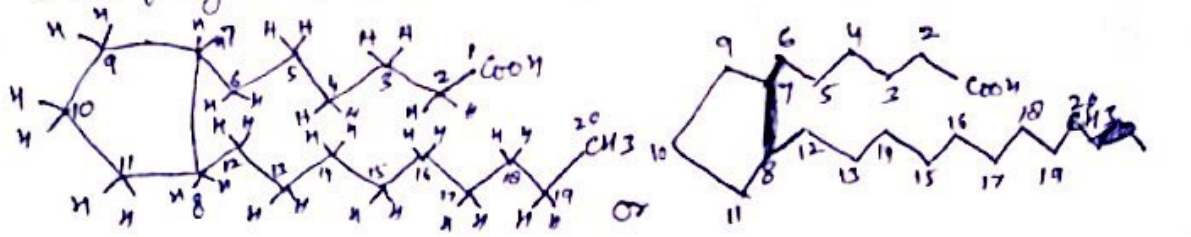
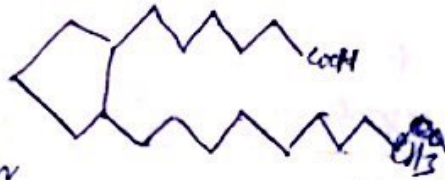


These are the secretions of prostate gland. Human vesicle is the richest source of prostaglandins. Among other sources are CVS, adrenals, thymus, lungs, Menstrual fluids, pancreas and kidney. They were discovered by Von Euler in 1935.

Chemical Nature About 14 prostaglandins have been discovered so far. These are C-20 fatty acid derivatives, containing one or more unsaturated linkages, hydroxyl group, ketonic group and a cyclopentane ring. These compounds have been derived from C-20 fatty acid, known as prostanoic acid.

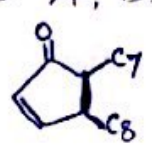


Prostanoic acid

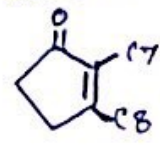


Nomenclature

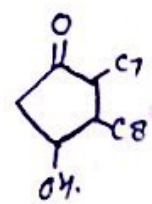
Nomenclature is based on the difference in the ring structure; substituents, unsaturations and side chains. Four basic ring structures have been found in prostaglandins, on the basis of which, these have been classified as A, B, E and F.



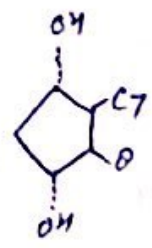
A



B



E



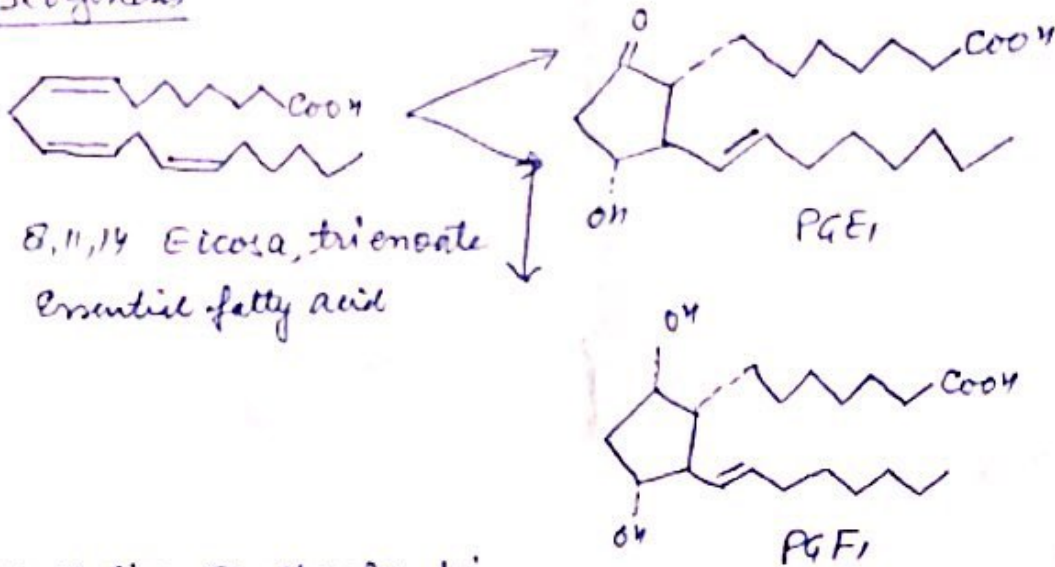
F

These groups have been further divided as subgroups. eg. there are three E and three F prostaglandins, which are formed in certain tissues. PGE₁, PGE₂, PGE₃, PGF₁, PGF₂ and PGF₃ these six prostaglandins are known as primary prostaglandins, and they can be converted into eight secondary prostaglandins.

Prostaglandins of human semen is a mixture of six closely related substances, belonging to the groups E, F A and B.

Prostaglandins are synthesized in the body from certain polyunsaturated fatty acids by the formation of a five membered ring and inclusion of three oxygen atoms at appropriate positions. Enzymes responsible for their synthesis are found mainly in Seminal Vesicles.

Biogenesis



Some of the prostaglandins seem to be synthesized from C-24 fatty acid known as Arachidonic acid. Various type of enzymatic system seem to catalyse the procedure of prostaglandin synthesis

