

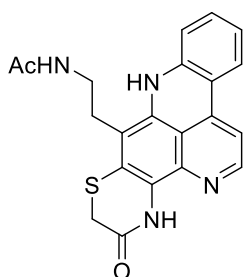
The Total Synthesis of Natural Products as an Engine of Progress

Marco A. Ciufolini

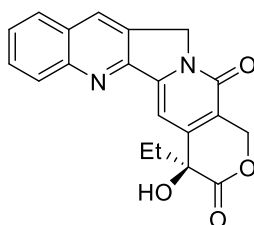
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University of Rome La Sapienza, November 6-13-20, 2023

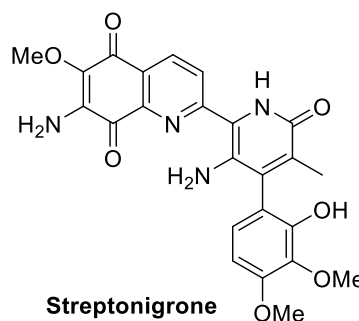
These three presentations illustrate how problems in total synthesis provided an incentive to devise new reactions that permitted the execution of transformations that were previously difficult – or impossible – to achieve. The meeting of November 6 will focus on the development of chemical technology for the synthesis of pyridoacridine alkaloids, camptothecin, and streptonigrone. Scheduled for November 13 is an outline of methodology for the assembly of medium-ring nitrogen heterocycles and of oxazoles, with applications to the synthesis of mitomycinoids and oxazole natural products. The discussion of November 20 will center on the development of the oxidative amidation of phenols for the total synthesis of tyrosine-derived natural substances and other noteworthy nitrogenous natural products. Representative synthetic targets are as follows:



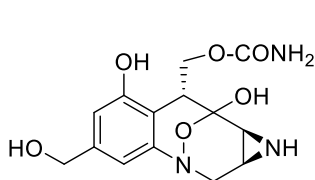
Sermilamine



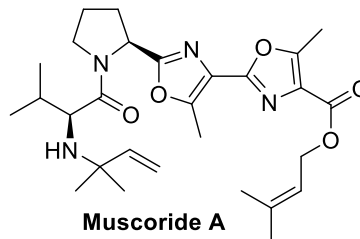
Camptothecin



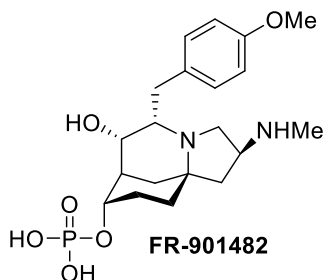
Streptonigrone



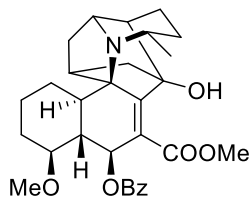
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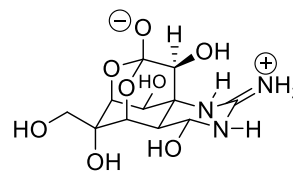
Muscoride A



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Himandrine



Tetrodotoxin