

Dental Implant Modification

Kisielewski, R.W., Hastings, C.K.,
McCarthy, G.R. (FDA)
Filed 19 Apr 95
Serial No. 08/424,786.

Description of the Invention: Implanted dental prostheses are subjected to large forces acting in different directions within severely-limited space. Screw and/or nut connections, while useful in the construction of these prostheses, are subject to relative rotations which can lead to undesirable loosening of the implant at inopportune times. The present invention greatly inhibits the undesirable loosening of the dental prosthesis by providing for a linear, axial transmission of forces from the prosthesis to a tubular spacer and an implanted base by the retaining nut. This invention has the additional advantage of permitting relatively easy retrofitting of existing dental prostheses which were prone to failure due to loosening when the retaining nut or screw turned under the forces normally found in previously available prostheses.

Potential Areas of Application: Applicable to improvement of dental prostheses used world-wide; design adaptable to other prosthetic securing applications.

Main Advantages of Invention: Inexpensive to apply to existing prostheses; much improved functional design. [portfolio: Dental Technology—Therapeutics, implants]

Drycleaning Secondary Vapor Isolation and Removal System

Earnest, G.S., Froehlich, P.A. (NIOSH)
Filed 27 Oct 94
Serial No. 08/329,920.

Description of the Invention: A system which reduces environmental emissions and operator exposure to solvent vapors associated with dry cleaning machines. Dry cleaning solvents such as perchloroethylene are known to cause liver and kidney damage and to contribute to ozone depletion. Due to the operational nature of dry cleaning machines, which involves continuous loading and unloading, operators are exposed to solvent vapors which are emitted each time the machines are opened. The invention involves a ventilation system which isolates, contains and removes residual solvent vapors before a dry cleaning machine chamber is opened.

Potential Areas of Application: Closed circuit dry cleaning machines; exhausting dry cleaning machines; single and multiple bath processing machines.

Main Advantages of Invention: Reduce worker exposure to hazardous solvent vapors; reduce emission of hazardous vapors into the environment; can be retrofitted onto existing dry cleaning machines.

Stage of Development: Conceptual only. [portfolio: Devices/Instrumentation—Environmental Technology, prevention, apparatus]

An Integrating Sphere Which Delivers a Homogeneous Beam of Laser Light for Use in Photodynamic Therapy

Smith, P.D., Cole, J., Harrington, F.,
Bernstein, E. (NCR)R
Filed 24 May 94
Serial No. 08/248,918.

Description of the Invention: An irradiation attachment for an optical fiber which provides an output of light that has a highly uniform intensity. Frequently, optical fibers are used in illumination delivery systems. However, in general the output from optical fibers is irregular due to a number of factors which include: imprecise introduction of light into the fiber; imperfect cleaving or polishing of the fiber output face; and distortions introduced by handling the fiber. The inventive device simply attaches to the end of a delivery optical fiber and overcomes the irregularities and produces a uniform level of illumination. The inventive device permits uniform irradiation of irregularly shaped objects.

Potential Areas of Application: Photodynamic therapy; treatment of psoriasis; uniform illumination of flat and raised surfaces.

Main Advantages of Invention: Simple attachment to optical delivery fibers; hand held; uniform illumination of flat and raised surfaces.

Stage of Development: Prototype built and tested on laboratory animals. [portfolio: Devices/Instrumentation—Therapeutics, instruments]

Ventilated Casting Grinding Workstation With Turntable

Gressel, M.G. (CDC)
Filed 20 May 94
Serial No. 08/247,181.

Description of the Invention: A new ventilated workstation which reduces worker exposure to hazardous particulate materials has been invented. In conventional foundry casting operations, castings are cleaned by hand using pneumatic chipping and grinding tools. The grinding and chipping of sand burnt into the castings results in a discharge of respirable silica particles. The workstation of the present invention is equipped with a rotatable workpiece holder which allows all

surfaces of the workpiece to be positioned so that particles discharged by grinding or machining are directed toward a ventilation area at which the discharged particles are removed.

Potential Areas of Application: Cleaning foundry castings; machining workpieces.

Main Advantages of Invention: Reduces worker exposure to hazardous particulate materials; easy to retrofit to existing ventilated workstations.

Stage of Development: Prototype built, tested, and evaluated.

Recent Publications: Abstract entitled "An Evaluation of a Local Exhaust Ventilation Control System for Casting Cleaning in a Foundry," May 21–27 meeting of the American Industrial Hygiene Conference and Exhibition (1994); NTIS Technical Report. [portfolio: Devices/Instrumentation—Environmental Technology, equipment and machinery]

Magnetic Resonance Monitor

(Bowman, J.D., Engel, D.P. (NIOSH)
Filed 29 Apr 94
Serial No. 08/235,833.

This invention relates to measurement of static and extremely low frequency magnetic fields. Further, it permits measurement of environmental magnetic fields which are in magnetic resonance with magnetic moments in a biological organism, particularly the human body. This invention overcomes deficiencies in current systems, such as: only measuring oscillating magnetic fields, measuring static and oscillating fields with Hall-effect or flux-gate probes, and measuring static and oscillating fields and all their characteristics without taking into consideration chemical and biological effects. [portfolio: Devices/Instrumentation—Environmental Technology, methods of testing]

Dated: June 8, 1995.

Barbara M. McGarey,

Deputy Director, Office of Technology Transfer.

[FR Doc. 95–14899 Filed 6–16–95; 8:45 am]

BILLING CODE 4140-01-P

Government-Owned Inventions; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

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 U.S. 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 John Fahner-Vihtelic, Technology Licensing Specialist, Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804 (telephone 301/496-7735 ext 285; fax 301/402-0220). A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

Production and Use of Anti-Dorsalizing Morphogenetic Protein

Moos, M., Jr., Krinks, M., Wang, S.
(FDA)

Filed 8 Nov 94

Serial No. 08/335,583.

In recent years, a number of members of the TGF- β superfamily have been discovered which serve as growth factors in the development of bone, or participate in a variety of developmental processes. This case discloses a novel member of the TGF- β superfamily, designated Anti-dorsalizing morphogenetic protein-1, or ADMP-1. ADMP-1 is most closely related to human bone morphogenetic protein-3, and counters dorsalizing influences during development. ADMP-1 can be used as a pharmaceutical to treat inappropriate proliferation of neural crest derivative tissues, such as neuroblastomas, as well as a probe for finding and cloning other ADMPs. The case claims isolated ADMP-1, pharmaceutical preparations employing ADMP-1, diagnosis of genetic lesions involving this protein, and methods of treatment of conditions involving inappropriate proliferation of tissues by administering ADMP-1. [*portfolio: Cancer—Research Reagents*]

Improvements in the Ability of Neural Networks, Particularly Dystal, To Distinguish Among Small Differences in Similar Inputs

Alkon, D.L., Vogl, T.P. (NINDS)

Filed 14 Nov 94

Serial No. 08/331,554.

This application describes a powerful associative learning neural network system and improvements designed to enhance decision making. This invention consists of a basic architectural unit of certain inputs and outputs. Interposed between inputs and outputs are "patches" or storage areas of dynamic interaction between

conditioned and unconditioned signals. The patches process information to achieve associative learning locally under rules designed for application-related goals of the system. This technology far exceeds the power and utility of previous neural networks with features such as: rapid incremental learning without supervision, self organizing and insensitive to global parameters, and associates extremely noisy and heterogeneous patterns. The utility of this technology has been proven with complex experimental applications. [*portfolio: Devices/Instrumentation—Software, artificial intelligence*]

Fluorescent and NMR Sensitive Intracellular pH Indicators

London, R.E. Levy, L.A., Murphy, E., Gabel, S. (NIEHS)

Filed 11 Oct 94

Serial No. 08/320,986.

This invention discloses compositions and methods useful for measuring pH. Specifically, this invention teaches the measurement of intracellular pH and a new class of fluorescent and fluorinated (NMR sensitive) aromatic compounds. These compounds have excitation wavelengths in the ultraviolet or visible portions of the electromagnetic spectrum. In addition to being useful for pH indicators, fluorine containing analogs of these compounds have shown utility for NMR spectroscopic determinations. The present invention overcomes the disadvantages of pk values that are not matched to the cytosol, leaking, and binding to cellular protein, found in current fluorescent intracellular pH probes. [*portfolio: Internal Medicine—Diagnostics, imaging, agents*]

Method and System for Doppler Ultrasound Measurement of Blood Flow

Adam, D.R., Kempner, K.M., Vivino, M.A., Tucker, E.E., Jones, M. (DCRT)

Filed 24 Sep 94

Serial No. 08/300,718

This invention discloses a system and method for providing Doppler flow velocity data that is corrected for misalignment between the flow direction within a vessel and the beam orientation of the ultrasound probe. A conventional ultrasonic Doppler color mapping system was adapted to include an apparatus to measure and record the free space position and orientation of the ultrasonic probe. A set of 2D image planes, which need not be parallel, is acquired. A structural representation derived from the acquired data is used to determine the flow direction for the imaged vessel. This apparatus and method has advantages over other

systems because it offers the ability to measure flow distributions with a hand-manipulated probe. [*portfolio: Devices/Instrumentation—Diagnostics, imaging, ultrasound*]

Method and System for Multidimensional Localization and Rapid Magnetic Resonance Spectroscopic Imaging

Posse, S., Le Bihan, D. (CC)

Filed 15 Aug 94

Serial No. 08/290,348 (CIP of 08/224,942).

A newly developed method and system for multidimensional localization and rapid magnetic resonance spectroscopic imaging allows for quicker, more accurate imaging of metabolites in biologic tissue. Nuclear magnetic resonance (NMR) techniques have long been used to obtain spectroscopic information about substances in order to reveal the substance's chemical composition. More recently, spectroscopic imaging techniques have been developed that combine magnetic resonance imaging (MRI) with NMR spectroscopic techniques, thus providing a spacial image of the chemical composition; however, previously available techniques for making such measurements have been hampered by limitations in prelocalization of samples due to long echo times as well as long data acquisition times. Most of these systems often generate spectral as well as spacial data due to the long echo times, and their localization techniques are not applicable to acquiring multiple-volume data from nuclei that have short T2 relaxation times. This new system circumvents these limitations by applying pulse sequence to a conventional MRI apparatus, which allows the rapid acquisition of data for generating spectroscopic images and greatly shortens the echo time. Spatial prelocalization of a volume of interest is achieved by providing a presuppression sequence before a stimulated echo (STE) sequence and a suppression sequence before the interval of the STE sequence. [*portfolio: Devices/Instrumentation—Diagnostics, imaging apparatus, MRI*]

Method and System For MRI Detection of Abnormal Blood Flow

Moonen, C.T., Duyn, J., van Gelderen, P. (NCRR)

Filed 5 Aug 94

Serial No. 08/286,783.

The present invention disclosure describes a magnetic resonance imaging system and method for detecting blood flow abnormalities. This is

accomplished by determining the time delay for the arrival of a bolus of MR contrast agent into a localized region of tissue. This arrival is observed in a series of magnetic resonance signals obtained subsequent to the bolus injection. A rapid series of imaging pulse sequences acquires the time development of the signal from the localized regions within the imaged field of view of the body. The arrival time for the bolus into a given localized region is determined from the acquired time data, and the relative arrival time among regions in the imaged field of view indicated whether there is decreased blood flow to certain areas. This method and system has the potential to replace some of the invasive procedures now in use to determine blood flow through certain body tissues. [portfolio: Devices/Instrumentation—Diagnostics, imaging, methods]

DNA Sequence Which Acts as a Chromatin Insulator Element To Protect Expressed Genes From Cis-Acting Regulatory Sequences

Chung, J., Felsenfeld, G. (NIDDK)
Filed 29 Jul 94
Serial No. 08/283,125 (CIP of 08/
045,266).

Novel method of insulating functional DNA domains introduced into higher leukaryotic cells from the effects of the cell's cisacting regulatory elements. The invention represents the first pure insulator to be demonstrated to function in human cells. The element promises to be a useful tool in gene therapy, gene transfer techniques, and studies involving gene regulation and other gene expression technologies. [portfolio: Cancer—Therapeutics, gene therapy]

Spectroscopic Imaging Device Employing Quality Spectral Filters

Lewis, E.N., Levin, I.W., Treado, P.J. (NIDDK)
Serial No. 08/236,655
Patent Issued 27 Dec 94
U.S. Patent No. 5,377,003.

This novel imaging device, which integrates both light microscopy and spectroscopy, allows for the cost-effective development of high-resolution spatial, chemical, and spectral images. It provides a rapid means for examining and collecting large format images from vibrational and visible spectra in a three-dimensional sample. It is superior to current equipment because it has no moving parts. This device may be used as a tool for the characterization of polymers and semiconductors and has potential as a diagnostic tool for clinical analysis of histologic materials. [portfolio: Devices/Instrumentation—Diagnostics, imaging, spectroscopy]

Method To Enhance the Sensitivity of MRI for Magnetic Susceptibility Effects

Moonen, C.T. (NCRF)
Filed 13 Aug 93
Serial No. 08/106,372 (CIP of 07/
841,994).

A novel fast-imaging method resulting in enhanced sensitivity to T2* changes was developed. This new technique is unlike other methods in that it is based on gradient-recalled echoes of spins whose excitation and echo formation are separated by one or more TR period. It does not require chemical shift refocusing and, thus, results in increased T2* sensitivity. The new method improves the ability of functional MRI based on T2* effects. [portfolio: Devices/Instrumentation—Diagnostics, imaging methods]

Dated: June 8, 1995.

Barbara M. McGarey, J.D.

Deputy Director, Office of Technology Transfer.

[FR Doc. 95-14897 Filed 6-16-95; 8:45 am]

BILLING CODE 4140-01-P

Opportunity for Licensing: Pharmaceutical Preparations Containing Cyclodextrin Derivatives

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

ACTION: Notice.

SUMMARY: The National Institutes of Health (NIH), Department of Health and Human Services, seeks licensee(s) for U.S. Patent 4,727,064, entitled "Pharmaceutical Preparations Containing Cyclodextrin Derivatives," which issued February 23, 1988. This invention describes a method of improvement of pharmaceutical preparations which comprises the addition of crystalline drugs with substantially low solubility to cyclodextrin compounds which are water soluble, have the ability to form inclusion complexes with the drugs in question, and are intrinsically amorphous and substantially decrease the tendency of the drug to crystallize.

This U.S. Patent had been exclusively licensed to Pharmatec Inc. and Cyclex Inc. (see **Federal Register** of September 10, 1987—52 FR 34268) by the National Technical Information Service (NTIS). The period of general exclusivity provided under the NTIS agreements has expired and the patent is now available for licensing. NTIS has transferred custody of this case to NIH and NIH has the right to grant nonexclusive or exclusive licenses to this patent in most fields of use. In particular, NIH can grant an exclusive

license for the use of cyclodextrin technology in combination with "drug actives" that are approved for a particular use by the Food and Drug Administration (FDA) if the drug active itself or its FDA-approved use is covered by a U.S. patent.

NIH intends to grant the selected firm(s) royalty-bearing license(s) to practice the inventions embodied in U.S. Patent 4,727,064 in the U.S. for all or some of the available fields of use. The patent rights in these inventions have been assigned to the United States of America.

SUPPLEMENTARY INFORMATION: The NIH seeks licensee(s), who in accordance with requirements and regulations governing the licensing of government-owned inventions (37 CFR Part 404), have the most meritorious plan for the development of the cyclodextrin technology to a marketable status to meet the needs of the public and with the best terms for the NIH. The criteria that NIH will use to evaluate license applications will include, but not be limited to those set forth by 37 CFR 404.7(a)(1)(ii)-(iv).

ADDRESSES: Requests for a copy of the patent, license application form, or other questions and comments concerning the licensing of this technology should be directed to: Carol C. Lavrich, Technology Licensing Specialist, Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852-3804; telephone: 301/496-7735 ext 287; fax: 301/402-0220.

Dated: June 5, 1995.

Barbara M. McGarey,

Deputy Director, Office of Technology Transfer.

[FR Doc. 95-14898 Filed 6-16-95; 8:45 am]

BILLING CODE 4140-01-P

Office of Inspector General

Program Exclusions: May 1995

AGENCY: Office of Inspector General, HHS.

ACTION: Notice of program exclusions.

During the month of May 1995, the HHS Office of Inspector General imposed exclusions in the cases set forth below. When an exclusion is imposed, no program payment is made to anyone for any items or services (other than an emergency item or service not provided in a hospital emergency room) furnished, ordered or prescribed by an excluded party under the Medicare, Medicaid, Maternal and Child Health Services Block Grant and