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Studies on 2-phenylquinoline *Staphylococcus aureus* NorA efflux pump inhibitors: new insights on the C-6 position

Tommaso Felicetti,[a,‖] Rolando Cannalire,[a,‖] Maria Giulia Nizi,[a] Oriana Tabarrini,[a] Serena Massari,[a] Maria Letizia Barreca,[a] Giuseppe Manfroni,[a] Bryan D. Schindler,[b] Violetta Cecchetti,[a] Glenn W. Kaatz[b,c] and Stefano Sabatini[a,*]

[a]Department of Pharmaceutical Sciences, University of Perugia, via del Liceo 1, 06123 Perugia, Italy.

[b]John D. Dingell Department of Veterans Affairs Medical Centre and the [c]Department of Internal Medicine, Division of Infectious Diseases, School of Medicine, Wayne State University, Detroit, MI 48201, United States.

Abstract

The alarming and rapid spread of antimicrobial resistance among bacteria represents a high risk for global health. Targeting factors involved in resistance to restore the activity of failing antibiotics is a promising strategy to overcome this urgent medical need. Efflux pump inhibitors are able to increase antibiotic concentrations in bacteria, thus they can be considered true antimicrobial resistance breakers.

In this work, continuing our studies on inhibitors of the *Staphylococcus aureus* NorA pump, we designed, synthesized and biologically evaluated novel 2-phenylquinoline derivatives starting from our hits **1** and **2**. Two of the synthesized compounds (**6** and **7**) bearing a C-6 benzyloxy group showed the best NorA inhibition activity, thereby providing an excellent starting point to direct future chemical optimizations.