



DEVELOPMENT OF DATABASE FOR CENTRAL NERVOUS SYSTEM (CNS) DISORDERS AND HERBAL REMEDIES

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ABSTRACT

The Central Nervous System consists of the Brain and Spinal Cord. It contains millions of neurones (nerve cells). The brain plays a central role in the control of body functions, including awareness, movements, sensations, thoughts, speech, and memory. Some reflex movements can occur via spinal cord pathways without the participation of brain structures. The spinal cord is connected to a section of the brain called the brainstem and runs through the spinal canal. Cranial nerves exit the brainstem. The spinal cord carries signals (messages) back and forth between the brain and the peripheral nerves. There are many types of brain and spinal cord tumours & disorders. The importance of the psyche in the cause of disease and in the maintenance of health has been recognized in Ayurveda, the plants often been used to treat the Central Nervous System(CNS) disorders and retain mental ability even at a ripe old age. There is a great need to develop a data base for Central Nervous System physiology, diseases and herbal support to treat CNS disorders. In this project we put an effort to design and develop a web-database to cater the above requirements. The address of the web-database is: <https://sites.google.com/site/herbals4cns/>

KEY WORDS: Central Nervous system, database management system, drugs, pharmacology and herbal remedies



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INTRODUCTION

If you slice through some fresh brain or spinal cord you will find some areas appear grey whilst other areas appear rather white. The white matter consists of axons, it appears white because it contains a lot of fatty material called myelin¹⁻⁴. The myelin sheath insulates an axon from its neighbours⁵⁻⁷. This means that nerve cells can conduct electrical messages without interfering with one another. The grey matter consists of cell bodies and the branched dendrites which effectively connect

them together. So this area is mainly cytoplasm of nerve cells which is why it appears white^{8,9}. In this paper we described the collection of data on Anatomy and Physiology of the Central Nervous System, collection of data on the Pathophysiology of the Central Nervous System diseases, maintenance of a database of Herbal remedies of Central Nervous System diseases, uploading the above database onto a website.

METHODOLOGY

The methodologies followed for the construction of web-database has been shown in the following flow-chart.

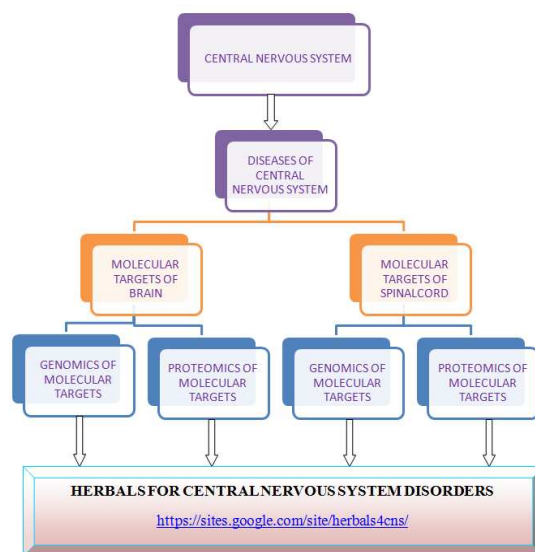


Figure 1

Flow chart of the methodology of the development of the web-database.

National Center for Biotechnology Information (NCBI)
(<http://www.ncbi.nlm.nih.gov/gene/>)

Universal Protein Knowledgebase (UNIPROT-KB)
(<http://www.uniprot.org/>)

RESULTS AND DISCUSSION

Using google sites database, a web-database for herbal support to treat cardiovascular diseases was developed. The database can be browsed using the address <http://sites.google.com/site/herbals4cns>

The following sections are present in the designed database

Navigation

- **HOME**
- [SPINAL CORD](#)
- [THE BRAIN](#)
- **DISEASES OF CNS**
- [Akinetic Mutism](#)
- [Auditory Diseases](#)
- [Basal Ganglia Diseases](#)
- [Brain Abscess](#)
- [Brain Damage](#)
- [Brain Diseases](#)
- [Brain Edema](#)
- [Canavan Disease](#)
- [Cerebellar Diseases](#)
- [Cerebral Sclerosis](#)
- [Cerebrovascular Disorders](#)
- [Dementia](#)
- [Encephalitis](#)
- [Encephalomalacia](#)
- [Epilepsy](#)
- [Hallervorden-Spatz Syndrome](#)
- [Hydrocephalus](#)
- [Hypothalamic Diseases](#)
- [Malaria](#)
- [Narcolepsy](#)
- [Neuroaxonal Dystrophies](#)
- [Poliomyelitis, Bulbar](#)
- [Pseudotumor Cerebri](#)
- [Rett Syndrome](#)
- [Reye Syndrome](#)
- [Spinal Cord Diseases](#)
- [Thalamic Diseases](#)
- [Toxoplasmosis, Cerebral](#)
- [Tuberculoma, Intracranial](#)
- [Tuberous Sclerosis](#)
- [Zellweger Syndrome](#)
- **Genes & Protiens**
- [Target Genes](#)
- [Target Protiens](#)
- **Herbal Support**
- [Balm or lemon balm](#)
- [Black cohosh](#)
- [Black haw](#)
- [Brahmi \(Bacopa monniera\)](#)
- [Californian poppy](#)
- [Chamomile](#)
- [Cowhage \(Mucuna pruriens\)](#)
- [Cramp bark](#)
- [Ephedra](#)

- [Ginkgo](#)
- [Hops](#)
- [Hyssop](#)
- [Jamaican dogwood](#)
- [Kava](#)
- [Lady's slipper](#)
- [Lavender](#)
- [Lime blossom](#)
- [Mistletoe](#)
- [Motherwort](#)
- [Pasque flower](#)
- [Passion flower](#)
- [Rosemary](#)
- [skullcap](#)
- [St. John's Wort \(Hypericum perforatum L.\)](#)
- [Valerian](#)

- **INFECTIONS OF CNS**

- [AIDS Dementia Complex](#)
- [Brain Abscess](#)
- [Empyema](#)
- [Encephalitis](#)
- [Encephalomyelitis](#)
- [Malaria](#)
- [Meningitis](#)
- [Meningoencephalitis](#)
- [Myelitis](#)
- [Neurosyphilis](#)
- [Poliomyelitis](#)
- [Prion Diseases](#)
- [Toxoplasmosis](#)

- **NEOPLASMS OF CNS**

- [Brain Neoplasms](#)
- [Cerebellar Neoplasms](#)
- [Encephalomyelitis](#)
- [High Pressure Nervous Syndrome](#)
- [Hypothalamic Neoplasms](#)
- [Meningeal Neoplasms](#)
- [Meningism](#)
- [Spinal Cord Neoplasms](#)

- **Sitemap**

- **Recent site activity**

CONCLUSIONS

The central nervous system disorders are growing worldwide. Use of herbals for such disorders will be a great advantage to treat the disorders in an effective manner. Here we have developed a web-database to maintain the Central Nervous System disorders and herbal support data. The address of the web-

database is: <https://sites.google.com/site/herbals4cns/> It contains genes & proteins responsible for disorders, which are molecular targets for the bioactive constituents of the herbals. Using the above database, one can easily go through the contents and get served.

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