INTRODUCTION

Herbal medicine is the oldest form of health care to the mankind. The practice of traditional medicine is not new to India since it’s the birth place of many traditional practices like Ayurveda, Siddha and Unani. The emergence of new unrevealed diseases like cancer and AIDS has compelled experts from world over to find new remedies to cure these diseases. As a result interest has been diverted towards old as well as newer unexplored avenues for control and cure. Herbal products now occupy a major share in the world trade and market. India is one of the worlds twelve leading biodiversity centers with the presence of over 45000 different plant species. India is the largest producer of medicinal herbs and is rightly called as ‘Botanical garden of the world’.

As its evident that plants are treasure house for many potent medicines, its important to scientifically evaluate the traditional practices as well as upgrade the existing knowledge and make it available to the general public. The scientific mind will not be satisfied by mere claims no matter from whatever source they originate, unless corroborated by experimental and clinical evidences. This dawned with the advent of the chemistry in the late 18th century. Chemist gradually started isolating pure substances from various anatomical parts of medicinal plants and concluded that certain active constituents are responsible for therapeutic actions of the plants.

These activities are often known as a result of millenia of trial and error, but they have to be carefully investigated to develop new drugs that meet the criteria of modern treatment. The goals of the research in this field are to identify the active principles, their isolation, identification and characterization in order that they may be synthesised, structurally modified or simply extracted more efficiently. Their safety, efficacy and constant activity should be thoroughly studied before implementing them.

Cancer is an abnormal growth of cells in our bodies that can lead to death. Cancer cells usually invade and destroy normal cells. Cancer is one of the dreaded diseases of the 20th century and spreading further with continuance and increasing incidence in current 21st century, plagning the life of mankind. It is considered a negative and adversary of modernisation and advanced pattern of socio – cultural life dominated by westernisation. Modern medicine and multi disciplinary scientific investigations are making best efforts for combating the disease, but the
A sure shot, perfectly curative and fully suitable cure is yet to be brought out in the world medicine. Billions of dollars have been spent on cancer research and yet we do not understand exactly what cancer is.

Since cancer is a global problem of serious nature and the concerted and active efforts of medical and bioscientists including chemists have got success and several anticancer remedies of synthetics and natural both. Several of modern drugs, foods and other edible articles have carcinogenic effects on human. Various anti cancer medicines and therapies applied for many clinical management of several kinds of cancer and malignancy conditions results more or less severe side effects and problematic complications in cancer patients. Moreover, the drugs, therapies and proper cancer treatment are tedious, costly and sometimes discouraging or hopeless, little optimism for complete and steady recovery.

Chemotherapy, being a major treatment modality used for the control of advanced stages of malignancies and as a prophylaxis against possible metastasis, exhibits severe toxicity on normal tissues. Plants maintain the health and vitality of individuals, and also cure diseases, including cancer without causing toxicity. More than 50% of all modern drugs in the clinical use are of natural products many of which have the ability to control cancer cells.

Plant secondary metabolites for the cancer chemoprevention, which has been defined as “the use of non-cytotoxic nutrients or pharmacological agents to enhance physiological mechanism that protects organism against mutant clones of malignant cells. There has been considerable prior work on the cancer chemopreventive effects of extracts and purified constituents of certain culinary herbs, fruits, spices, teas and vegetables which have shown the ability to inhibit the development of cancer in laboratory animal models. Phytochemicals derived from such fruits and vegetables, referred to as chemopreventive agents, include tannins, coumarins, lignans, quinones, stilbens, curcuminoids, flavonoids and other group of substances.

*Justicia* is a genus of flowering plants in the family Acanthaceae. There are 658 species with a further 611 species as yet unresolved by Kew. They are native to tropical to warm temperate regions of the Americas, India and Africa. Common names include water-willow and shrimp plant, the latter from the inflorescences, which resemble a shrimp in some species. *Justicia tranquibariensis* is a small shrub, which is widely distributed in southern parts
of India. In this genus about 20 species have been chemically investigated and major secondary metabolites isolated were lignans, flavonoids, steroids and triterpenes. Some species of *Justicia* have been used in the traditional system of medicines for the treatment of fever, pain, inflammation, diabetes, diarrhoea and liver diseases. *Justicia adhatoda* (L.)Nees (family Acanthaceae) is a shrub widespread throughout the tropical regions of Southeast Asia. They also possess anti inflammatory, anti allergic, anti tumoral, anti viral and analgesic activities.

The plants Justicia tranquibariensis and Justicia adathoda belonging to the family Acanthaceae are classical medicinal plants. Eventhough there are many folkclore uses, fewer research works have been done to study their medicinal properties completely. The present investigation was undertaken with a view to subject the plant samples for phytochemical, anti cancer and other pharmacological activities.