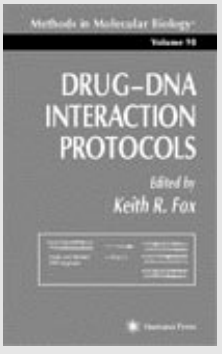
Book review

'Drug–DNA Interaction Protocols'

edited by Keith R. Fox, Humana Press, 1997. $64.50

(x + 288 pages, hardback) ISBN 0-89603-447-X



This extremely timely book, volume 90 in the *Methods in Molecular Biology* series, is a compilation of techniques used in the study of small-molecule–DNA interactions. The intended audience is novice users, but it will be useful to all workers in the field who require reference to techniques in which they are not expert. The individual chapters are written by scientists who use the particular technique in their research and are intimately familiar with protocols. The high level of detail is particularly useful, and each chapter includes a list of reagents and equipment necessary. The book is divided into two parts: techniques to examine sequence selectivity in the binding of small molecules to DNA and techniques for measuring the strength of binding; it also includes an appropriately detailed index.

Each chapter is divided into five sections: a detailed introduction with literature citations; a materials section (including all reagents, buffers and equipment); a methods section (including detailed and clearly organized step-by-step instructions); a notes section that provides additional details on materials and methods; and concluding each chapter is a thorough list of literature citations.

This book will make a useful addition to the library of scientists interested in the interaction of small molecules with DNA, and will be particularly useful for workers involved in the design and characterization of new anticancer agents. Because of its specialized nature, the book will probably not appeal to a wider audience.

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Letter

Antimalarial gallium complex

With reference to the article *Semiconducting malaria drugs* by David Bradley, published in the March 1998 issue of *Drug Discovery Today* (p. 103), I would like to draw your attention to the following report.

A gallium complex, termed Naoyaojia, was synthesized in China in the 1980s. Its activity was reported at a WHO-organized symposium in Beijing in April 1989 by X.H. Teng *et al.* It was shown to be active against malaria in mice and rhesus monkeys. Although it was teratogenic in experimental animals, in human treatment it cured 33 out of 34 patients with chloroquine-resistant cerebral malaria.

In spite of not being able to find a published report of this study, the following paper describes an antimalarial study using the same gallium complex.

Effects of α-dimethylamino-cyclohexoxyl-dimethyl gallium on ultrastructure of erythrocytic stage of Plasmodium berghei *and* P. yoelii [*Chung Kuo Yao Li Hsueb Pao* (1991) 12, 530–533] by Yan, G.H., Wang, G.J. and Li, Y.C. from the Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing, China.

Abstract: 'The effects of α-dimethylamino-cyclohexoxyl-dimethyl gallium (DCDG), a new antimalarial drug developed in China, on the ultrastructure of murine malaria parasites *in vivo* was studied in comparison with those of chloroquine (CQ) and artemisinin (Art). All these three antimalarials were administered i.g. to mice at dosages of 1–3, 40–80 and 200–400 mg kg^{-1} for DCDG, CQ and Art respectively, based on a similar intensity of morphological changes in the parasites. Blood samples were collected for electron microscopy from 15 min to 48 h after medication. The results showed that DCDG killed the malaria parasites (both asexual and sexual forms) rapidly. The most prominent changes in DCDG-treated parasites were serious dilation of perinuclear space, endoplasmic reticulum, mitochondrion, some other vesicles or intermembranous spaces. These led to the formation of large autophagic vacuoles containing some membranous materials, which were subsequently extruded. Then the parasite became more concentrated, finally pyknotic and died. The mode of action was very different from that of CQ and Art.'

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