| | |
|---|---|
| Tipo | Periódico |
| Título | Biflavonoids: Preliminary Reports on Their Role in Prostate and Breast Cancer Therapy |
| Autores | Carolina Afonso De Lima; Larissa Kaori Maquedano; Luiza Sertek Jaalouk; Dina Cardoso Dos Santos; Giovanna Barbarini longato |
| Autor (es) USF | Carolina Afonso De Lima; Larissa Kaori Maquedano; Luiza Sertek Jaalouk; Dina Cardoso Dos Santos; Giovanna Barbarini longato |
| Autores Internacionais | - |
| Programa/Curso (s) | Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde |
| DOI | 10.3390/ph17070874 |
| Assunto (palavras chaves) | biflavonoids; breast and prostate cancer; anticancer; natural product |
| Idioma | Inglês |
| Fonte | Título do periódico: Pharmaceuticals<br>ISSN: 1424-8247<br>Volume/Número/Paginação/Ano: 17/7/874/2024 |
| Data da publicação | Julho de 2024 |
| Formato da produção | digital |
| Resumo | Dimeric flavonoids, also called biflavonoids, are bioactive compounds that exhibit various activities described in the literature, including antibacterial, antifungal, antiviral, anti-inflammatory, analgesic, antioxidant, vasorelaxant, and anticancer properties. This work focuses on the anticancer action of naturally occurring dimeric flavonoids against prostate and breast cancer, as well as on the mechanisms of action involved in their activity and presents the most current information on this subject in the literature. In the present review, we summarize the latest findings on the antiproliferative activity of 33 dimeric flavonoid-based compounds selected from recently published studies. The tests conducted were in silico and in vitro and demonstrated the cytotoxic activity potential of biflavonoids against prostate and breast tumor cells. Biflavonoids were capable of interfering with the migration and replication of cancer cells and their mechanism of action is related to cell death pathways, especially apoptosis, necrosis, and ferroptosis. These compounds decreased mitochondrial membrane potential and significantly increased intracellular levels of reactive oxygen species (ROS). Additionally, they significantly upregulated the expression of p21, Bax, and cleaved caspase-3, while downregulating Bcl-2 and caspase-3 levels, indicating their cell death mechanism of action is through the Bcl-2/Bax/cleaved caspase-3 pathway and cell cycle arrest. The biflavonoids here related have shown promising anticancer activity and are considered potential drug candidates for prostate and breast cancer treatment. |
| Fomento | - |