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Simple Tea Creates Nano Gold Particles for Fighting Cancer

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Key concepts: [Nanoparticles](#), [Chemicals](#) and [Phytochemicals](#)

(NaturalNews) Scientists have discovered a way to create cancer-fighting nanoparticles using nothing but gold salts and a cup of Darjeeling tea, according to a paper published in the Journal of Materials Chemistry.

Nanoparticles are particles much smaller than those commonly used in chemical or industrial applications, small enough that they can pass through cell membranes designed to keep foreign particles out. Because even widely studied elements and compounds act drastically different on the nano scale, nanotechnology is a burgeoning area of scientific research.

Most [nanoparticles](#) are manufactured during intensive industrial processes involving toxic [chemicals](#) and byproducts. Recently, however, researchers at the University of Missouri-Columbia discovered a process for producing nanoparticles by adding gold salts to a soybean-water mixture. Naturally occurring soy [phytochemicals](#) interact with the salts to produce stable gold nanoparticles, with no toxic byproducts.

"Our new process only takes what nature has made available to us and uses that to produce a technology that has already proven to have far-reaching impacts in technology and medicine," researcher Kattesh Katti said.

Researchers then repeated the same procedure with Darjeeling tea instead of [soy](#), and found that once again, phytochemicals naturally found in the tea transformed the salts into pure, nano-scale particles of gold. Furthermore, the phytochemicals bind to the outside of the gold particles. This means that the microscopic particles could be injected into tumor cells, carrying cancer-fighting tea compounds directly to where they could provide the most benefit.

"Throughout history, tea drinking has been directly attributed to a plethora of health benefits," Katti said. "Our discovery has provided a practical way to deliver cancer-fighting phytochemicals directly to tumor cells through gold nanoparticles."

The researchers selected gold for their research because it is very stable, chemically, and therefore is less likely to lead to side effects in the body. They said that the production process they have pioneered could easily be replicated on a larger scale.

Sources for this story include: www.dailymail.co.uk; www.devicelink.com.