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An Efficient and Total Synthesis of DBore Hydroxyphenyl Benzene-1, 2, 3-triol

Dronadula Borraiah*

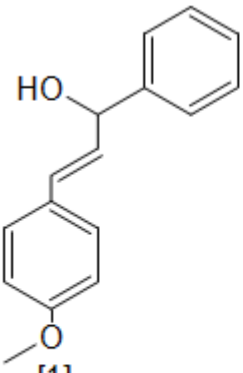
Abstract: ***The DBore hydroxyphenyl benzene-1, 2, 3-triol ((1Z, 3E)-4-(4-hydroxyphenyl)-2-phenylbut-3-enehydrazo namide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol) invention belongs to organic synthesis field, in spite of this, a complete vibration analysis of the molecules is missing in the experimental study Therefore; the aim of this study was to obtain a comprehensive vibrational investigation of DBore hydroxyphenyl benzene-1, 2, 3- triol by means of theoretical methods. The DBore hydroxyphenyl benzene-1, 2, 3-triol ((1Z, 3E)-4-(4-hydroxyphenyl)-2-phenylbut-3-enehydrazo namide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol invention belongs to the organic synthesis field, described in clims and derivatives, DBore hydroxyphenyl benzene-1, 2, 3-triol product and their formations discussed in introduction.***

Keywords: Sodium hydroxide (NaOH), Water (H2O), Ethanol (EtOH), Potassium cyanide (KCN), Hydroxylamine (NH2 OH), Craig synthesis, N, N′ dicyclohexylcarbodiimide (DCC), CH3ONHCH3, Tetrahydrofuran (THF), Me thanol (MeOH), 2-(2, 3, 4-trimethoxyphenyl) ethan-1-amine (C11 H17 N O3), 1-(2-ethoxyquinolin-1-(2H)-y l) ethan-1-one (C13 H15 N O2), Aluminium chloride (AlCl3), Dichloromethane (CH2Cl2), Hydrogen iodide (HI), DBore hydroxyphenyl benzene-1, 2, 3-triol, (2E)-3-(4-methoxyphenyl)-1-phenylprop-2-en-1-one

1. Introduction

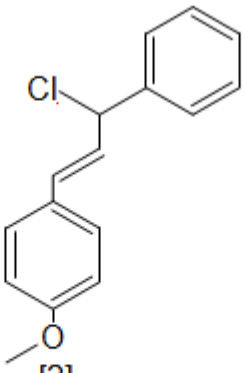
DBore hydroxyphenyl benzene-1, 2, 3-triol ((1Z, 3E)-4-(4-hydroxyphenyl)-2-phenylbut-3-enehydrazonam ide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol) was synthesized from 2-(2, 3, 4-trimethoxyphenyl) ethan-1- amine and reacted in the enehydrazonamide group. Due to DBore hydroxyphenyl benzene-1, 2, 3-triol structure it has been used in many applications in organic formulations (Ex: Biosynthesis, R- and S- Nomenclature, etc.)

Nine new molecules are involved in DBore hydroxyphenyl benzene-1, 2, 3-triol synthesis they are



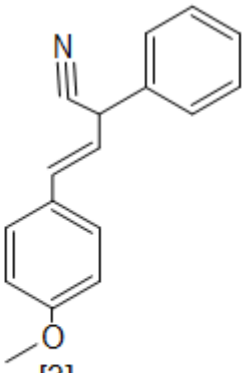
[1]

(2E)-3-(4-methoxyphenyl) -1-phenylprop-2-en-1-ol



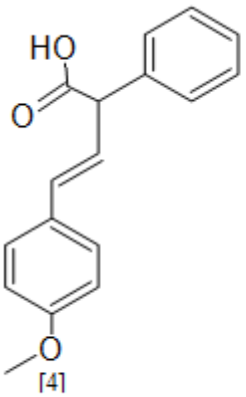
[2]

1-[(1E)-3-chloro-3-phenylprop -1-en-1-yl]-4-methoxybenzene



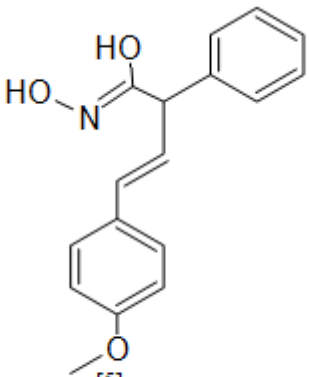
[3]

(3E)-4-(4-methoxyphenyl) -2-phenylbut-3-enenitrile



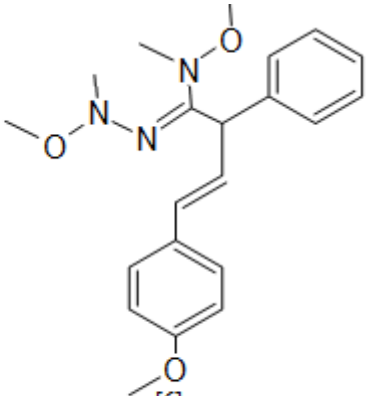
[4]

(3E)-4-(4-methoxyphenyl) -2-phenylbut-3-enoic acid



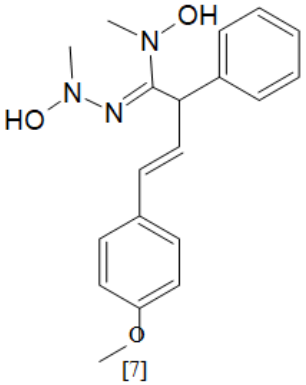
[5]

(1Z, 3E)-N-hydroxy-4-(4- methoxyphenyl) -2-phenyl but-3- enimidic acid



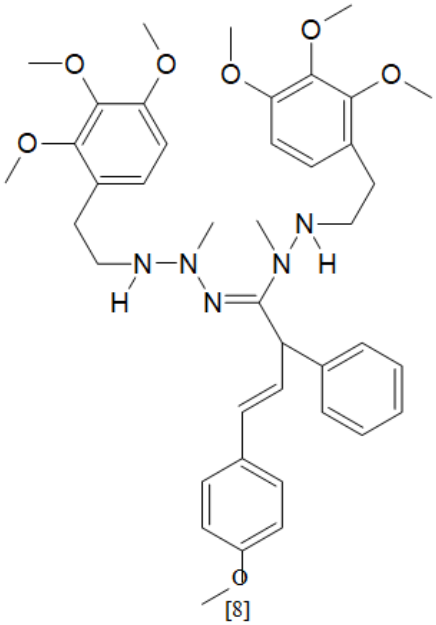
[6]

(1Z, 3E)-N, N'-methoxy-4-(4-methoxyphenyl) -N, N'- dimethyl-2-phenylbut-3- enehydrazonamide



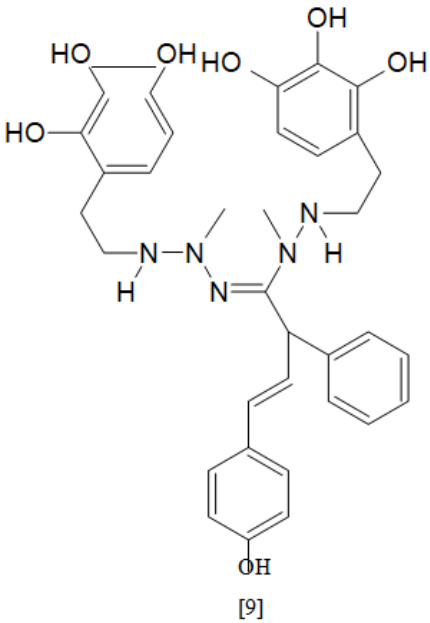
[7]

(1Z,3E)-N,N'-hydroxy-4-(4-methoxyphenyl)-N,N'-dimethyl-2-phenylbut-3-enehydrazonamide



[8]

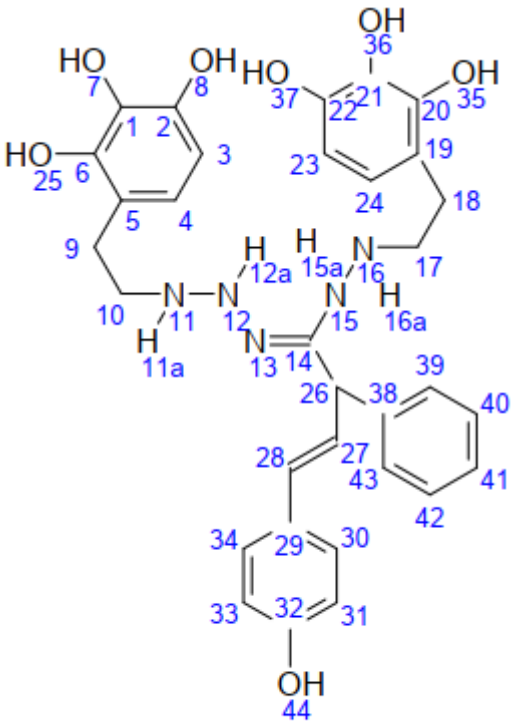
(1Z,3E)-4-(4-methoxyphenyl) -N,N'-dimethyl-2-phenylbut-3-enehydrazonamide-2,1-2-(2,3, 4-trimethoxyphenol)ethan-1-amine



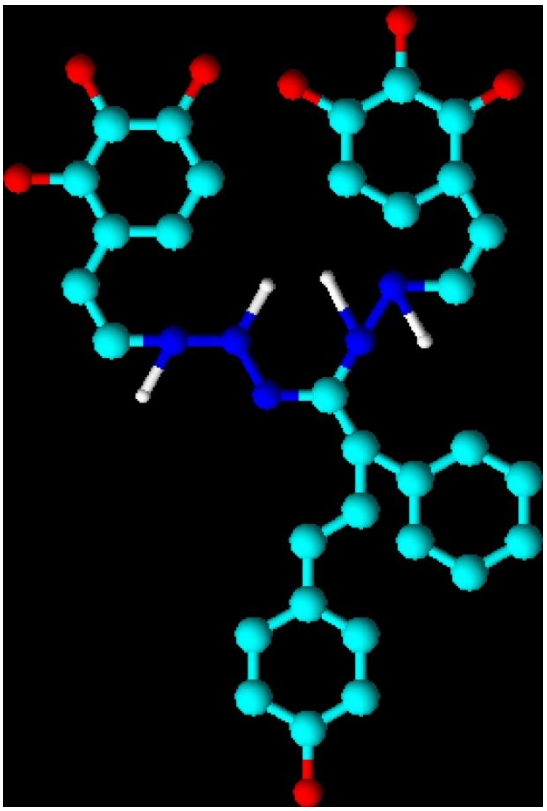
[9]

(1Z,3E)-4-(4-methoxyphenyl) -N,N'-dimethyl-2-phenylbut-3-enehydrazonamide-2,1-4-(2-aminoethyl)benzene-1,2,3-triol

DBore hydroxyphenyl benzene-1, 2, 3-triol structure:



(C32 H35 N5 O7)
FW:- 601.648
DBore hydroxyphenyl benzene-1, 2, 3-triol

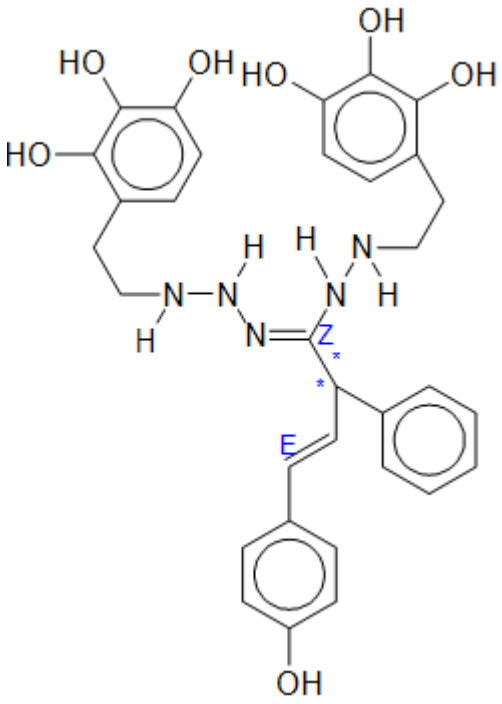


Graphical structure of DBore hydroxyphenyl benzene-1, 2, 3-triol:

The IUPAC International Chemical Identifier:

InChI=1S/C32H35N5O7/c38-24-11-6-20 (7-12-24) 8-13-25 (21-4-2-1-3-5-21) 32 (35-33-18-16-22-9-14- 26 (39) 30 (43) 28 (22) 41) 36-37-34-19-17-23-10-15-27 (40) 31 (44) 29 (23) 42/h1-15, 25, 33-34, 37-44H, 16-1
9H2, (H, 35, 36) /b13-8+

Aromaticity and stereo descriptors of DBore hydroxyphenyl benzene-1, 2, 3-triol:

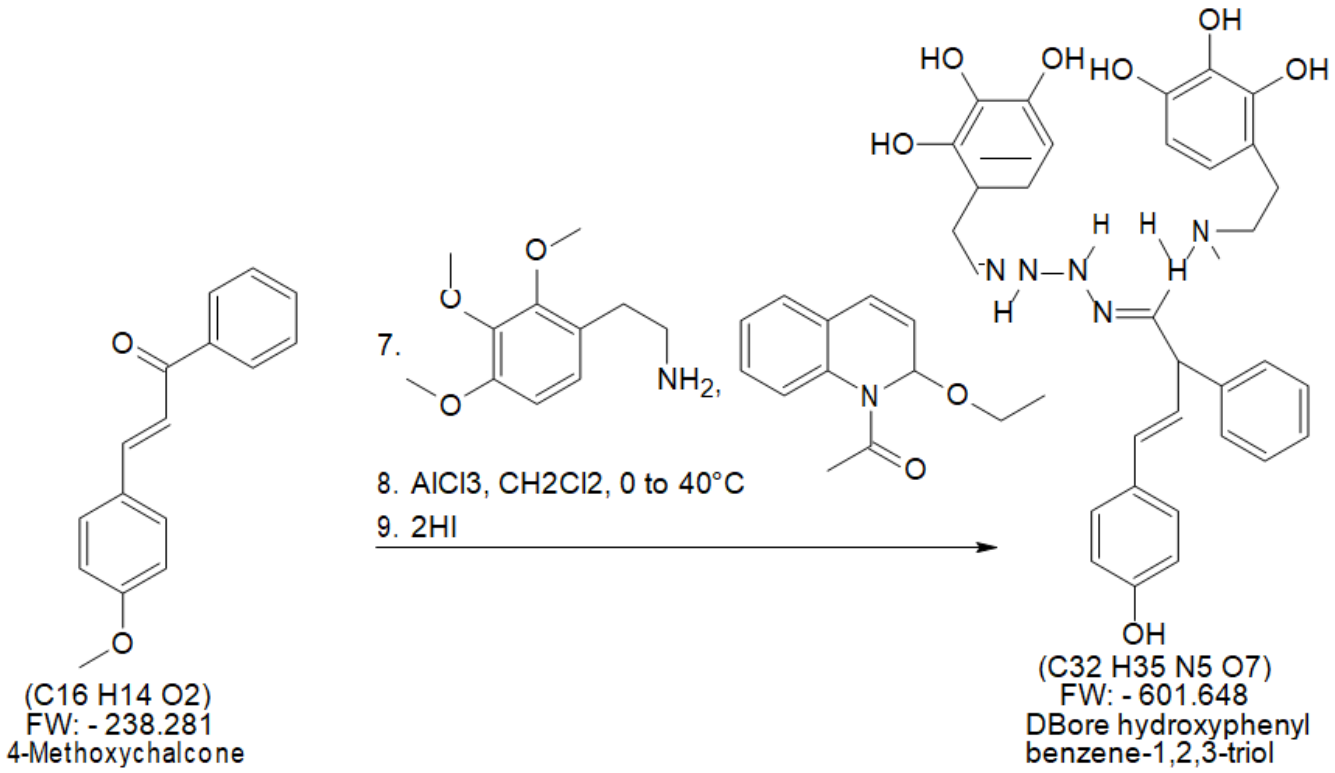


Canonical SMILES

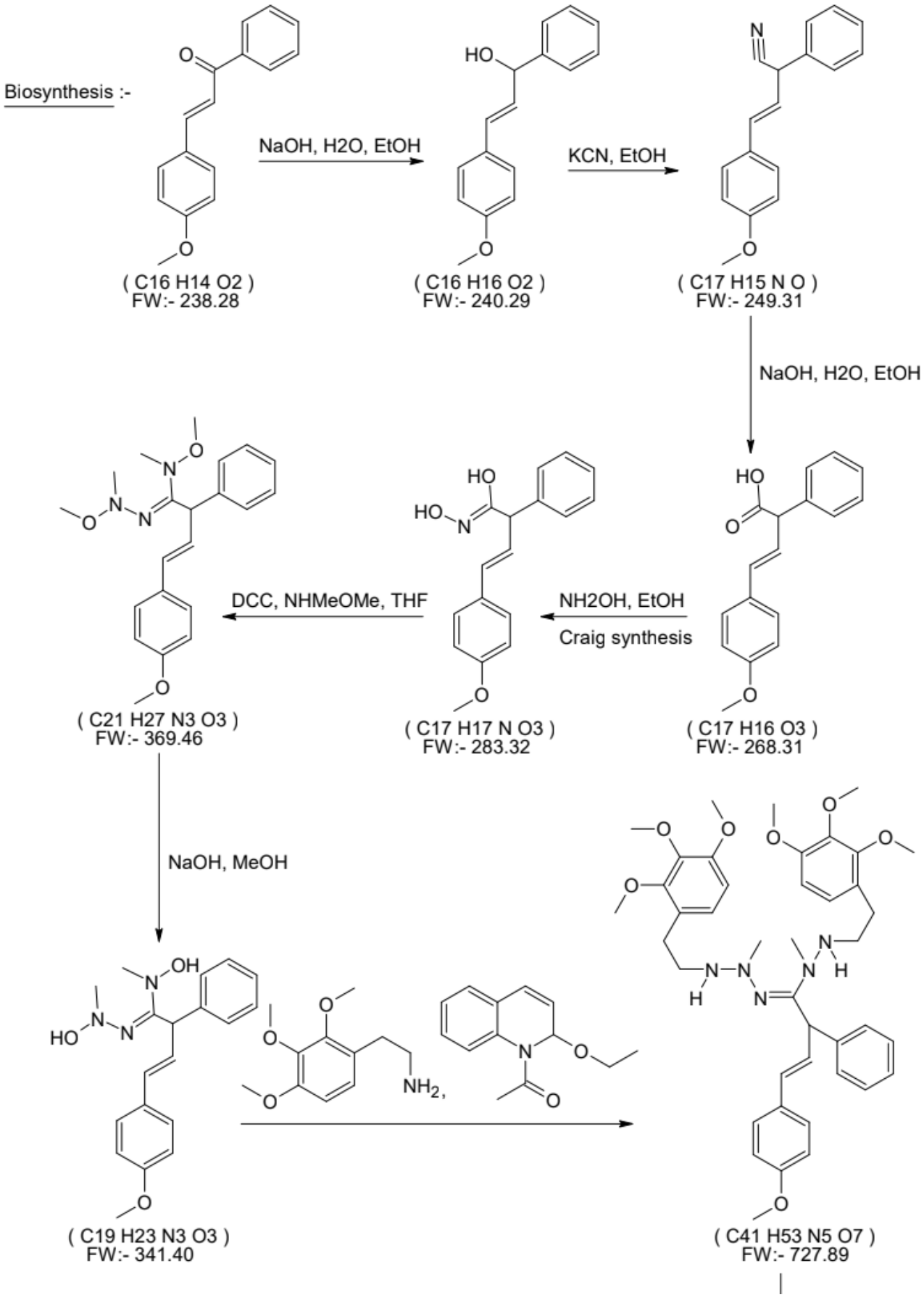
Oc1ccc(CCNN\N=C(/NNCCc2ccc(O)c(O)c2O)C(/C=C/c2ccc(O)cc2)c2ccccc2)c(O)c1O

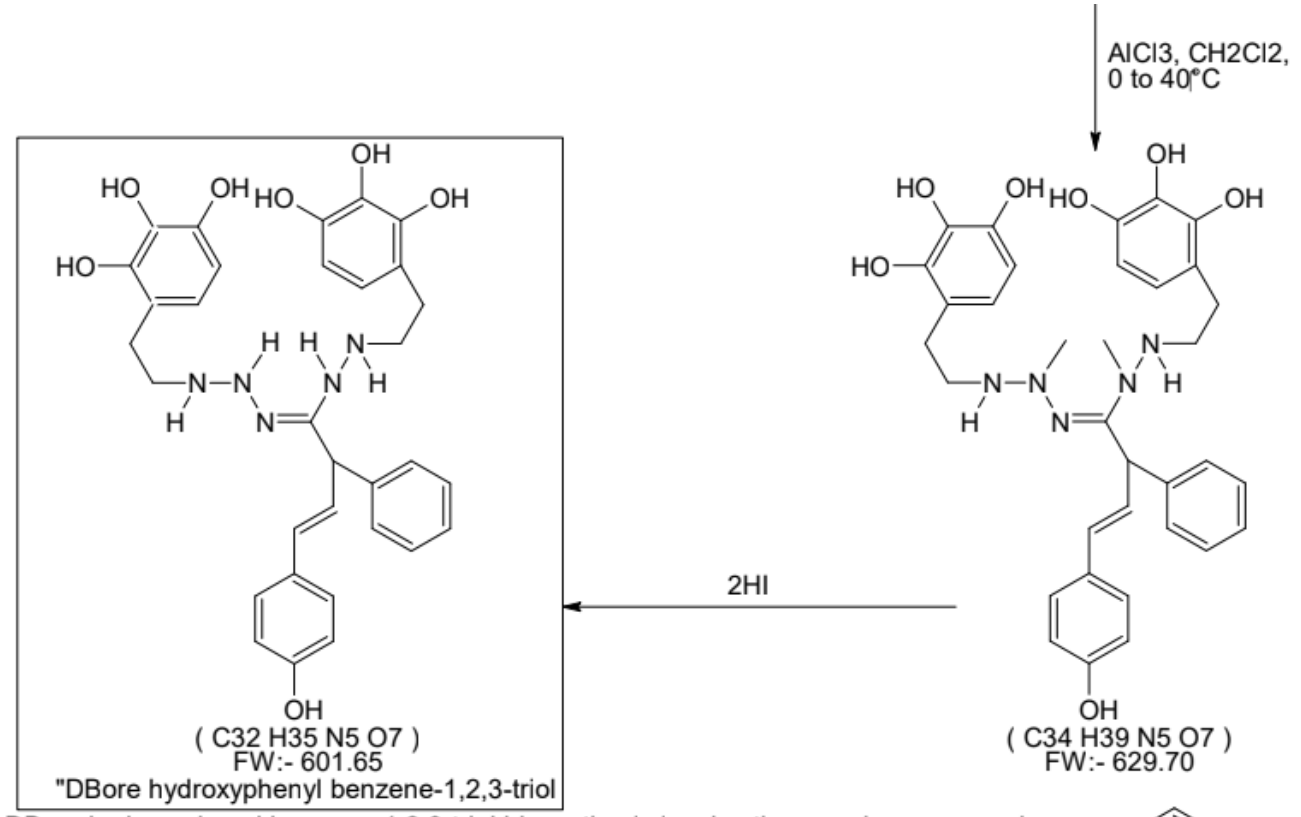
Reaction:

1) NaOH, H2O, EtOH
2) KCN, EtOH
3) NaOH, H2O, EtOH
4) NH2OH, EtOH
5) DCC, NHMeOMe, THF
6) NaOH, MeOH

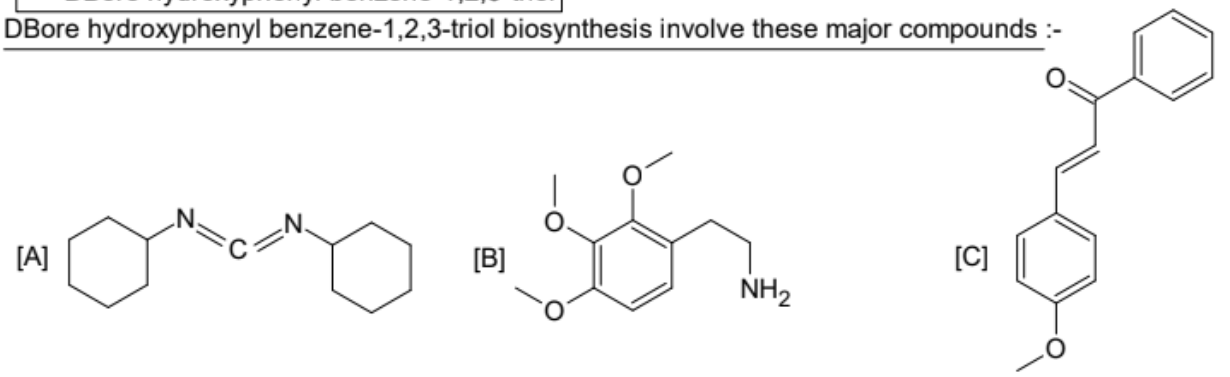


Biosynthesis

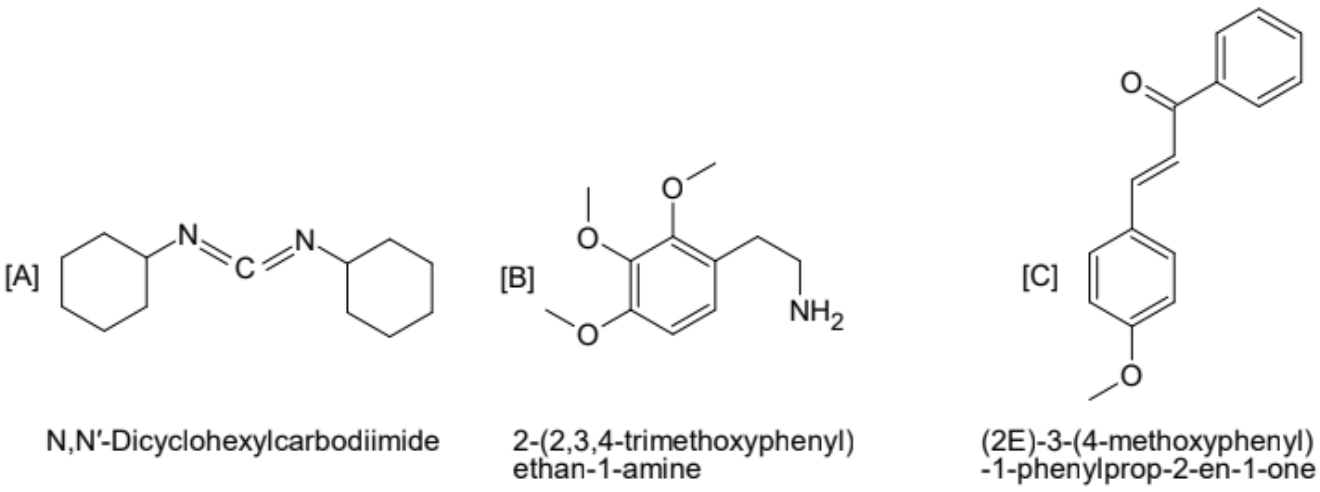




DBore hydroxyphenyl benzene-1,2,3-triol biosynthesis involve these major compounds :-



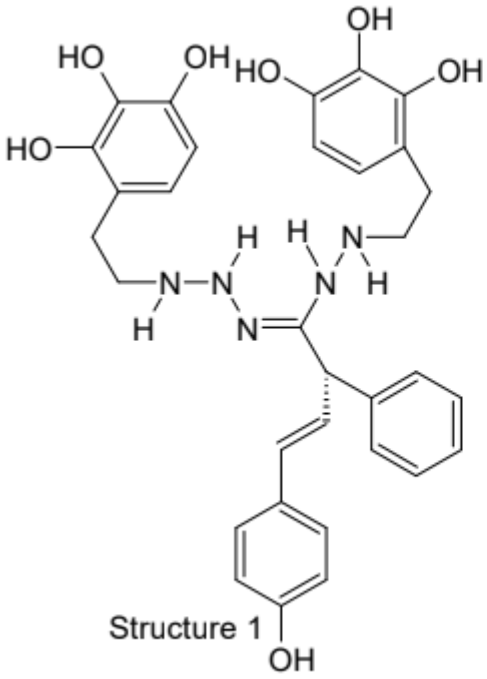
DBore hydroxyphenyl benzene-1, 2, 3-triol biosynthesis involve these major compounds

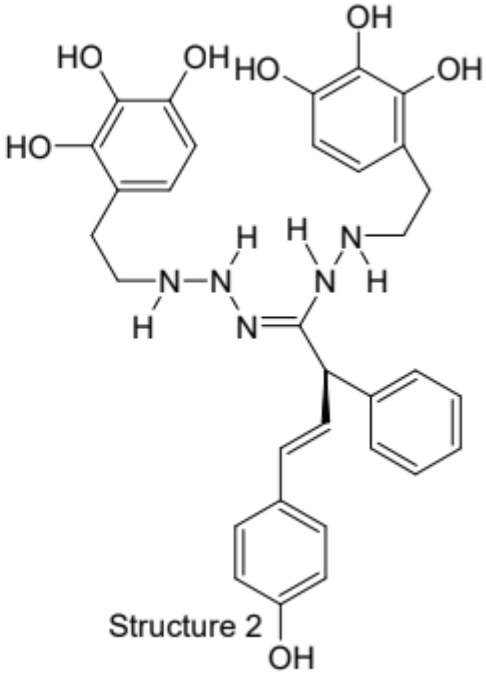


Preparation of DBore hydroxyphenyl benzene-1, 2, 3-triol biosynthesis:

4-Methoxychalcone (2E)-3-(4-methoxyphenyl)-1-phenylprop-2-en-1-one in the presence of sodium hydroxide, water and ethanol to formed (2E)-3-(4-methoxyphenyl)-1-phenylprop-2-en-1-ol in the presence of potassium cyanide and ethanol to formed (3E)-4-(4-methoxyphenyl)-2-phenylbut-3-enenitrile in the presence of sodium hydroxide water and ethanol to formed (3E)-4-(4-methoxyphenyl)-2-phenylbut-3-enoic acid in the presence of Hydroxylamine, ethanol and fallow the Craig Synthesis to formed (1Z, 3E)- N-hydroxy-4-(4-methoxyphenyl)-2-phenylbut-3-enimidic acid in the presence of N, N' Dicyclohexylcarbo diimide, NHMeOMe and tetrahydrofuron to formed (1Z, 3E)-N, N'-methoxy-4-(4-methoxyphenyl)-N, N'-di methyl-2-phenylbut-3-enehydrazonamidein the presence of sodium hydroxide and methanol to formed (1Z, 3E)-N, N'-hydroxy-4-(4-methoxyphenyl)-N, N'-dimethyl-2-phenylbut-3-enehydrazonamide in the presence of 2-(2, 3, 4-trimethoxyphenyl) ethan-1-amine and 1-(2-ethoxyquinolin-1 (2H)-yl) ethan-1-one to formed (1Z, 3E)-4-(4-methoxyphenyl)-N, N'-dimethyl-2-phenylbut-3-enehydrazonamide-2, 1-2-(2, 3, 4-trim ethoxyphenol) ethan-1-amine in the presence of aluminum chloride and dichloromethane at 0-40°C hea ting to formed (1Z, 3E)-4-(4-methoxyphenyl)-N, N'-dimethyl-2-phenylbut-3-enehydrazonamide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol in the presence of hydrogen iodide to formed (1Z, 3E)-4-(4-hydroxypheny l)-2-phenylbut-3-enehydrazonamide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol (DBore hydroxyphenyl be nzene-1, 2, 3-triol)

DBore hydroxyphenyl benzene-1, 2, 3-triol R- and S- nomenclature





2. Conclusion

During development, DBore hydroxyphenyl benzene-1, 2, 3-triol ((1Z, 3E)-4-(4-hydroxyphenyl)-2-pheny lbut-3-enehydrazonamide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol) is widely synthesized from 4-Meth oxychalcone (2E)-3-(4-methoxyphenyl)-1-phenylprop-2-en-1-one; However the effect on cardiovascular diseases has not been fully investigated.

4-Methoxychalcone (2E)-3-(4-Methoxyphenyl)-1-phenylprop-2-en-1-one used for did show synthesis in achieving DBore hydroxyphenyl benzene-1, 2, 3-triol ((1Z, 3E)-4-(4- hydroxyphenyl)-2-phenylbut-3-enehy drazonamide-2, 1-4-(2-aminoethyl) benzene-1, 2, 3-triol) is proved as Theoretical not an experimental; the re are no clinical trials on DBore hydroxyphenyl benzene-1, 2, 3-triol.

3. Funding Statement

This work did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

4. Declaration of competing interest

The authors report no relevant conflicts of interest. Dronadula Borraiah was employed in Divis Laboratory, as chemist in research and development However, none of these studies involved Gilead Sciences.

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