



TRINITY COLLEGE FOR WOMEN NAMAKKAL

Department of Chemistry

Artificial Hormones

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Artificial Hormones

- Hormones are organic substances which are secreted by endocrine glands .
- They are brought to the different organs of the body by means blood stream to produce the various physiological functions.
- They required small quantities which are specific in thier functions.
- The deficiency of a hormone leads to a particular disease which can only be cured by the administrated of that hormone.

Synthetic oestrogens

- Several synthetic oestrogens have been discovered which are more active than oestrone and approach oestradiol in activity.
- the synthetic substitutes are stilboestrol and hexoestrol etc...,

Stilboestrol

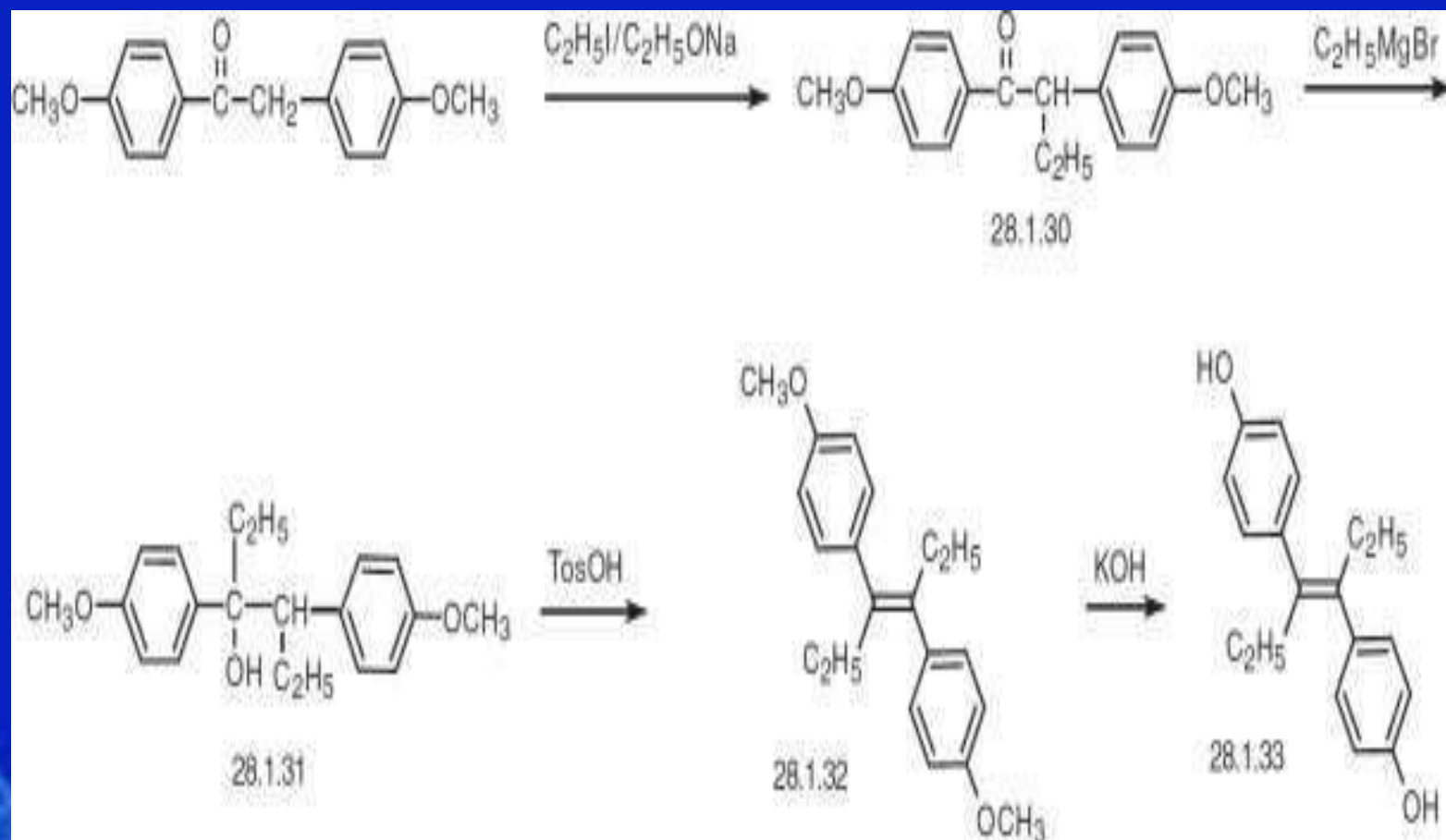
- Structure of stilboestrol.



Stilboestrol (Synthetic oestrol)

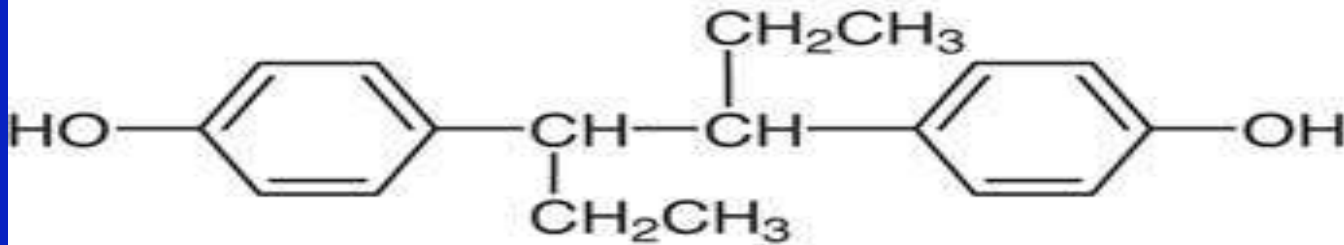
- Diethylstilbestrol (DES) are known as stilboestrol or stilbestrol is a nonsteroidal estrogen.
- It is more active than oestrone when administered.
- Moreover , it can also be given orally.
- It is used for prostate cancer and also for hormone therapy.

Dodds and Lawson synthesis



Hexoestrol

Structure of
hexoestrol.



Hexoestrol (Dihydrostilboestrol)

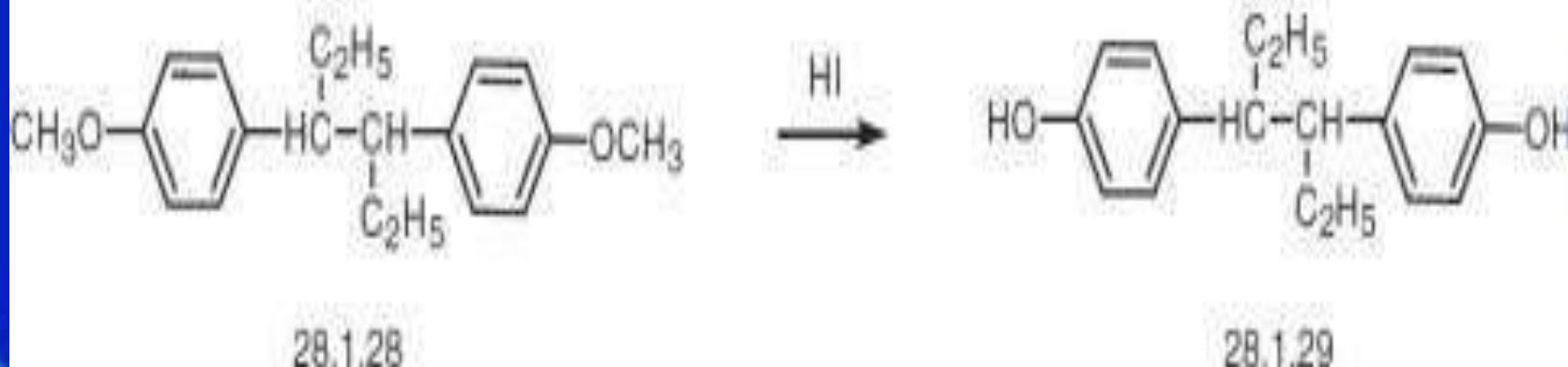
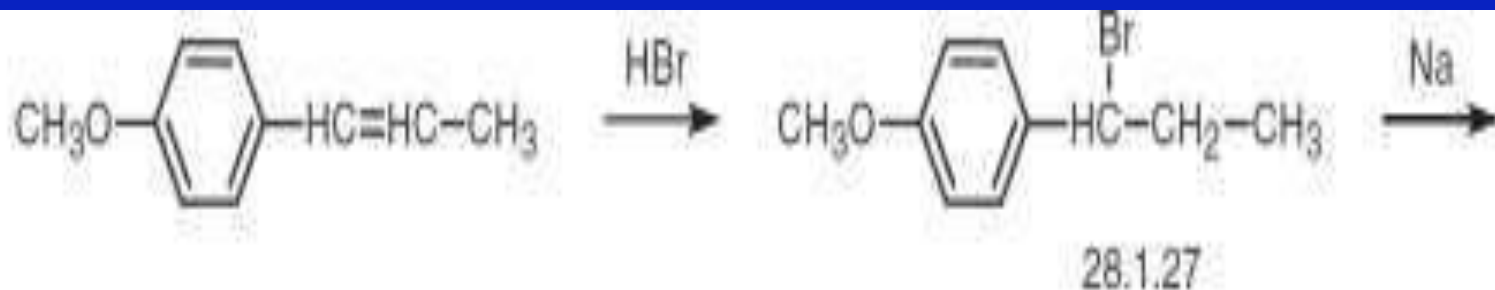
Hexoestrol is a nonsteroidal estrogen which was previously used for estrogen replacement therapy.

It is also used for treatment of certain hormone dependent cancer as well as gynaecological disorders.

It is synthetic hydrogenated derivative of diethylstilbestrol (DES).

It is used as hormone antineoplastic agent.

Kharasch synthesis of Hexoestrol.



THANK YOU

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