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## Research team gets \$12M grant

Federal award to help Del.-based Fraunhofer develop vaccine materials

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A Delaware research team has won a \$12 million federal grant to develop a vaccine-production system that can respond quickly to biological threats.

The grant is the second major award this year for Fraunhofer, which announced in January that it received \$8.7 million from the Bill & Melinda Gates Foundation to develop a vaccine for bird flu. Fraunhofer Executive Director Vidadi Yusibov said the research group expects to add at least 10 scientists to its staff of about 80 thanks to the grants.

The award represents the second phase of a program run by the research and development arm of the U.S. Department of Defense, which is searching for a flexible technology that can produce vaccines for threats like pandemic flu and biological weapons within weeks.

Fraunhofer Center for Molecular Biotechnology, a nonprofit research center in Newark, leads a team developing a plant-based manufacturing system. The team includes Newark biotech firm iBioPharma Inc. and Delaware State University.

Fraunhofer's technology uses tobacco plants to produce target proteins for use in vaccines. In the first phase of the program, run by the Defense Advanced Research Projects Agency, the Fraunhofer-led team proved it could produce target vaccine materials at the lab scale.

DARPA spokeswoman Jan Walker said the Fraunhofer grant is the first Phase II award under the program, although the agency expects to award additional grants. Other research groups have explored producing vaccine materials from fungi, mushrooms and crustaceans, Walker said.

Fraunhofer is building a \$15 million manufacturing facility at its home in the Delaware Technology Park that is expected to be completed this summer.

The 14,000-square-foot facility, supported by a \$5 million grant from the state, is designed to produce materials according to quality-control standards known as Good Manufacturing Practices (GMP), a requirement of the DARPA grant.

With the Phase II grant, the team will have a year to develop its GMP production processes before facing "live-fire" testing from DARPA. Yusibov said the agency will send Fraunhofer a vaccine target, after which the group will have three months to produce enough vaccine material for three million doses at low cost.

If successful, the Fraunhofer team could receive another grant for the third phase of the program.

Gov. Jack Markell visited Fraunhofer on Monday to congratulate employees. The governor said the award will help create good jobs and represents "exactly the kind of economic development we want" in Delaware.

"It's a reflection of the very important work that's going on here at Fraunhofer," Markell said.

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