Novel Pleuromutilin Antibiotics

OCR Number: OCR 7106

Description:

**Total Synthesis and Synthetic Route for Novel Antibiotics**

- About the Pleuromutilins
  - Bacterial protein synthesis inhibitor
  - Pleuromutilins approved in the clinic
    - Approved (retapamulin; Altabax®) for topical use (impetigo)
    - Phase 3: Ifoxamulin (oral) various bacterial indications

- Current production Pleuromutilins
  - >3000 semisynthetic derivatives prepared modulated at C14
  - Little other exploration due to synthetic difficulties

- Future Production/Novel Pleuromutilins
  - Total synthesis at high efficiency
    - Commercially viable routes, high overall yield, short convergent synthesis
    - Ability to modulate ring size, introduce atomic substitutions, conduct deep SAR
  - Complete stereocontrol
  - Total synthesis facilitates novel chemistry

**OCR7106 IP Status:**

- Accepted to Science
- Provisional patents filed
- Both available under CDA

**PI:** Seth Herzon

**Licensing Contact:** David Lewin
david.lewin@yale.edu