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New Thiazole Androstane Derivatives: Synthesis and Cytotoxic Activity

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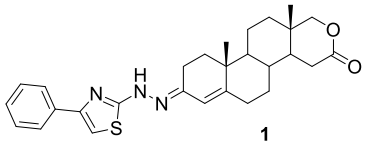
Hybrid molecules created by combining a steroid with a thiazole core may be potential candidates for drug design, with improved biological activity and bioavailability. This work describes the synthesis of new thiazole androstane derivatives. The starting compound was dehydroepiandrosterone, which was modified in a multiphase synthesis into 3- or 6-thiosemicarbazone androstane derivatives, direct precursors in the synthesis of thiazole androstane derivatives **1** and **2**. Their cytotoxicity was tested on five cancer cell lines: breast adenocarcinoma cells (MCF-7), acute lymphoblastic leukemia (CCRF-CEM), cervical carcinoma cells (HeLa), hormonal insensitive prostate cancer cells (DU-145), hormonal sensitive prostate cancer cells (LNCaP), as well as on one healthy line: normal skin fibroblasts (BJ). Compound **1** showed strong cytotoxic activity against cervical carcinoma cells (HeLa), while compound **2** was highly cytotoxic against acute lymphoblastic leukemia (CCRF-CEM).



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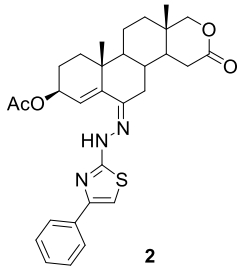

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