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.

Enhanced Homologous Recombination Mediated by Lambda Recombination Proteins

Drs. E. Lee, N. Copeland, N. Jenkins, and D. Court (NCI)
DHHS Reference No. E–077–01/0 filed Feb 26, 2001
Licensing Contact: John Rambosek; 301/496–7056 ext. 270; e-mail: rambosej@od.nih.gov

The present invention concerns a method to enhance homologous recombination in bacteria using the Red recombination system derived from a defective lambda prophage. This lambda system, like the RecET system, uses homologous recombination proteins to protect and recombine the electroporated linear DNA. However, the lambda system is at least 50 to 100 times more efficient than the RecET system. The high recombination efficiency offered by this system makes it possible to manipulate DNA without drug selection. Point mutations, deletions, or insertions can be engineered into any gene on plasmids or bacterial artificial chromosomes (BACs) for gene functional analysis. This recombination system also can be used to subclone DNA fragments as large as 80 kb from BACs by gap repair. Targeting vectors for embryonic stem cells or transgenic constructs by BAC engineering can now be subcloned with ease, and virtually any region of the engineered BAC may be included in the final subclone. The ability to efficiently and precisely modify genes or regulatory sequences on BACs, combined with the ability to include or exclude them during the subcloning process, should make it possible to dissect the function of these sequences in the whole animal at a high-throughput level not previously possible.

This lambda recombination system has been used to introduce a Cre recombinase gene into the coding region of the mouse neural-specific enolase gene carried on a 250 kb mouse BAC after transfer of the mouse BAC into DY380 E. coli cells which carry the lambda recombination system. Transgenic mice that were subsequently generated which carry this modified BAC specifically expressed Cre in all mature neurons and Cre expression mirrored that of the mouse neural-specific enolase gene.

This abstract modifies an abstract for this technology published in the **Federal Register** on Thursday, April 5, 2001 (66 FR 18098).

Use of Endogenous Vertebrate Phytase to Increase Capacity To Utilize Phytic Acid in Livestock Feed

Stephen Shears (NIEHS), Paul Reynolds, Jim Petitte
DHHS Reference No. E–139–00/0 filed Aug 11, 2000
Licensing Contact: John Rambosek; 301/496–7056 ext. 270; e-mail: rambosej@od.nih.gov

This invention discloses the concept of creating transgenic farm animals that secrete a native phytase enzyme into their digestive tracts. It has long been recognized that monogastric animals (e.g. pigs and chickens) do not utilize dietary phosphorus as efficiently as possible. This is because a high percentage of total phosphorus (70% in cereals, 50% in legume seeds) is present as phytic acid and its salts—phytate. Monogastric animals utilize phytate inefficiently because they lack the enzyme phytase in their digestive systems. Phytase liberates the phosphorus from phytate, thereby making dietary phosphorus available to the animals. This has the dual effect of both promoting more efficient growth of the animals, as well as imposing less of an environmental burden in the form of excess phosphorus in water streams.

Use of phytase as a growth feed supplement is well known. However, in the past the focus has always been on adding exogenous phytase to animal feed, or to increase the level of phytase expression in the seeds making up the feed. The inventors' novel concept is to redirect expression of a naturally occurring phytase gene so that the enzyme will be secreted into the intestinal lumen. This will create farm animals that can more efficiently utilize unsupplemented feeds. Another problem with existing phytases that the present invention overcomes is that phytase tends to be unstable during the heat treatment used to process feed. This invention overcomes this limitation because the phytase does not have to incorporated into feed at all.

Cloning of the Human Nuclear Receptor Co-Repressor Gene

Dr. Johnson M. Liu (NHLBI)
DHHS Reference Number E–088–99/0 filed Aug 3, 1999
Licensing Contact: John Rambosek; 301/496–7056 ext. 270; e-mail: rambosej@od.nih.gov

Alteration in the expression of human genes is critical to the development and progression of many diseases. These include, among others, cancer, inflammation, cardiovascular disease, hypercholesterolemia, blood pressure, and diabetes. The Human Nuclear Receptor Co-Repressor (HuN-Cor) gene represents a technology that may be used to alter the transcription of genes. It provides a general mechanism by which many genes may be modulated throughout the entire range of being turned on to being completely turned off. The HuN-Cor gene encodes for a ubiquitously expressed protein that silences other genes. It does this by specifically recruiting an enzyme complex that causes local folding of chromatin, not allowing other transcription factors to access the DNA. HuN-Cor represents a powerful research tool that can be used to study gene expression and characterization of many different genes. It may ultimately have great utility in controlling gene expression via gene therapy technology, and may also be useful as a target for the isolation of pharmaceutical compounds that enhance or inhibit expression of genes. For example, it may be possible to engineer mutations of the HuN-Cor gene that dominantly inhibit its function; these mutants could then be expressed in appropriate target tissues or cells in order to control gene expression. Finally, the gene product may have utility in the discovery of therapeutic compounds that modulate gene expression via HuN-Cor.

Antibodies That Selectively Detect the Human Nestin Protein

Conrad Messam et al. (NINDS)

DHHS Reference Nos. E–145–99/0 and E–009–01/0

Licensing Contact: Norbert Pontzer; 301/496–7736, ext. 284; e-mail: pontzern@od.nih.gov

Nestin is an intermediate filament protein first described in early embryonic neuroepithelial stem cells. Although not found in most cells of the mature CNS, nestin is the predominant marker used to detect the small population of undifferentiated cells. The presence of nestin identifies stem, progenitor and some tumor cells in the CNS, and also labels areas of reactive gliosis in the CNS. Available methods to detect nestin use antibodies generated against rat nestin protein. Since rat and human nestin have only about fifty percent sequence homology, these antibodies may not be optimal for detecting nestin in human cells.

NIH scientists used a novel human nestin immunogen to generate polyclonal and monoclonal antibodies that bind with high affinity and specificity to human nestin. The immunogen was expressed from a 450 base-pair segment of human nestin mRNA, which has 11 nucleotide differences from previously published human nestin. These antibodies increase the specificity to accurately detect human nestin in all stages of brain development and will increase our understanding of glial differentiation. In addition, this technology may be useful for detecting glioblastomas or other early stage neuroectodermal tumors and for following transplanted stem cells.

Dated: April 20, 2001.

Jack Spiegel,

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

[FR Doc. 01–10580 Filed 4–27–01; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Statement of Organization, Functions, and Delegations of Authority

Part N, National Institutes of Health, of the Statement of Organization, Functions, and Delegations of Authority for the Department of Health and Human Services (40 FR 22859), May 27, 1975, as amended most recently at 66 FR 6617, January 22, 2001, and redesignated from Part HN as Part N at 60 FR 56605, November 9, 1995), is amended as set forth below to reorganize the Office of the Director, NIH, as follows: (1) Abolish the Office of Bioengineering, Bioimaging, and Bioinformatics.

Section N–B, Organization and Functions, under the heading Office of the Director (NA, formerly HNA), is amended as follows:

(1) Immediately following the statement for the Executive Office (NAR, formerly HNAR), the title and functional statement of the Office of Bioengineering, Bioimaging, and Bioinformatics (NAC, formerly HNAC) as deleted in their entirety.

DELEGATIONS OF AUTHORITY STATEMENT: All delegations and redelegations of authority to officers and employees of NIH which were in effect immediately prior to the effective date of this reorganization and are consistent with this reorganization shall continue in effect, pending further redelegation.

Dated: March 6, 2001.

Ruth L. Kirschstein,

Acting Director, National Institutes of Health.

[FR Doc. 01–10581 Filed 4–27–01; 8:45 am]

BILLING CODE 4140–01–M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Prospective Grant of Exclusive License: Bacteriophage Having Multiple Host Range

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

ACTION: Notice.

SUMMARY: This is notice, in accordance with 35 U.S.C. 209(c)(1) and 37 CFR 404.7(a)(1)(i), that the National Institutes of Health (NIH), Department of Health and Human Services, is contemplating the grant of a an exclusive license to practice the invention embodied in: United States Patent Application 60/220,987 entitled ''Bacteriophage Having Multiple Host Range'' filed on July 25, 2000, to BioPhage, Inc., having a place of business in Montreal, Quebec. The patent rights in this invention have been assigned to the United States of America.

DATES: Only written comments and/or application for a license which are received by the NIH Office of Technology Transfer on or before June 29, 2001 will be considered.

ADDRESSES: Requests for a copy of the patent applications, inquiries, comments and other materials relating to the contemplated license should be directed to: Peter Soukas, Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, MD 20852–3804; Email: ps193c@nih.gov; Telephone: (301) 496–7056, ext. 268; Facsimile: (301) 402–0220.

SUPPLEMENTARY INFORMATION: This invention concerns bacteriophage with specificity to more than one bacterial species and the ability to make such bacteriophages. The specificity is broadened and/or changed by genetic engineering of the phage tail proteins. The phage can be used to kill pathogenic bacteria in both animals and humans. The use of phages as antibacterials may be one answer to the problem of antibiotic resistant bacteria.

The prospective exclusive license will be royalty bearing and will comply with the terms and conditions of 35 U.S.C. 209 and 37 CFR 404.7. The prospective exclusive license may be granted unless, within 60 days from the date of this published Notice, NIH receives written evidence and argument that establishes that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209 and 37 CFR 404.7.

The field of use may be limited to prophylaxis and/or treatment of bacterial infections in non-human animals and treatment and/or prophylaxis of antibiotic resistant bacteria in humans.

Properly filed competing applications for a license filed in response to this notice will be treated as objections to the contemplated license. Comments and objections submitted in response to this notice will not be made available for public inspection, and, to the extent permitted by law, will not be released under the Freedom of Information Act, 5 U.S.C. 552.

Dated: April 20, 2001.

Jack Spiegel,

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

[FR Doc. 01–10576 Filed 4–27–01; 8:45 am]

BILLING CODE 4140–01–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Prospective Grant of Exclusive License: MHC Class II Restricted Melanoma Antigens and Their Use in Therapeutic Methods

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

ACTION: Notice

SUMMARY: This is notice, in accordance with 35 U.S.C. 209(c)(1) and 37 CFR 404.7(a)(1)(i), that the National