LITERATURE REVIEW

Adeloye et al (2007), studied on antimicrobial, antioxidant and phytochemical analysis of Urena lobata leave extract. The ethyl acetate and n-butanol fractions had a fast antioxidant reaction with DPPH solution, while the n-hexane and dichloromethane fractions gave no reaction. Three compounds were isolated and compounds showed strong antimicrobial activity against Escherichia coli, Bacillus subtilis, Klebsiella pneumoniae, Bacillus polyxyma and Candida albicans\textsuperscript{[16]}.

Lissy et al (2006), investigated antioxidant activity of S. retusa, U.lobata and T.rhomboidea and found significant. The methanolic extract of Sida retusa Linn (Malvaceae), Urena lobata Linn.(Malvaceae) and Triumfetta rhomboidea Jacq.(Teliaceae) roots were found to inhibit lipid peroxidation, scavenge hydroxyl and superoxide radicals \textit{in vitro}. The present investigation indicated that S. retusa, U.lobata and T.rhomboidea possessed significant antioxidant activity\textsuperscript{[17]}.

Akhere et al (2011), evaluated the long term effects of daily oral administration of aqueous extracts of Urena lobata roots in normal rabbits. Parameters studied such as body weight, blood glucose and liver function tests were monitored at specific intervals in the serum for 24 weeks, biochemical and histological evidences showed that Urena lobata administration exerted an initial toxic effect on hepatocytes and also caused bile obstruction, these events were however, not severe and sustained\textsuperscript{[18]}.

Chatterjee et al (2007), detected that DNA A and a satellite DNA $\beta$ molecule for the first time in the eastern part of India in Urena lobata showing yellow vein mosaic disease symptoms. Whitefly transmission, Nucleic acid spot hybridization (NASH) tests and positive PCR amplification confirmed the first record of a begomovirus with both DNA A and a satellite DNA $\beta$ molecule being associated with yellow vein mosaic disease of Urena lobata in India\textsuperscript{[19]}.

Nooman et al (2008), studied the methanolic crude extracts of some commonly used medicinal plants were screened for their free radical scavenging properties using ascorbic acid as standard antioxidant. The overall antioxidant activity of green tea (Camellia sinensis Linn.) was the strongest, followed in descending order by black tea (Camellia sinensis Linn.), Eugenia caryophyllus (Spreng.) Bullock and Harrison, Piper cubeba Linn. Zingiber officinale Roscoe and
Piper nigrum Linn. Trigonella foenum graecum Linn. and Elettaria cardamomum (Linn.) Maton showed weak free radical scavenging activity with the DPPH method\(^{20}\).

Sini et al (2011), studied the antioxidant activity and radical scavenging activity of methanolic extracts of Cassia occidentalis, Clitoria ternatea, Trianthema decandra, Capparis zeylanica, Anisomeles malabarica and Plumbago zeylanica, traditionally used by the tribes of Attapady regions as folk remedies was evaluated against 1, 1-diphenyl-2-picrylhydrazyl (DPPH) free radical. Cassia occidentalis, Clitoria ternatea, Trianthema decandra, Capparis zeylanica, Anisomeles malabarica and Plumbago zeylanica exhibited strong antioxidant activity as compared to other plants. Trianthema decandra showed the highest antioxidant activity\(^{21}\).

Zhang et al (2011), studied the antioxidant, anti-inflammatory, and cytotoxic activities of water and ethanol extracts of 14 Chinese medicinal plants were investigated and also their total phenolics and flavonoid contents measured. Four plants, namely, Scutellaria baicalensis, Taxillus chinensis, Rheum officinale, and Sophora japonica, showed significant antioxidant activity in both yeast model and also free radical scavenging methods\(^{22}\).

Gupta et al (2004), investigated that the antioxidant and free radical scavenging activity of methanolic extract of Ervatamia coronaria leaves (Apocynaceae) in DPPH radical, superoxide anion radical, nitric oxide radical and hydroxyl radical scavenging assays. The results obtained in the present study indicated the MEEC was a potential source of natural antioxidant\(^{23}\).

Odimegwu et al (2008), investigated a herbal ointment containing Dissotis theifolia extract for wound healing and antibacterial activities against clinical wound isolates of Staphylococcus aureus and Pseudomonas aeruginosa. The rate of wound healing of excision wounds infected with clinical isolates of S. aureus were higher for the groups treated with D. theifolia ointment\(^{24}\).

Sumitra et al (2005), determined the efficacy of topical administration of an alcoholic bark extract of Butea monosperma (B. monosperma) on cutaneous wound healing in rats. The tensile strength of drug-treated wounds was increased significantly. B. monosperma possesses antioxidant properties, and the results clearly substantiate the beneficial effects of the topical application of B. monosperma in the acceleration of wound healing\(^{25}\).

Karodi et al (2009), investigated the wound healing activity of a crude extract of Rubia cordifolia L. (Indian madder) in mice. The effect produced by gel, in terms of wound contracting
ability, wound closure, decrease in surface area of wound, tissue regeneration at the wound site and histopathological characteristics were significant in treated mice\textsuperscript{[26]}. 

Lotlekare et al (2011), investigated the wound healing and antioxidant potential of aqueous and alcohol extracts of \textit{Allium sativum Linn bulb}. Aqueous and alcohol extracts of \textit{Allium sativum Linn bulb} promoted the wound healing activity significantly in all the wound models studied. Aqueous and alcohol extracts of \textit{Allium sativum Linn bulb} when compared to the control group of animals and aqueous and alcohol extracts of \textit{Allium sativum Linn bulb} possess wound healing and antioxidant activity\textsuperscript{[27]}.

Kalyon et al (2009), investigate the wound healing activity by excision and incision wound models to evaluate the wound-healing activity of \textit{Ficus religiosa} extracts, prepared as ointment form (5 and 10\%) and applied on Wistar albino strain rats of either sex. The healing of the wound was assessed by the rate of wound contraction, period of epithelialization, skin breaking strength. Leaf extracts of \textit{Ficus religiosa} in the form of 10\% ointment promote wound-healing activity better than the 5\% concentration\textsuperscript{[28]}.

Yaman et al (2010), investigated to compare the effects of \textit{Nigella sativa} (NS) and silversulfadiazine (SSD) cream on healing of burn wounds in rats. Application of NS and SSD cream are effective in healing burn related skin wounds in the rat model\textsuperscript{[29]}.

Nayak et al (1999), studied the alcoholic extract of the flowers of \textit{Ixora coccinea} for its effect on wound healing, using a dead space wound model in rats. Significant increases in granuloma tissue weight, tensile strength, hydroxyproline and glycosaminoglycan content were observed. The prohealing actions due to increased collagen deposition as well as better alignment and maturation\textsuperscript{[30]}.

Joan et al (2003), demonstrated the ability to heal an injury is a biologic necessity for all organisms, with mammals lagging in proficiency when compared with lower life forms that have the ability to regenerate differentiated structures. Insight into the complex chain of events leading to the formation of scar is a necessity for every individual who attempts wound management\textsuperscript{[31]}.

Chitra et al (2009), studied the wound healing activity of different extracts of \textit{Allium cepa} L. in excision, incision and dead space wound models in albino rats and extracts were also subjected to antibacterial screening by using the cup plate method. These studies were concluded that alcoholic extract of tubers of \textit{Allium cepa} has significant wound healing activity\textsuperscript{[32]}.
Ashok et al (2009), investigated the antitumor effect on EAC and antioxidant role of the methanol extract of Oxystelma esculentum R on tumor growth and the host survival time with mice. Decreases in tumor volume, packed cell volume, and viable cell count were observed in MEOE-treated mice when compared to EAC-treated mice and decreased the body weight of the EAC-bearing mice. Hematological profiles indicated a decrease in white blood cells (WBC), an increase in red blood cells (RBC), and, thereby, Hemoglobin (Hb) and increased the levels of GSH, SOD and CAT.[33]

Rahman et al (2011), aimed to find out antioxidant and anticancer activities of two Bangladeshi ginger varieties (Fulbaria and Syedpuri) at young age. High antioxidant activities were observed in the rhizomes of Syedpuri grown under elevated CO\textsubscript{2} concentration. The results showed that enriched ginger extract (rhizomes) exhibited the highest anticancer activity on MCF-7 cancer cells.[34]

Sodde et al (2011), discussed about the anticancer activity of the methanolic and aqueous stem extract of the Macrosolen parasiticus in Swiss albino mice against Ehrlich Ascites Carcinoma (EAC) cell line. The both the extracts showed significant decrease in tumor volume, viable cell count, tumor weight and elevated the life span of EAC tumor bearing mice. Haematological profile such as RBC, haemoglobin and WBC count reverted to normal level in treated mice and anticancer activity and that is comparable to that of cisplatin.[35]

Siems et al (1991), studied the extents of ATP-yielding and consuming processes in Ehrlich mouse ascites tumor cells during the proliferating and resting growth phase were compared. In the resting phase the total ATP production was decreased by one-third. The ATP supply by oxidative phosphorylation was drastically reduced, whereas the rate of glycolysis stayed nearly constant. All ATP-consuming processes investigated, i.e., protein turnover, Na+/K (+)-ATPase, Ca\textsuperscript{2} (+)-ATPase, and RNA synthesis, were decreased proportionally with the total ATP consumption.[36]

Lee et al (2008), determine the capability of mycelial extract of inhibiting the activities of acetylcholinesterase (AChE) and beta-secretase (BACE) activity. Butanol, ethanol, and water extracts of C. pyxidata DGUM 29005 mycelia were shown to inhibit AChE activity by 99.3%, 93.7% and 91.7%, respectively. These results suggested that the C. pyxidata mycelial extract had the potential to enhance cholinergic function and, therefore, may perform a function in the
amelioration of the cholinergic deficit observed in cases of AD, as well as other types of age-associated memory impairment\textsuperscript{[37]}. 

\textbf{Mehmet et al (2011).}, studied on experimental tumors which have great importance in modeling, and Ehrlich ascites carcinoma (EAC) is one of the commonest tumors. The ideal drug being ineffective or minimally effective for normal cells had been focused on, and at this point, the usage of natural sources as an alternative cancer therapy is thought to have a great value for cancer control and programs’ destruction\textsuperscript{[38]}. 

\textbf{Prakash et al (2000).}, demonstrated that, the seed oil of \textit{Ocimum sanctum} possess chemopreventive activity against subcutaneously injected 20-methylcholanthrene induced-fibrosarcoma tumors in the thigh region of Swiss albino mice. Liver enzymatic (superoxide dismutase, catalase, glutathione-S-transferase), non-enzymatic antioxidants (reduced glutathione) and lipid peroxidation end product, malondialdehyde levels were significantly modulated with oil treatment as compared to untreated 20-methylcholanthrene injected mice\textsuperscript{[39]}. 