



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Publications of IISER Mohali (/jspui/handle/123456789/4)

/ Research Articles (/jspui/handle/123456789/9)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/3170>

Title:	Diarylidenecyclopentanone derivatives as potent anti-inflammatory and anticancer agents
Authors:	Joshi, Mayank (/jspui/browse?type=author&value=Joshi%2C+Mayank) Choudhury, A.R. (/jspui/browse?type=author&value=Choudhury%2C+A.R.)
Keywords:	Anticancer agents Anti-inflammatory Diarylidenecyclopentanone
Issue Date:	2020
Publisher:	Springer
Citation:	Medicinal Chemistry Research, 29(9), pp.1579-1589.
Abstract:	Cancer is often associated with chronic inflammation. In order to develop potential anticancer and anti-inflammatory agents a series of 26 diarylidenecyclopentanones (DACPs) Ia–Iv, II, III, and IV were synthesized. Five of the synthesized DACPs are novel (Ih, Ij, Ik, Is, and Iv), derivative Iv was characterized using single-crystal X-ray diffraction study. All the synthesized derivatives were tested for their anti-inflammatory as well as cytotoxicity properties. Compound Is is found to have the highest anti-inflammatory activity (93.67%) by inhibiting PGE2 (prostaglandin E2) production. Three of the DACPs (Io, It, and Iu) were observed to have high cytotoxicity with IC50 value of $8.73 \pm 0.06 \mu\text{M}$ (Io), $12.55 \pm 0.31 \mu\text{M}$ (It), and $11.47 \pm 0.15 \mu\text{M}$ (Iu) against HeLa cells. Further staining and cell cycle analysis was done using these three DACPs to understand their mechanism of action. The G0/G1 phase was observed to be the longest one through which the cells undergo apoptosis.
Description:	Only IISERM authors are available in the record.
URI:	https://link.springer.com/article/10.1007%2Fs00044-020-02578-5 (https://link.springer.com/article/10.1007%2Fs00044-020-02578-5) http://hdl.handle.net/123456789/3170 (http://hdl.handle.net/123456789/3170)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format
Need to add pdf.odt (/jspui/bitstream/123456789/3170/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text

[View/Open \(/jspui/bitstream/123456789/3170/1/Need%20to%20add%20pdf.odt\)](#)

[Show full item record \(/jspui/handle/123456789/3170?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/3170/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.

