

New Treatment for Sepsis

Tech ID: 19491 / UC Case 2003-034-0

BACKGROUND

Septic shock occurs from an overwhelming bacterial infection and is characterized by severe hypotension with low blood flow. It is the 13th leading cause of death in the United States with a mortality rate of 30%-50% due to the lack of effective treatments. In addition to the devastating effects of this syndrome on individuals, it incurs billions of dollars annually in healthcare costs.

TECHNOLOGY DESCRIPTION

Nitric oxide (NO) is produced in high quantities during sepsis and plays a major role in the development of hypotension. Cobalamin is known from previous studies in animal models to scavenge NO and to reduce mortality from septic shock. Researchers at UCSD have recently discovered that the cobalamin precursor cobinamide binds NO with 100 times greater affinity than cobalamin ([Reactions of Nitric Oxide with Vitamin B12 and its Precursor, Cobinamide](#)). They have developed a rapid and inexpensive method to produce cobinamide and have found that cobinamide, like cobalamin, shows no evidence of toxicity in rodent and human cells. Cobinamide has the potential to be extremely valuable in the treatment of septic shock.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,534,007	01/03/2017	2003-034
United States Of America	Issued Patent	8,431,561	04/30/2013	2003-034

Additional Patent Pending

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ [A Novel Nitric-Oxide Releasing Drug](#)
- ▶ [Treatment for Smoke Inhalation and Cyanide Poisoning](#)

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INVENTORS

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OTHER INFORMATION

CATEGORIZED AS

- ▶ **Medical**
 - ▶ Disease: Blood and Lymphatic System
 - ▶ Disease: Infectious Diseases
 - ▶ Other

RELATED CASES

2003-034-0