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研究简报

同位素微量试验法检测新化合物抗恶性疟原虫活性试验

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摘要
将连续培养的恶性疟原虫克隆系Dd2和3D7用6%山梨醇作2次同步处理。处理后第2代原虫用健康人红细胞稀释至红细胞比容为2.5%、原虫血症为0.5%，并加入2 μCi/ml 8-^{3}H-次黄嘌呤，利用同位素微量试验法检测20个新化合物的抗疟原虫活性。结果显示20个新化合物均无明显的抗疟原虫活性；对照药物氯喹和奎宁显示出良好的抗疟活性，表明同位素微量试验法是一个稳定、可靠的体外筛选新抗疟药的方法。

关键词 恶性疟原虫 抗疟药 同位素微量试验法
分类号

Detection of Antimalarial Activity for New Compounds by Isotopic Microtest

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Abstract
Two clone lines （Dd2 and 3D7） of *Plasmodium falciparum* were cultivated continuously in human erythrocytes at 37°C in RPMI 1640 medium with human serum and subjected to 6% sorbitol treatment 2 times in order to obtain highly synchronized cultures. The second generation parasites after the treatment were diluted with human RBC to be a suspension of *P. falciparum*-human RBC at 2.5% hematocrit and 0.5% parasitemia, and 2 μCi/ml of 8-^{3}H-hypoxanthine was added. Isotopic microtest was employed to detect the antimalarial activity for 20 new compounds. Results revealed that the 20 compounds showed no anti-malarial activity, while the control drugs, chloroquine and quinine, exhibited high efficacy, indicating that the isotopic microtest is a stable and reproducible assay for screening new antimalarials.

Key words *Plasmodium falciparum* Antimalarial drug Isotopic microtest

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