WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.074
Volume 7, Issue 12, 377-382. Review Article ISSN 2277– 7105

CHEMICAL COMPOUNDS FROM CARRISA CARANDAS-A REVIEW

***[1]HemRaj Vashist and [2]Vivek Sharma**

[1]L.R. Institute of Pharmacy Solan, Oachghat HP- 173223.

[2]Govt. College of Pharmacy Rohru, HP-171207.

Article Received on
01 May 2018,

Revised on 22 May 2018,
Accepted on 12 June 2018,

DOI: 10.20959/wjpr201812-12436

***Corresponding Author**
HemRaj Vashist
L.R. Institute of Pharmacy
Solan, Oachghat HP-
173223.

ABSTRACT

Carrisa carandsa is an indigenous plant of himalayan region known for its fruits mainly. The ripe fruit is rich in phenolic compounds triterpenoids flavonoids, vitamins, peptides and sugars.not only the fruit but the whole plant is known to have several valuable medicinal properties against varios of the plant is because of several secondry metabolites present in the plant. the present review is compilation of reported researches howing secondry metabolites in plant.

KEYWORDS: Carrisa carandas, Himalyan region. Secondary metabolites.

INTRODUCTION

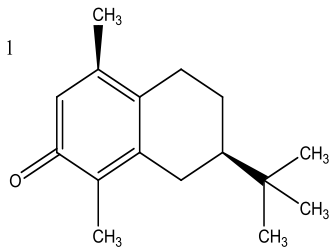
Carissa carandas is a species of flowering shrub in the dogbane family (Apocynaceae). Recently its name has been changed to C.congesta. Its leaf decocit tion is used in case of intermittent fever. The unripe fruits of the plant are used as an astringent.Its roots are used as bitter stomachic, vermifuge. It is an ingredient several preparation for itches. Small amount of salicylic acid has also been reported in the plant. Because of the presence of cardiac glycosides it is reported to lower slight BP.[1]

Carissa carandas is a minor exotic plant. The fruits of the plants are known as karundu,.[2] Moreover the parts of plant is used in the prevention of amenorrhoea rheumatoid arthritis[3] piles[4] nevine disorders, splenomegaly, diabetes, pyrexia, hepatic disorders, tuberculosis, leprosy and renal dysfunction.

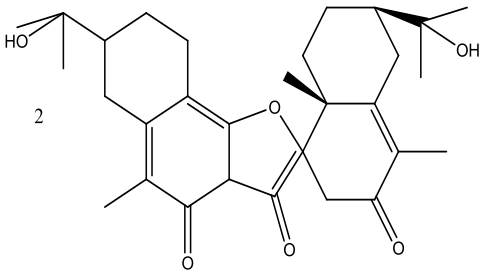
Secondry metabolites

Many terpenoids particularly mixture of sesquiterpenoids mainly carissone and caridone as a novel type of c31 terpenoids have been reported from C. carandas. Other products include pentacyclic triterpenoids carissin[5,6]

1. From Roots of *Carissa congesta* roots[5,7]



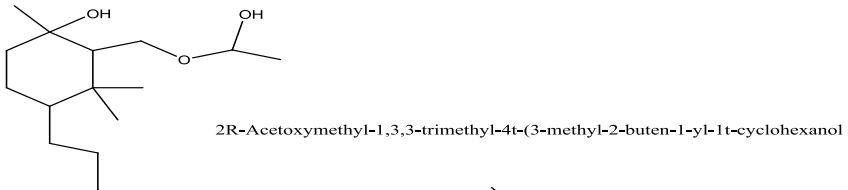
1 Carissone



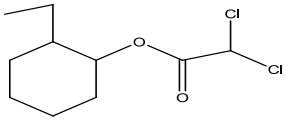
2 Carindone

3 Carinol

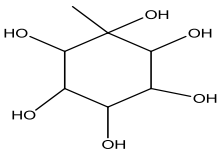
2. From C. *carandas* fruits[8-11]



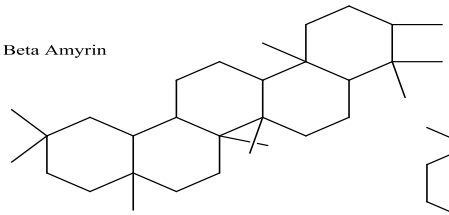
2R-Acetoxymethyl-1,3,3-trimethyl-4t-(3-methyl-2-buten-1-yl-1t-cyclohexanol



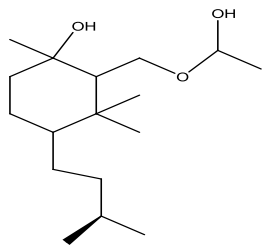
Dichloroacetic acid-2-ethylhexylester



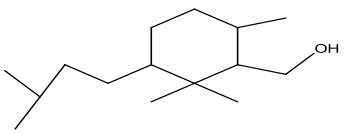
Myo-inositol,4-c-methyl



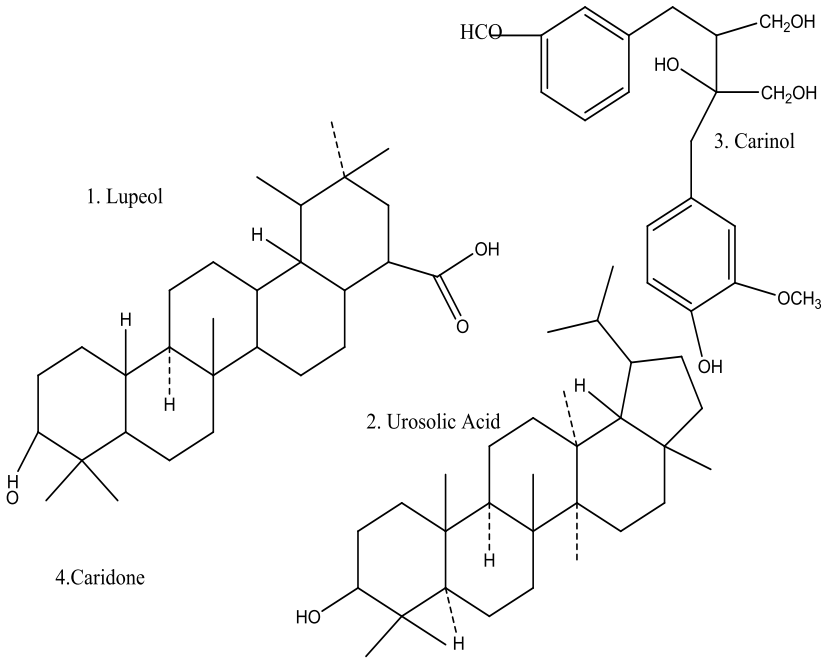
Beta Amyrin

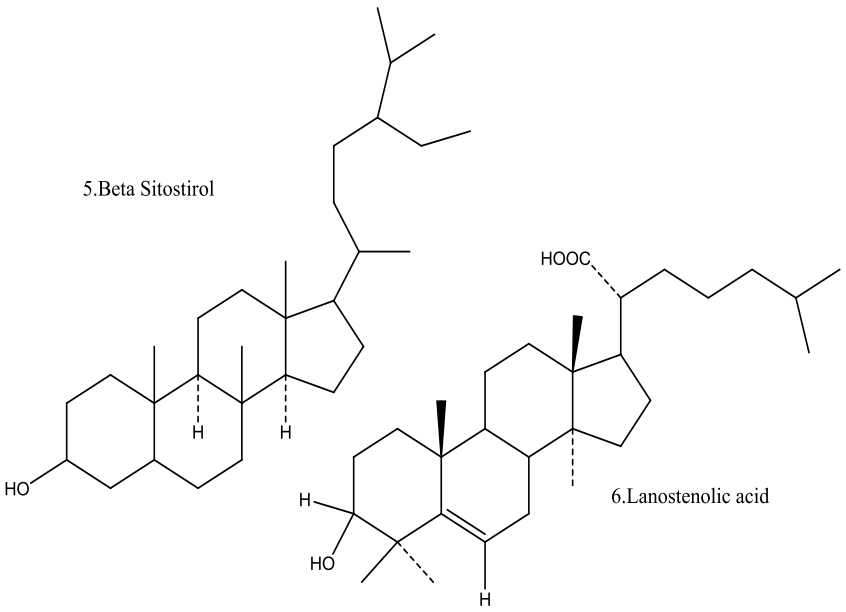


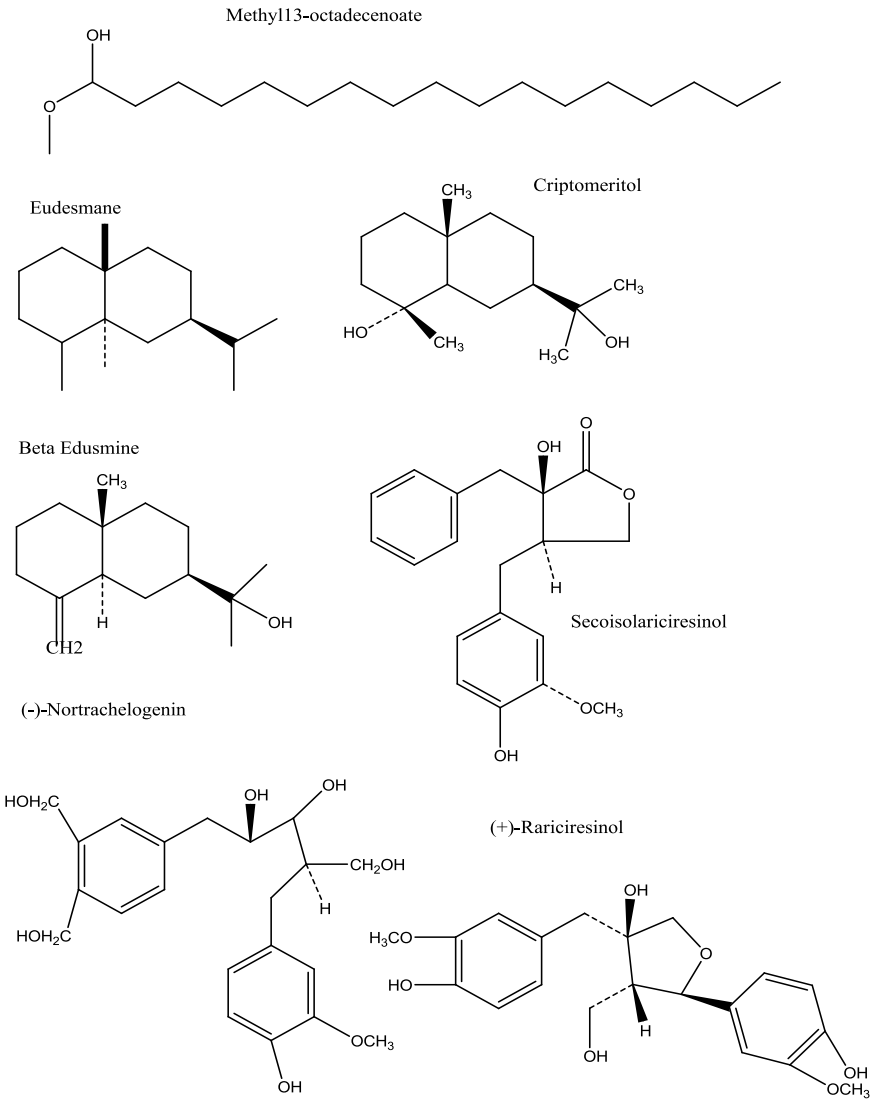
2R-acetoxymethyl-1,3,3-trimetjhyl-4t-(3-methyl-2-buten-1-yl)-1-cyclohexcanol.



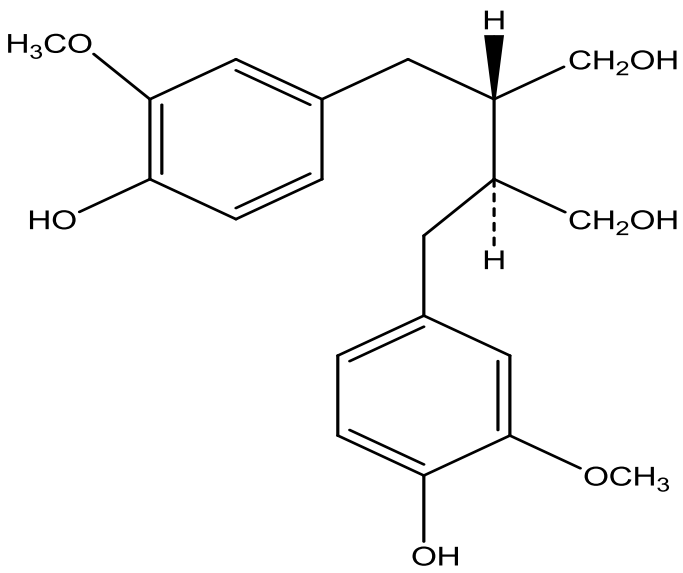
2,4,4-Trimethyl-3hydroxymethyl-5a-(3-methyl-but—2-enyl)


HCO
CH2OH
HO
CH2OH
3. Carinol
1. Lupeol
H
OH
H
H
O
O
OCH3
OH
2. Urosolic Acid
H
H
HO
H
4.Caridone

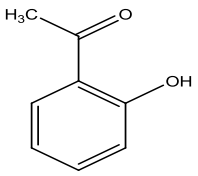

5.Beta Sitostirol
HOOC
H
H
HO
H
HO
H
6.Lanostenolic acid


Methyl13-octadecenoate
OH
O
Eudesmane
Criptomeritol
CH3
HO
CH3
CH3
H3C
OH
Beta Edusmine
CH3
H
CH2
OH
(-)-Nortrachelogenin
O
OH
O
H
Secoisolariciresinol
OCH3
OH
HOH2C
OH
OH
CH2OH
H
HOH2C
OCH3
OH
(+)-Rariciresinol
OH
H3CO
HO
O
H
OH
OH
OCH3

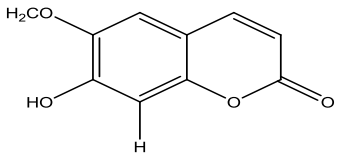
(-)- Olivil


H
H3CO
CH2OH
HO
CH2OH
H
OCH3
OH

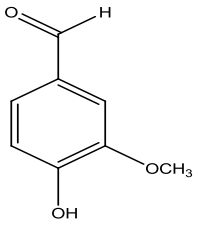
3. Other Compounds from Carissa *carandas*[12-13]



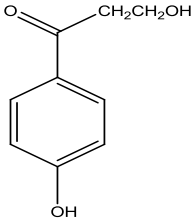
2-hydroxyacetophenone



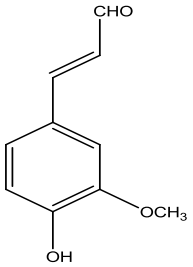
2-hydroxy-(3-propnyl) benzine



Coniferaldehyde



Scopoletine



Vanillin

CONCLUSION

The plant posses various valuable chemical constituents of medicinal importance. such reported findings by different researchers again drags our attention to work more on the plant to formulate new valuable compounds of medicinal interest.

REFERENCES

1. Fariha A, Mohammad S, Mahuddin AB. Invivo pharmacological investigation of bark extract of *Carissa carandas*., 2014; 6(6): 180-185.
2. HemRaj Vashist, Diksha Sharma. Ethnomedicinal Survey of Plant of Gharsi Village Hills and its Allied Area of District Solan. IJPPS, 2013; 5(3): 848-850.
3. Sharma A, Reddy GD, Kaushik A, Sharma K, Tiwari RK, et al, Analgesic and anti-inflammatory activity of *Carissa carandas* tree and Microstylis wallichi tubers.Nat. Prod Sci., 2007; 13: 6-10
4. Rai R, Mishra KK, Micropropagation of karonda[Carissa carandas) through shootmultiplication. Sci Hort., 2005; 103: 227.
5. Sunita shailajan, Shashi kumar menon Neelam shayed, Bavesh Tiwari.Simultaneous estimation of three terpenoids from C. carandas using validated HPLC. International journal of green pharmacy., 2012.

6. Devmura V., Shivanand P. and Jivani NP.2010,Review on *Carissa congesta*: phytochemical constituents, Taditional use and pharmacological Properties. Int. J. Chem Sci., 2010; 8(1): 81-87.
7. Arif M, kamal M, Javed T, Khalid M, Saini KS, Kumar A, Ahnwad A. Carissa carandas linn (karoda) an esxolic minor plant fruit with immense value in neutraceuticals and pharmaceutical industries. AJBPS., 2015.
8. Anupama N, Madhumitha G, Rajesh KS. Role of dried fruits of Carissa carandas as anti-inflammatory agent and the analysis of phytochemical constituents by GC-MS.Hindawi publishing corporation biomedical research International., 2014.
9. Desai V G. "The Materia Medica and Therapeutic of Indian Medicinal Plants."Vadavji Trikumjee Acharya. Bombay., 1927; 477.
10. Joglekar S N, Gaitonde B B, Histamine releasing activity of Carissa carandas roots (Apocynaceae). Jap. J. Pharmacol, 1970; 20: 367-372.
11. Singh B, Rastogi R P. "The structure of carindone" Phytochem, 1972; 11: 1797.
12. Sharma A, Tiwari R K, Kaushik A, Tyagi L K, Shankar K, Virmani T, et al. "Standardisation of Carissa carandas Linn: A drug used in Indian system of medicine as per W.H.O. Guidelines." Cont J Pharm Sci., 2007; 1: 9-14.
13. Malik S K, Chaudhury R, Dhariwal O P, Bhandari D C. "Genetic resources of tropical underutilized fruits in India." New Delhi: Na-tional Bureau of Plant Genetic Resources (NBPGR)., 2010; 47-53.