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06/2006

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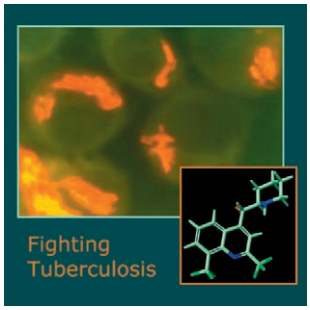
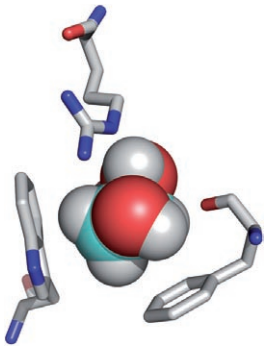
COVER PICTURE



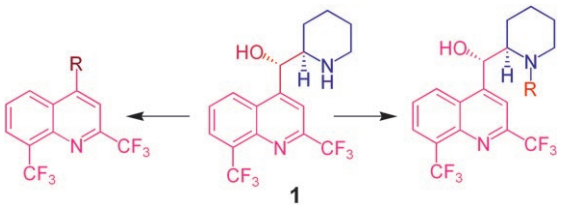
The cover picture shows the structure of (+)-*erythro*-mefloquine atop a fluorescence photomicrograph of *Mycobacterium tuberculosis* $H_{37}Rv$ (orange) residing within a macrophage cell culture. *M. tuberculosis* is able to grow both within macrophages and extracellularly. The strain shown was transformed with a red fluorescent protein gene, which enables easy visualization by fluorescence microscopy and assessment of viability. Mefloquine is an established antimalarial agent. See the Communication by A. P. Kozikowski et al. on p. 593 ff. for details on the activity of mefloquine and mefloquine analogues against both replicating and nonreplicating *M. tuberculosis*.

NEWS

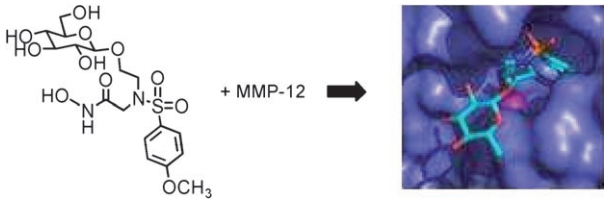
MINIREVIEWS



COMMUNICATIONS

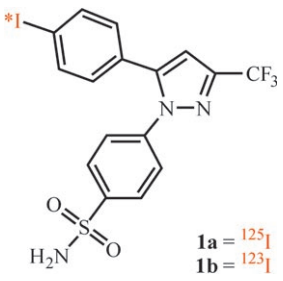


Potential new tuberculosis treatment: Mefloquine (**1**), an antimalarial drug with simple, yet interesting structural features has been found to be active against *Mycobacterium tuberculosis*. Thus, this molecule is a good candidate as a lead compound in the search for new TB drugs. The design and synthesis of mefloquine analogues is described, and biological data against the TB organism are also presented.

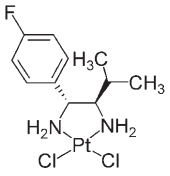


Matrix metalloproteinases (MMPs) are a class of Zn-containing hydrolases that participate in a variety of biological processes, and aberrant activity of MMPs has been implicated in a number of diseases including cancer. A new glycoside-containing inhibitor of MMPs, unprecedented among the inhibitors of this family of enzymes, is reported. This inhibitor is water soluble, and displays nanomolar affinity toward several MMPs.

FULL PAPERS



Cyclooxygenase-2 (COX-2) is overexpressed in many disease states, including cancer. The potential use of COX-2 inhibitors as a clinical tool is in doubt, as long-term use significantly increases cardiovascular mortality. We hypothesize that elevated COX-2 levels in target organs can be detected by planar nuclear medicine imaging prior to the development of overt cancer, so that susceptible individuals may be targeted for treatment.



A series of leaving group derivatives of enantiomerically pure [1,2-diamino-1-(4-fluorophenyl)-3-methylbutane]platinum(II) complexes were synthesized and tested for cytotoxicity on the hormone-dependent MCF-7 and the hormone-independent MDA-MB 231 breast cancer cell lines, as well as the LNCaP/FGC prostate cancer cell line. (*R*,*R*)-4F-Ph/*i*Prop-$PtCl_2$ was identified as the most active platinum(II) complex. The configuration and the C2-alkyl group determined the antiproliferative effects.

BOOKS

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Issue 5, 2006, was published online on May 2, 2006.

ChemMedChem is indexed in *Chemical Abstracts Service/SciFinder*, *ChemInform*, *Chemistry Citation Index*, *COMPENDEX*, *EMBASE/Excerpta Medica*, *EMNursing*, *GEOBASE/Geographical & Geological Abstracts*, *Mosby Yearbooks*, and *SCOPUS*.

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ChemMedChem (ISSN 1860-7179) is published monthly by Wiley-VCH, PO Box 191161, 69451 Weinheim, Germany. Periodical postage pending at Jamaica, NY 11431. Air freight and mailing in the USA by Publications Expediting Services Inc., 200 Meacham Ave., Elmont, NY 11003.
US POSTMASTER: Send address changes to *ChemMedChem*, c/o Wiley-VCH, 111 River Street, Hoboken, NJ 07030.

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