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# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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## FORM 8-K

### CURRENT REPORT

#### Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **January 26, 2004**

### **AVI BioPharma, Inc.**

(Exact name of registrant as specified in its charter)

**Oregon**  
(State or other jurisdiction of  
incorporation or organization)

**0-22613**  
(Commission File Number)

**93-0797222**  
(IRS Employer  
Identification Number)

**One S.W. Columbia, Suite 1105**  
**Portland, OR 97258**  
(Address of principal executive offices)

**(503) 227-0554**  
Registrant's telephone number, including area code

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#### **Item 5. Other Events and Regulation FD Disclosure.**

The information set forth below pursuant to Item 12 shall also be deemed filed pursuant to Item 5.

#### **Item 7. Financial Statements, Pro Forma Financial Information and Exhibits.**

<u>Exhibit Number</u>	<u>Description</u>
99.1	Press Release dated January 26, 2004 announced the presentation of test study results demonstrating the therapeutic manipulation of the immune system using AVI's NEUGENE <sup>®</sup> antisense compounds at the Midwinter Conference of Immunologists.

#### **Item 12. Results of Operations and Financial Condition.**

Company issued a press release on January 26, 2004, before the opening of trading in its Common Stock on the Nasdaq National Market System. A copy of the press release is filed herewith as Exhibit 99.1 and is incorporated herein by reference.

The Press Release dated January 26, 2004 announced the presentation of test study results demonstrating the therapeutic manipulation of the immune system using AVI's NEUGENE<sup>®</sup> antisense compounds at the Midwinter Conference of Immunologists.

#### **SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Portland, State of Oregon, on January 27, 2004.

AVI BioPharma, Inc.

By: /s/ ALAN P. TIMMINS  
Alan P. Timmins  
*President and Chief Operating Officer*  
*(Principal Operating Officer)*

## Text of Press Release

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**For Release 4 a.m. PST  
 Jan. 26, 2004**

**AVI BioPharma Reports Successful NeuGene Antisense Approach  
 To Regulation of the Immune Response in Transplantation**  
*Data Presented at the Midwinter Conference of Immunologists May Be Broadly  
 Applicable*  
*To Include Transplantation, Autoimmunity and Cancer*

**PORTLAND, Ore. — Jan. 26, 2004** — AVI BioPharma, Inc. (Nasdaq: AVII), today announced the presentation of positive results demonstrating the therapeutic manipulation of the immune system using its NEUGENE<sup>®</sup> antisense compounds. The study, presented this week at the Midwinter Conference of Immunologists, represents a novel approach to specific immunotherapy by clonally deleting activated lymphocytes responding to transplanted tissue. NEUGENE antisense drugs targeting an inhibitor of programmed cell death, or apoptosis, resulted in the elimination of the responding immune cells and acceptance of the transplant.

“This study, along with others, gives us new insight into our ability to influence the immune system with our NEUGENE antisense compounds,” said Patrick Iversen, Ph.D., senior vice president of research and development at AVI BioPharma. “Targeting NEUGENE antisense drugs to genes that regulate apoptosis in immune cells represents an important step in clonal regulation of the entire immune response. We believe our work in this area may lead to an entirely new approach in the management of the immune system and immune diseases especially in improving tissue and organ transplantation survival.”

“This new program in immunotherapy takes advantage of AVI’s substantial and rapidly progressing experience with NEUGENE antisense compounds in a variety of therapeutic settings,” said Denis Burger, Ph.D., chief executive officer of AVI. “Regulation of the immune response is a key element to our high-priority clinical programs in cardiovascular disease, infectious disease, cancer and polycystic kidney disease. To effectively manipulate the immune response not only

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strengthens our existing core focus areas, it opens up the important new clinical areas of transplantation and autoimmunity.”

The study, “Inhibiting c-FLIP Expression Promotes Transplant Tolerance of a Minor Histocompatible Antigen,” will be presented Tuesday, Jan. 27, by AVI scientists Dan Mourich, Ph.D., and Nikki Marshall. When immune cells or lymphocytes confront foreign antigens they become activated and proceed to respond against the antigen to eliminate it. When the antigen is transplanted tissue, activated lymphocytes reject it. Although activated cells are programmed for cell death, or apoptosis, activated immune cells produce an inhibitor of apoptosis, called c-FLIP, to avoid death and carry out their immune function. By using antisense targeting c-FLIP, the activated cells cannot avoid apoptosis and proceed down the death pathway thus eliminating the immune cells capable of rejecting the transplant. In this study, the delivery of a NEUGENE antisense drug targeting c-FLIP in lymphocytes was successfully accomplished and produced a significant reduction in expression of the target protein. When cells from a mouse were transplanted to an incompatible mouse treated with the c-FLIP antisense drug, the transplanted cells survived.

Current management of transplant rejection involves chronic immune suppression with approved drugs that can be toxic at effective concentrations and may fail to completely block transplant rejection. The current observations in this study show that specific lymphocytes are eliminated when they are activated by transplantation antigens, thus eliminating or reducing significantly the potential for transplant rejection. By the same general mechanism, this approach may also be able to eliminate clones of immune cells responsible for autoimmunity for diseases such as multiple sclerosis.

**About AVI BioPharma**

AVI BioPharma develops therapeutic products for the treatment of life-threatening diseases using two technology platforms: third-generation NEUGENE antisense drugs and cancer immunotherapy. AVI’s lead NEUGENE antisense compound is designed to target cell proliferation disorders, including cardiovascular restenosis, cancer and polycystic kidney disease. In addition to targeting specific genes in the body, AVI’s antiviral program uses NEUGENE antisense compounds to target single-stranded RNA viruses, including West Nile virus, SARS coronavirus, calicivirus and hepatitis C. AVI’s second technology, AVICINE<sup>®</sup>, is a therapeutic cancer vaccine with late-stage trials planned for the treatment of pancreatic cancer. More information about AVI is available on the company’s Web site at <http://www.avibio.com/>.

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“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995: The statements that are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including, but not limited to, the results of research and development efforts, the results of

*preclinical and clinical testing, the effect of regulation by the FDA and other agencies, the impact of competitive products, product development, commercialization and technological difficulties, and other risks detailed in the company's Securities and Exchange Commission filings.*

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