

Garlic, herbs hold promise in treating Lyme

Study finds oils seem better for persistent infection

The Baltimore Sun (TNS)

Oils from garlic and other common herbs and medicinal plants are showing promise in the lab for treating the bacteria that cause Lyme disease, and may prove especially useful in treating those who continue to have symptoms after antibiotic treatment, Johns Hopkins University researchers have found.

The findings, still in the early stages, come just after the U.S. Centers for Disease Control and Prevention released data showing that tick-borne diseases such as Lyme are on the rise nationwide.

Last year, state and local health departments reported 59,349 cases, up from 48,610 the years before. The case numbers

have been rising for years to last year's record, though the reasons are unknown.

Cases are not always diagnosed, and Hopkins researchers say there are likely to be 300,000 new cases of Lyme annually in the United States. For most people, a course of doxycycline or other antibiotic clears up the infection in a few weeks.

But 10 percent to 20 percent experience lasting symptoms that include fatigue and joint pain.

Some researchers have speculated that this persistent Lyme infection, or post-treatment Lyme disease, is a new disorder triggered by the initial infection. The Hopkins researchers also say the Lyme bacteria, *Borrelia burgdorferi*, can enter a stationary or slow-growing phase, and so-called persister cells from the bacteria are more resistant to antibiotics.

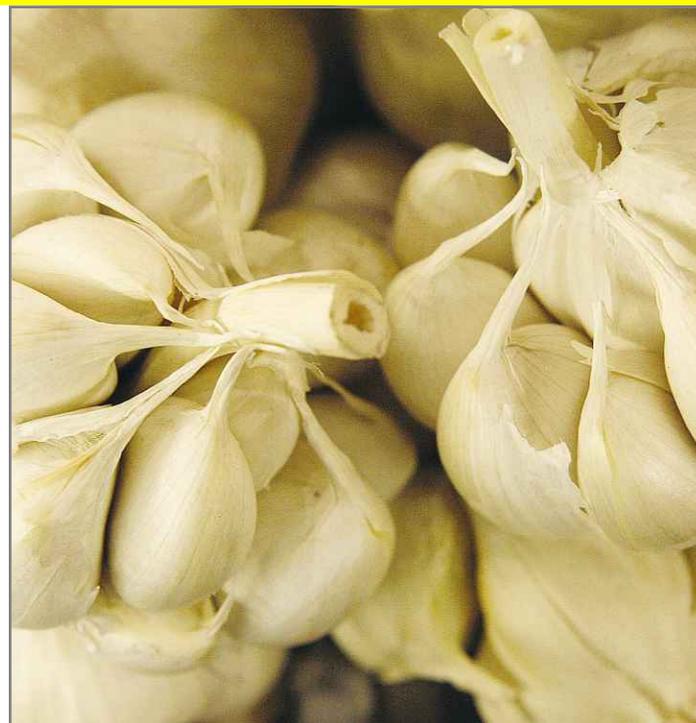
The oils from garlic and other herbs may prove better than antibiotics at tackling those cells, according to the

Hopkins study, published Oct. 16 in the journal *Antibiotics*.

The research included lab-dish tests of 35 essential oils, pressed from plants or their fruits. Ten of these, including oils from garlic cloves, myrrh trees, thyme leaves, cinnamon bark, allspice berries and cumin seeds, showed the strongest killing activity against the Lyme persister cells.

"We found that these essential oils were even better at killing the persister forms of Lyme bacteria than standard Lyme antibiotics," said study senior author Dr. Ying Zhang, professor in the department of molecular microbiology and immunology in the Hopkins Bloomberg School of Public Health.

Zhang previously found that antibiotic combinations and drugs used to treat resistant bacteria, such as MRSA, work better than standard antibiotics in treating Lyme disease. He plans to test the oils in animals and later in humans.



AP / KATHY WILLENS

Oils from garlic and other herbs may prove better than antibiotics at tackling Lyme persister cells, according to the Hopkins study.

WORKER ELIGIBILITY FOR TRADE ACT BENEFITS

The US Department of Labor has certified that workers of **CSC Holdings, LLC, Call Center Workforce Management division, a subsidiary of Altice USA, Inc, Bethpage, New York**, may be eligible for Trade Adjustment Assistance (TAA). The petition number is 94183. This petition applies to all workers who:

- Were engaged in activities related to the supply of resource management, scheduling support, and communications services to the call centers
- Were laid off between 9/28/2017 and 10/25/2018 or
- Were notified that they will be laid off by 10/25/2020

TAA benefits may include:

- Career counseling services
- Paid training for a new job
- Financial support while looking for new employment or attending approved training
- Allowances to:
 - Pay travel expenses to job interviews outside the commuting area
 - Relocate family and household goods to a new job location
- A wage subsidy for workers aged 50 years or older, if they find a new job that pays less

To apply for these benefits or get more details:

Call (518) 485-1597 or
Write to NYS Department of Labor, TRA Unit,
State Office Campus,
Bldg. 12, Room 222,
Albany, NY 12240



**Department
of Labor**

WORKER ELIGIBILITY FOR TRADE ACT BENEFITS

The US Department of Labor has certified that workers of **Telephonics Corporation, a wholly owned subsidiary of Griffon Corporation, including on-site leased workers from Nationwide Technical Resources Corporation, Huntington, New York**, may be eligible for Trade Adjustment Assistance (TAA). The petition number is 93645. This petition applies to all workers who:

- Were engaged in activities related to the production of radar systems, surveillance systems, communication systems, and Application Specific Integrated Circuits (ASICs)
- Were laid off between 3/14/2017 and 9/4/2018 or
- Were notified that they will be laid off by 9/4/2020

TAA benefits may include:

- Career counseling services
- Paid training for a new job
- Financial support while looking for new employment or attending approved training
- Allowances to:
 - Pay travel expenses to job interviews outside the commuting area
 - Relocate family and household goods to a new job location
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