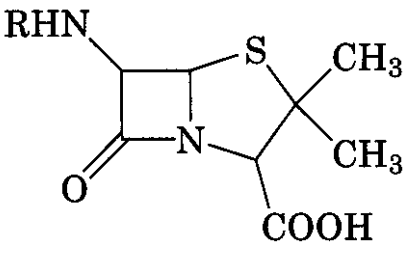
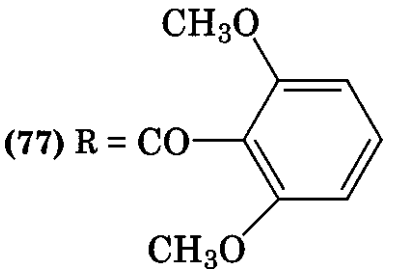
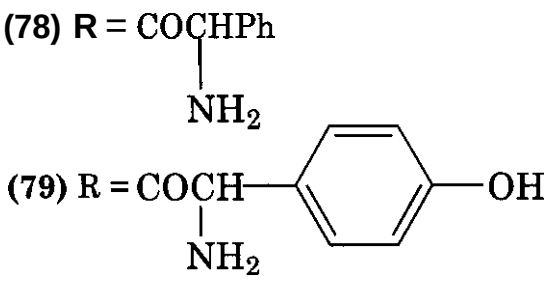


(75) R = $COCH_2Ph$

(76) R = H

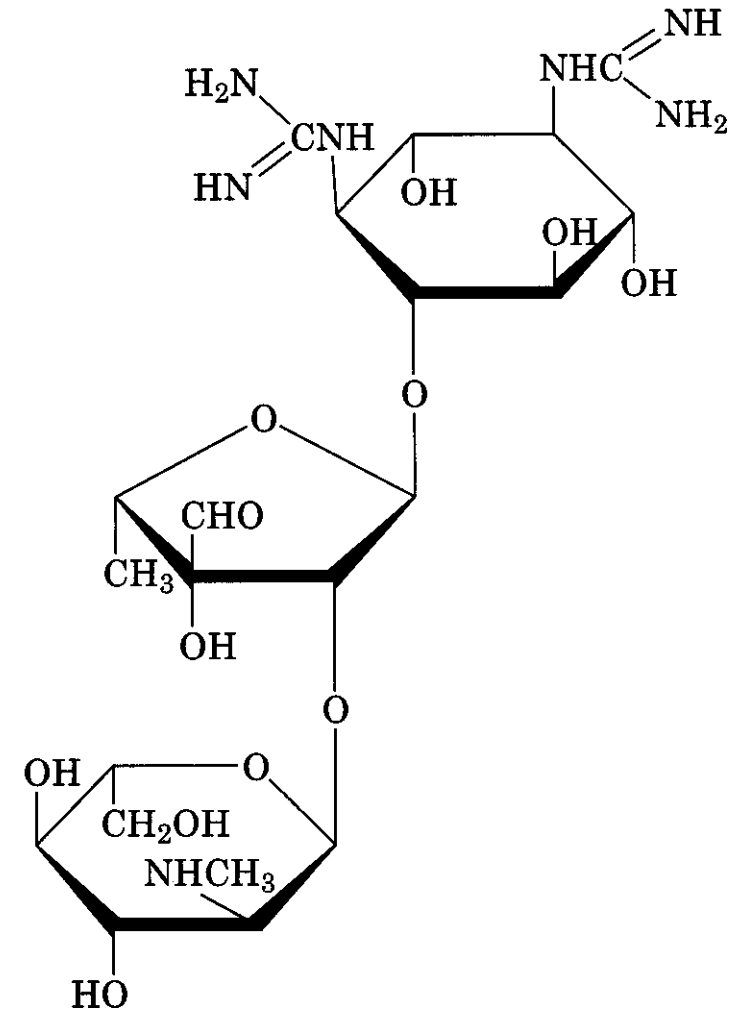


(77) R = CO

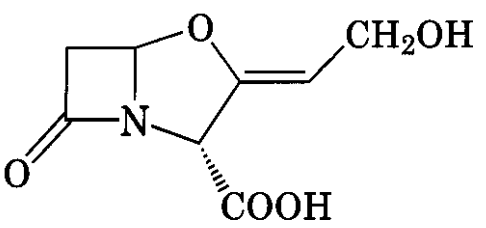


(78) R = COCHPh

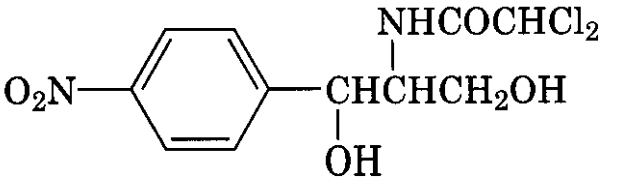
(79) R = COCH



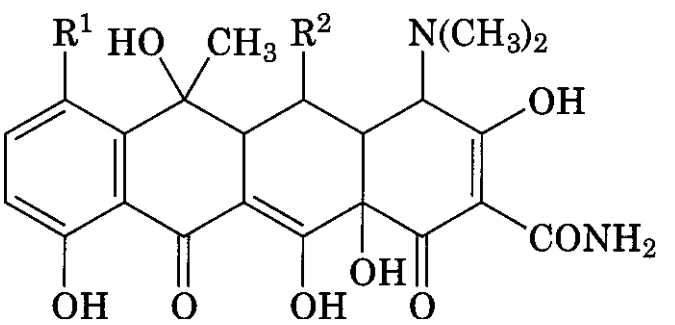
(81)



(80)



(82)



(83) R^1 = -Cl, R^2 = -H
(85) R^1 = -H, R^2 = -OH

ceutical companies also embarked on large programs of screening soil samples for antibiotic-producing microorganisms (127). Chloramphenicol (**82**) was isolated from *Streptomyces venezuelae* in 1948 and other clinically important antibiotics followed: chlortetracycline (**83**), neomycin (**84**), oxytetracyclin (**85**), erythromycin (**86**), oleandomycin (**87**), kanamycin (**88**), and rifamycin (89).

In 1948 Giuseppe Brotzu isolated the fungus ***Cephalosporium acremonium*** from ***a*** water sample collected off the coast of Sardinia. The culture showed significant antimicrobial activity, but Brotzu could not interest the Italian authorities in his discovery. He then turned to a friend in England for help, who arranged for Howard Florey at Oxford to receive a sample of the producing culture. Eventually, an antibacterial substance was isolated and named cephalosporin C (90) (128). The compound, which had a structure similar to that of the penicillins, except it had a dihydrothiazine ring fused to the β-lactam core,