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 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. 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.

Novel Molecular Conjugates for Signal Amplification

Subhash Dhawan (CBER/FDA), DHHS Reference No. E–136–02/0 filed 10 Jun 2002, Licensing Contact: Susan Ano; 301/435–5515; *anos@od.nih.gov.*

This invention relates to novel molecular conjugates that are applicable to the field of immunoassays and, in general, any probe assay requiring detection of an analyte. These molecular constructs are capable of enhancing test sensitivity and shortening assay time through the use of analyte-specific binding reagents associated with a multiple label scaffold. The invention can utilize a diversity of analyte-binding molecules, providing adjustable selectivity for a range of analytes. Conversely, combination of labels with different chemical properties with a single binding partner facilitates a multiplex approach to analyte detection on a large scale. The invention includes kits and methods for production and use of the molecular conjugates.

Methods of Inducing Deacetylase Inhibitors To Promote Cell Differentiation and Regeneration

Vittorrio Sartorelli (NIAMS) and Pier L. Puri, DHHS Reference No. E–353–01/0 filed 18 Oct 2001, Licensing Contact: Fatima Sayyid; 301/435–4521; *sayyidf@od.nih.gov.*

The present invention discloses a method of enhancing progenitor cell differentiation, including enhancing myogenesis, neurogenesis and hematopoiesis, by contacting a progenitor cell with an effective amount of a deacetylase inhibitor (DI). The progenitor cell can be part of cell culture, such as a cell culture used for in vitro or in vivo analysis of progenitor cell differentiation, or can be part of an organism, such as a human or other mammal. Contacting the progenitor cell with a DI can lead to enhancement of expression of terminal cell-type specific genes in the progenitor cell, such as enhancing expression of muscle-specific genes in myoblasts, and can lead to skeletal muscle hypertrophy. Administering a DI to a subject also can provide some prophylactic or therapeutic effect for inhibiting, preventing, or treating associated with a degeneration or loss of tissue. The DI can be administered to a subject as part of a pharmaceutical composition.

FcεRI-Bearing Human Mast Cell Lines

Arnold Kirshenbaum, Cem Akin, Dean D. Metcalfe (NIAID), DHHS Reference No. E–279–01/0 filed 04 Feb 2002, Licensing Contact: Marlene Shinn; 301/435–4426; *shinnm@od.nih.gov.*

Allergic diseases, which include asthma, are a significant health problem in the United States, with 15–25% of the population displaying some form of allergies. The mast cell is the major effector cell of allergic inflammation and has also been shown to be involved in delayed hypersensitivity reactions, fibrosis, autoimmune disorders, neoplasia, and immunity against parasitic infections. Most mast cell studies are currently performed using mast cells derived from cultured CD34+ progenitor cells, which is time consuming, costly, and produces a poor yield of cells.

The NIH announces a number of newly derived mast cell lines that more closely resemble normal in vivo and in vitro human mast cells, which express functional FcεRI receptors and respond to Stem Cell Factor (SCF) with proliferation. It is well known that the most important means by which mast cells induce inflammation is by mediator release via FcεRI receptor cross-linking. These cell lines also release mediators by cross-linking of FcγRI (CD64) receptors, and have been shown to express FcγRII (CD32). It is anticipated that these cell lines will be useful in a variety of research projects including the development of drugs that block the release of potent mediators that cause allergic inflammation and the development of drugs to inhibit mast cell hyperplasia and dysmyelopoiesis in mastocytosis.

Thermolabile Hydroxyl Protecting Groups and Methods of Use

Serge L. Beaucage et al. (FDA), DHHS Reference No. E–242–00/0 filed 03 Dec 2001, Licensing Contact: Marlene Shinn; 301/435–4426; *shinnm@od.nih.gov.*

Synthetic oligonucleotides can be used in a wide variety of settings, which aside from basic research tools include gene therapy applications, antisense and immunostimulatory therapeutic indications, and the rapidly evolving diagnostic and DNA sequencing microarray technology. The NIH announces a new technology aimed at improving oligonucleotide synthesis on glass microarrays. The technology is based on the use of thermolabile groups for 5′-/3′-hydroxyl protection of oligonucleotides and departs from the current methods employed in the preparation of oligonucleotide microarrays in that it does not utilize photochemical irradiation or abrasive chemicals for the removal of such protecting groups. Instead, thermal cleavage of 5′-/3′-hydroxyl protecting groups is effected at temperatures near 90°C under mild neutral conditions to prevent glass surfaces from being harmed by harsh chemical reagents. In addition, thermolabile protecting groups could be useful in manufacturing synthetic oligonucleotides on solid supports or in solution. Thermolabile protecting groups may also be used to protect/deprotect drug functional groups under conditions that will not affect other functional entity(ies) on the molecule.

Dated: October 24, 2002.

Jack Spiegel,

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

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