developing a mouse model for studying the effect of down-regulating these receptors specifically in melanoma cells. This would mimic the effect of antagonists without the confounding effects of systemically inhibiting CXCR4 or CCR10. By either adding or removing dietary administered doxycycline, receptor expression can be regulated to assess the role of these two receptors in a variety of cancer-related assays.

Applications:

• Study the effect of chemokine receptors in tumor growth or metastasis.

• Test CXCR4 and CCR10 antagonists in preclinical studies.

• Develop B16 melanoma mouse model mimicking the effect of chemokine receptor antagonists.

Advantages:

• Ability to regulate *in vitro* and *in vivo* expression of the chemokine receptor.

• Ability to investigate the *in vivo* role in cancer cells of doxycycline control of chemokine receptor expression.

Development Status: The technology is currently in the preclinical stage of development.

Market: Cancer is the second leading cause of death in the U.S. and it is estimated that more than 1 million Americans develop cancer in a year.

Inventors: Sam T. Hwang (NCI).

Publication: T Kakinuma, ST Hwang. Chemokines, chemokine receptors, and cancer metastasis. J Leukoc Biol. 2006 Apr;79(4):639–651.

Patent Status: HHS Reference No. E–345–2008/0—Research Material. Patent protection is not being sought for either technology.

Licensing Status: Available for non-exclusive licensing under a Biological Materials License Agreement.

Licensing Contact: Betty B. Tong, Ph.D.; 301–594–6565; *tongb@mail.nih.gov.*

Identification of Persons Likely To Benefit From Statin Mediated Cancer Prevention by Pharmacogenetics

Description of Technology: Inhibitors of 3-hydroxy-3-methylglutaryl (HMG) coenzyme A reductase (statins) are a class of well-tolerated compounds that are the most widely used cholesterol-lowering drugs in the United States. Reduced cancer risk among statin users has also been observed as a secondary outcome in randomized controlled clinical trials evaluating effects of statins on cardiovascular outcomes. However the observed cancer risk reduction varied with different clinical studies. Thus there is a need to identify individuals who would benefit from treatment with statins.

The current invention describes a pharmacogenetic method to identify candidates who are most likely to benefit from treatment with statins to reduce cancer risk, and consequently minimizing any unnecessary cost and side effects in individuals who do not benefit. Specifically, we discovered that an HMGCR genetic variant rs12654264 is associated with significantly lower colorectal cancer risk, with most of the benefit seen in HMGCoA reductase inhibitor (statin) users. We also discovered that this same HMGCR genetic variant is associated with significantly higher serum cholesterol levels in Israeli colorectal cancer patients. The same HMGCR genetic variant has also been associated with significantly higher serum cholesterol levels in two independent groups of individuals of mixed European descent [*http://www.broad.mit.edu/diabetes/scandinavs/index.html* and N Engl J Med.2008 March 20;358(12):1240–1249 (*http://www.ncbi.nlm.nih.gov/pubmed/18354102?dopt*)]. These data suggest that the same genetic variant modifies cholesterol metabolism in a manner that affects both colorectal cancer risk and cardiovascular risk.

Applications and Market:

• Statins account for approximately 80% of the cholesterol-lowering drugs prescribed in the United States, and six statins are currently available on the U.S. market. Reduced cancer risk is also associated with statin use. This invention provides a method to indentify individuals who are most likely to benefit from cancer chemopreventive treatment with statins.

• Pharmacogenetic markers can be developed to identify patient population that can be benefit from statins, therefore expands the markets of stains.

Development Status: The inventors have discovered several novel genetic variants of HMG coenzyme A reductase gene, and are further investigating the functional significance of the variants in vitro.

Inventors: Levy Kopelovich (NCI) *et al.*

Patent Status: PCT Application No. PCT/US2008/082359 filed 04 Nov 2008, which published as WO 2009/061734 on 14 May 2009 (HHS Reference No. E–328–2007/0–PCT–02).

Licensing Status: Available for licensing.

Licensing Contact: Betty B. Tong, Ph.D.; 301–594–6565; *tongb@mail.nih.gov.*

Dated: October 7, 2009.

Richard U. Rodriguez,

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

[FR Doc. E9–24877 Filed 10–15–09; 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.

Biological/Research Material for H1N1 Influenza Virus Vaccine Research

Description of Technology: Offered for licensing is a recombinant attenuated vaccinia virus, MVA, that expresses the haemagglutinin (HA) and nucleoprotein (NP) of influenza virus A/PR/8/34 (H1N1). The virus has been shown to stimulate protective immunity to influenza virus in mice.

The materials can be used for research purposes and in particular in the area of influenza virus vaccines.

The related publications listed below demonstrate the usefulness of this biological material in influenza virus vaccine research.

Applications: Research reagents useful in research and development in the area of H1N1 Influenza virus vaccines.

Development Status: Fully developed. The usefulness of the materials has been shown in Dr. Moss' laboratory.

Inventors: Bernard Moss and Linda S. Wyatt (NIAID).

Publications:

1. G Sutter, LS Wyatt, PL Foley, JR Bennink, B Moss. A recombinant vector derived from the host range-restricted and highly attenuated MVA strain of vaccinia virus stimulates protective immunity in mice to influenza virus. Vaccine 1994 Aug;12(11):1032–1040.
2. B Bender, CA Rowe, SF Taylor, LS Wyatt, B Moss, PA Small Jr. Oral immunization with a replication-deficient recombinant vaccinia virus protects mice against influenza. J Virol. 1996 Sep;70(9): 6418–6424.

Patent Status: HHS Reference No. E–260–2009/0—Research Material. Patent protection is not being sought for this technology.

Related Technologies: HHS Reference No. E–552–1982/2—

1. U.S. Patent No. 6,998,252 issued 14 Feb 2006, ''Recombinant Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Regulatory Sequences''
2. U.S. Patent No. 7,015,024 issued 21 Mar 2006, ''Compositions Containing Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Sequences''
3. U.S. Patent No. 7,045,313 issued 16 May 2006, ''Recombinant Vaccinia Virus Containing Chimeric Gene Having Foreign DNA Flanked by Vaccinia Regulatory DNA''
4. U.S. Patent No. 7,045,136 issued 16 May 2006, ''Methods of Immunization Using Recombinant Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Regulatory Sequences''

An abstract describing these technologies may be viewed at *http://www.ott.nih.gov/Technologies/abstractDetails.aspx?RefNo=2000.*

Licensing Status: Available for licensing.

Licensing Contacts: Uri Reichman, Ph.D., MBA; 301–435–4616; *UR7a@nih.gov*; RC Tang, JD, LLM; 301–435–5031; *tangrc@mail.nih.gov.*

Biological/Research Material for HIV Vaccine Research

Description of Technology: Offered for licensing is a recombinant attenuated vaccinia virus, MVA, that expresses SIV 239gagpol. The materials can be used for research purposes and in particular in the area of HIV/AIDS vaccines.

Plasmid insertion vector pJH–4, containing the foreign gene SIV 239 GagPol controlled by vaccinia early/late promoter, inserts into del III of attenuated vaccinia MVA virus to make recombinant MVA virus. The resulting recombinant virus made from pJH4, MVA/SIV239gagpol, expresses the SIV 239gagpol gene and thus can be used to conduct vaccine studies in animal models such as Rhesus macaques.

The list of publications shown below demonstrates the usefulness of this biological material in HIV vaccine research.

Applications: Research reagents useful in research and development in the area of HIV/AIDS vaccines.

Development Status: Fully developed. Material has been used extensively in research.

Inventors: Bernard Moss and Linda S. Wyatt (NIAID).

Publications:

1. RR Amara, F Villinger, JD Altman, SL Lydy, SP O'Neil, SI Staprans, DC Montefiori, Y Xu, JG Herndon, LS Wyatt, MA Candido, NL Kozyr, PL Earl, JM Smith, HL Ma, BD Grimm, ML Hulsey, J Miller, HM McClure, JM McNicholl, B Moss, HL Robinson. Control of a mucosal challenge and prevention of AIDS by a multiprotein DNA/MVA vaccine. Science 2001 Apr 6;292(5514):69–74.
2. PL Earl, LS Wyatt, DC Montefiori, M Bilska, R Woodward, PD Markbam, JD Malley, TU Vogel, TM Allen, DI Watkins, N Miller, B Moss. Comparison of vaccine strategies using recombinant env-gag-pol MVA with or without an oligomeric Env protein boost in the SHIV rhesus macaque model. Virology 2002 Mar 15;294(2):270–281.
3. RR Amara, JM Smith, SI Staprans, DC Montefiori, F Villinger, JD Altman, SP O'Neil, NL Kozyr, Y Xu, LS Wyatt, PL Earl, JG Herndon, JM McNicholl, HM McClure, B Moss, HL Robinson. Critical role for Env as well as Gag-Pol in control of a simian-human immunodeficiency virus 89.6P challenge by a DNA prime/recombinant modified vaccinia virus Ankara vaccine. J Virol. 2002 Jun;76(12):6138–6146.
4. RR Amara, F Villinger, SI Staprans, JD Ahman, DC Montefiori, NL Kozyr, Y Xu, LS Wyatt, PL Earl, JG Herndon, HM McClure, B Moss, HL Robinson. Different patterns of immune responses but similar control of simian human immunodeficiency virus 89.6P mucosal challenge by modified vaccinia virus Ankara (MVA) and DNA/MVA vaccines. J Virol. 2002 Aug;76(15):7625–7631.
5. S Sadagopal, RR Amara, DC Montefiori, LS Wyatt, SI Staprans, NL Kozyr, HM McClure, B Moss, HL Robinson. Signature for long-term vaccine-mediated control of a Simian and human immunodeficiency virus 89.6P challenge: stable low-breath and low-frequency T-cell response capable of coproducing gamma interferon and interleukin-2. J Virol. 2005 Mar;79(6):3243–3253.

Patent Status: HHS Reference No. E–258–2009/0—Research Material. Patent protection is not being pursued for this technology.

Related Technologies: HHS Reference No. E–552–1982/2—

1. U.S. Patent No. 6,998,252 issued 14 Feb 2006, ''Recombinant Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Regulatory Sequences''
2. U.S. Patent No. 7,015,024 issued 21 Mar 2006, ''Compositions Containing Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Sequences''
3. U.S. Patent No. 7,045,313 issued 16 May 2006, ''Recombinant Vaccinia Virus Containing Chimeric Gene Having Foreign DNA Flanked by Vaccinia Regulatory DNA''
4. U.S. Patent No. 7,045,136 issued 16 May 2006, ''Methods of Immunization Using Recombinant Poxviruses Having Foreign DNA Expressed Under the Control of Poxvirus Regulatory Sequences''

An abstract describing these technologies may be viewed at *http://www.ott.nih.gov/Technologies/abstractDetails.aspx?RefNo=2000.*

Licensing Status: Available for licensing.

Licensing Contacts: Uri Reichman, Ph.D., MBA; 301–435–4616; *UR7a@nih.gov*; RC Tang, JD, LLM; 301–435–5031; *tangrc@mail.nih.gov.*

A Target for the Development of Diagnostics and Therapeutics for Abnormal Hematopoiesis

Description of Technology: The zinc finger protein ZFP36L2 has been shown by the inventors to play an essential role in hematopoiesis, a process that is dysregulated in hematological cancers, anemia, and other conditions. Thus, ZFP36L2 has promise for use in a diagnostic test to detect abnormal hematopoiesis, or as a target for the development of therapeutics to treat abnormal hematopoiesis.

Hematopoiesis is the formation of blood cellular components, through the differentiation of hematopoietic stem cells into lineages with a variety of roles, such as carrying oxygen, immune function, and blood clotting. Abnormally high hematopoiesis can be caused by hematological cancers such as leukemia or lymphoma, or by other myeloproliferative disorders. Abnormally low hematopoiesis can be caused by diseases such as anemia, thrombocytopenia, or myelodysplastic syndrome, and is often a secondary symptom of other conditions, such as cancer, infection, or dialysis.

The inventors have discovered that Zinc finger protein 36 like type-2 (ZFP36L2) plays an essential role in hematopoiesis, possibly by affecting the stability of mRNAs involved in this process. ZFP36L2 is a member of the tristetraprolin (TTP) family, which are mRNA-binding proteins involved in mRNA processing and degradation. The invention discloses methods of detecting abnormal hematopoiesis by detecting abnormal ZFP36L2 expression or a mutation in the ZFP36L2 gene, and methods of controlling abnormal hematopoiesis by modulating levels of ZFP36L2 protein.

Applications:

• Diagnostic test to detect abnormal hematopoiesis.

• Therapy for abnormal hematopoiesis.

Development Status: Discovery stage.

Market:

• Over 3.5 million people in the United States suffer from anemia, according to NHLBI, and more than half of all chemotherapy treatment for cancer results in anemia.

• The American Cancer Society estimates that approximately 4300 cases of chronic myelogenous leukemia are diagnosed in the United States every year.

Inventors: Perry J. Blackshear and Deborah J. Stumpo (NIEHS).

Related Publication: DJ Stumpo, HE Broxmeyer, T Ward, S Cooper, G Hangoc, YJ Chung, WC Shelley, EK Richfield, MK Ray, MC Yoder, PD Aplan, PJ Blackshear. Targeted disruption of Zfp36l2, encoding a CCCH tandem zinc finger RNA-binding protein, results in defective hematopoiesis. Blood 2009 Sep 17;114(12):2401–2410.

Patent Status: PCT Application Serial No. PCT/US08/68900 filed on 01 Jul 2008 (HHS Reference No. E–255–2007/0–PCT–02).

Licensing Status: Available for licensing.

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

Collaborative Research Opportunity: The NIEHS Laboratory of Signal Transduction, Polypeptide Hormone Action Group, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. Please contact Elizabeth M. Denholm, Ph.D., Director, Office of Technology Transfer, NIEHS, at *denholme@niehs.nih.gov* for more information.

Susceptibility-Matched Multiwell Plates for High-Throughput Screening by Magnetic Resonance Imaging and Nuclear Magnetic Resonance Spectroscopy

Description of Technology: Available for licensing and commercial development is a patent estate that covers multi-well assay plates for high-throughput screening by magnetic resonance imaging (MRI) and nuclear magnetic resonance (NMR) spectroscopy. Multi-well plates are used in a wide variety of high-throughput measurements in clinical chemistry and immunology, as well as in drug discovery and other research applications. Magnetic resonance imaging (MRI) of multi-well plates offers the possibility of performing new kinds of high-throughput assays, including the detection of magnetic nanoparticles attached to or within cells. Moreover, MRI-guided localized nuclear magnetic resonance (NMR) spectroscopy could be used to perform detailed chemical analysis of complex mixtures of metabolites not possible by any other common analytical technique. Best of all, conventional MRI techniques exist which would permit all samples in one or more multi-well plate(s) to be analyzed simultaneously. Unfortunately, conventional multi-well plates typically give poor performance for MRI-based assays since they provide inadequate matching of magnetic susceptibility between the plate, the sample and their surroundings. This results in distortion of the magnetic field within the scanner and thus reduces the sensitivity for detecting magnetic particles and the resolution of NMR spectra.

This invention relates to a new multi-well plate design incorporating one-piece polyetherimide plastic construction for improved magnetic susceptibility matching for aqueous samples. This design can easily be extended to non-aqueous samples by the selection of an appropriate, commercially available plastic resin or resin blend. Further enhancement in susceptibility matching can be accomplished by combining the new plate design with plugs for each well constructed from the same plastic as the plate. These plugs would allow the entire thickness of each sample to be scanned in chemical analyses, improving signal-to-noise ratio and sensitivity. These plugs can optionally be integrated into a single ''cap mat'' so that the entire assembly can be filled and manipulated by standard robotic laboratory equipment already in wide use in the pharmaceutical industry. Alternatively, spherical wells, accessed by narrow fill holes, may be molded into a solid plate, eliminating the need for individual plugs to seal each well. The new multi-well plate/plug design reduces magnetic field distortions and should dramatically improve spectral resolution and sensitivity for NMR and MRI-based high-throughput screening.

Applications:

• NMR Spectroscopy,

• MRI Imaging of magnetic nanoparticles,

• Clinical Chemistry,

• Immunology,

• Drug Discovery,

• Combinatorial Chemistry, and

• Quality Control in the pharmaceutical, chemical and agricultural industries.

Advantages:

• Increased signal-to-noise ratio and sensitivity relative to conventional multi- well plates

• Portability

• Compatible with existing high-throughput robots.

Development Status: Used actively in inventor's lab.

Inventor: Kenneth W Fishbein (NIA).

Patent Status: U.S. Patent Application No. 12/083,501 filed 30 Dec 2008 (HHS Reference No. E–243–2005/0–US–03).

Licensing Status: Available for licensing.

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

Collaborative Research Opportunity: The National Institute on Aging, Magnetic Resonance Imaging & Spectroscopy Section, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize this technology. Please contact Nicole Darack, Ph.D. at 301–435–3101 or *darackn@mail.nih.gov* for more information.

Dated: October 5, 2009.

Richard U. Rodriguez,

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

[FR Doc. E9–24871 Filed 10–15–09; 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.