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 (etapamilin; Altabax®) for topical use (impetigo)
    - Phase 3: Ilemulin (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