

ORGANIC SYNTHETIC PHOTOCHEMISTRY IN THE SERVICE OF MEDICINAL CHEMISTRY AND DRUG SYNTHESIS

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Organic Synthetic Chemistry is in a continuous lookout for the introduction of novel reactivities and new platforms of activation. Photochemistry, the use of light to promote organic transformations, is a field of research that although it is known for more than a century, nowadays is flourishing since it provides access to alternative activation modes, compared to polar chemistry. Photoorganocatalysis, the use of small organic molecules as photocatalysts, is a low-cost and environmentally friendly alternative, which further increases the sustainability options of photochemistry. Our group has introduced in literature a photochemical protocol that is easy to operate, employing cheap household lamps as the source of irradiation and phenylglyoxylic acid as the photoinitiator.[1] Application of this photochemical protocol was found in the discovery of a novel previously unidentified family of bioactive lipids [saturated oxo fatty acids (SOFAs)] that promote human health and have interesting bioactivity against cancer.[2] Furthermore, this methodology was applied in the green synthesis of drugs Vorinostat and Moclobemide.[3]

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