Software System for Analysis of Extremely Large Experimental Dataset and Multidimensional Drug Discovery

NIH Reference Number
E-143-2010

Product Type
- Research Tools

Keywords
- Software
- Research Tool
- gene arrays
- proteomics

Collaboration Opportunity
This invention is available for licensing.

Description of Technology

The National Institute on Aging, Laboratory of Neurosciences-Receptor Pharmacology Unit is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize biomedical informatics.

This invention is a computer software suite that will enable its user to investigate extremely large experimental datasets in a simple, yet multidimensional, manner. The software, Omnimorph, allows multidimensional investigation of any form of data including experimental datasets in biomedical science using either gene arrays or proteomics. Omnimorph allows the user to look for extremely subtle correlated differences between experimental datasets which will allow the investigator to discover far more drug- or disease-specific factors than other analytical methods currently used. The software of present invention has been employed in the targeted discovery of G protein-independent receptor-based pharmacotherapeutics. These discoveries represent an entirely new GPCR-based G protein-independent pharmacopeia. Therefore, the Omnimorph is not only newly developed software, but the Omnimorph suite can also be used as a simple and unbiased tool to detect novel and unexpected modes of GPCR-based drug actions. This could potentially alter the way drugs are developed and screened in the future.

Development Status: Fully developed and available

Patent Status: Research Tool. Patent protection is not being pursued for this technology.

Potential Commercial Applications
- Development and screen for pharmaceutical drugs
- Biomedical research

Patent Status

- **Research Material:** NIH will not pursue patent prosecution for this technology