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PII: S0960-894X(16)30340-7
DOI: http://dx.doi.org/10.1016/j.bmcl.2016.03.108
Reference: BMCL 23751

To appear in: *Bioorganic & Medicinal Chemistry Letters*

Received Date: 2 March 2016
Revised Date: 29 March 2016
Accepted Date: 30 March 2016

Please cite this article as: Gardelly, M., Trimech, B., Belkacem, M.A., Harbach, M., Abdelwahed, S., Mosbah, A., Bouajila, J., Jannet, H.B., Synthesis of novel diazaphosphinanes coumarin derivatives with promoted cytotoxic and anti-tyrosinase activities, *Bioorganic & Medicinal Chemistry Letters* (2016), doi: http://dx.doi.org/10.1016/j.bmcl.2016.03.108

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ABSTRACT

A series of α-aminocarbonitriles **2a-h**, obtained by a condensation reaction of 4-hydroxycoumarin with malononitrile and a series of arylaldehydes, was reacted with Lawesson's reagent to give the diazaphosphinanes **3a-h** and **3a'-h'** as diastereoisomers. All the synthesized compounds were characterized by spectroscopic means such as NMR (^{1}H, ^{13}C, ^{31}P) and MS. The synthesized compounds were evaluated for their cytotoxic activity in vitro against two tumor cell lines MCF-7 and HCT-116 and for their anti-tyrosinase effect. The results showed a moderate cytotoxic activity for most compounds and nearly all tested derivatives have been found considerable tyrosinase inhibitors.

Keywords: diazaphosphinanes, coumarin, Lawesson's reagent, cytotxic activity, anti-tyrosinase activity.