.S. Patent 5,654,432 issued 05 Aug 97)

Michellamines, structurally novel naphthalene tetrahydroisoquinoline alkaloids, are a new class of antiviral compounds present in the plant *Ancisrocladus korupensis.* The *Ancitrocladaceae* is a small paleotropical family, with 20 species known from Asia and tropical Africa. *A. korupensis* contains three distinct michellamines, A, B, and C. Michellamine B, the most prevalent and potent of the three, is capable of inhibiting two distinct stages of the HIV life cycle. the compound is able to inhibit HIV-induced cell killing of infected cells but has to effect on HIV virons or initial binding of HIV to target cells. In addition, michellamine B inhibits the enzymatic activity of both the normal HIV reverse transcriptase and the activity of several mutant transcriptases which are resistant to several nonnucleoside inhibitors. The claims of this invention relate to michellamine compounds and derivatives, methods for the isolation of the michellamines from *A. korupensis,* and methods for the administration of these antiviral compounds for treating patients infected with HIV. Licenses of this invention will be required to comport with all applicable federal and country-of-collection policies relating to biodiversity.

Antimalarial Korupensamines and Pharmaceutical Composition and Medical Uses Thereof

MR Boyd, G Francois, G Bringmann, YF Hallock, KP Manfredi, JH Cardellina (NCI)
Serial No. 08/195,260 filed 14 Feb 94 (U.S. Patent 5,409,938 issued 25 Apr 95)

The class of compounds known as korupensamines exhibit in vitro and in viro antimalarial activity and offer a potent new means for treating and controlling this devastating disease. As many as 2–3 million people worldwide die from malaria each year, and many more suffer from long-term chronic infection. The deadliest malarial parasites have become resistant to previously effective antimalarial drugs such as chloroquine and other clinically useful agents; therefore, effective new antimalarial drugs are urgently needed. These korupensamine compounds, which are isolated from a new species of the plant genus *Ancistrocladus* which is found in tropical Africa and southern and southeast Asia, effectively inhibit the growth, reproduction, and pathologic effects of a broad spectrum of *Plasmodia* parasites when given alone or in conjunction with previously available antimalarial agents. Licensees of this invention will be required to comport with all applicable federally and country-of-collection policies relating to biodiversity.

Antimalarial Napthylisoquinoline Alkaloids and Pharmaceutical Compositions and Medicinal Uses Thereof

G Francois, G Bringmann, JD Phillipson, MR Boyd, LA Assi, G Dochez, C Schneider, G Timperman (NCI)
Serial No. 08/195,547 filed 14 Feb 94 (U.S. Patent 5,639,761 issued 17 Jun 97) and Serial No. 08/843,582 filed 16 Apr 97

This is a new class of napthylisoquinoline alkaloid compounds, present in plant species of the *Ancistrocladaceae* and *Dionocophyllaceae* plant families which

are found in tropical Africa and southern and southeast Asia, that exhibit effective antimalarial properties and offer important new weapons in the treatment of this devastating disease. The deadliest malarial parasites have become resistant to previously effective antimalarial drugs; therefore, effective new antimalarial drugs are urgently needed. These new naphthylisoquinoline compounds effectively inhibit the growth, reproduction, and pathologic effects of a broad spectrum of *Plasmodia* parasites, including drug-resistant strains.

Dated: October 13, 1998.

Jack Speigel,

Director, Division of Technology Development and Transfer, Office of Technology Transfer.

[FR Doc. 98–27960 Filed 10–16–98; 8:45 am]

BILLING CODE 4140–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meetings

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), notice is hereby given of the following meetings.

The meetings will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets of commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Cancer Institute Special Emphasis Panel, Health Communications in Cancer Control.

Date: November 4–6, 1998.

Time: 7:00 pm to 5:00 pm.

Agenda: To review and evaluate grant applications.

Place: Gaithersburg Hilton, Gaithersburg, MD 20878.

Contact Person: C.M. Kerwin, PhD, Scientific Review Administrator, Special Review, Referral and Resources Branch, Division of Extramural Activities, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard/EPN–609, Rockville, MD 20892–7405, 301/496–7421.

Name of Committee: National Cancer Institute Special Emphasis Panel, Regional Variation in Breast Cancer Rates in the United States.

Date: November 9, 1998.

Time: 9:00 am to 5:00 pm.

Agenda: To review and evaluate grant applications.

Place: Executive Plaza North–Conference Room D, 6130 Executive Boulevard, Rockville, MD 20852.

Contact Person: Lalita D Palekar, Scientific Review Administrator, Special Review, Referral and Resources Branch, Division of Extramural Activities, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard/EPN–622B, Rockville, MD 20892–7405, 301/496–7575.

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower, 93.399, Cancer Control, National Institutes of Health, HHS)

Dated: October 13, 1998.

LaVerne Y. Stringfield,

Committee Management Officer, NIH.

[FR Doc. 98–27950 Filed 10–16–98; 8:45 am]

BILLING CODE 4140–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), notice is hereby given of the following meeting.

The meeting will be closed to the public in accordance with the provisions set forth in sections 552b(c)(4) and 552b(c)(6), Title 5 U.S.C., as amended. The grant applications and the discussions could disclose confidential trade secrets or commercial property such as patentable material, and personal information concerning individuals associated with the grant applications, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: National Cancer Institute Special Emphasis Panel, Oncogenes in Cancer Etiology and Progression.

Date: November 4–5, 1998.

Time: 8:00 am to 5:00 pm.

Agenda: To review and evaluate grant applications.

Place: Crown Plaza Philadelphia Center City, 1800 Market Street, Philadelphia, PA 19103.

Contact Person: David Irwin, PhD, Research Programs Review Section Chief, Grants Review Branch, Division of Extramural Activities, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard, EPN—Room 635E, MSC 7405, Rockville, MD 20892–7405, (301) 402–0371, di4knih.gov.

(Catalogue of Federal Domestic Assistance Program Nos. 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention Research; 93.394, Cancer Detection and Diagnosis Research; 93.395, Cancer Treatment Research; 93.396, Cancer Biology Research; 93.397, Cancer Centers Support; 93.398, Cancer Research Manpower; 93.399, Cancer Control, National Institutes of Health, HHS)

Dated: October 13, 1998.

LaVerne Y. Stringfield,

Committee Management Officer, NIH.

[FR Doc. 98–27951 Filed 10–16–98; 8:45 am]

BILLING CODE 4140–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

National Cancer Institute; Notice of Closed Meeting

Pursuant to section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2), notice is hereby given of a meeting of the Board of Scientific Counselors, National Cancer Institute.

The meeting will be closed to the public as indicated below in accordance with the provisions set forth in section 552b(c)(6), Title 5 U.S.C., as amended for the review, discussion, and evaluation of individual intramural programs and projects conducted by the National Cancer Institute, including consideration of personnel qualifications and performance, and the competence of individual investigators, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.

Name of Committee: Board of Scientific Counselors, National Cancer Institute, Subcommittee B—Basic Sciences.

Date: November 1–2, 1998.

Time: November 1, 1998, 7:00 pm to 10:30 pm.

Agenda: To review and evaluate administrative confidential matters.

Place: DoubleTree Hotel, 1750 Rockville Pike, Rockville, MD 20852.

Time: November 2, 1998, 8:00 am to 5:30 pm.

Agenda: To review and evaluate administrative confidential matters.

Place: National Cancer Institute, 9000 Rockville Pike, Building 31, C Wing, 6th Floor, Conference Room 10, Bethesda, MD 20892.

Contact Person: Florence E. Farber, PhD, Executive Secretary, Office of Advisory Activities, Division of Extramural Activities, National Cancer Institute, National Institutes of Health, 6130 Executive Boulevard, EPN 609, Rockville, MD 20892, 301/496–2378.

(Catalogue of Federal Domestic Assistance Program Nos 93.392, Cancer Construction; 93.393, Cancer Cause and Prevention