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Efficient synthesis of new antiproliferative steroidal hybrids using the molecular hybridization approach

Bin Yu, Ping-Ping Qi, Xiao-Jing Shi, Ruilei Huang, Hao Guo, Yi-Chao Zheng, De-Quan Yu, Hong-Min Liu



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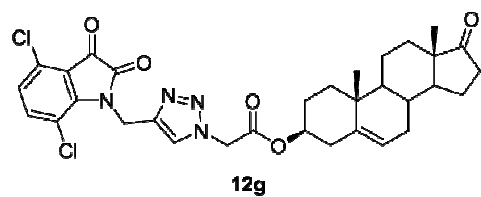
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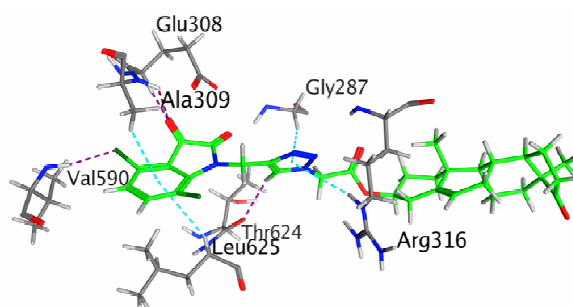
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Steroidal hybrids were synthesized and evaluated for their antiproliferative activity. Compound **12g** potently inhibited growth of SH-SY5Y cells possibly through the inactivation of LSD1, arrested cell cycle at G2/M phase, induced apoptosis and decreased MMP. Docking simulations were performed to rationalize the potency toward LSD1.



SH-SY5Y $IC_{50} = 4.06 \pm 0.61 \mu\text{M}$
LSD1 $IC_{50} = 3.18 \mu\text{M}$
First Steroid-Based LSD1 inactivator



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