A.V.V.M. Sri Pushpam College (Autonomous)
Poondi– 613 503, Thanjavur-Dt, Tamilnadu
(Affiliated to Bharathidasan University, Tiruchirappalli – 620 024)

3.7.1 Number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

Collaborating Agency:

Dr. M. Boominathan Assistant Professor,

K.N Govt. Arts College for Women (Autonomous), Thanjavur.

Dr. S. V. BAKIYA LAKSHMI
Assistant Professor
Department of Biotechnology
AVVM Sri Pushpam College (Autonomous)
Poondi-613 503, Thanjavur-Dt, Tamil Nadu
India.

Dr.M. BOOMINATHAN
Assistant Professor
PG& Research Department of Botany
K. NGovt. Arts college for Women(Autonomous)
Thanjavur – 613007, Tamilnadu
India.

Date: 10.02.2019

LINKAGE

For the year 2019-2020

Between

1. **Dr. S. V. BAKIYA LAKSHMI**
Assistant Professor
Department of Biotechnology
A.V.V.M Sri Pushpam College
(Autonomous), Poondi – 613 503,
Thanjavur Dt.

&

2. **Dr.M. BOOMINATHAN**
Assistant Professor
PG& Research Department of Botany
K. N Govt. Arts college for Women
(Autonomous)Thanjavur- 613007.

Considering the significance of the noble cause for the student community, we have come forward to collaborate with each other to exchange research knowledge, expertise, laboratory and library facilities to the process of scientific research and education in the field of Phytomedicine. The parties (mentioned above as 1. & 2.) have had preliminary discussion in this matter and have ascertained areas of broad consensus. The parties now therefore agreed to enter in writing these avenues of consensus, under a flexible linkage, and this project aims to fill the gap between knowledge demand and subject expertise related to the mentioned field.

Joint Responsibilities

- Sharing of laboratory facilities, library resources, database etc.,
- Joint Publication of research articles, books, magazines, bulletins etc.,
- Jointly organizing conferences, seminars, symposia and workshops.
- Submitting joint proposals for research funding from agencies like UGC, CSIR, DST and TNSCST.

Dr. S. V. BAKIYA LAKSHMI

Dr.S.V.BAKIYA LAKSHMI, M.Sc., Ph.D.,
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A.V.V.M Sri Pushpam College (Autonomous)
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1-02/19

Dr.M. BOOMINATHAN

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A study on *In Vitro* anticancer activity of *chlorella vualgaris* against hepg-2 cell line

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Abstract

In recent years, natural antioxidant activities of plants have been claimed to have beneficial health functions for retarding aging and preventing cardiovascular, inflammatory, neurological diseases, as well as cancers. Current study focuses on selected medicinal algae ***Chlorella vualgaris*** that can aid in fighting against liver cancer using Hep G cell line are discussed along with their chief bioactive phytochemicals. The test sample treatment showed significant dose-dependent inhibition of growth of HepG2 cells at IC_{50} values of 466.8µg/ml and 918.4µg/ml respectively. In conclusion methanolic extract of *C.vulgaris* offers a valuable candidate lead compound to counter growing drug resistance in cancers.

Introduction

Cancer is a multi-step disease developed by physical, environmental, metabolic, chemical and genetic factors, which play a direct and/or indirect role in the induction of cancers. In the normal tissue, normal cell growth rate and death are kept in balance. In cancer cells this balance is disrupted leading to either cellular overgrowth and/or shortage of apoptosis of damaged cells that later become malignant. Carcinogens can damage or alter the DNA and lead to the transformation of genes controlling cell proliferation, differentiation, and apoptosis. There are more than 100 different types of cancer and they are named according to their origin of initiation. Cancer can be grouped as carcinoma, sarcoma, leukemia, lymphoma and myeloma and nervous system cancer. (NCI, 2010).

Cancer kills about 3500 per million people around the world annually. In United States, 1,735,350 new cancer cases and 609,640 cancer deaths are projected to occur in 2018. Over the past decade of data, the cancer incidence rate was stable in women and declined by approximately 2% annually in men, while the cancer death rate (2006 & 2015) declined by about 1.5% annually in both men and women (Jemal *et al.*, 2018). The combined cancer death rate dropped continuously from 1991 to 2015 by a total of 26%, translating to approximately 2,378,600 fewer cancer deaths than would have been expected if death rates had remained at their peak. Of the 10 leading causes of death, only cancer declined from 2014 to 2015 (Rebecca L. Siegel MPH et al and American cancer society, 2018).