

Novel, first in class drugs for the treatment of serious, life-threatening acute disorders

PolyMedix is focused on developing novel, *first-in-class* therapeutic drugs for serious, life-threatening acute disorders. Our therapeutic targets are infectious diseases and cardiovascular thrombosis disorders. We have created our entire product pipeline ourselves using a proprietary computational technology platform developed at and licensed from the University of Pennsylvania. **The first two products are a novel antibiotic drug and a unique heparin antagonist, both in clinical development. A Phase I clinical trial for PMX-30063 antibiotic commenced in August 2008. A Phase I clinical trial for PMX-60056 heptagonist commenced September 2008.**

PolyMedix has raised over \$50 million since being founded in 2002, including a \$21 million public offering in February 2006, \$19 million in two financings in 2008, and six approved SBIR grants (including a \$3 million Advanced Technology grant).

PolyMedix's product opportunities have been *rationally selected to mitigate risk*:

- o Fast clinical trials – acute dosing (single dose to days), plus possibility of accelerated development paths.
- o Straightforward endpoints, *to determine if the drug works*.
- o Animal models and Phase I clinical data generally considered predictive of success.
- o PolyMedix will develop and commercialize acute care products in North America with a hospital sales force.
- o Address major market opportunities.

Experienced management team

- **President & C.E.O. - Nicholas Landekic**
- **Vice President Clinical Development – Dr. Eric McAllister**
- **Vice President Drug Development – Dr. Bozena Korczak**
- **Vice President Research – Dr. Richard Scott**
- **Vice President Finance & C.F.O. – Edward Smith**
- **Vice President, Business Development – Dawn Eringis**

Renowned Scientific Founders

From the University of Pennsylvania, members of the National Academy of Sciences, American Academy of Arts and Sciences, and the Royal Society:

- **Dr. William DeGrado**
- **Dr. Michael Klein**
- **Dr. Gregory Tew**

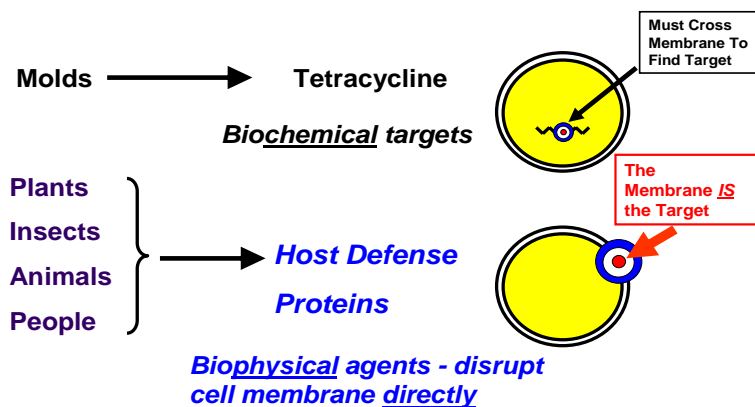
Antibiotic Drugs – PMX-30063

The rapid rise of drug-resistant bacterial infections is one of the most serious medical problems in the world today. Bacterial infections are now the 4th leading cause of death in the U.S. with over 2.5 million cases causing over 100,000 deaths annually. The world anti-infective drug market is over \$25 billion and growing due to increasing drug resistance.

PolyMedix *imitated nature* and mimicked the **activity and structure of host defense proteins**, one of the oldest and most effective antimicrobial defense systems in virtually all living creatures. We believe PMX-30063 is the only **small molecule** mimetic of host defense proteins under development for systemic use, with many potential advantages.

How our antibiotic compounds work:

Other conventional antibiotics:



Primitive life forms such as molds secrete compounds like tetracycline and penicillin to protect themselves from bacteria.

Many forms of life produce host defense proteins as their first line of defense against bacteria.

Despite hundreds of millions of years of evolution, widespread bacterial resistance has not developed to the host defense proteins, validating this antimicrobial mechanism of action and target for the development of new antibiotic drugs.

PolyMedix compounds: Biophysical mechanism – directly targets and disrupts membrane from the outside

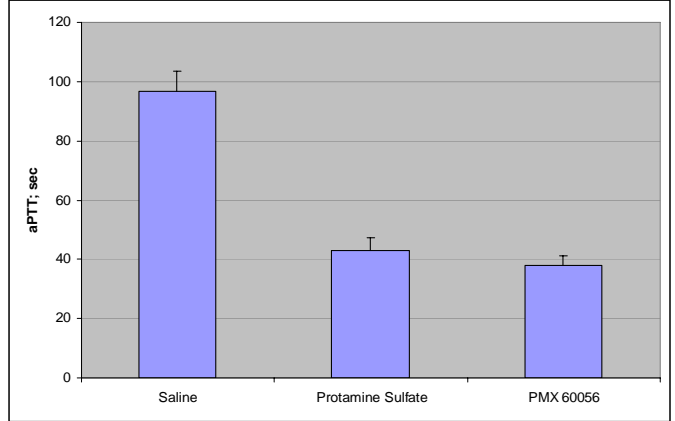
- Novel mechanism of action – directly lysing bacterial cell membranes – ***makes resistance unlikely to develop.***
- Potent activity against 100's of Gram-positive and Gram-negative bacteria, ***including 148 strains of Staph and MRSA.***
- Much faster bactericidal action than other antibiotics, *seconds to minutes vs. days.*
- Proven activity against drug-resistant bacteria, including multiple MRSA and VRE strains.

- Ophthalmic formulation tested; potential oral formulations; for antibacterial, anti-fungal, and anti-viral uses.
- **Antimicrobial polymers** for **biomaterials** applications to create self-sterilizing surfaces and bactericidal products for biomedical, industrial, and consumer products - paints, plastics, and personal care products.
 - **Phase I clinical trial commenced August 2008.**
 - **First clinical product is an intravenous formulation to broadly treat multiple Staph infections**

PMX-60056 neutralization of heparin in whole human blood from CABG (bypass) patients

Heptagonist – PMX-60056

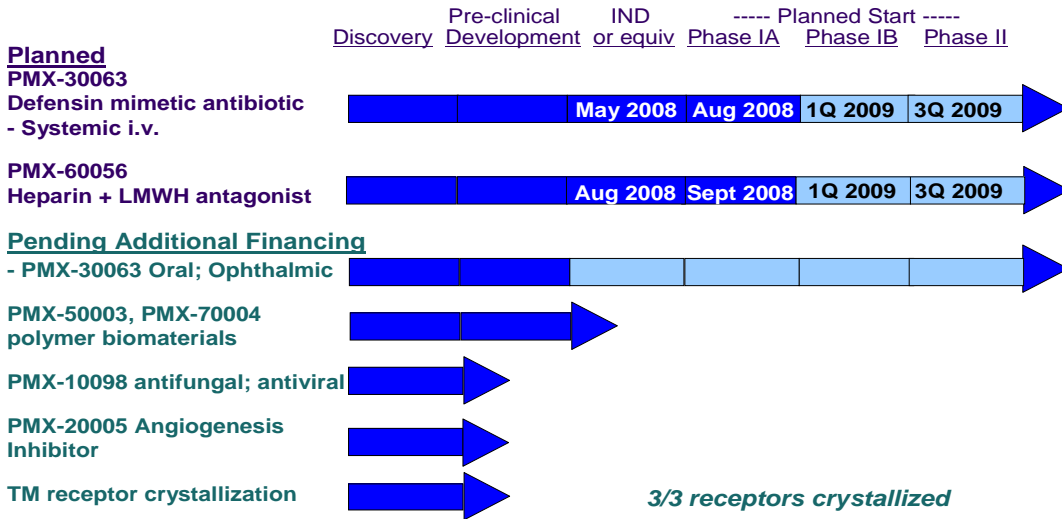
Heparin is an intravenous or s.c. anticoagulant routinely used after surgery and during cardiothoracic procedures to prevent blood clots from forming. Blood clots can be life threatening and cause strokes or heart attacks. After the procedure heparin activity must be turned off, which is currently done with protamine, the only agent available for this use. Protamine has many limitations, including difficulty in adjusting dose, unpredictable efficacy, bleeding complications, and serious toxicities. Additionally, protamine is not effective against Low Molecular Weight Heparins (LMWH), used in ~12 million patients annually for chronic treatment of thrombosis, with up to 20% bleeding complications.



PolyMedix has developed compounds including PMX-60056 as anticoagulant reversing agents, for both heparin and LMWH. Our goal is to develop a drug that is safer and easier to use than protamine, and useful for LMWH's. Studies (above) in whole blood drawn from heparinized CABG (bypass) patients show that PMX-60056 can **completely normalize blood clotting time**. Clinical trials are anticipated to be relatively straightforward, rapid, and inexpensive – the target endpoint is not curing a “disease”, but simply to **normalize clotting time**.

- **Phase I clinical trial commenced September 2008**
- **Clinical proof of concept – heparin reversal in human subjects – planned for Phase IB**
- **Unique opportunity as the first reversing agent for LMWH**

Product Pipeline (timelines assume adequate financing)



Using our proprietary computational drug design technologies, PolyMedix has developed a **sustainable, full pipeline of novel biomimetic drugs for acute, serious, life-threatening disorders.**

This sustainable pipeline makes PolyMedix a sustainable business

3/3 receptors crystallized

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