be a potential therapeutic agent for Alzheimer’s type of dementia. These results give the promising effects of the selected drugs and the bioactive molecule for the treatment and management of memory loss associated with Alzheimer’s type of dementia.

I. INTRODUCTION

Herbal medicines employed in traditional folklore treatment strategies provide a wide remarkable application in human ailments. Traditional therapeutic techniques still plays a potential role in covering the essential health benefits in developing parts of the world. The World Health Organization (WHO) reported that the world’s 80% of population relies on conventional medication. In the present scenario, 25% prescription written contains at least one active ingredient of plant origin (Lin et al., 2003)

Natural system of medicine includes herbal medication which has been practiced for more than 5000 years. The Sanskrit word ayurveda means “practice of longevity or science of life”. In olden days the natural scientists developed these systems throughout centuries of observation, discussion and trial and error method. Basically all indigenous preparations in traditional medicine consist of herbs as major components, especially in ayurveda, homeopathy and Native American Indian medicine. In folklore treatment, rejuvenation of body, prevention
of disease and extension of life span are conceived by herbal medicine with balanced harmony.

The knowledge of native plants which possess medicinal property was reserved in ancient period by people throughout the world. One of the endless sources of medicine was plants, which are first used as infusion, syrups, liniments, powders and herbal teas in medicine. Exploration in western medicine and the chemical identification by various novel technologies made easy to identify and isolate the bioactive molecules for various applications in medicines.

Various research and development of herbal preparations and alternative medicines entitled the potentiality of herbs to treat CNS, CVS, GIT, Endocrine system disorders and are intended to promote health. Molecular aspects in the treatment through herbal medicine include the free radical scavenging, modulation of biochemical pathways and hormonal changes in the human body.

The original declaration of therapeutic use of herbs was found in Rigveda, which is one of the oldest repositories according to the knowledge of humans and thought to be written during 4500 and 1600 B. C. (Kapoor, 1990). Ayurveda includes rasayana tantra-geriatrics
including rejuvenation was one of eight principal disciplines of Ayurveda. Rasayana was defined as treatment to accomplish longevity, cognition, devoid from age concerned disorders, to maintain speech ability and improve memory (Bala and Manyam, 1999).

So many recipes of rasayanas are used in ayurveda for treating brain related disorders. Ayurvedic preparations consists of extracts of *Centella asiatica*, powder from *Glycyrrhiza glabra* incorporated with milk, the extract of *Tinospora cordifolia* and flower paste of *Convolvulus pluricaulis* assorted collectively and administrated to prevent dementia. Another conventional formula prepared with 1000 *Emblica officinalis* and *Piper longum* fruits and was imbibed in alkali extract of *Butea monosperma* and dried to powder form. The prepared powder was assorted four times of its quantity with honey and ghee. This formula can be started to take from the later young age or middle age. This medication is confidently recommended for enhancing the lifespan for 100 years through full dynamism, intellection and protect the youth fullness (Bala and Manyam, 1999).

The pioneering work, to replace crude extracts with its bioactive molecules emerged after Karlsheel in 18th centaury with isolation of organic acids from herbs. Preparation of the bioactive lead by synthetic methods are impractical, unknown or may be uneconomical and for
these reasons scientists continue to explore the better suit, lead from medicinal plants for the treatment of various disorders and diseases.

It is therefore a great attention to exploit these plants, in sequence to validate their folklore use for the treatment of different diseases. As CNS active agents, identification of *Rawolfia serpentina*, *Mucuna pruriens*, *Ocimum santum Withania somnifera*, *Centella asiatica* and *Bacopa monneria* indicated the importance for treatment of brain related disease and disorders (Bhattacharya et al., 2000). Especially *Centella asiatica* and *Bacopa monneria*, *Curcuma longa* and *Gingo biloba* are used to treat loss of memory including Alzheimer’s types of dementia (Gertz and Kiefer, 2004). There were significant evidences to sustain the conception that abnormal production of reactive oxygen species (ROS) called as free radicals along with amyloid beta (Aβ) protein causes neuronal vulnerability and leads to neuropathological disease, such as Alzheimer’s disease. Apart from the production of ROS and Aβ, the involvement of acetylcholinesterase, monamine oxidase enzymes, neurotransmitters and neurohormonal changes were consistent during the neuropathology of AD.

Among herbal drugs, there are some rejuvenating agents used for the treatment of amnesia, forgetfulness, brain tonics, anti-stress, emotional depression and to treat nervous excitement. There is a very
limited research has been carried out to exploit the relationship between the traditional medicinal plants and the aspects of oxidative stress, neurotransmitter metabolic enzymes and neurohormonal balance. Even though there was a limited investigations done to scientifically explore the properties of medicinal plants in neurodegenerative diseases, several optimistic results encourages the researches to converge the lead seeking process towards herbal drugs.

Ethnopharmacological advancement and bioassay-guided fractionation and isolation had been provided the best lead for identifying the potential AChE inhibitors from herbs, as well as those for memory related disorders. A wide variety of medicinal plants had been implicated to possess AChE inhibitory effect and may be appropriate to treat the neurodegenerative disease such as AD.

Several studies have been probed the memory increasing potential of *Withania somnifera* (L.) and an extensive review (Kulkarni and Dhir, 2008) indicated the importance of it as CNS active agent. The analysis included isolation of chemical entity, withanoloids from it, which have the property of inhibiting AChE and BuChE in a dose dependent manner. Treatment by means of withanoloid-A regenerated the axons and dendrites of memory on cognitive dysfunctioned mice. Withanosid-IV
isolated from root induced the sprouting of neurons in cultured rat cortical cells. The promising effect of *Centella asiatica* (L.) on cognition indicated the potential property to enhance cognitive function. Reduction in AChE activity in the hippocampus and enhanced activity of dendrite cells of CA3 neurons indicated, that the treatment with *Centella asiatica* extract in the early postnatal developmental period can generate extensive beneficial action on the mice brain (Rao Sulochana et al., 2005).

Using ethnobotanical and ethnopharmacological knowledge as a channel in deciding which herbal drugs to evaluate for treating age-related CNS ailments, it’s possible to produce a potential lead molecule. It’s also well known that the mechanisms of herbal drugs possess antioxidant and potent anti-inflammatory activities. As in light of the principal role, the neurohormonal imbalances, neuroinflammation and ROS play in these diseases, it is evenhanded to anticipate that the herbs possessing rejuvenating property, antioxidant and anti-inflammatory activity might be highly useful in treating them. Based on these evidences, the treatment of AD is much focused towards traditionally used rejuvenating agents and other neurotonics. In recent trends in pharmacological evaluation of AD is focused to identify bioactive compounds for the treatment mechanism based inhibition of amyloid