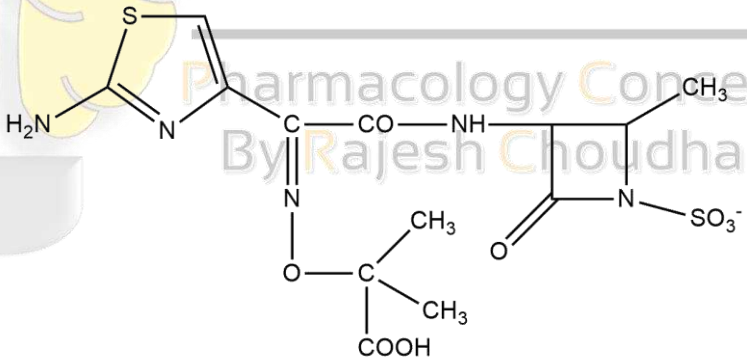
2.5. MONOBACTAMS

These are *β-lactam*ase resistant *β-lactam* antibiotics in which the *β-lactam* ring is not condensed with another ring.

A) Aztreonam

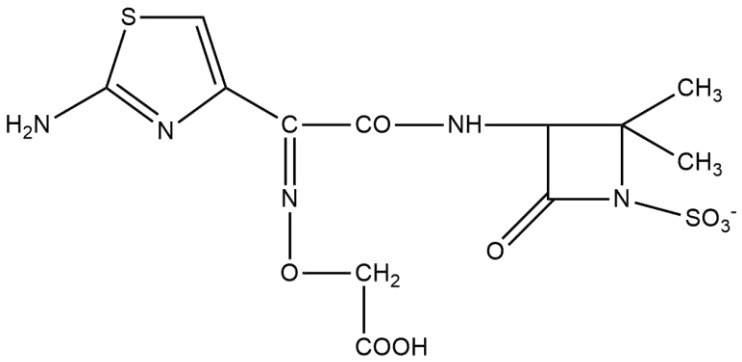
- It is a new β-lactam antibiotic, acts by binding to specific PBPs.
- **Aztreonam** (isolated from *Chromobacterium violaceum*) is a monobactam resistant to *β-lactamases* but has narrow antibacterial spectrum
- It inhibits gram-negative enteric bacilli and *H. influenzae* at very low concentrations and *Pseudomonas* at moderate concentrations, but does not inhibit gram-positive cocci or faecalvanaerobes.
- Main use of aztreonam are hospital acquired infections originating from urinary, biliary, gastrointestinal and female genital tracts.
- Lack of cross sensitivity with other β-lactam antibiotics except ceftazidime (which has chemical similarity to aztreonam)
- The bioavailability of orally administered dose is poor and therefore aztreonam is administered parenterally
- Rashes and rise in serum aminotransferases are the notable adverse effects.



3-(2-(2-aminothiazol-4-yl)-2-(((2-carboxypropan-2-yl)oxy)imino)acetamido)-2-methyl-4-oxoazetidine-1-sulfonate

B) Tegemonam

It is a oral active monobactam



3-(2-(2-aminothiazol-4-yl)-2-((carboxymethoxy)imino)acetamido)-2,2-dimethyl-4-oxoazetidine-1-sulfonate