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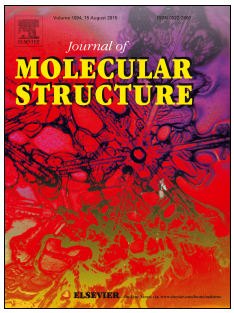

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SYNTHESIS, MOLECULAR STRUCTURE AND CYTOTOXIC STUDIES OF FLUORENE COMPOUND WITH POTENTIAL ANTI-CANCER PROPERTIES

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ABSTRACT

A new fluorene derivative, 1,1'-(9,9-dihexyl-9H-fluorene-2,7-diyl)bis(N,N-bis(pyridine-2-ylmethyl)methanamine has been successfully synthesized through condensation reaction of bis(2-pyridylmethyl)amine and 2,7-bis(bromomethyl)-9,9-dihexyl-9H-fluorene with exceptionally good yield (60%). The molecular structure of the synthesized compound was well characterized by nuclear magnetic resonance (NMR), infrared (FTIR), UV-vis absorption and fluorescence techniques. The *in-vitro* anticancer activity of the title compound against human cervical (HeLa) cancer cell line was validated wherein the target molecule exhibits IC_{50} value of 28.58 µg/mL (37.76 µM).

Keywords: fluorene compound, nuclear magnetic resonance, fluorescence, *in-vitro* anticancer activity, human cervical, IC_{50} value

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