

Silver Sol Improves Wound Healing By Destroying Bacteria, Viruses and Fungus

By

Dr. Gordon Pedersen

Outline:

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Wound Healing Definition

Wound: Any break in the skin

Healing: The act or process in which the normal healthy structures and functions are restored

Silver Sol Gel destroys bacteria, viruses and fungus

And improves wound healing

Skin antimicrobial (wounds or prevention)

No alcohol

No petroleum

Good for post surgery

Face peel

Dry skin

Diseased skin

Cibron Dental Consultants report: “It is our clinical experience that the findings... appear to be directly attributable to the use of the Silver Sol Product”



Dr's Willoughby and Clease

308 dental implant patients:

Implant procedure using Silver Sol Gel
performed in one day:

Total infections using Silver Sol Gel = 0

Silver Sol produces no resistance
(Penn State University, 2008)

Dr John Shaw M.D., P.C.

Over the years we have used Kernalog 0.1% cream, Silvadene cream, and Aloe Vera for radiation burns. All of these have done a fairly good job in assisting healing of skin. However, we have now used Silver Sol Gel. It actually not only accelerates the healing process but actually will provide moisture to the dry damaged tissues in the patients who have dry desquamation.

It appears that from these earlier studies that the use of Silver Sol gel will be an excellent tool in our armamentarium in promoting healing of the skin reaction from radiation therapy in the breast cancer patient.

MRSA Infection ongoing one year Before Silver Sol



After Silver Sol (17 days once a day gel)



When a Wound Heals Normally
natural repair and regeneration of
tissues will pass through the
following phases

Inflammatory
Proliferative
Remodelling

Inflammatory Phase

Clotting occurs

Bacteria and debris are phagocytized and removed

Immune factors are released causing the activation, mobilization and division of cells involved in the proliferative phase

Platelets are the cells in highest numbers shortly after a wound occurs. They release ECM proteins, cytokines, growth factors and pro-inflammatory factors like serotonin, bradykinin, prostaglandins, prostacyclins, thromboxane and histamine (2).

Within an hour of wounding, polymorphonuclear neutrophils (PMNs) arrive at the wound site.

Fibrin and fibronectin cross-link together and form a plug that traps proteins and stops bleeding

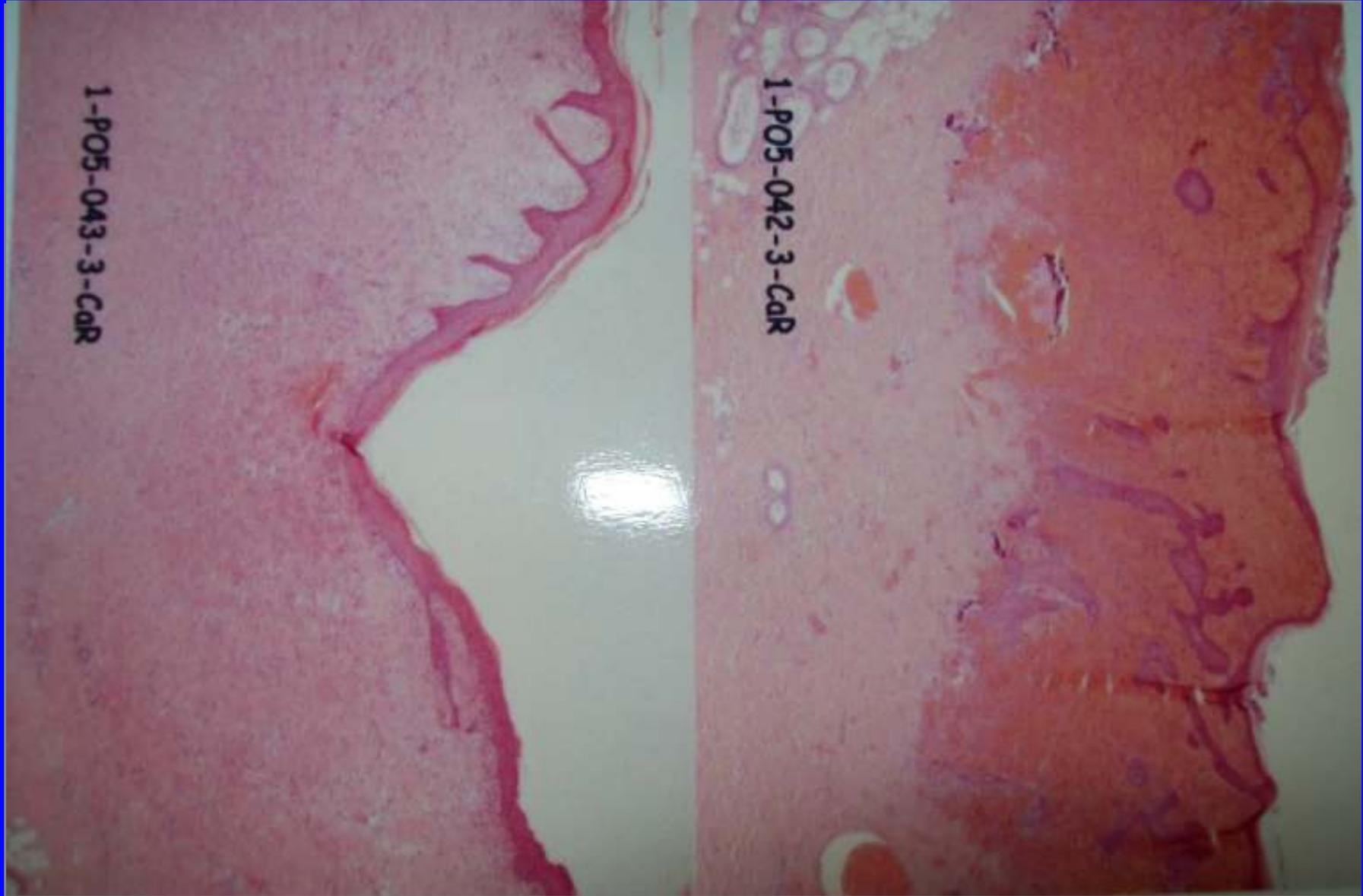
Migratory cells use this plug as a matrix to migrate across, and platelets adhere to it and secrete immune factors

Bacteria, Viruses and Fungus interfere with normal healing

Silver Sol helps to reduce the bacteria and infection in the wound while stimulating the production of stem cells, effectively shortening the inflammatory phase and accelerating the proliferative phase, which improves healing times and helps reduce scarring.

Silver Sol (Univ Utah)
little inflammation

No Silver Sol
high inflammation



Proliferative Phase (Reconstruction Phase)

About two or three days after the wound occurs, fibroblasts begin to enter the wound site, marking the onset of the proliferative phase.

- *Angiogenesis produces new blood vessels from endothelial cells
- *Fibroblasts grow and form an extracellular matrix by excreting collagen and fibronectin.
- *Epithelial cells migrate across the wound bed to cover it and myofibroblasts draw the edges of the wound together.

Bacteria (MRSA) or Fungus can interfere with this phase causing increased inflammation, and prevent the wound from closing



19 days later Silver Sol killed the MRSA and helped close the wound



Remodelling Phase (Maturation)

- In the remodeling phase the wound matures. Collagen is remodeled and realigned along tension lines where the wound is contracting. The healing process is complex, fragile and susceptible to interruption or failure which can lead to the formation of a chronic non-healing wound. Some of the most significant factors which may contribute to the failure of a wound to heal, include; diabetes, venous or arterial disease, old age, and infection.

The maturation phase can last for a year or longer, depending on the size of the wound and whether it was initially closed or left open (21). During Maturation, originally disorganized collagen fibers are rearranged, cross-linked, and aligned along tension lines (19). As the phase progresses, tensile strength of the wound increases.

The strength approaches 50% that of normal tissue by three months after injury and ultimately becomes as much as 80% as strong as normal tissue (21).

Infection, prolonged inflammation or debris can cause a wound to become a chronic wound or keloid scar.

Silver Sol gel destroys bacteria, viruses and fungus that infect wounds.

The use of Silver Sol gel reduces infection and inflammation without antibiotic resistance, alcohol or petroleum.

(US Patent #7135195)

Obstacles of Normal Healing

1. Infection
2. Inflammation
3. Contamination

Case Studies

Singapore general Hospital

Infection: MRSA

70 yr old diabetic

Amputation ongoing for 1 year

Antibiotics and maggot therapy unsuccessful

Treated with Silver Sol Gel twice daily and

given liquid silver sol orally

two teaspoons twice daily

Oct 13, 2008



Nov 17, 2008 (25 days)



Dec 24, 2008 ready for artificial limb
(total days 37)



Infections that commonly interfere with normal healing

Bacteria:

Pseudomonas aeruginosa

burns

Staph aureus MRSA

skin, surgery

Streptococcus

inside and
outside the
body

Viruses:

Herpes virus

fever blisters

Fungus

Candida / yeast

skin, vagina,
intestines

Case Study Eye Laceration

47 year old male

Multiple lacerations requiring sutures

Broken orbital bone

Significant bruising

1 hour after injury



Gel 4 times a day
liquid 2 teaspoons twice a day



Day 2



Day 3



Day 5





Day 7

Aug 4, 2008 developed bullous pemphigoid (autoimmune)



4 days later



10 days later
note area of epithelialization (stem cells)



MRSA 6 hours old





MRSA 30 hours later





88 yr
old

Burn



65 days
later

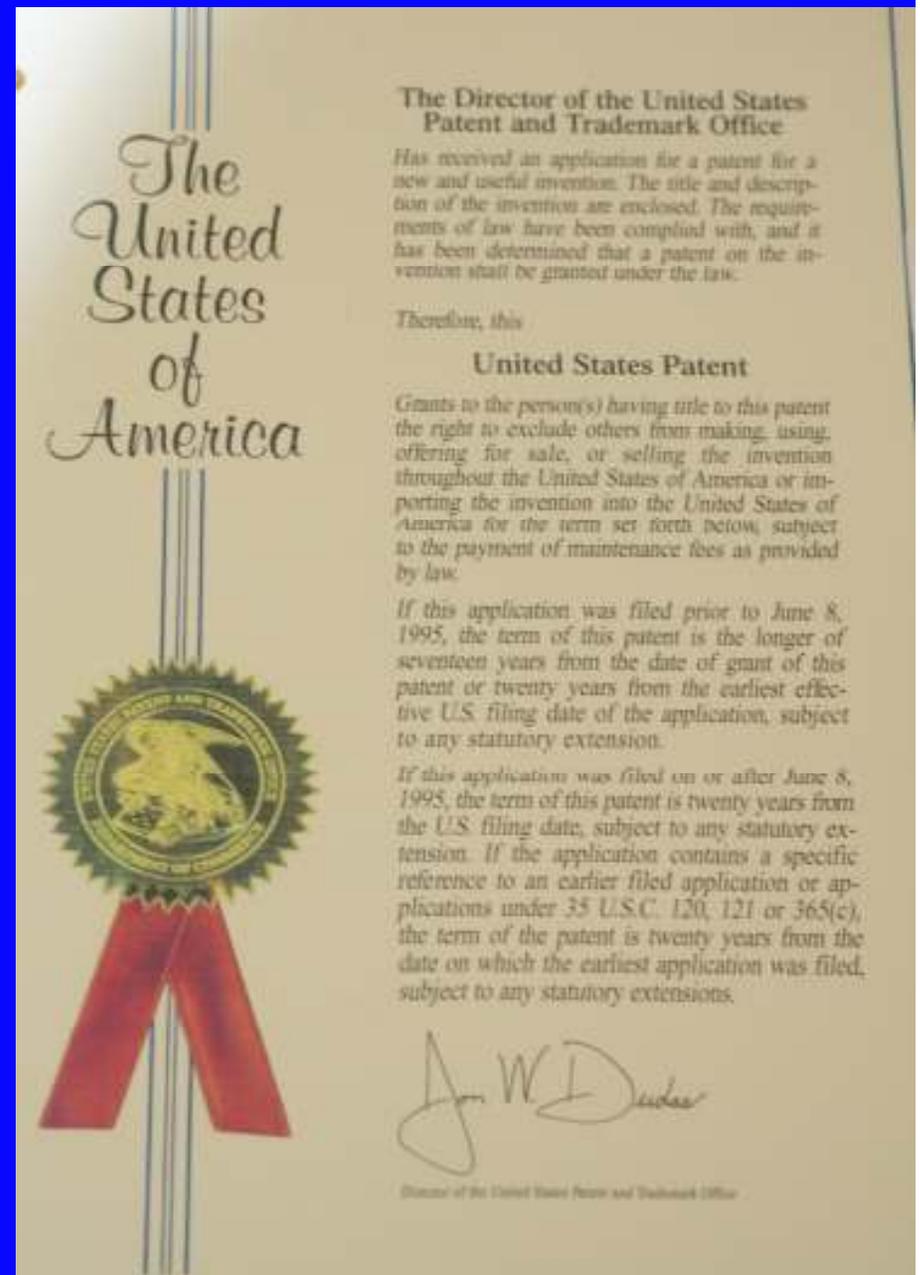
No
infection

Silver Sol destroys
bacteria viruses and
fungus that interfere
with normal healing
(US Patent # 7135195)

Pg 41:

“Human diseases cured
by and pathogens killed
by the inventive silver
composition”.

List of 143 including:
MRSA, Pseudomonas,
candida, Strep., etc.



- * Destroys bacteria, viruses and fungi
- * Purifies water
- * Can be used in every orifice of the body
- * Does not destroy good bacteria
- * Can be taken every day for prevention
- * Proven in over 180 scientific studies
- * Approved Patent #7135195
- * Works inside and outside the body
- * Helps stimulate stem cells
- * Antibiotic alternative (produces no resistance)

Silver Sol destroys bacteria without resistance (Current Science, 2008)

RESEARCH COMMUNICATIONS

Bactericidal activity of combinations of Silver-Water Dispersion™ with 19 antibiotics against seven microbial strains

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The recent increase in the incidence of infections due to bacterial resistance to antibiotics has been recognized as an alarming problem, especially in the hospital environment with probability of cross-infection. Silver-Water Dispersion™ solution as an antibacterial is claimed to have no bacterial resistance. Nineteen antibiotics were checked in combination with Silver-Water Dispersion™ solution against seven microbial organisms for synergism. First, minimal inhibitory concentrations were determined for the individual antibiotics and Silver-Water Dispersion™ solution individually. Those combinations of individual antibiotics with Silver-Water Dispersion™ that displayed synergism were further evaluated through the checkerboard method. Synergistic activity of Silver-Water Dispersion™ solution in combination with nineteen antibiotics was tested against seven bacterial strains, except where an organism was known to be resistant to the antibiotic. Out of 96 tests, five were synergistic, 89 additive, and two antagonistic.

Keywords: Antibiotics, bacterial resistance, Silver-Water Dispersion™, synergism.

SERIOUS infections, particularly antibiotic-resistant, often result in therapeutic failure when treated with seemingly appropriate single-drug antibiotic regimens, despite readily achievable minimum inhibitory concentrations (MICs). The mutations responsible for antibiotic resistance in bacteria do not arise as a result of the 'need' of the organism. Futuyma¹ has noted that: '... The adaptive needs of the species do not increase the likelihood that an adaptive mutation will occur; mutations are not directed towards the adaptive need of the moment... Mutations have causes, but the species need to adapt isn't one of them'. Alternatives must therefore be sought to overcome infections carrying highly resistant strains.

Silver-Water-Dispersion™ solution has been shown as an effective antibiotic against many Methicillin-resistant *Staphylococcus aureus* (MRSA) and multiple drug-resistant (MDR) strains (*Escherichia coli*, *Pseudomonas aeruginosa*).

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As high level acquired resistance to conventional antibiotics is frequent, it seems reasonable to use combination therapy in order to achieve bactericidal synergism. Active silver solutions have shown marked activity against proven bacterial-resistant strains. Hence, a range of antibiotics were tested with Silver-Water Dispersion™ solution to determine antagonism, additive and synergistic effects against a panel of microbial strains.

Antibiotic discs used in this investigation are standardized discs by Pathoteq Biological Laboratories, India: Amoxicillin (AX, 30 mcg), Carbenicillin (CN, 100 mcg), Cefoperazone (CP, 75 mcg), Ceftizidime (FG, 30 mcg), Ciprofloxacin (RC, 5 mcg), Clindamycin (CD, 2 mcg), Doxycycline (DX, 30 mcg), Erythromycin (ER, 15 mcg), Gentamycin (GM, 10 mcg), Kanamycin (KA, 30 mcg), Nalidixic Acid (NA, 30 mcg), Oxacillin (OC, 1 mcg), Penicillin-G (PG, 10 units), Rifampin (RF, 5 mcg), Streptomycin (SM, 10 mcg), Tetracycline (TE, 5 mcg) Tobramycin (TB, 10 mcg) and Trimethoprim (TP, 5 mcg).

The antibiotic solutions used in the study are KANAMAC-500 (Kanamycin injection, Macleods Pharmaceuticals Ltd, Daman), FORTUM® (Ceftizidime injection, GlaxoSmithKline Pharmaceutical Ltd, India), MIKACIN (Amikacin injection, Aristo Laboratories Ltd, Daman), MAGNAMYCIN® (Cefoperazone injection, Astral Pharmaceutical Industries, India).

The 32 ppm silver in distilled water (S-W D™) was obtained from American Biotech Laboratories, Utah, USA.

The organisms used are: *E. coli* (MDR) strain from stool sample; *P. aeruginosa* (multiple-drug resistant) strain from sputum. These two strains were obtained from P.D. Hinduja Hospital (Mumbai); Methicillin-resistant *S. aureus* was obtained from Lokmanya Tilak Municipal Hospital. *Shigella flexneri*, *Salmonella typhi*, *S. aureus* 6538 P, *Bacillus subtilis* and *Candida albicans* are in-house laboratory strains.

Nutrient agar (Hi-Media, Mumbai) used in the antibiotic spectrum studies and Silver-Water Dispersion™ and antibiotic combination studies contains peptic digest of animal tissue 50.00 g/l; yeast extract 1.5 g/l; beef extract 1.5 g/l; sodium chloride 5.00 g/l; agar type 1 25 g/l; pH 7.4 ± 0.2. Nutrient broth (Hi-Media, Mumbai) used in the macrodilution method (MIC) contains peptic digest of animal tissue 50.00 g/l; yeast extract 1.5 g/l; beef extract 1.5 g/l; sodium chloride 5.00 g/l; glucose 5 g/l; pH 7.4 ± 0.2.

Actively growing 16-h-old culture was surface-spread using sterile cotton swabs onto the nutrient agar surface (Hi-Media). The plates were kept aside for absorption for 15 min. The antibiotic discs were then placed onto the agar surface and the plates were incubated at 37°C for 24 h. All plates were examined for any zones of inhibition around the antibiotic discs that would indicate sensitivity of the organism. Zone diameters were recorded in millimetres using a zone reader (Hi-Media) and interpreted according to the standard charts provided by the National Committee for Cultural and Laboratory Standards².

According to:

(Current Science, 91(7) Oct. 2006)

Silver Sol “has no bacterial resistance”

Silver Sol was tested against 7 bacteria in combination with 19 antibiotics...

”Out of 96 tests, five were synergistic, and 89 were additive.”

In the synergistic tests the antibiotic was made ten times more effective at killing bacteria, because “the Silver killed the residual bacteria that the antibiotic couldn’t.”

Singapore Health Ministry and The Dept of Homeland Security Wound Care Study

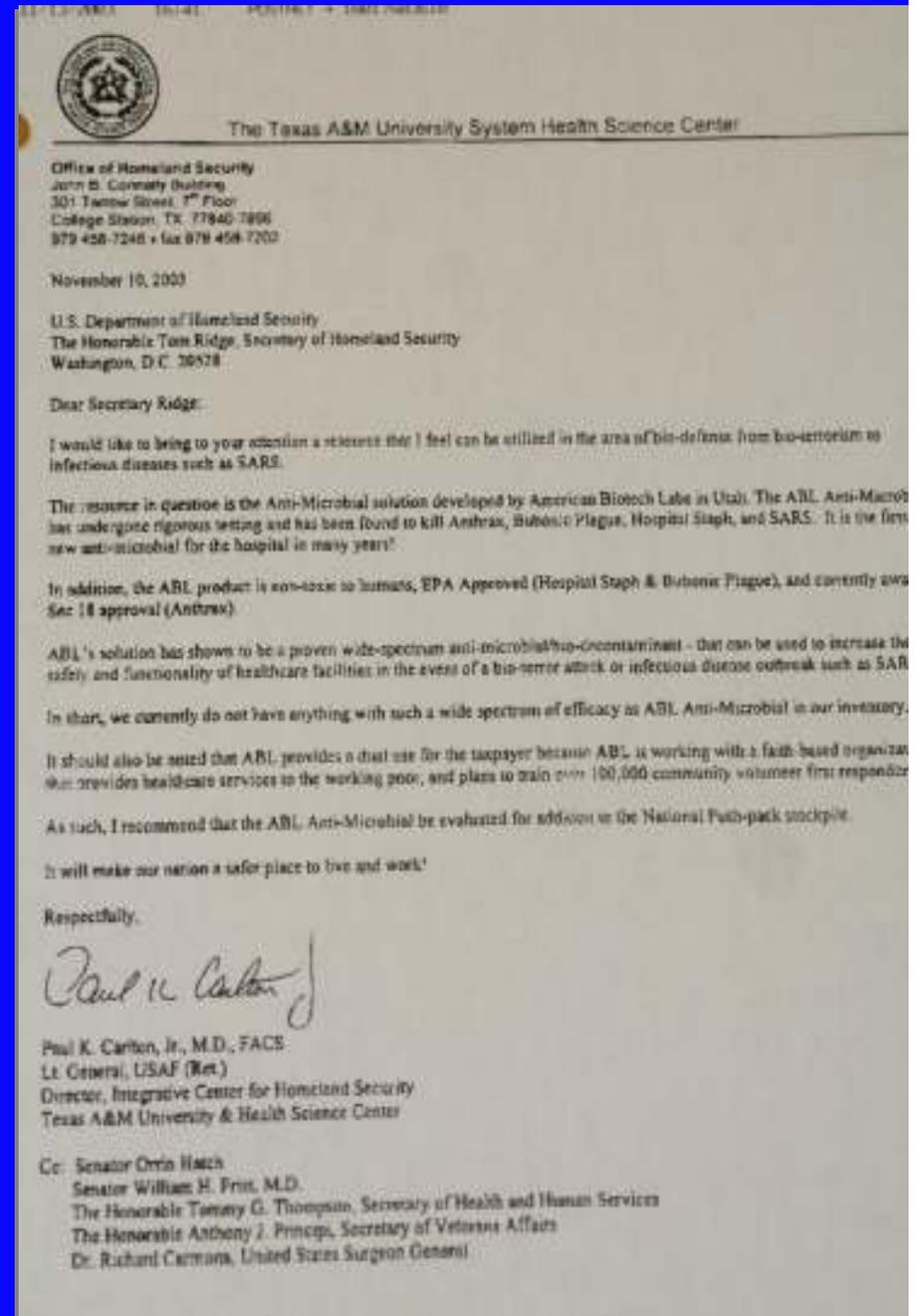
Dr. Soo Keoung, Chairman Food and Drug Board

Results

- * Silver sol was three times better than any other drug or other silver at healing wounds
- * Three times faster killing of bacteria
- * Three times better wound healing (time to closure)
- * Three times better average survival rates in bacteria infected mice

| | |
|-----------------------------------|-----------|
| Silver sol infected mice survived | 11.3 days |
| Control infected mice survived | 3.7 days |
- * Silver Sol was Frozen and boiled before testing

AF Surgeon General PK Carlton MD Requests Silver Sol for Use in Infections disease and epidemics



- Surgeon General PK Carlton MD
(Director of Integrative Center for Homeland Security) Recommends:

“I would like to bring to your attention a resource that I feel can be utilized in the area of bio-defense from bio-terrorism to infectious diseases such as SARS.”

“The antimicrobial has undergone rigorous testing and has been found to kill anthrax, bubonic plague, hospital staph, and SARS. It is the first new anti-microbial for the hospital in many years.”

Surgeon General PK Carlton MD (continued)

“In addition, the product is non-toxic to humans, approved for Hospital Staph, Bubonic Plague and currently awaiting Sec 18 approval for (anthrax).”

“In Short, we currently do not have anything with such a wide spectrum of efficacy... in our inventory.”

“As such, I recommend that the antimicrobial be evaluated for addition to the National push-back Stockpile.”

EPA Certification # 73499-2

Commercial, industrial and residential use

Pesticide

Surface disinfectant

Hospital disinfectant

Roses with silver sol still
blossoming at 3.5 weeks



Roses live 60 % longer





Stem re-growth



Proper use of Silver Sol Liquid and Gel

Liquid:

Drink 2 teaspoons twice a day

Gel use topically as needed

Silver Sol can be used to assist in wound healing because it destroys the causes of infection, inflammation and contamination

What you can expect from Silver Sol

Destroys bacteria but not the healthy
bacteria

Moisture donating to injuries

Helps heal the wound three times faster

Helps regenerate wounds on skin

Can be taken internally and externally

Can help reduce the cause of premature
aging on the skin

Summary

Silver Sol destroys the causes of infection and inflammation

Silver Sol helps improve wound healing by destroying bacteria, viruses and fungus

It can be taken orally (liquid) 2 Tea twice a day

It can be taken topically (gel as needed)