Reviews on 1,4-naphthoquinones from Diospyros L.
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The genus Diospyros is one of the most important sources of bioactive compounds, exclusively 1,4-naphthoquinones. The following information is an attempt to cover the developments in the biology and phytochemistry of 1,4-naphthoquinones isolated from this genus, as well as the studies done and the suggested mechanisms regarding their activities. During the past 60 years, many of these agents have been isolated from Diospyros L. Twelve considerable bioactive structures are reported in this review. The basic 1,4-naphthoquinone skeletons, on which a large number of studies have been done, are plumbagin and diospyrin. Today, the potential for development of leads from 1,4-naphthoquinones obtained from Diospyros L. is growing dramatically, mainly in the area of anticancer and antibacterial investigations. The data prepared and described here are intended to be served as a reference tool to the natural products and chemistry specialists in order to expand the rational drug design.

Keywords: Diospyros; 1,4-naphthoquinone; antibacterial; anticancer; mechanism