2. YW Lin et al., NUP98-HOXD13 transgenic mice develop a highly penetrant, severe myelodysplastic syndrome that progresses to acute leukemia. Blood. 2005 Jul 1;106(1):287–295.

Patent Status: HHS Reference No. E–071–2007/0—Research Tool.

Licensing Status: Available for non-exclusive licensing.

Licensing Contact: Jennifer Wong; 301–435–4633; *wongje@mail.nih.gov*.

Collaborative Research Opportunity: The Leukemia Biology Section, Genetics Branch, National Cancer Institute is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the NHD13 mouse model. Please contact John D. Hewes, Ph.D. at 301–435–3121 or hewesj@mail.nih.gov for more information.

Conjugates of Ligand, Linker, and Cytotoxic Agent and Related Compositions and Methods of Use

Description of Technology: Systemic toxicity of drugs is one of the most serious problems in cancer chemotherapy and frequently is dose limiting. Specific delivery of cytotoxic drugs to cancer cells remains among the most intractable problems of cancer therapy. Targeted delivery of anti-proliferation drugs through the cell surface receptors that are over expressed on cancer cells can reduce systemic toxicity and increase effectiveness of a treatment.

The present invention describes cytotoxic compounds with an intracellular target that can selectively enter tumor cells through specific receptors on the cell surface. The invention also describes a conjugate comprising a cytotoxic agent, a linker arm and a ligand capable of delivering a cytotoxic agent in a cell specific manner. Such conjugates of a cytotoxic agent and a ligand (delivery moiety) have increased selectivity for tumor cells. The toxic moiety and the ligand are joined by a linker arm that is stable in circulation, but is easily cleaved in lysosomes upon internalization of the conjugate. A panel of compounds comprised of a variety of cytotoxic warheads, against various intracellular targets linked to an assortment of ligands, has been developed and tested in a model system. Ligand moieties of these conjugates are capable of specific delivery of cytotoxic agents to receptors that are frequently over expressed in gastric, colon, lung, breast, ovarian and pancreatic tumors. These compounds have the potential to be highly effective anti-tumor agents with considerably little negative effect. This disclosed technology could provide new and exciting methodologies to treat cancer.

Applications: Anti-tumor agent for gastric, colon, lung, breast, ovarian and pancreatic tumors.

Development Status: The technology is currently in the pre-clinical stage of development.

Inventors: Nadya I. Tarasova *et al.* (NCI).

Patent Status: U.S. Patent Application No. 10/505,239 filed 19 Aug 2004, claiming priority to 27 Feb 2002 (HHS Reference No. E–057–2002/2-US–02).

Licensing Contact: Adaku Nwachukwu, J.D.; 301/435–5560; *madua@mail.nih.gov*.

Collaborative Research Opportunity: The National Cancer Institute Structural Biophysics Laboratory is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize Conjugates of Ligand, Linker, and Cytotoxic Agent and Related Compositions and Methods of Use. Please contact John D. Hewes, Ph.D. at 301–435–3121 or hewesj@mail.nih.gov for more information.

SH2 Domain Binding Inhibitors

Description of Technology: Signal transduction processes underlie the transfer of extracellular information to the interior of the cell and ultimately to the nucleus. A variety of signal transduction processes are critical for normal cellular homeostasis, with protein-tyrosine kinases (PTKs) playing central roles in many of these pathways. Examples of such PTKs include the PDGF receptor, the FGF receptor, the HGF receptor, members of the EGF receptor family, such as the EGF receptor, erb-B2, erb-B3 and erb-B4, the src kinase family, Fak kinase and the Jak kinase family. Protein-tyrosine phosphorylation that results from the action of PTKs can modulate the activity of certain target enzymes as well as facilitate the formation of specific multi-protein signaling complexes through the actions of homologous protein modules termed Src homology 2 (SH2) domains, which recognize specific phosphotyrosyl containing sequences. A malfunction in this system through tyrosine kinase overexpression and/or deregulation can be manifested by various oncogenic and hyperproliferative disorders, including cancers, inflammation, autoimmune disease, hyperproliferative skin disorders, psoriasis and allergy/asthma, etc. The disclosed compounds, e.g. peptides, preferably, macrocyclic peptides, are Grb2 SH2 domain signaling antagonists with enhanced binding affinity. The claims of the current application are directed to compositions of matter and methods of use which provide for the diagnosis, testing and treatment of the aforementioned disease states.

Applications: For treatment of cancer, inflammation, autoimmune diseases, hyperproliferative skin disorders, psoriasis and asthma.

Development Status: The technology is currently in an early pre-clinical stage of development.

Inventors: Terrence R. Burke, Jr., *et al.* (NCI).

Patent Status:

- U.S. Patent No. 6,977,241 issued 20 Dec 2005 (HHS Reference No. E–262–2000/0–US–03).
- U.S. Patent Application No. 10/517,717 filed 17 Mar 2005, allowed (HHS Reference No. E–262–2000/1-US–03).

Licensing Status: Available for exclusive or non-exclusive licensing.

Licensing Contact: Adaku Nwachukwu, J.D.; 301–435–5560; *madua@mail.nih.gov*.

Dated: August 7, 2008.

Richard U. Rodriguez,

Director, Division of Technology Development and Transfer, Office of Technology Transfer, National Institutes of Health.

[FR Doc. E8–18982 Filed 8–19–08; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

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

ACTION: Notice.

SUMMARY: The inventions listed below are owned by an agency 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. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852–3804; telephone: 301/

496–7057; fax: 301/402–0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

Broadly Neutralizing Anti-HIV Monoclonal Antibody That Targets a New Epitope on gp41

Description of Technology: Blocking entry of HIV into cells and vaccine development against HIV are the prime targets of HIV therapy and prevention, respectively. Current invention describes a monoclonal Fab anti-HIV antibody isolated through panning against the chimeric construct N_{CCG}-gp41 by Antibodies-by-Design (Morphosys). One of the antibodies has broadly neutralization ability against several HIV subtypes in an envelope-pseudotyped-virus neutralization assay. This antibody was also shown to have synergistic effect with a gp41-derived peptide discovered in this laboratory in inhibiting HIV–1 fusion.

Applications: Research tool or screening for HIV vaccine.

Advantages: Can be potentially used as a therapeutic agent to block HIV–1 entry into cells.

Development Status: In vitro data available.

Market: For the development of drugs against HIV.

Inventors: G. Marius Clore *et al.* (NIDDK).

Publications:

1. E Gustchina *et al.* A monoclonal Fab derived from a human nonimmune phage library reveals a new epitope on gp41 and neutralizes diverse human immunodeficiency virus type 1 strains. J Virol. 2007 Dec;81(23):12946–12953.

2. E Gustchina *et al.* Sequestering the pre-hairpin intermediate of gp41 by peptide $N36^{Mut(e,g)}$ potentiates the human immunodeficiency virus type 1 neutralizing activity of monoclonal antibodies against the N-terminal helical repeat of gp41. J. Virol. in press (2008).

Patent Status: HHS Reference No. E–229–2008/0—Research Tool. Patent protection is not being pursued for this technology.

Licensing Status: This invention is available for non-exclusive licensing as a research tool.

Licensing Contact: Sally Hu, Ph.D.; 301–435–5606; *HuS@mail.nih.gov*.

Collaborative Research Opportunity: The NIH, Laboratory of Chemical Physics is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this monoclonal Fab. Please contact Dr. G.M. Clore at 301–496 0782 and/or e-mail at *mariusc@mail.nih.gov* for more information.

Polyamine Compounds That Bind Tar RNA of HIV and Methods of Treating Viral Disorders

Description of Technology: Current HIV treatment involves applying cocktail of drugs targeting either virus entry or one of three viral enzymes. Because patients eventually develop resistance to the cocktail, a new class of drugs is urgently needed. Current invention describes a new class of polyamine compounds that specifically bind to HIV RNA at micromolar range to prevent binding of viral RNA to viral proteins and therefore blocking viral replication. This differs with the mechanisms of current HIV drugs in the market and therefore offers new strategy in HIV treatment and prevention. Furthermore, this class of compound may aid future development of drugs targeting RNA.

Applications: Treatment and prevention of HIV infection.

Advantages: Novel strategy for HIV treatment and prevention; Specific binding to HIV RNA and strong activity.

Development Status: In vitro data available.

Market: HIV therapeutics and preventatives.

Inventors: Daniel Appella *et al.* (NIDDK).

Publications: Manuscripts in preparation.

Patent Status: U.S. Provisional Application No. 61/123,076 filed 04 Apr 2008 (HHS Reference No. E–159–2008/0-US–01).

Licensing Status: This invention is available for exclusive or non-exclusive licensing.

Licensing Contact: Sally Hu, Ph.D.; 301–435–5606; *HuS@mail.nih.gov.*

Collaborative Research Opportunity: The NIDDK, Laboratory of Bioorganic Chemistry, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the application of TAR-binding polyamines for the treatment of HIV infections. Please contact Daniel Appella at 301–451–1052 or *appellad@niddk.nih.gov* for more information.

Monoclonal Antibodies to HIV–1 Vpr

Description of Technology: Available for licensing are monoclonal antibodies against HIV–1 viral protein R (Vpr) and the respective hybridoma cell lines expressing the same. The antibodies provide a means for detecting HIV–1 Vpr. Currently, the mechanism of HIV pathogenesis believed to involve viral replication inside immune cells and other cells. At present, there are no clinical assays for detecting HIV–1 Vpr. Vpr circulates at detectable levels in the blood and is likely derived from degraded virions or released from infected cells. Vpr facilitates viral replication and disrupt normal cell function. Thus measurement of Vpr levels in blood, extracellular fluid, and tissue may be of benefit in understanding the pathogenesis of HIV–1 infection and its myriad complications.

The hybridoma cell lines (9F12 and 10F2) were selected from a group of hybridoma cell lines. These antibodies can be used for detection, including immunoasssays (ELISA) and immunoaffinity-capillary electrophoresis. The amount of detected HIV–1 Vpr is compared to a standardized control sample for determining the progress of disease or the presence of known complications like neuropathy, dementia, metabolic syndrome, or nephropathy.

Inventors: Jeffrey Kopp (NIDDK), Terence Philips (NBIB), Schubert Ulrich (NIAID), John Yewell (NIAID).

Patent Status: U.S. Patent Application No. 11/630,880 filed 27 Jun 2005 (HHS Reference No. E–141–2003/0–US–03).

Licensing Status: Available for licensing.

Licensing Contact: Michael Shmilovich, Esq.; 301–435–5019; *shmilovm@mail.nih.gov*.

Anti-Pax 2 Antibody

Description of Technology: Available for licensing and commercialization are anti-Pax 2 polyclonal antibodies that can be used for the detection of Pax-2 protein expression in a variety of kidney and neuronal tissues. Pax-2 protein, a transcription factor active during early kidney development, is expressed at high levels in almost all renal proliferative diseases such as renal cancer, polycystic kidney disease and acute renal failure.

The Pax-2 protein has also been linked to Wilms' tumor, a cancerous kidney tumor accounting for ~6% of childhood cancers, and for which ~500 new cases are diagnosed each year in the U.S. Wilms' tumors are hard to diagnose in the early stage because they can grow quite large without causing any pain. While abdominal ultrasound may be used for detection, it is not a practical screening test for otherwise healthy children. There are no blood tests or other tests for screening for Wilms' tumors which, if diagnosed sufficiently early, may be treated with surgery, chemotherapy, and/or radiation therapy.

Potential applications of this technology may also include detection of Pax-2 protein in urine for both chronic and acute renal disease.

Applications: Diagnostics for renal diseases; Research tools for evaluating disease processes of the kidney and other tissues through Pax-2 protein expression in the relevant tissues.

Development Status: Ready for commercialization.

Patent Status: HHS Reference No. B–039–1996/0—Research Tool. Patent protection is not being pursued for this technology.

Inventor: Gregory Dressler (NICHD).

Relevant Publications:

1. GR Dressler. Another niche for Notch. Kidney Int. 2008 Jun;73(11):1207–1209.

2. SR Patel et al. The BRCT-domain containing protein PTIP links PAX2 to a histone H3, lysine 4 methyltransferase complex. Dev Cell. 2007 Oct;13(4):580–592.

3. GR Dressler. The cellular basis of kidney development. Annu Rev Cell Dev Biol. 2006;22:509–529.

4. GB Silberstein et al. Expression of the PAX2 oncogene in human breast cancer and its role in progesterone-dependent mammary growth. Oncogene. 2002 Feb7;21(7):1009–1016.

5. GR Dressler and AS Woolf. Pax2 in development and renal disease. Int J Dev Biol. 1999;43(5):463–468 (Review).

6. GR Dressler. Pax-2, kidney development, and oncogenesis. Med Pediatr Oncol. 1996 Nov;27(5):440–444.

7. GR Dressler and EC Douglass. Pax-2 is a DNA-binding protein expressed in embryonic kidney and Wilms tumor. Proc Natl Acad Sci USA. 1992 Feb 15;89(4):1179–1183.

Licensing Status: Available for non-exclusive licensing as biological materials (internal use or commercial use).

Licensing Contact: RC Tang, JD, LLM; 301–435–5031; *tangrc@mail.nih.gov*.

Dated: August 7, 2008.

Richard U. Rodriguez,

Director, Division of Technology Development and Transfer, Office of Technology Transfer, National Institutes of Health.

[FR Doc. E8–18983 Filed 8–19–08; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Inventions; Availability for Licensing

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

ACTION: Notice.

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Species-Independent A3 Adenosine Receptor Agonists

Description of Technology: The A3 adenosine receptor (A3AR) subtype has been linked with helping protect the heart from ischemia, controlling inflammation, and regulating cell proliferation. Agonists of the human A3AR subtype have been described; however, they lack selectivity for the corresponding receptor of the mouse. This poses a problem for clinical development because animal model testing is important for pre-clinical validation of drug function. Consequently, a novel agonist was made that is selective for the mouse A3AR while retaining selectivity for the human receptor. This innovation should facilitate moving A3 agonists into the clinical phase of drug development with confidence.

This invention claims species-independent agonists of A3AR, specifically (N)-methanocarba adenine nucleosides. In addition, it describes pharmaceutical compositions comprising such nucleosides, and methods of use such as administering an effective amount to a mammal.

Applications: cardiac arrhythmias or ischemia; inflammation; stroke; diabetes; asthma; cancer.

Market: Heart disease and cancer are the leading causes of death for both women and men in the United States despite many advances in drug development. Hence, there is a need for drugs with unique mechanism of action. It is noteworthy that the first synthetic adenosine receptor agonist has recently been approved for use in humans.

Development Status: Research quantities of compounds have been synthesized and tested for receptor selectivity.

Inventors: Kenneth A. Jacobson and Artem Melman (NIDDK).

Publication: A Melman *et al.* Design of (N)-methanocarba adenosine 5′-uronamides as species-independent A3 receptor-selective agonists. Bioorg Med Chem Lett. 2008 May 1;18(9):2813–2819.

Patent Status: U.S. Provisional Application No. 61/040,985 filed 31 Mar 2008 (HHS Reference No. E–140–2008/0–US–01).

Licensing Status: Available for exclusive or non-exclusive licensing.

Licensing Contact: Norbert Pontzer, J.D., Ph.D.; 301–435–5502; *pontzern@mail.nih.gov*.

Fluorescent Cell Lines for Detection of DNA Damage

Description of Technology: The Enhanced Level of Genomic instability 1 (ELG1) protein suppresses genomic instability caused by DNA damage. Cell lines for studying human ELG1 (hELG1) have been established that stably express a fusion protein combining hELG1 and either Green Fluorescent Protein (GFP) or Cyan Fluorescent Protein (CFP). It has been shown that the fluorescent hELG1 is an excellent reporter for DNA damage within the cell, with increased hELG1 localization to the cell nucleus upon exposure to a genotoxin. Therefore, these cell lines may have utility as a screening tool to detect genotoxic agents.

Available for licensing are the RPE cell line (immortalized normal retinal pigment epithelial cells) stably expressing hELG1-CFP, and the U2OS cell line (human osteosarcoma cells) stably expressing hELG1-GFP.

Applications: High-sensitivity screening tool for genotoxic agents.

Inventor: Kyungjae Myung (NHGRI).

Relevant Publication: In preparation.

Patent Status: DHHS Reference No. E–108–2008/0—Research Tool. Patent protection is not being pursued for this technology.

Licensing Status: Available for non-exclusive licensing.

Licensing Contact: Tara L. Kirby, Ph.D.; 301–435–4426; *tarak@mail.nih.gov*.

Collaborative Research Opportunity: The National Chemical Genomics Center is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the assay for detection of genotoxic agents using RPE cell line having hELG1–CFP. Please contact