

Drug Class Review Monograph – GPI Class 09 – Antimycobacterial Agents

Review Time Frame: 05/2016 – 04/2017

Previous Class Review: 08/2016

Background:

Antimycobacterial agents are used to treat diseases such as tuberculosis. There are several drugs with various mechanisms of actions.

- Ethambutol: inhibits arabinosyl transferase, resulting in impaired mycobacterial cell wall synthesis
- Rifamycins (rifampin, rifabutin, rifapentine): inhibit DNA-dependent RNA polymerase, thereby inhibiting the binding of the enzyme to DNA and suppressing RNA synthesis
- Pyrazinamide: mechanism of action is unknown
- Isoniazid and ethionamide: inhibit mycolic acid synthesis, which interferes with cell wall synthesis
- Bedaquiline: binds to adenosine 5'-triphosphate (ATP) synthase, preventing production of ATP via ATP synthase

New treatment guideline recommendations:

- None identified

Newly approved drugs:

- None identified

Newly approved formulations:

- None identified

Newly approved generics:

- None identified

Discontinued drugs:

- None identified

FDA Safety Alerts/black box warnings:

- None identified

Pipeline alerts:

Agents pending FDA approval include:

- None identified

References:

1. Drew RH. Rifamycins (rifampin, rifabutin, rifapentine). Calderwood SE, Baron EI. (Ed), UpToDate. Waltham MA. Accessed May 2017.
2. Drew RH. Second-line antituberculous therapy. Calderwood SE, Baron EI. (Ed), UpToDate. Waltham MA. Accessed April 2016.

3. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.; 2016. URL: <http://www.clinicalpharmacology-ip.com/>. Updated April 2016.
4. Food and Drug Administration. [WWW.FDA.GOV](http://www.fda.gov). Accessed May 2017.
5. Envolve Pharmacy Solutions internal pipeline database. Accessed May 2017.