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## ***In Silico* Analysis and Homology Modelling of Antioxidant Proteins of Amaranthus**

Priyadarshini Pillai

### **Abstract**

Amaranthus, collectively known as amaranth, is a cosmopolitan genus of annual or short-lived perennial plants. Some amaranth species are cultivated as leaf vegetables, pseudo cereals, and ornamental plants. Most of the Amaranthus species are summer annual weeds and are commonly referred to as pigweed. In this paper, a bioinformatics and molecular modelling approach was adopted to explore properties and structure of Amaranthus antioxidant proteins. The antioxidant proteins selected for this study are ascorbate peroxidase (APX), dehydro ascorbate reductase (DHAR), phospholipid hydroperoxide glutathione peroxidase-like protein (PHGPX) and 2-Cys peroxiredoxin BAS1 (2-CPs). Physico-chemical characterization interprets properties such as pI, EC, AI, GRAVY and instability index and provides data about these proteins and their properties. Prediction of motifs, patterns, disulphide bridges and secondary structure were performed for functional characterization. Three dimensional structures for these proteins were not available as yet at Protein Data Bank (PDB). Therefore, homology models for these antioxidant proteins were developed. The modelling of the three dimensional structure of these proteins shows that models generated by Modeller were more acceptable in comparison to that by Geno3D and Swiss Model. The models were validated using protein structure checking tools PROCHECK and WHAT IF. These structures will provide a good foundation for functional analysis of experimentally derived crystal structures.

**Key words:** Amaranthus, Computational tools, Isoelectric point, Disulphide bridge, Homology model

# Biological Control and Management of *Parthenium hysterophorus* Linnaeus - A Review

K. Pratibha

## Abstract

*Parthenium hysterophorus* L is one of the ten worst invasive weed species in the world, it is spreading widely in open vegetations at a very alarming speed. This shrub has not only become a noxious threat to other crops but also has been occupying grazing lands, road sides and is found distributed in all vacant areas. The negative effect of this weed on human and animal health has been well researched and documented over the past few years. This aggressive and dangerous plant has spread to all parts of the world, parts of Asia, Indian states and in Karnataka and also its very prevalent in Bangalore.

In this review paper there is an attempt made to understand the causes for the accelerated growth of *Parthenium* which has altered the natural ecosystem. In addition, the eradication methods, impacts, management and control of this weed (Biological, Physical and Chemical) *Parthenium* population and its percentage in and around the other habitats are discussed.

**Key words:** Invasive weed, eradication, herbicides, management, allergy

## India's Outward Foreign Direct Investment in the Developing Region - An Analysis of Market-Seeking Motivation

Leena Nair and V. Basil Hans

### Abstract

India's outward foreign direct investment (OFDI) has registered considerable increase since 1990s. This study analyses OFDI originating from India to developing countries. The study considers host developing countries based on the categorization followed by the United Nations Conference on Trade and Development in its publication, the World Investment Report. A longer period of OFDI data 2001-2013 than other studies of India's OFDI has been considered. The study seeks to analyse the significance of market-seeking motivation of India's OFDI to the developing region which is widely acknowledged to be resource abundant. To determine market-seeking motivation, the study empirically tests market size as a significant factor influencing India's OFDI by adopting a panel data methodology. The result of the panel cointegration test shows that India's OFDI is positively associated with larger host markets in the developing region, indicating market-seeking motivation.

**Key words:** Developing region, India's OFDI, Market-seeking, Panel cointegration

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# Projected Destination Image of Karnataka Tourism: A Digital Content Analysis

Neha Itty Jose Paul

## Abstract

The world is leaping and bound toward the eminent digital age, it is fundamental that the tourist boards of various organizations work out a plan to map the impact of various means of transmitting data on a destination in the internet. With the rise in the use of social media platforms, it is vital to track the customer attitude toward a tourism product as the impact can lead to either positive or negative outcomes. Therefore, this paper investigates the various media used for the promotion of Karnataka on the web and its impact on the destination image as perceived by a tourist. A digital content analysis of the feedback and content available on various media platforms on the internet, the paper is a working paper and charts out a means of determining the various methods to understand the projected image of Karnataka tourism.

**Key words:** Destination image, ICT, Karnataka tourism, social media, e-travel agents

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## **CAMPCO in the Exaltation of Arecanut Marketing: A Case Study of Kasaragod District, Kerala**

N. Karunakaran and Reshma Rajan M

### **Abstract**

Arecanut is an important cash crop in Kerala which plays a significant role in providing income and livelihood security to the people. A sudden market crisis in 1970-71 and consequent fall in prices caused considerable concern to the growers give birth to a co-operative venture called CAMPCO. The study analysed the role of CAMPCO in the exaltation of arecanut market in Kasaragod district. The procurement and marketing of arecanut in different grades, quality and value added products ensured reasonable prices to the farmers. The areca and cocoa growers as members and is there any problem to them, CAMPCO take remedial measures to organise meeting, study the problem and influence the Government for necessary action. The CAMPCO Ltd. is a success story of the people, by the people and for the people. It is a fruit of successful implementation of the vision and values of the founders and has developed a brand which people trust through their own experience. In Kasaragod district of Kerala, the main reason for the increased production is as a result of the better institutional support from Central Arecanut and Cocoa Marketing and Processing Co-operative Ltd and effectively influenced the exaltation of arecanut marketing.

**Key words:** Arecanut marketing, CAMPCO, exaltation, Kerala

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# English Language Vocabulary through WhatsApp Technology

Meenu Pandey and B Vedant Pandey

## Abstract

Widespread use of mobile and wireless devices in education has led to revolutionary changes in the way teachers teach and learners learn. Due to their pervasiveness, mobile phones are considered as being potentially valuable learning tools. However, students' personal use of mobile phones and their apps for learning benefit is still open to research. The present study aimed to investigate the role of WhatsApp in the vocabulary learning improvement of twelfth class students. Using a mixed method design, a group of 50 students including 25 male and 25 female students studying at two male and female senior higher secondary schools in participated in the study. A pre-test and post-test were used. Four English classes were instructed and the experimental group received vocabulary instructions electronically four days a week for four weeks using the WhatsApp while the control group was taught vocabularies of their textbook inside the classroom by traditional method used in all schools for teaching English to students. The results revealed that using WhatsApp had significant role in vocabulary learning of the students. The results also showed that there was not a substantial difference between male and female students regarding their vocabulary knowledge after using WhatsApp. The findings of this study can be beneficial to students, teachers, language schools, policy makers, and syllabus designers.

**Key words:** WhatsApp, Mobile Technology, English Language, Vocabulary.

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# **E-Wallet and its Usefulness among College Students in Chennai**

Guru Akilandeswari B

## **Abstract**

With demonetisation as an inflection point, the usage of E-Wallets has increased to a greater extent. And students can adopt any technology at a faster rate. This has led to the study of usefulness of E-Wallets among college students in Chennai. 100 samples were collected for the study and statistical tools like percentage and chi-square have been used to analyse the same and it was found out that paytm was largely used E-Wallet among college students in Chennai and they have been using it especially for the recharge of their mobiles and it can become an alternative for cash payment system in future.

**Key words:** Digital wallets, security, privacy, hacking, paperless transaction.

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# Environmental Pollution - A Case Study on Plastic Pollution in Bangalore

Farah Mathew

## Abstract

Human beings and animals are the creation of nature. Nature may exist without us but we cannot survive in the absence of nature. The imbalance of nature has caused many disasters. Natural balance is absolutely necessary and there are not any alternatives to it if we want to continue human race on the earth. If otherwise also it will help us to live a secure, easier and healthy life. All our daily activities can give rise to a large variety of different wastes arising from different sources. Early solid waste management consisted of digging pits and throwing garbage into them solid waste management became a serious issue. Houses that did not have room to bury their garbage would throw it into the streets, making a stroll to the corner store an unpleasant prospect. In response, many cities started to set up municipal garbage collection, in the form of rag and bone men who would buy useful garbage from people and recycle it, or waste collection teams which would dispose of unusable garbage.

Environmental pollution is now a world wide concern. Plastic products have become an integral part in our daily life as a basic need. It is produced on a massive scale worldwide and its production crosses the 150 million tones per year globally. Further, the recycling of a virgin plastic material can be done 2-3 times only, because, after every recycling, the strength of plastic material is reduced due to thermal degradation. It is to mention that no authentic estimation is available on total generation of plastic waste in the country.

**Key words:** Pollution, Waste Management, Plastic, Bio-fertilizers, Government