AVI BioPharma Provides Update on New Business Plan: Increased Pipeline Focus, Skill Base and Strategy

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Discontinuation of AVI–5126 Trial in CABG

For Immediate Release

CORVALLIS, OR — June 10, 2008 — AVI BioPharma, Inc. (NASDAQ: AVII) today provided an update on its actions to focus its product development pipeline and to strengthen its emerging position in directed alternative splicing. AVI's new business plan was approved at a recent meeting of the Board of Directors and will drive the Company's new focus going forward. The Company has reduced its non–core work force in Corvallis and Portland, OR and in Research Triangle Park, NC by relocation, selective re–hiring to vacant positions and a reduction in force. Following analysis of data from the initial phase of the adaptive design clinical trial of AVI–5126 in CABG, the Company has decided to discontinue the trial. The Company will continue the development of AVI–5126 in cardiovascular restenosis with its partner, Cook Medical.

AVI's corporate priorities are to:

- Advance the Company's clinical development programs in:
  - Duchenne muscular dystrophy
  - Ebola, Marburg, Junin and Dengue virus infections
  - Cardiovascular restenosis
- Progress the soluble TNF alpha receptor 2 project — which is based on directed alternative splicing of the receptor's exon 7 — through Preclinical Development to Clinical Trial
- Build synergy in its focused portfolio of Discovery Research targets which direct RNA alternative splicing
- Secure additional major partnerships, not only to validate the portfolio of product candidates but also to demonstrate the wide applicability of AVI's antisense chemistry to direct alternative splicing of pre–mRNA therapeutic targets

Staff and skill base

AVI has reduced staffing levels and restructured to support the Company's new focus in product development and discovery research. Approximately 16% of AVI's staff — those not directly involved in the progression of the Company's priority projects — were part of a reduction in force. The Company believes that this reduction — combined with the actions described above — will save an estimated $0.88 million in 2008 and an additional $1.6 millior in 2009.

Cardiovascular Research

Following a futility analysis and data review, the Company decided to discontinue its clinical trial to assess the safety and efficacy of AVI–5126 in reducing clinically–significant graft failure in coronary artery by–pass grafting (CABG).

AVI initiated this study in April 2007 as a randomized, double–blind, placebo–controlled, multi–site adaptive design that was intended to enroll up to a total of 600 patients undergoing CABG. The goal of the study was to evaluate the safety and efficacy of exposing a patient's saphenous vein to AVI–5126 prior to grafting, compared to a placebo group treated with saline (1:1 randomization). The primary endpoint of the study was demonstration of > 50% reduction in the clinical graft failure rate (i.e., <75% reduction in study vessel patency in all study vessels of a patient) in the AVI–5126 group compared to placebo at 1–year, based on angiography. An independent Data Safety Management Board (DSMB) reviewed available safety and efficacy data for each patient from the time of CABG until the end of study surveillance at 1–year in an unblinded fashion. After the first 47 patients were treated and assessed, the DSMB reported a higher than expected rate of graft failure based on 4–D CAT scans of coronary arteries at 1–Month and 3–Months after CABG.

Complete data from 45 subjects were available for analysis. Based on 4–D CAT scan results at Month 3, there were 13 patients with at least one graft failure out of 23 patients exposed to AVI–5126 and 7 patients with at least one graft failure out of 22 patients exposed to placebo (i.e., 57% failure rate for experimental versus 32% in control group). Therefore, the conditional power to meet the study's efficacy endpoint was only 66%. For 10 patients, angiograms were available at 1 year, and those confirmed the occlusions that were found by 4–D CAT scans at 3 months. Both 4–D CAT scans and angiography showed the same rate of re–occlusion in these patients. The probability of successfully attaining the study's clinical endpoint, even at this early stage, was deemed to be too low to warrant continuing the trial.

The analysis was not focused on clinical safety concerns since there was no significant difference between the AVI–5126 or placebo groups with respect to Major Cardiac Adverse Events (MACE). MACE is conventionally defined to include: cardiac death, myocardial infarction, emerging need for repeat CABG, stroke, major bleeding complications and organ failure.

'These are significant steps in our commitment to focus AVI's pipeline on our major product and R&D opportunities," said Dr. Leslie Hudson, CEO of AVI BioPharma Inc, "The former includes our significant success in the potential treatment of Ebola and Marburg virus infections, which was highlighted in our opening presentation at yesterday's symposium for the 6th Annual Biodefense Vaccines and Therapeutics Meeting. For the latter, the current interest by large pharmaceutical companies in RNAi has created an opportunity for AVI. We believe that our antisense chemistry and the ability to direct alternative splicing will position our Company to benefit from this opportunity."

Analyst Call

The company has scheduled an analyst call for 9:00 a.m. EDT (6:00 a.m. PDT) on Wednesday, June 11, 2008. The toll–free number for the call is 866.507.1212.

A recording of the analyst call is also available.

About AVI BioPharma

AVI BioPharma develops therapeutic products for the treatment of life–threatening diseases using third–generation NeuGene® antisense drugs and alternative RNA splicing technology. AVI's alternative RNA splicing technology is initially being applied to potential treatments for Duchenne muscular dystrophy. AVI's NeuGene compounds are also designed to treat cardiovascular restenosis. In addition to targeting specific genes in the body, AVI's antiviral program uses NeuGene antisense compounds to combat disease by targeting single–stranded RNA viruses, including Marburg Musoke and Ebola Zaire viruses. More information about AVI is available at www.avibio.com.