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(54) Title: SYNTHESIS OF TETRACYCLINES AND ANALOGUES THEREOF

(57) Abstract: The tetracycline class of antibiotics has played a major role in the treatment of infectious diseases for the past 50 years. However, the increased use of the tetracyclines in human and veterinary medicine has led to resistance among many organisms previously susceptible to tetracycline antibiotics. The modular synthesis of tetracyclines and tetracycline analogs described provides an efficient and enantioselective route to a variety of tetracycline analogs and polycyclines previously inaccessible via earlier tetracycline syntheses and semi-synthetic methods. These analogs may be used as anti-microbial agents or anti-proliferative agents in the treatment of diseases of humans or other animals.



WO 2005/112945 A3