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Chromatographic Lipophilicity Determination of Newly Synthesized Steroid Derivatives for Further Biological Analysis

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Abstract : In this study, a set of 29 newly synthesized steroid derivatives were investigated using reversed-phase high-performance liquid chromatography (RP-HPLC) as a first step in preselection of drug candidates. This analysis presents an experimental determination of chromatographic lipophilicity, and it was conducted to obtain physicochemical characterization of these molecules. As the most widely used bonded phases in RP-HPLC, octadecyl (C18) and octyl (C8) were used. Binary mixtures of water and acetonitrile or methanol were used as mobile phases. Obtained results were expressed as retention factor values logk and they were correlated with logP values. The results showed that both columns provide good estimations of the chromatographic lipophilicity of the molecules included in this study. This analysis was conducted in order to characterize newly synthesized steroid derivatives for further investigation regarding their antiproliferative and antimicrobial activity. This article is based upon work from COST Action (CM1306), supported by COST (European Cooperation in Science and Technology).

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