


**Information Assurance Technology Analysis Center (IATAC)**

**IATAC**
**Story 1**
**Story 2**

## IATAC Support to Computer Network Threat Analysis



IATAC members support the Joint Task Force for Computer Network Operations (JTF-CNO) with analysis and assessments that characterize the capabilities and intentions of potentially hostile actors and entities. Individuals and groups who present potential threats to the security of Department of Defense computer networks range widely, from state affiliated intruders who have access to unlimited resources to online victims who unwittingly proliferate computer viruses or worms. In the gray area between, there are terrorists, hackers, hacker crews, non-state actors and disgruntled individuals, to name just a few.

[Continued on Story 1](#)

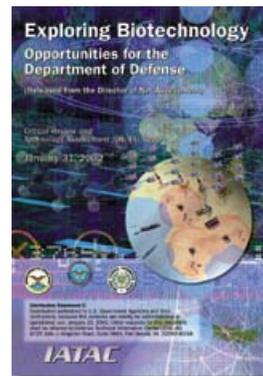
## IATAC Explores Biotechnology

Biotechnology has revolutionary potential for a broad range of U.S. military capabilities. Further, because of the United State's unparalleled lead in research and development, biotechnology presents the opportunity to recast the framework of military operations and create a long term U.S. advantage in the global strategic environment. If biotechnology's strategic importance is realized, it could provide the U.S. with a significant advantage for the next two to three decades. IATAC conducted a study to determine if the explosion of discovery and advances in biotechnology held the same potential for advances in military affairs as the Information Revolution.

[Continued on Story 2](#)

Please visit our Web site at <http://iac.dtic.mil/iatac> or send us an E-mail to [iatac@dtic.mil](mailto:iatac@dtic.mil)

[Visit the Archives section for past stories...](#)




**Information Assurance Technology Analysis Center (IATAC)**

**IATAC**
**Story 1**
**Story 2**

## IATAC Support to Computer Network Threat Analysis (continued)

Although youthful hackers and annoying virus coders don't necessarily appear overly threatening when compared with state affiliated security agencies or international terrorist organizations, the potential damage wrought by computer network attacks, even among relatively unskilled individuals, can seriously degrade or impede vital networks that support military operations. In fact, single individuals with little or no outside support perpetrated some of the most damaging and expensive computer network incidents in recent memory (the "I Love You" virus, for example).



**Beyond the destruction, corruption, or alteration of data, the above illustrates another important characteristic of such electronic attacks—the attackers attempt to erode confidence in the confidentiality, integrity, and availability of vital computer networks.**

IATAC members assist the JTF-CNO in tracking and understanding current and emerging threats and in warning decision makers about possible future threats. Tailored IATAC assistance in this arena includes, but is not limited to, focused information management, data correlation, research, assessments, and training.

Maintaining cognizance of emerging threats is a perpetual process that requires active participation and constant situational awareness. With wave after wave of threats traversing the Global Information Grid, success in thwarting one type of threat can be quickly followed by a catastrophic failure in another. IATAC members help the JTF-CNO maintain round-the-clock situational awareness by leveraging the intellectual and technology resources of IATAC, industry partners, the military, and other U.S. government organizations. Together, we provide tools, products, and processes that assist the JTF-CNO in ensuring vital computer networks are available and reliable whenever and wherever combat forces around the world need them.

Please visit our Web site at <http://iac.dtic.mil/iatac> or send us an E-mail to [iatac@dtic.mil](mailto:iatac@dtic.mil)

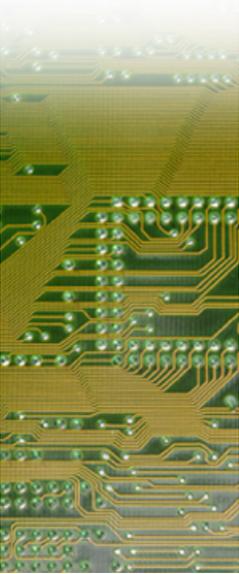
[Visit the Archives section for past stories...](#)

The IATAC logo is displayed in a stylized, metallic font with a 3D effect.

## Information Assurance Technology Analysis Center (IATAC)

A horizontal navigation bar with a grey gradient background. It contains three labels: 'IATAC', 'Story 1', and 'Story 2'. 'IATAC' is in blue, while 'Story 1' and 'Story 2' are in grey. The bar has a decorative shape on the right side.

### IATAC Explores Biotechnology (continued)

A vertical graphic on the left side of the page showing a close-up of a green and gold circuit board with various components and traces.

The approach undertaken in this study was to look at existing programs in biotechnology within DoD and among other government agencies, and see if any hold promise for revolutionary application for warfighting. Once the military merits of biotechnology were discerned, the study focused on three converging areas:

- **Legal and Policy**—This entailed a close examination of the legal and ethical guidelines that allow and control much of the research in biotechnology. During the evaluation of a particular biotechnology exemplar, it was assessed if there was sufficient policy and legal guidance to enable DoD to pursue the capabilities it desired.
- **Development of Exemplars**—An evaluation of the current DoD effort in biotechnology concluded that the military has an excellent, but very narrow set of capabilities. These capabilities lie in the traditional fields of bio-defense and medical remediation, with little work being done to expand the science to other fields of application. Further, an evaluation of commercial applications and research and development showed little potential for military utility beyond a very fundamental level of work. Unless provided economic incentive and direction from DoD, it is unlikely that any commercial off-the-shelf products for the military will be created.

The exemplar effort was aimed at drawing attention to the opportunities presented by biotechnology in the areas of Advanced Military Medicine, Human Performance Enhancement, Logistics and Materials Science, and Biological Metaphors (biomimicry). The set of exemplars do not define the universe of potential applications, nor the best or only programs that could provide a strategic advantage. They are intended to show only the scope and scale of what biotechnology presents to the warfighter and provoke curiosity toward the potential that this science holds for the future warfare environment.

- **Provide Recommendations on the DoD Infrastructure**—Organizational constructs were examined and a recommendation made for OSD regarding advanced biotechnology.

The current study has shown the potential impact that biotechnology can have on future warfare. Future study efforts will focus on the application of biotechnology to current military requirements, such as urban warfare and fratricide. In addition, the exemplars will be expanded into other areas, such as nanotechnology, cognitive science, advanced information technology, and robotics. Finally, the progress of current institutions in exploiting biotechnology will be examined and the establishment of a biology based military-industrial complex researched.

Please visit our Web site at <http://iac.dtic.mil/iatac> or send us an E-mail to [iatac@dtic.mil](mailto:iatac@dtic.mil)

[Visit the Archives section for past stories...](#)