addresses), small manufacturers' assistance, information on video conferencing and electronic submissions, Mammography Matters, and other device-oriented information. The CDRH home page may be accessed at http://www.fda.gov/cdrh. Guidance documents are also available on the Dockets Management Branch Internet site at http:/www.fda.gov/ohrms/dockets/default.htm.

IV. Comments

Interested persons may submit to the Dockets Management Branch (address above) written or electronic comments regarding this guidance at any time. Submit two copies of any comments,except that individuals may submit one copy. Comments are to be identified with the docket number found in brackets in the heading of this document. The guidance document and received comments may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

Dated: December 11, 2001.

Linda S. Kahan,

Deputy Director, Center for Devices and Radiological Health.

[FR Doc. 02–690 Filed 1–10–02; 8:45 am]

BILLING CODE 4160–01–S

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. 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.

Expression, Purification and Efficacy Testing of Synthetic Plasmodium Falciparum Apical Membrane Antigen 1 Expressed in Pichia Pastoris

Stowers et al. (NIAID)

DHHS Reference No. E–025–02/0 filed 09 Nov 2001

Licensing Contact: Carol Salata; 301/496–7735 ext. 232; e-mail: *salatac@od.nih.gov.*

A challenge facing the biotechnology industry involves finding robust systems for the expression of large amounts of recombinant protein. Extra technological hurdles are faced when these proteins are required for therapeutic usages.

Malaria remains one of the leading causes of both morbidity and mortality in the tropical and sub-tropical world. Currently, there is no malaria vaccine. This invention relates to both of these issues.

Two recombinant forms of the malaria asexual blood stage antigen Apical Membrane Antigen 1 (AMA1) were produced in Pichia pastoris using totally defined, synthetic medias and a fermentation methodology that has been reproducibly scaled over a 10-fold range to 60L. High levels of secreted recombinant protein were obtained (300mg/L secreted protein in the supernatant, and >50mg/L final purified bulk protein), and a purification strategy developed to remove Host cell-derived lipids. Highly purified forms of both types of AMA1 produced appear to produce antibodies in vivo in rabbits that block homologous parasites from invading red blood cells in vitro. The combination of the two allelic forms made appears potent at inducing antibodies capable of blocking the invasion of many heterologous parasite strains in vitro, suggesting that the combination of these two alleles of AMA1 will provide sufficient coverage from the diverse field populations of parasites. One of the two AMA1's, based on the FVO allelic variant of AMA1, was emulsified with complete and incomplete Freund's adjuvant.

Vaccination of highly susceptible Aotus vociferans monkeys with this formulation conferred significant protection from a subsequent lethal challenge with the virulent FVO Plasmodium falciparum parasite. Five of eight animals whose primary immune response was directed against AMA1 were completely protected. These two recombinant form of AMA1 may be an effective malaria vaccine. The production and purification methodologies may be suitable to other therapeutic proteins where large-scale, inexpensive production methodologies are required.

Two cDNA Clones of Hepatitis E Virus (HEV) That Are Infectious for Primates and Encode a Virulent and an Attenuated Virus Respectively

Suzanne U. Emerson, Robert H. Purcell, Mingdong Zhang, and Xiang-Jin Meng (NIAID)

DHHS Reference No. E–278–01/0 filed 09 Nov 2001

Licensing Contact: Carol Salata; 301/496–7735 ext. 232; e-mail: *salatac@od.nih.gov*

Hepatitis E virus (HEV) is a human pathogen that is the most important cause of acute hepatitis in areas where the virus in endemic (Southeast and Central Asia, and parts of Africa). This invention relates to transcripts from the two cDNA clones that produced virus following intrahepatic transfection of chimpanzees. The virus encoded by cDNA with the consensus sequence of the wild-type Sar 55 Pakistani strain of HEV caused liver enzyme elevations (i.e. acute hepatitis) in the chimpanzee and resulted in seroconversion to anti-HEV at five weeks following inoculation. The second cDNA differed from the first by a two nucleotides, one of which was located in the coding region. The nucleotide at this position and the 18–20 nucleotides surrounding it are highly conserved in all strains sequenced thus far. Two chimpanzees inoculated with transcripts from this clone seroconverted to anti-HEV but seroconversion was delayed until week 14 and liver enzyme levels did not rise, indicating the virus was attenuated. Viral sequences could be recovered from the serum of only one chimp and at only one time point by reverse-transcription polymerase chain reaction, indicating viral replication was inefficient. An attenuated vaccine would be more cost effective than a recombinant protein vaccine.

Suppression of CCR5 but Not CXCR4-Tropic HIV–1 Replication in Lymphoid Tissue by Human Herpes Virus 6

Margolis et al. (NICHD)

DHHS Reference No. E–089–01/0 filed 28 Mar 2001

Licensing Contact: Carol Salata; 301/496–7735 ext. 232; e-mail: *salatac@od.nih.gov.*

HIV–1 infects cells via a receptor complex formed by CD4 and a coreceptor, such as CCR5 or CXCR4. The early stages of HIV–1 infection are dominated by CCR5-tropic viral variants. CXCR4-tropic variants frequently emerge at later stages

followed by a rapid decline in CD4+ T cells and progression to AIDS.

This invention describes the mechanism of the coreceptor switch from CCR5 to CXCR4 as HIV infection progresses. The study of the interaction between human herpes virus 6 (HHV–6) and HIV has shed light on this coreceptor switch. The inventors observed that HHV–6 affects HIV replication by suppressing CCR5-tropic but not CXCR4-tropic HIV–1. The inventors demonstrate that HHV–6 upregulates the production of RANTES, a CC chemokine that is known to inhibit infection by CCR5-tropic HIV–1. RANTES interferes with the interaction of the CCR5-tropic HIV–1 thereby allowing the CXCR4-tropic HIV–1 variants to emerge.

This observation may lead to new HIV–1 therapies and vaccines. For example, an attenuated HHV–6 or the use of other compounds to stimulate RANTES production could be used as an HIV vaccine while a drug effective against HHV–6 could be used as an HIV therapeutic. Once HHV–6 is eradicated from the body or rendered nonfunctional the conversion from CCR5-tropic HIV–1 to CXCR4-tropic HIV–1 cannot take place.

Human Papilloma Virus Immunoreactive Peptides

Samir N. Khleif , David Contois, and Jay Berzofsky (NCI)
DHHS Reference No. E–126–01/0 filed 23 Mar 2001
Licensing Contact: Sally Hu; 301/496–7056 ext. 265; *e-mail: hus@od.nih.gov.*

This invention provides immunogenic peptides from the HPV–18E6 protein that comprise class I restricted T cell epitopes and discloses methods of administering these peptides to individuals, and a method for monitoring or evaluating an immune response to HPV with these peptides. The HPV–18E6 peptide cross-reacts immunologically with both HPV type 16 and HPV type 18. HPV 16 and HPV 18 are the most common HPV types involved in cervical cancer, which is the second most common cause of cancer deaths in women worldwide. This invention demonstrates that the HPV–18E6 peptide has a higher affinity for the most common human lymphocyte antigen (HLA), HLA–A2 than the homologous peptide from HPV 16. Thus, this invention provides a potential prophylactic or therapeutic vaccine against cervical cancer caused by HPV16 and 18, and a targeted therapy for cervical cancer and other diseases that are caused by HPV including other genital cancers, head and neck cancers, and upper digestive tract cancers. It could also be potentially used in the treatment of patients presenting with pre-malignant cervical disease, especially in underdeveloped countries with no access to surgical treatment or to completely avoid surgical treatment.

Parallel Measurements of Multiple Macromolecules Using a Cryoarray

Robert Star (NIDDK), Takehiko Miyaji (NIDDK), Stephen Hewitt (NCI), and Lance Liotta (NCI)
DHHS Reference No. E–064–01/0 filed 31 Aug 2001
Licensing Contact: Cristina Thalhammer-Reyero; 301/496–7056 ext. 263; e-mail: *ThalhamC@od.nih.gov.*

Available for license is a new improved technique for the creation of biological arrays of 25–100 biological samples per slide, for use in parallel molecular screening in medical research and clinical diagnostics. Recent advances in genomics, including serial analysis of gene expression, and DNA microarrays have allowed researchers to perform high throughput analysis of gene expression. These experiments generate large amounts of information that must be validated independently, one gene at a time. In particular, there is an increasing demand for protein arrays in order to measure changes in protein expression or post-translational modification of proteins. Current techniques to create protein arrays are deficient because the proteins stick to the arraying pins, and array fabrication at room temperature may destroy the protein structure and function. The CryoArray technology, based on the creation of the arrays at subzero temperature, preserves the stability and functionality of the biological samples, including proteins, and is flexible with respect to the molecular probes it can accommodate. Wells made in a frozen block of embedding material are filled with biological samples, which freeze and bond to the surrounding block. The loaded block is cut in a cryostat to produce up to 800 replicate 4–10 microns thin sections. The samples can include DNA, RNA, and proteins such as antibodies or receptors. Recombinant or native tissue proteins are detected using antibodies; however, the system can be extended for other types of biological assays.

The ability to make multiple (i.e., up to 800) cryosections from one cryoblock enables parallel analysis of many identical arrays. Unlike other proteomic techniques, cryoarrays are easy to use, economical, efficiently use samples with little waste, require only a small volume of sample, and are protein friendly because samples are kept frozen during production. The cryoarray method allows small laboratories without access to expensive arraying equipment to produce many identical arrays with moderate numbers of precious samples. Proteins can be detected in their native configuration, without SDS or formalin. Cryoarrays may be useful for screening small samples of precious biological fluids or tissues for new biomarkers or for rapid screening of monoclonal antibodies. It may be possible to use cryoarrays to also measure protein function and protein-protein interactions.

Method for Non-Invasive Identification of Individuals at Risk for Diabetes

Anthony J. Durkin, Marwood N. Ediger, Michelle V. Chenault (FDA)
DHHS Reference No. E–091–98/2 filed 17 May 2001
Licensing Contact: Dale Berkley; 301/496–7735 ext. 223; e-mail: *berkleyd@od.nih.gov*

The invention is a non-invasive technique for the detection of ocular pathologies, including molecular changes associated with diabetes. Raman spectra emitted from an eye that is subject to a laser probe provides information regarding early markers of diabetes or diabetes-induced ocular pathologies. The invention compares spectra taken from the subject under study to spectra from a normal subject. Multivariate statistical methods are used to obtain predictive information based on the detected spectra, and to diagnose or predict the onset or stage of progression of diabetes-induced ocular pathology.

Dated: January 4, 2002.

Jack Spiegel,

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

[FR Doc. 02–744 Filed 1–10–02; 8:45 am]

BILLING CODE 4140–01–P

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.,