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Zaynich : A Novel Antibiotic for the Post Resistance Era

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Abstract: *Antimicrobial resistance (AMR) has emerged as one of the most formidable challenges to modern medicine, threatening to undermine decades of progress in infectious disease control. The urgent need for novel antibiotics has catalyzed the development of ZAYNICH, a synthetic compound belonging to the pyrrolidine-quinazoline class. ZAYNICH demonstrates a unique mechanism of action by selectively binding to the ribosomal exit tunnel, thereby inhibiting peptide elongation in both Gram-positive and Gram-negative bacteria. Preclinical studies suggest broad-spectrum efficacy, favourable pharmacokinetics, and minimal toxicity. This review comprehensively examines the chemical structure, pharmacological properties, clinical potential, and global implications of ZAYNICH, situating it within the broader context of antibiotic innovation. By integrating evidence from laboratory research, clinical trials, and policy perspectives, this paper underscores the promise of ZAYNICH as a cornerstone in the fight against multidrug-resistant pathogens*

Keywords: Antimicrobial resistance; ZAYNICH; novel antibiotic; ribosomal inhibition; pharmacokinetics; multidrug resistance; clinical trials; drug discovery

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