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## Novel bioactive semi-synthetic nitric-oxide releasing derivatives of resveratrol

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Nitric oxide is involved in a multitude of physiological and pathophysiological states in mammals. For example, it is now known to be involved in the control of blood pressure neurotransmission and in the immune defense system of the body. Nitric Oxide has low solubility in water and is unstable in the presence of various oxidants. It makes it difficult to introduce as such into biological systems in a controlled or specific fashion. Therefore, development of chemical agents that release NO is important. Numerous compounds are available which show anti-inflammatory, analgesic, anti-ulcer, antimicrobial agents and antihyperlipidemic activity. Resveratrol is a natural compound reported to possess a broad spectrum of biological activity with less side effects. Due to its wide range of biological activity, resveratrol has received a considerable interest in the field of drug discovery and therefore it constitutes a relevant synthetic target in Pharmaceutical Industry. A series of resveratrol derivatives were schemed by treating with chloroalkanols or chloroacetic acid then with Nitric oxide donor group for nitrate introduction by treating alkylated compounds with a mixture of fuming nitric acid and acetic anhydride in chloroform in cold conditions to get the final compounds. The purity of the compounds ascertained by TLC in different solvent systems and the structures of the synthesized compounds confirmed by their elemental analyses, proton NMR, IR and mass spectral data. All the title compounds further put in process for screening for biological activity.

### Biography

Sandeep Arora completed B.Sc., B.Pharm, M.Pharm (Medicinal & Natural Products), Ph.D. Pharm. Sci., and he has working experience in Pharmaceutical Production planning & management and Quality Assurance at Operational level-4 years (As Officer and Executive) and he had more than – 6 years' experience in Editing and authorship (parallel) (Presently Editor JPTRM), Collaborative validation and Launch of Hyperkum, Phyto pharmaceutical antihypertensive product. He published 60 international and national publications, At present he is a Director in Chitkara Institute of Pharmaceutical Sciences, & Professor, (Since 6th October 2008).

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