Special Issue

Efflux Pump Inhibitors: An Update on the Search for New Antimicrobial Resistance Breakers

Message from the Guest Editors

Considering the microbial promptness in achieving successful mechanisms to escape antibiotic activity towards new drugs, the use of non-antibiotic adjuvant molecules that target resistance mechanisms is a valid approach to recover drug sensitivity in resistant microorganisms. Efflux pumps, reducing intracellular drug concentrations to subinhibitory levels and permitting microorganisms to grow in the presence of routinely adopted therapeutic doses, play a nonspecific role in the early stages of antibiotic exposure, thereby allowing microorganisms to develop more specific and effective mechanisms of resistance. Therefore, the use of efflux pump inhibitors (EPIs) in combination with extruded drug may be a promising strategy in the development of effective antimicrobial treatments.

This Special Issue aims to highlight the recent medicinal chemistry research on new bacterial, mycobacterial, pathogenic fungi, and protozoa EPIs.

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As the premier open access journal dedicated to experimental organic chemistry, and now in its 25th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts and novel materials. Pushing the boundaries of the discipline, we invite papers on multidisciplinary topics bridging biochemistry, biophysics and materials science, as well as timely reviews and topical issues on cutting edge fields in all these areas.

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