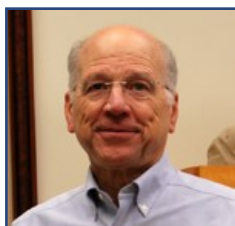


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 Reference: Antiviral
 compounds



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Broad Spectrum Antiviral Compounds

Overview: Auburn University is seeking a licensee or development partner for a suite of patented antiviral compounds. These compounds have activity against several human viruses including Ebola, human cytomegalovirus, norovirus, and dengue fever, with the potential to inhibit other, untested viruses. The compounds can be used to prevent or treat viral outbreaks.

Advantages:

- **Broad spectrum** - Active against a variety of DNA and RNA viruses
- **Scalable** - Less expensive, more stable and scalable compared to biologicals
- **Reduced toxicity** - many compounds lack the toxicity seen in most neplanocin derivatives

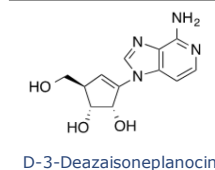
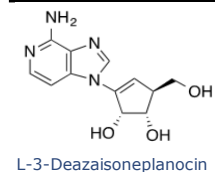
Description: Antiviral treatments remain a significant need.

Currently, control of viral outbreaks such as Ebola and norovirus consists mostly of interventional methods like isolation and case management. Globalization has made these and other “developing world” diseases a threat to industrialized nations with little or no treatments available.

Chemists at Auburn University have developed a collection of enantiomeric derivatives of the antiviral compound neplanocin A, which show broad spectrum antiviral activity. Many of these compounds have a different antiviral mechanism than neplanocin A and a corresponding low-toxicity profile. Variants of these compounds can have different antiviral activities, meaning different viruses can be targeted through “stereochemical tweaking” of compounds. Several compounds were validated by the USAMRIID in mouse models for Marburg (same viral family as Ebola). Activity against other viruses were validated by NIH in preclinical cell culture studies.

Status:

- Subject of issued patents in the U.S. (9,657,048, 10,227,373 and 10,787,478), Australia (2015301248), Europe (15829746; GB, DE, FR, ES, IT), Canada (2,960,156), and Japan (6546268)
- Some compounds validated against Marburg in mice
- These compounds are available for exclusive or non-exclusive licensing



Virus	L-Iso	EC ₅₀ (µM) L-Deazaiso	D-Deazaiso	Annual cases	Annual Societal Cost
Norovirus	0.784	-	-	>1 million (US/EU/CA)	\$8BB societal cost (US)
CMV	0.11	<0.1	<0.1	~80% of the US	Low Billions
Hep B	7.2	-	-	> 4 MM (Global)	>\$2 BB (US/Korea)
Ebola	0.38	<0.32	<0.32	27,000 (latest outbreak)	\$1.6 BB (latest outbreak)
Dengue	1.5	-	-	390 million (Global)	\$46 MM
Measles	<0.4	8.7	<0.1	<1000 (US)	>\$12 MM (US/EU)

Early Stage

Lab testing

Animal Studies

Clinical Trials

THIS IS INNOVATION. THIS IS AUBURN.