



## Internet's 'Miracle Antibiotic' Withstands Scientific Investigation

### Description

**WORLD : Social media posts featuring strange decoctions and peculiar natural treatments flood the internet daily, offering hope to those seeking alternatives to established pharmaceutical approaches.**

A growing number of people are striving to increase their knowledge about herbal remedies, self-applied formulas, and homemade plant-derived compounds, also known as phytopharmaceuticals.

Although this trend certainly spreads awareness and responsibility for one's well-being, not all health news circulating on the internet is trustworthy.

With the advent of every new movement come those who want to exploit innocent souls for personal profit and power. Therefore, it is smart to apply the principle of "caveat emptor"—caution, common sense, or simply a "buyer beware" attitude.

### The Latest 'Antibiotic' Hype

One "miracle remedy," hailed as the most powerful antibiotic, is a concoction of only four components: turmeric, ginger, honey, and the "surprise ingredient" of vanilla.

**According to the paper, the global threat of antimicrobial resistance (AMR) can be narrowed down to "six leading pathogens for deaths associated with AMR: Escherichia coli, followed by Staphylococcus aureus, Klebsiella pneumoniae, Streptococcus pneumoniae, Acinetobacter baumannii, and Pseudomonas aeruginosa."**

AMR is especially problematic in hospitals, clinics, and other health care settings. According to findings presented in a 2019 International Journal of Molecular Sciences article, up to 15 percent of hospitalized patients are affected by health care-associated infections.

This article will carefully examine all the ingredients to see whether this wondrous elixir making the rounds online can withstand scientific evaluation.

An observational in vitro study shows that *Curcuma longa*, commonly known as turmeric, is especially useful for combating two of the above-mentioned pathogens.

Researchers attempted to treat *Escherichia coli* and *Staphylococcus aureus* with a crude turmeric paste and compared that with an aqueous liquid extract and conventional antibiotics.

During the year-long examination, all three methods completely inhibited the growth of the bacteria.

Another in vitro study in 2023 found that an extract of the turmeric rhizome can eradicate *Proteus mirabilis* and the multidrug-resistant *Klebsiella*.

Turmeric and its antibiotic qualities also have been studied in the animal world and deemed “an alternative to antibiotics in poultry nutrition,” according to a 2023 publication in *Translational Animal Sciences*.

Keeping thousands of chickens in confined quarters has made the use of antibiotics essential in oversized poultry farms and ignited calls for powerful alternatives for antimicrobial-resistant infectious diseases.

Curcumin, the active compound in turmeric, is active against a wide range of resistant bacteria and has shown antimicrobial effects. Turmeric is something of a jack-of-all-trades, as the yellow-orange root has even more health benefits than its antibiotic properties.

“Curcumin has an anti-inflammatory, antioxidative, antinociceptive, antiparasitic, antimalarial effect, and it is used as a wound-healing agent,” a 2022 study published in the journal *Antibiotics* reads.

Sometimes there is a problem with the “bioavailability of curcumin in human beings,” the review states, caused by “poor curcumin absorption in the small intestine, fast metabolism, and fast systemic elimination.”

However, that should not be a hindrance, as there is no such thing as overdosing on turmeric. Tests showed that we can tolerate a high dosage of turmeric without side effects.

Additional research published in *Molecular Pharmaceutics* confirms these findings and found that curcumin has broad effects against “cancer, cardiovascular diseases, diabetes, arthritis, neurological diseases, and Crohn’s disease.”

### **Ginger, Another Wondrous Ingredient**

Ginger is another phytopharmaceutical that is being used as an alternative antibiotic in poultry. A 2020 review published in the journal *Animals* evaluated a number of studies and found that ginger thwarts and controls intestinal pathogens and offers promise as an alternative to antibiotics.

Research published in *Molecules* investigated the essential oil of ginger in an in vitro study.

**It was shown to be effective against two of the bacterial strains resistant to antibiotics:**

*Staphylococcus aureus* and *Escherichia coli*. Ginger's components zingiberene and alpha-curcumene, in particular, seem to be effective antimicrobial ingredients.

According to the experts, ginger has potential as a “nutraceutical,” a food that has a medicinal benefit.

The significance of medicinal plants as alternatives to conventional antibiotics was highlighted in a Nigerian publication in the *Scientific World Journal*.

Ginger, as one of a plethora of medicinal plants traditionally grown in Nigeria, is noted by the review to be a worthy complementary therapy when fighting against multidrug-resistant pathogens.

The paper even mentions that ginger not only is a great antibiotic alternative but also lacks toxic side effects that regularly accompany conventional medicine.

Often used in traditional Asian medicine, *Zingiber officinale* var. *rubrum*, or simply red ginger, is another notable variety with abundant health benefits and bioactive constituents.

A 2022 review noted the plant's “immunomodulatory, antihypertensive, antihyperlipidemic, antihyperuricemic, antimicrobial, and [exhibiting] cytotoxic activities.”

### **Honey—More Than a Sweetener**

Most medical literature highlights honey's wound-healing properties, but the sweet delight proves valuable internally as well.

A 2023 *in vitro* study in the journal *Antibiotics* of honey's antibiotic effects as more than a topical skin treatment found that ginger-enriched honey, in particular, has healing qualities that “attenuate QS [quorum sensing] virulence factors and biofilm formation of *P. aeruginosa*,” one of the problematic resistant bacteria.

A research review published in the *Journal of Medicinal Food* explains the healthy effects of ingesting honey. It decreases hormone-like lipids called prostaglandins and exerts prebiotic effects in our bodies.

This is good, as these factors control inflammation, encourage healing processes, and support microbial control. Although honey seems to be a wonderful alternative antibiotic, over the past decade, this golden elixir has been found to be contaminated with pesticides, heavy metals, and more, according to a review in the *World Scientific Journal*.

For this reason, it is important you get honey from a local, trusted source and be wary of cheap imported honey.

Conventional heating techniques used to pasteurize honey can also affect its medicinal qualities. A 2023 study found that these techniques even have the potential to form toxic compounds.

The researchers introduced ultrasonication as a preservation method but noted that more research in the field is needed. You can purchase unpasteurized, raw honey as an alternative.

As with all ingredients, quality should be taken into consideration. At the very least, check the food label for the country of origin and the composition of the honey to ensure that it is free of additives.

These issues aside, science has verified honey's antibacterial qualities.

### **Vanilla–The Surprise Ingredient**

Another ingredient with extreme variability in quality is vanilla. As one of the most popular essences, pure vanilla extract can be expensive. Imitation vanilla flavorings are readily available but do not hold the same medicinal qualities as the pure plant product.

According to a review in the International Journal of Food Sciences and Nutrition, vanillin, the major component of vanilla pods, is often commercially blended or altered. Therefore, be aware of the quality of products you purchase.

Seemingly all research on vanilla as a medicinal compound has been conducted in recent years. Studies suggest that vanilla is a “novel therapeutic strategy” against some bacteria and in relation to multidrug-resistant bacteria.

A 2022 research review published in the European Journal for Microbiology and Immunology found that “vanilla ingredients provide novel treatment options for infections with multidrug-resistant bacteria.”

Vanilla's role has long been more than that of a flavoring agent. Vanillin or vanillin acid, the active ingredient in vanilla, has a history as a health-beneficial ingredient with antimicrobial effects.

A 2021 research review supports that vanilla has antibacterial and antibiotic qualities and suggests that “vanillin has the potential to be used as an antibiotic adjuvant in [the] future.”

### **Employing Caveat Emptor**

All four ingredients have been shown to be alternative antibiotic constituents.

Still, as with all advertised supplements or health remedies, be wise and use common sense when purchasing or ingesting anything.

As with all remedies, be wise with dosage and observe your body for potential adverse reactions, especially if taking something for an extended period. Consult your local community herbalist, naturopathic doctor, or other health care professional for any personalized treatment advice.

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### **Category**

1. Health-Wellness-Healing-Nutrition & Fitness
2. Main

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