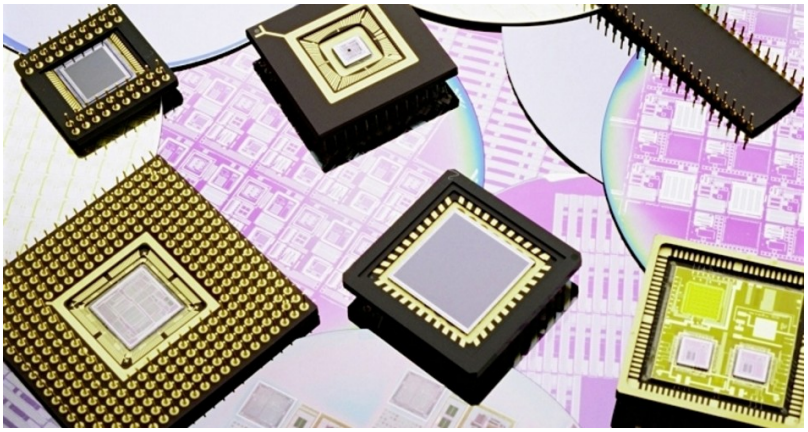
Written by **Alex Newman** on May 8, 2012

U.S. Military Seeking Implantable Microchips in Soldiers



The U.S. government is developing implantable sensor microchips for use in American troops, supposedly to monitor their health on the battlefield, the Defense Advanced Research Projects Agency (DARPA) announced earlier this year seeking proposals. But critics of the scheme are speaking out, warning that the new technology could just be a prelude to expanding the use of related devices among the general population — with dangerous implications for freedom and privacy.

According to news reports about the development, DARPA believes that being able to instantly receive updates about any potential medical problems among soldiers would give the U.S. armed forces an advantage over adversaries. Calling the implants "a truly disruptive innovation," the agency said the nanotechnology could revolutionize war — especially because most medical evacuations are a result of illness or disease rather than injuries sustained in battle.

But despite supposedly not being used for tracking purposes, at least initially, privacy experts concerned about the expanding use of such technology are sounding the alarm. "It's always in incremental steps," noted activist Katherine Albrecht, author of the book "*Spychips*" about the threat of rapidly increasing use of Radio Frequency Identification chips.

According to Albrecht, the use of injectable microchips that do not necessarily track people could eventually lead to calls for systems that do. And while she does not expect the government to ever force Americans to accept the chip at "gunpoint," the gradual process of expanding the whole system should be halted now — before it is too late. Captive audiences like soldiers and prisoners, she told World Net Daily, are merely a stepping stone to broader use.

The proposed DARPA system would work by pumping unimaginably small "nanosensors" into the human body to monitor stress levels, inflammation, diseases, nutrition, and more. In addition to feeding doctors real-time information on the physiological state of individual U.S. troops, DARPA hopes to further develop the technology so that it could actually work to treat the problems from within. The agency expects to begin working on the treatment aspect of the program in late 2012.

"The military runs on the strength of its soldiers, and this latest innovation holds promise to bolster the U.S. armed forces by decreasing preventable illnesses and keeping its men and women at the peak of their health," claimed Kate Knibbs in an article touting the implants for Mobiledia, a technology-focused news outlet that was among the first to break the story.

While the safety of the system remains unclear, the agency is reportedly seeking help from the private sector and academia to develop the biosensors and study their potential applications. If tests show initial success in animal trials, American troops – especially Special Forces – could be next in line for the implants.

"For military Special Forces the practical realization of implantable nanosensors capable of monitoring

multiple indicators of physiological state could be a truly disruptive innovation," DARPA said in its announcement of the scheme. And apparently there are already several government-funded efforts to create such systems — albeit not quite as futuristic — that have been at least somewhat successful.

One of the emerging technologies highlighted in press accounts about the implants is a tiny robotic device being developed at Stanford University that can be injected directly into the human bloodstream. The wirelessly controlled robot — small enough to go through veins — is reportedly able to perform tasks ranging from medical diagnostics to direct drug delivery.

"Such devices could revolutionize medical technology," Stanford electrical engineer Ada Poon, who led the project, was quoted as saying in news reports. "Applications include everything from diagnostics to minimally invasive surgeries." The tiny medical robots, however, are still a work in progress.

Numerous technology commentators expressed alarm over the potential slippery slope involved in rolling out the system. But perhaps senior officials could lead the way to assuage those fears.

"Of course, as Commander-In-Chief, the President of the United States will be the first military man to submit to the new nanochips," wrote Stephen Alexander on the blog Technorati, presumably sarcastically. "As should all the Cabinet leaders and Congressional leaders that are 'next-in-line' for the Presidency of the United States."

In 2010, DARPA was also working on brain implants that would use light pulses to control brain cells and possibly even re-route or re-organize mental activity. While that system, too, was supposed to be for U.S. troops — particularly those who suffer from traumatic brain injuries — analysts warned that the implications of the technology were frightening.

Around the world, hundreds or possibly even thousands of humans have already received implantable microchips for various reasons. Pets and animals across America and much of the developed world have as well. Meanwhile, governments and megabanks are increasingly seeking to phase out paper currency in favor of digital options like the so-called "MintChip" being developed by the Royal Canadian Mint.

Of course, resistance to these types of controversial schemes is growing, too. But with powerful interests pushing to expand the use of implantable nanotechnology in humans, analysts expect the battle between privacy activists and the establishment to become increasingly fierce in the coming years.