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ATTI DEL CONGRESSO

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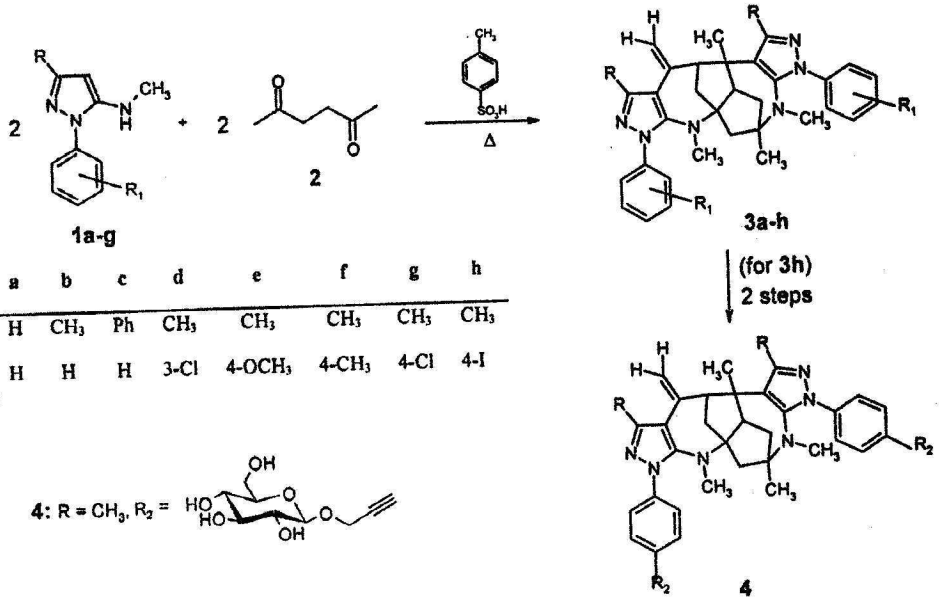
Synthesis and antiproliferative Activity of a natural like glucosyl polycyclic compound

B. Maggio[a], M.V. Raimondi[a], S. Cascioferro[a], M.C. Scherrmann[b], N. Prosa[b], M. Lauricella[c], D. Carlisi[c], and G. Daidone[a]

a Dip. STEBICEF, Università di Palermo, Via Archirafi 32, 90123, Palermo, Italy
b Université Paris-Sud, ICMMO Bât 420, 91405 Orsay Cedex, France
c Dip. Di Biomedicina Sperimentale e Neuroscienze, Università di Palermo, Via del Vespro 129 , 90127, Palermo, Italy

giuseppe.daidone@unipa.it

Previously we reported the synthesis of new polycyclic compounds **3a,g** [1]. Some of them resulted to be endowed with antiproliferative activity when tested against the NCI panel of human tumoral cell lines. In continuing the above research we prepared by Sonogashira reaction, starting from **3h,** the glucosyl derivative **4.** Compound **4** showed antiproliferative activity in the range 0.47-5.43 μM against all the tumoral cell lines of the NCI panel. Cytofluorimetric analyses performed on MDA-MB231 cells showed that **4** is able to induce cell cycle arrest at G2/M phase. Moreover, the compound induced morphological signs of differentiation, decreased the level of cyclin B1, a cyclin involved in G2/M transition, while increased the level of cyclin-dependent kinase (CDK) inhibitor p21WAF1.



1,3	a	b	c	d	e	f	g	h
R	H	CH_3	Ph	CH_3	CH_3	CH_3	CH_3	CH_3
R_1	H	H	H	3-Cl	4-OCH_3	4-CH_3	4-Cl	4-I

[1]B. Maggio, D. Raffa, M. V. Raimondi et al., Eur. J. Med. Chem. 2014, 72, 1-9.