

# Allicidin™ (True allicin garlic extract)

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.



Garlic (*Allium sativum*) has been used as a medicine and health-promoter for 5,000 years. It was widely used in ancient Assyria, Egypt, India, Greece and China for its health benefits. Garlic was also used extensively in medieval and Renaissance Europe. In

today's modern Europe and the U.S. garlic supplements are widely used. There were at least 1,200 pharmacologic studies done on garlic by mid-1997, as well as many hundreds of studies on the chemistry of garlic.

The chemistry of garlic is extremely complex, but research has shown that it is the unusual organosulfur compounds relatively unique to garlic that promote its broad range of potential lipid-lowering, anti-thrombotic, anti-blood coagulation, anti-hypertensive, antioxidant, antimicrobial, antiviral, and antiparasitic effects. The most well known and widely studied garlic compound is allicin, yet ironically allicin does not exist in fresh, undamaged garlic cloves. The predominant garlic sulfur compound found in the garlic plant is alliin. Garlic also contains high levels of an enzyme called "allinase". Alliin and allinase are held in different compartments of the garlic plant, by design, since they are meant to react only when necessary to protect the plant from attack or when the plant is crushed.

When fresh garlic cloves are crushed or chopped, or when garlic powder (that has been carefully dried to preserve its alliin/allinase content) is added to water, allicin is produced in seconds by the action of allinase on alliin.

Allicin and other thiosulfonates are somewhat unstable, but dilution and dissolving in water greatly improve their stability. Allicin can decompose into a broad range of compounds, including S-allylmercaptocysteine, allylmercaptan, diallyl disulfide, allylmethyl disulfide, vinylthiols, ajoene, and possibly allylsulfenic and allylsulfonic acid.

## ALLICIN POTENTIAL

It is no wonder that companies have been standardizing their garlic products to this amazing active ingredient. However, due to the instability of allicin, you will see allicin listed on labels as "allicin potential" or "allicin yield".

## HOW IS ALLICIN POTENTIAL MEASURED?

In a laboratory, dried garlic powder gets added to water so that the alliin and allinase can quickly react to make allicin. The amount of allicin produced is the measure of "allicin potential". However, the situation is completely different when such garlic supplements are swallowed. The allinase enzyme is rapidly and completely destroyed by stomach acid. This is why many garlic products are enteric coated. Unfortunately, such supplements usually do not work as designed. Lawson and Wang reported the results of testing twenty-three coated, U.S. garlic supplements in 2001. Twenty of twenty-three failed to release even 15 percent of their claimed "allicin potential" when placed in simulated intestinal fluid. Lawson and Wang concluded that allicin potential is an extremely poor measure of garlic supplement activity in the human body.

## **ALLICIDIN: TRUE ALLICIN GARLIC EXTRACT**

Peter Josling and collaborators have recently come up with a completely new, patented approach to producing a garlic supplement containing real, preformed alliin. This approach makes tablet coatings and carefully controlled tablet dissolvability irrelevant. The patented process that produces Allucidin, uses a carefully temperature/pressure-controlled process, using water to continually flush alliin from the reaction vessel as soon as it's formed. This yields a dilute water solution of alliin, which is further diluted and spray-dried onto a maltodextrin-gum acacia matrix to produce a 300 ppm alliin powder. The diluting and dissolving in water, as well as spray drying onto a slightly acid powder, stabilizes the alliin, even without refrigeration. Allucidin is available in 180 mg capsules, which provide 55-60 mcg alliin per cap, and approximately 300 mcg alliin per gram.

## **ALLICIDIN RESEARCH ON THE COMMON COLD**

Peter Josling published results of a double-blind, placebo-controlled clinical trial of Allucidin in 2001. Seventy active treatment patients and 72 placebo patients took one capsule daily of Allucidin or placebo for 12 weeks. The results were impressive. The placebo group had 65 colds during the study compared to the Allucidin group which had only 24 colds. The average duration of symptoms was 5.01 days for the placebo group, 1.52 days for the Allucidin group. The placebo group required an average of 5.63 days to recover, the Allucidin group 4.63 days. The total for days of infection was 366 for the placebo group, 111 for the Allucidin group. During the trial, 16 placebo group members had more than one cold, while only two of the Allucidin group had more than one cold. The "accelerated relief, reduction in the severity of troublesome symptoms ...and recovery to full fitness" as well as "reduced likelihood of becoming reinfected with other viral strains" clearly demonstrated the effectiveness of Allucidin against the common cold.

## **ALLICIDIN RESEARCH ON MRSA (Methicillin-Resistant Staphylococcus Aureus)**

With the widespread overuse of antibiotics for the past 60 years, more and more bacteria are becoming resistant to more and more antibiotics. A common strain in hospitals (and also spreading to the general population) is MRSA: methicillin-resistant Staphylococcus aureus. Josling reports on one case of MRSA infection of spinal surgical wounds that had not healed after several years, even with intravenous, oral and topical antibiotic usage. Amazingly, combined use of oral and topical Allucidin cleared the wound infections in a short period of time. Allucidin is so effective against MRSA that each new production batch of Allucidin is tested against MRSA to establish its antimicrobial efficacy.

You can be absolutely sure that when you choose Allucidin from Designs for Health for a broad array of clinical applications that you are getting the world's finest and only truly alliin standardized garlic product.

### *References*

1. Lawson, L.D. "Garlic: A review of its medicinal effects and indicated active compounds" In: Lawson, L.D., Bauer, R., eds. *Phytomedicines of Europe: Chemistry and Biological Activity*. Amer. Chem. Soc. Symposium Series 691, Washington D.C.: Amer Chem Soc; 1998: 176-209.
2. Cavallito, C. & Bailey, J. "Alliin, the antibacterial principle of *Allium sativum*. Isolation, physical properties and antibacterial action" *J Am Chem Soc* 66 (1944): 1944-52.
3. Lawson, L. & Wang, Z. "Low alliin release from garlic supplements: a major problem due to the sensitivities of alliinase activity" *J Agric Food Chem* 49(2001): 2592-99.
4. O'Gara, E. et al "Activities of garlic oil, garlic powder, and their diallyl constituents against *Helicobacter pylori*" *Appl Environ Microbiol* 66 (2000): 2269-73.
5. Ankri, S. & Mirelman, D. "Antimicrobial properties of alliin from garlic" *Microbes Infect* 2 (1999): 125-29.
6. Josling, P. "Preventing the common cold with a garlic supplement: a double-blind, placebo-controlled survey" *Adv Nat Ther* 18 (2001): 189-93.
7. Joslin, P. *Alliin - The Heart of Garlic*. Callahan, FL: NWI Pub.; 2004: 111-20.
8. Amagase, H. et al "Intake of garlic and its bioactive components" *J Nutr* 131(2001): 955s-62s.
9. Sivam, G. "Protection against *Helicobacter pylori* and other bacterial infections by garlic" *J Nutr* 131 (2001): 1106s-08s.

## **Designs for Health Allucidin™**



**To contact Designs for Health, please call us**

**at (800) 847-8302, or visit us on the web at**

**www.designsforhealth.com**