



# ACS<sub>200</sub><sup>®</sup>

Advanced Cellular Silver

A unique dietary supplement  
for immune system health

*For Health Care Professionals*

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# ACS<sub>200</sub><sup>®</sup>

## Advanced Cellular Silver

### The History of Silver in Medicine



Silver has long been recognized in recorded history as having germicidal properties. In 69 B.C. silver nitrate was described in the contemporary pharmacopoeia.<sup>1</sup> In ancient Greece, Rome, Phoenicia and Macedonia, silver was used extensively to manage many immune challenges.<sup>2</sup> From the time man first learned to work with silver, he has known that it delayed the spoilage of foods and that it reduced the symptoms of illness. Hippocrates, the “Father of Medicine,” used silver and instructed that it promoted tissue repair and was a notable topical aid.<sup>3</sup> In the days before refrigeration, farmers tossed a silver coin in a bucket of milk to preserve it. Chemists put silver dimes in Petri dishes to sterilize them. For many years it had been common practice to place silver wires and threads around infected wounds that refused to heal.

### The Resurgence of Silver in Medicine

The rediscovery of the healing properties of silver began in the 1970's. The late Dr. Carl Moyer, then chairman of Washington University's Department of Surgery, received a grant to develop better methods of treatment for burn victims. Searching for an antiseptic strong enough, yet safe to use over larger areas of the body, Dr. Moyer, together with Dr. Harry Margraf, the chief biochemist on the project, tested 22 antiseptic compounds. None were found suitable. Searching the scientific literature, Dr. Margraf found repeated references to the use of silver as an antimicrobial agent. While high concentrations of the best known compound of silver, silver nitrate are both corrosive and painful, Dr. Margraf found that silver diluted to a .5 percent solution effectively killed invasive burn bacteria and stimulated the healing process. Importantly, bacterial strains resistant to silver nitrate did not appear. While effective, the use of silver nitrate was far from ideal due to its chemical makeup. So the search continued for more suitable silver preparations. As a result of this and other researchers' efforts, hundreds of important new medical uses for silver were found.



### What is Colloidal Chemistry?

A colloidal dispersion is a heterogeneous mixture that appears visually as a homogenous solution. In a colloid, the dispersed phase is made of tiny

particles or droplets that are distributed evenly throughout the continuous phase. Colloidal chemistry is the process that converts minerals and metals into particles small enough to be bio-available to the body's living cells. Swiss born Karl Nageli (1893) first coined the term “oligodynamic effect” (from the Greek **oligos** = few, and **dynamis** = power) to best describe the toxic effect exerted by extremely low metal-ions (e.g., silver and copper ions) on living cells, algae, molds, spores, fungi, prokaryotic and eukaryotic microorganisms.<sup>2</sup> Properly formulated Olygodynamic Ag+ has been shown to modulate events which are immune offensives,<sup>4,5</sup> such as promoting superoxide release, supporting healthy regulation of toxicants,<sup>6</sup> and promoting healthy enzyme mediation from exogenous sources.<sup>7</sup> Through these supportive mechanisms and more, **ACS 200<sup>®</sup>** offers substantial support for immune system health.

### Life Functions in the Colloidal State

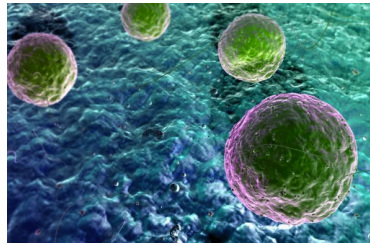
The primary chemistry comprising all living processes occurs in the colloidal state through “suspended” molecules as opposed to being “dissolved” in bodily fluids. Colloidal fluids enable optimal electron “poising” and transfer (redox), as well as stereo-chemical molecular alignments, interfaces and re-arrangements.<sup>8</sup> The “suspension milieu” of the colloidal state greatly lessens the constraints that time and space ordinarily exert upon essential biochemical pathways.<sup>9</sup> For example, at normal body temperatures, vital biochemical reactions will occur up to a billion times slower in the absence of functional enzymes.<sup>10</sup> To illustrate the near quantum speeds of the living suspension milieu, consider the following: DNA assays suggest that a healthy twenty-five year old, well-nourished human will suffer 100,000 genetic mutations daily to each of his or her 75 trillion human cells. That translates into approximately 7,500,000,000,000,000 (7.5 quintillion) genetic injuries daily. Yet within these same 24 hours, near perfect levels of repair are completed!<sup>11</sup> This suspension milieu maximizes life within our cells by insuring dominance over their environment.



Colloidal minerals, such as silver, copper and gold hydrosols, have several critical roles to play applicable to the genesis and function of the colloidal state. Of particular note, colloidal metals initiate the transformation of the bodily liquids from simple solvents into highly structured, ordered and energy rich gels. Since these gels are stabilized, they tend to be non-reactive with other molecules, resulting in an array of molecules in suspension.<sup>12</sup> As a result, the surface area of the molecule becomes 360° exposed in all directions, optimizing its capacity to react with other suspended molecules.<sup>13</sup> Indirectly or directly, colloidal minerals transition dissolved molecules into their suspended state,<sup>14</sup> and vis-à-vis colloidal proteins transition dissolved minerals into their suspended state.<sup>15</sup>

Of particular note, colloidal metals serve as catalysts (i.e., oxidases) to vital metabolic redox events.<sup>16</sup> As lower life forms evolved over the millennia into higher life forms, silver appears to have played a quintessential

catalytic role in the evolution of the aerobic mechanisms. This becomes clear when one considers how in higher (but not lower) life forms, silver amplifies complex immune functions,<sup>17</sup> and induces regenerative events even within human tissues.<sup>18</sup>



## The Problem: Immunodeficiency / Neutralizing Defiant Pathogens

Health Care Practitioners around the globe are being challenged daily by ever increasing trends that defy nearly all standard immune protocols. The problem is two-fold: As cases of Immunodeficiency diseases increase, complicated pathogens continue to adapt and evolve new ways to successfully infect the host. For example: "More people are infected and die of MRSA (methicillin-resistant staphylococcus aureus) each month in hospitals in the U.S. than from severe acute respiratory syndrome [SARS], anthrax, bioterrorism agents [and] avian influenza combined," Dr. William Jarvis, the CDC's former acting director of the hospital infections program, said in written comments to a February, 2007 hearing in Springfield, Illinois.<sup>19</sup> The Institute of Medicine, under the National Academy of Sciences, estimates that the annual cost associated with these difficult situations may be as high as \$30 billion. Annually, over 2 million Americans may present these highest risk immune challenges to their physician.<sup>20,21,22</sup> This trend is unacceptable.

## The Solution: ACS 200® (Advanced Cellular Silver)

All colloidal silvers are not the same. Most manufacturers of colloidal silver dodge the subject of actual efficacy, spending time and focus explaining their "high tech" manufacturing process, debating particle size, particle energy, color of fluid etc. Proven product performance, i.e. safety and efficacy are truly where the rubber meets the road. **ACS 200®** provides proven bacterial kill time and FDA protocol toxicology studies from certified independent 3rd party labs. **Formulated for health care practitioners exclusively, RESULTS RNA® ACS 200®** is the most carefully researched and scientifically tested medical grade colloidal silver formula available today. As shown from

independently derived studies, **ACS 200®** has been proven capable of rapidly killing an enormous array of disease causing organisms – literally oxidizing the cell wall of gram positive and gram negative bacteria as well as naked virus, and all without damaging human tissue.



## Safety and Efficacy by Dr. Garry Gordon

There is no colloidal silver product on the market today more carefully researched for safety or efficacy. Advanced Cellular Silver (ACS) 200® represents a major advancement in medical use

silver technology and is truly unique. ACS 200® is an extremely powerful and effective, yet safe formula which can be prescribed to engage the serious immune challenges we as physicians face every day.

**Safety:** An FDA protocol oral-toxicity (LD 50) study was conducted by Pacific BioLabs in Hercules, CA. Using mega doses of ACS 200® (5000 mg ACS 200® per 1 kilogram murine weight) there were NO MORTALITIES OR TOXIC SIGNS OBSERVED in any of the rats tested. Note: Typical LD 50 testing BEGINS using 2000 mg/kg. At 2 ½ times this dosage, not only were there "no mortalities or toxic signs observed", but the rats actually gained healthy weight during the 2 week observation period. Considering the POWER this formula provides in eliminating pathogens, the safety factor is truly remarkable. The full independent acute oral toxicity report is available under ORAL TOXICITY REPORT on ResultsRNA.com in click through and printable form.



**Efficacy:** Independent Kill Time studies have been performed at the microbiological laboratories of Brigham Young University to determine the bactericidal activity of ACS 200®. Dr. Robison and the BYU research team behind this testing have years of professional experience. They have utilized a Biosafety level 3 facility to test this proprietary silver derivative against a host of pathogens and have substantiated the documented kill times of ACS 200® exceed that of any product of its kind on the market today. One specific study performed against Staphylococcus aureus is as follows:

**Discussion:** Results from these procedures did not allow accurate log reductions (LR) or percent kill (PK) values to be calculated **because in each case there was complete kill resulting in zero counts.** However, lower limits of activity could be estimated. Log reduction (LR) and percent kill (PK) values were calculated using the formulas: 1)  $LR = -\log(S/S_0)$ , where S = concentration of viable organisms after 15 seconds; and  $S_0$  = the initial concentration of viable organisms at time zero. 2)  $PK = (1 - (S/S_0)) \times 100$ . These values are shown in the table below.

Solution	Diluent	Contact Time	Log Reduction (LR)	Percent Kill (PK)
Solution 7/16/04	Water	15 sec.	>5.20	>99,9994
Solution 7/16/04	MEM	15 sec.	>5.37	>99,9996

Neutralization control data showed that the disinfectant was adequately neutralized. Expected counts were similar to or slightly greater than those of the titer.

The disinfectant preparation tested here (solution 7/16/04) had significant bactericidal activity against Staphylococcus aureus in 15 seconds.

Test Dates: July 22-23, 2004

By,

Richard A. Robison, Ph.D.

Associate Professor

Brigham Young University

The full report is available under KILL TIME STUDIES on ResultsRNA.com in click through and printable form.

Dr. Garry Gordon, MD, DO, MD (H), cofounder of ACAM and advisor to ABCMT

## Conclusion

**RESULTS RNA**® scientists have identified and incorporated proprietary oligodynamic factors that have heightened impact on germicidal efficiency and Immunodeficiency modulation. Physicians now have a powerful yet safe formula to add to their immune challenge protocol and can feel confident prescribing **ACS 200**®.

## Dosage Guidelines

Initial Dose: Drink 1 – 2 ounces the first day. 1 capful equals ¼ oz. 150 sprays equals 1 oz.

Daily Dose: Take either 5 sprays or 1 spray per 30 lbs of body weight 1 to 3 times daily.

## Advisory

Jarish-Herxheimer Effects Associated with Immune Detoxification Overload: Jarish-Herxheimer Effects typically have predictable distributions and patterns of occurrence within test subject populations.<sup>23,24</sup> In the case of ACS 200®, a portion of patient populations

receiving the product may experience the associated immune detoxification events listed below. In order of known frequency, these may include from the most frequent to the most rare – mild to moderate headaches, arthralgia, hyperdiaphoresis, nausea, afebrile flu-like symptoms, simple malaise, erythema, skeletal and dental pain, itching, rigors or chills, diarrhea typically of short duration, vomiting of short duration, fever.

Associated immune detoxification events that arise when using ACS 200® can be managed by ceasing all silver ingestion for a minimum 24 – 96 hour wash-out period from the dosage schedule. With careful medical supervision, it is then generally possible to return to a dosage equaling just ¼ to ½ of the daily dose level taken at the time associated immune detoxification events arose. Classically, such associated immune detoxification events suggest that the targeted immune burdens are resolving rapidly. Therefore, carefully continue a reduced dosage schedule for at least 3 – 7 days. The ¼ to ½ dosage level is determined by the patient's "pre-reaction" dosage. Under medical supervision, the reduced schedule is then slowly increased until the optimal dosage schedule is achieved.<sup>25</sup> The half-life of ACS 200® is 15 days.

## References:

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## Addendum

ACS 200® Assay  
ACS 200® MSDS  
ACS 200® Oral Toxicity (FDA Protocol LD 50) Report  
ACS 200® Kill Time Studies

