

ARTICLE 4: BHRI Institute found the clue for »bio-treatment of neurological disorders«

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Key words: disorders, essential oils, neurological, bio-treatment, ADAH

Abstract:

Essential oils are a safe and effective tool for patients to incorporate into their daily life to optimize neurological health. The aromatic compounds of therapeutic grade essential oils have an immediate effect on the brain and central nervous system. BHRI Institute studies support their ability to positively affect the nervous system and facilitate the healing process. Previous work from BHRI Institute laboratory has shown positive effects of “bio-treatment” for different neurological disorders. Our recent data uncovering several significant results may help to understand the cause of disorders and further treatment as a promising therapeutic tool, as it is described in this article.

Introduction:

Brain disorders are among the most serious health problems facing our society, causing untold human suffering and enormous economic costs. They are also among the most mysterious of all diseases, and our ignorance of the underlying disease mechanisms is a major obstacle to the development of better treatments.

What is needed is not simply more 'me-too' drugs, but new therapeutic approaches that are based on a fundamental understanding of brain mechanisms. Our translational efforts must therefore rest on a strong foundation of basic discovery research – the engine that drives new practical applications.

Most common neurological disorders:

Nowadays, there are more than 600 neurological disorders, the most common types of disorders as follows:

Epilepsy - Epilepsy is a neurological condition, which affects the nervous system. Epilepsy is also known as a *seizure disorder*. The seizures happen when clusters of nerve cells, or neurons, in the brain send out the wrong signals. Many (50-70%) cases of epilepsy have no known cause.

Epileptic seizures may cause:

- Head injuries, such as a car accident or a fall.
- Brain tumor
- Stroke
- Arteriosclerosis (fatty plaque build-up in arteries)
- Brain injury before birth caused by infection or lack of oxygen to the brain
- Infection, such as meningitis or encephalitis

Sometimes seizures stop without treatment. Many people take antiepileptic (also called "anticonvulsant") drugs to control seizures. These drugs, however, do not cure the disorder. Rather, these drugs control the symptoms and are effective in 60-80% of the cases. Antiepileptic drugs work by reducing the abnormal firing of cortical neurons. These drugs may change the activity of neurotransmitters responsible for seizures or alter the way ions flow in and out of neurons. Unfortunately, many of these drugs have side effects such as drowsiness, dizziness and nausea so doctors must balance these undesirable effects with seizure control. It is also important to remember that different drugs are used to treat different types of seizures.

Alzheimer's disease (AD) - Alzheimer's disease attacks the brain; it is not a normal part of aging. People with AD have a gradual memory loss and difficulties with language and emotions. The progressive loss of intellectual abilities is termed dementia. Dementia is a brain disorder that seriously affects a person's ability to carry out daily activities. AD usually begins after age 60. The risk goes up as you get older. Your risk is also higher if a family member has had the disease. No treatment can stop the disease. However, some drugs may help keep symptoms from getting worse for a limited time, but all of these drugs have possible side effects, including nausea, vomiting, diarrhea, and loss of appetite.

Huntington's Disease (HD) - Huntington's Disease is a devastating, hereditary, degenerative brain disorder for which there is, at present, no cure and only one FDA-approved treatment (Xenazine) for a symptom of HD. HD slowly diminishes the affected individual's ability to walk, talk and reason. Eventually, the person with HD becomes totally dependent upon others for his or her care. Huntington's Disease profoundly affects the lives of entire families - emotionally, socially and economically. Early symptoms of Huntington's Disease may affect cognitive ability or mobility and include depression, mood swings, forgetfulness, clumsiness, involuntary twitching and lack of coordination. As the disease progresses, concentration and short - term memory diminish and involuntary movements of the head, trunk and limbs increase.

Parkinson's disease is a progressive disorder of the central nervous system affecting more than 1.5 million people in the United States. Clinically, the disease is characterized by a decrease in spontaneous movements, gait difficulty, postural instability, rigidity and tremor. Parkinson's disease is caused by the degeneration of the pigmented neurons in the Substantia Nigra of the brain, resulting in decreased dopamine availability. The major symptoms of the disease were originally described in 1817 by an English physician, Dr. James Parkinson, who called it "Shaking Palsy." Only in the 1960's, however, pathological and biochemical changes in the brain of patients were identified, opening the way to the first effective medication for the disease.

Muscular dystrophy (MD) is the name for a group of neuromuscular disorders that are characterized by progressive weakness and wasting of the voluntary muscles that control body movement. Muscular dystrophies are genetic disorders. Forms of muscular dystrophy can be passed on from generation to generation, or they can occur spontaneously in a single individual as the result of a mutation of a particular gene. Muscular dystrophy (MD) refers to a group of more than 30 inherited diseases that cause muscle weakness and muscle loss.

Multiple sclerosis (MS) is a nervous system disease that affects your brain and spinal cord. It damages the myelin sheath, the material that surrounds and protects your nerve cells. This damage slows down or blocks messages between your brain and your body, leading to the symptoms of MS. They can include:

- Visual disturbances
- Muscle weakness
- Trouble with coordination and balance
- Sensations such as numbness, prickling, or "pins and needles"
- Thinking and memory problems

There is no cure for MS, but medicines may slow it down and help control symptoms.

Schizophrenia is a serious psychiatric disorder that causes people to lose touch with reality. The schizophrenic disorders are characterised by profound disruption of thinking and perception that affects the most fundamental human attributes including cognition, language, perception and sense of self.

Bipolar disorder (termed 'manic-depressive illness') is a relatively common and chronic psychiatric condition in which patients experience episodes of mania and depression, usually with intervening periods of relative mood stability. Bipolar disorder is associated with cognitive and behavioral difficulties and in severe cases psychosis can present in both the manic and depressive states.

http://www.brainexplorer.org/brain_disorders/Focus_Bipolar_disorder.shtml

ADHD is an acronym for **attention deficit hyperactivity disorder**, a condition that some experts believe affects between three and five percent of all children in the United States. The condition was previously known (and still sometimes referred to as) attention deficit disorder (ADD). ADHD is characterized by a child's inattention (inability to concentrate his or her attention on a task for any length of time), hyperactivity (tendency to be significantly more active than what is considered normal for his or her peers), and impulsivity (tendency to produce abrupt and often inappropriate responses or comments).

<http://www.altmd.com/Articles/Aromatherapy-Essential-Oils-for-ADHD>

Autism - Autism is sometimes described as a disorder of the senses; the brain relies on information gathered by various sensory receptors such as touch, taste, smell, hearing and sight in order to make sense of our environment. Others describe it as a neurological dysfunction, although the exact type of dysfunction has not yet been identified.

Research:

Many neurological disorders are difficult to treat because of a natural barrier in the brain. The blood-brain barrier is a specialized system of cells that acts as a gatekeeper for the brain, blocking harmful substances from entering while allowing in necessary nutrients. The barrier is necessary to keep the brain and nervous system healthy. However, it also causes problems in medication delivery because it treats medications as the enemy, preventing the therapeutic agents from doing their job.

<http://www.sciencedaily.com/releases/2007/12/071220150412.htm>

The principle behind bio-treatment is that certain naturally occurring chemicals contained within essential oils can be used to treat a wide variety of physical, mental, and emotional disorders. The success of these essential oils arises from the fact that they stimulate parts of the body that are not functioning properly, restoring the body to its natural state. Over thousands of years, researchers have experimented with more than 100 different essential oils and found the specific effect each has on the body. Recent BHRI Institute scientific studies have confirmed the presence of certain key chemicals in essential oils that may react with the nervous or muscular system - or some other part of the body - to encourage healing.

According to the definition of bio-treatment, the BHRI Institute leading scientist Mr. Robert Hroval further explain. Bio-treatment is the use of essential oils in a way that can positively affect physical, emotional and mental health. Bio-treatment is the treatment or prevention of disease by use of essential oils. It does not cure conditions, but helps the body to find a natural way to cure itself and improve immune response. Essential oils contain chemical components that are among the few molecules that can cross the blood/brain barrier. A study done in 2012 by BHRI Institute research team compared the effectiveness of four sourcing essences in the treatment of ADHD children. One sourcing essence was found to be most effective in observations and brainwave scans, registered under the code "sourcing essence EBD 504". Although the essential oil are being useful in alternative medicine, they are more recently being used to relieve stress, anxiety, insomnia and depression.

Essential oils are a powerful and often under-rated key to health and a sense of well being. Smell is the only sense with receptor nerve endings in direct contact with the outside world, providing a direct channel to the brain. The 'blood-brain barrier' is an oil-rich membrane that sheathes and protects the brain. Oxygen and some nutrients can pass through this membrane, but large molecules, such as those of most therapeutic drugs, cannot. Because the olfactory nerves evolved before the brain, they are not protected by this sheath. The idea that something as noninvasive as natural scents can directly affect the mind is quite exciting. In fact, medical researchers hope someday to be able to use this pathway to access specific areas of the brain with fragrance to treat various disorders, including Alzheimer's disease. This is the main goal of further BHRI Institute research in the field of neurological bio-treatment of different types of disorders. There is an extensive list of successful essential oil treatments that diminish stress, sedate, relieve depression, invigorate, promote activity and alertness, stimulate sensory awareness, facilitate interaction and communication, and provide pain relief.

Neurological disorders research was carried out by BHRI research team with a revolutionary device called Scent Generator Classic. Scent Generator operates in a manner of simulating

natural circulation of essences in nature - by maintaining original molecules and the exact imitation of natural processes of air circulation, such as those found in the nature. Special bottle contains only 100% natural essences and are emitted into the room on the principle of cold transmission, which means no warming and other "classic" (unnatural) processes, so even without the aid of pressure or propellant.

According to the laws of aerodynamics, Scent Generator encourages essences to fill the space in the same way as it does outdoors. The result is that essences have all retained original effects. Therefore, the penetration of essences in human body takes place exactly as in nature: at a sufficiently high concentration through breathing to enter to the left cerebral hemisphere and to the lungs and then left the physical mechanisms regulate the absorption.

For a period of four month a team of top scientists from BHRI Institute has been observing a group of patients with different neurological disorder in order to facilitate the symptoms of diseases.

Monitoring events prior to the seizure, together with BHRI Institute research team observations of behaviour helps to determine some causes and types. It is important to record details of activities, diet, stress factors, environmental factors including temperature, sleep patterns, lighting and exercise, to ascertain triggers that elicit seizures. A blood test may reveal a disease or underlying condition causing epilepsy and there are several scanning tests, which may be used to investigate the structure of the brain, blood flow and electrical pathways. These tests would assist a doctor in providing diagnosis, but it will not be necessary to undergo all of them.

An electroencephalogram (EEG) recorded the activity of the brain on a graph via the signals received through electrodes attached to the scalp. The patient were given tasks to perform whilst the pathways were monitored.

A magnetic resonance imaging (MRI) scanner also shows the structure of the brain, but in more detail, because it is much more powerful. Images are made using radio waves and a magnetic field, rather than X-rays.

Movement of water in the brain may also reveal underlying abnormalities, and can be recorded by diffusion tensor imaging (DTI). This investigative technique can sometimes pick up abnormalities not seen with an MRI image, by showing where the flow of water is disrupted.

The common treatment in our society for most of neurological disorders are usually prescribed by various drugs. Unfortunately, drugs have been shown to have similar side effects on the brain, mind, and behavior including conditions such as psychosis, mania, drug abuse, and addiction. In this study, the BHRI Institute researches have elected to use natural substances as a treatment for ADHD in children. The substances are essential oils. Essential oils are aromatic, volatile liquids distilled from shrubs, trees, roots, bushes, seeds, and flowers. The essential oils are extracted from the plant or tree by various methods. The most effective method is by the process of distillation wherein the plant is heated at specific temperatures, pressures, and time to best separate the oil from the plant structure without

fracturing the chemical constituents. Essential oils contain hundreds of different chemical compounds, each having specific properties and actions. When these essential oils are inhaled, they not only provide exquisite fragrances, but they have also proven to be able to produce physical, emotional, mental, and spiritual well-being of people since the beginning of time. The chemical constituents of essential oils have been compared to human blood for they have similar properties; that of immune and nervous system stimulation, being antimicrobial in nature, of containing nutrients and oxygen, and of stimulating the regeneration of all tissues. One of the reasons for this is the way by which the oils are absorbed by the body. When the essential oil is inhaled, the micro droplets are carried to the limbic system of the brain, which is that portion that is the processing center for reason, emotion, and smell, and to the hypothalamus, which is the hormone command center. The essential oil micro droplets are also carried to the lungs where they enter the circulatory system. Some essential oils contain high levels of the chemical constituents sesquiterpenes, which can dramatically increase oxygenation and activity in the brain. Other essential oils because of their unique constituents tend to have a greater role in hormonal secretion and in the balance of mood and emotions.

Conclusion:

Based on all previous research, carried out with the top BHRI Institute scientific research team we can proudly concluded, that we obtain the goal of intended research. All patients has shown the positive effects on provided bio-treatment, mental and physical condition has dramatically increased, we have alleviated the symptoms of neurological disorders with less seizures and stable medical conditions of majority of the patients. Further research in the field of neurological disorders by exploring natural origin essences in accordance with our revolutionary patented device SG Classic should be further investigated.

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