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-l. [*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