

Therapeutic Targets and Novel Therapies in MDS

| Mechanism of Action | Therapeutic Compound |
|---|---|
| Inhibition of mitochondria mediated apoptosis | Erythropoietin, granulocyte colony-stimulating factors |
| Immunosuppression | Antithymocyte globulin, cyclosporine |
| Immunomodulatory agents | Thalidomide, lenalidomide |
| DNA methyltransferase inhibitors | Azacitidine, decitabine |
| Histone deacetylation inhibitors | Valproic acid, depsipeptide, MS275, vorinostat |
| Farnesyltransferase Inhibitors | Tipifarnib, lonafarnib |
| Chemotherapy | Clofarabine, cytarabine, anthracyclines, arsenic trioxide |
| Enzyme and kinase inhibition | Src family kinase inhibitors, imatinib |
| Thrombopoietic growth factors | Romiplostim, eltrombopag |
| Enzyme and kinase inhibition | Ezatiostat (TLK-199), Src family kinase inhibitors |
| Monoclonal antibodies | Mylotarg |
| Chemotherapy | Clofarabine, cytarabine, anthracyclines |
| Inhibitors of angiogenesis | Bevacizumab |
| TNF- α inhibitors | Etanercept, lenalidomide |
| Apoptosis induction | Arsenic trioxide |
| Glutathione analog | TLK-199 |
| Nucleoside analog | Sapacitabine |
| P38 MAPK inhibitor | SCIO-469 |
| Proteasome inhibitor | Bortezomib |