Hydrogen Bonding and Absolute Configuration in Manzamine Alkaloids

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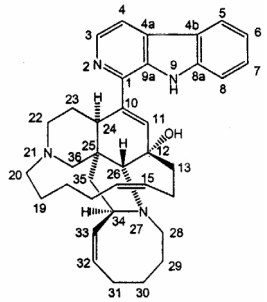
The manzamines, a class of sponge-derived alkaloids, have a complex polycyclic system with 5, 6, 8, and 13-membered rings and a β-carboline substituent. They show promising antibacterial, antitumor, and antimalarial activities, and moderate activity against HIV-1. Manzamine A (**1**) forms solvates with MeOH and acetone. Formation of the hydrochloride of 8-OH manzamine A (**2**) by N27 protonation allows absolute configuration determination. The Cl^- accepts hydrogen bonds from all four donors of one cation. Manzamine F (**3**) also has an 8-OH group and C31=O rather than C32=C33, and forms a mixed solvate with H_2O and MeCN. Ircinol A (**4**) lacks the β-carboline group, but has CH_2OH at C10, and crystallizes with Z'=3.



Keywords: marine natural products, absolute structure, hydrogen bonding