AVI BioPharma Presents Updated Safety Data from Ongoing Systemic Trial of AVI-4658 at 7th Annual Action Duchenne International Conference

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Data show PMO well tolerated in penultimate dose cohort (10mg/kg)

For Immediate Release

Bothell, Washington — October 26, 2009 — AVI BioPharma, Inc. (Nasdaq: AVII), a developer of RNA-based drugs, presented an update on preliminary safety data from its ongoing systemic Phase 1b/2 clinical trial of exon skipping AVI-4658 in patients with Duchenne muscular dystrophy (DMD) at the 7th Annual Action Duchenne Conference in London, UK.

The most recent data from the ongoing Phase 1b/2 trial at two MDEX sites in the UK demonstrate that AVI-4658 was well tolerated by DMD patients in a dose escalation study that is now up to the fifth cohort (10 mg/kg). Results from the 12 week dosing periods of the first four completed cohorts (0.5 mg/kg, 1.0 mg/kg, 2.0 mg/kg and 4.0 mg/kg) have been reviewed with data from the ongoing cohort 5 (10 mg/kg) and have demonstrated the drug to be well tolerated. There have been no safety issues identified, although one Serious Adverse Event was reported due to an anaesthetic-induced post-treatment biopsy procedure at 14 weeks, 2 weeks after last dose, causing nausea and vomiting.

The maximum cumulative dose administered to date is 2797 mg and the maximum single dose is 300 mg with no signs of intolerance, in either case. Blood tests, including measures of coagulation, have remained satisfactory, with the elevated levels of muscle enzyme, creatine kinase tending to fall in most boys during treatment. Lung function, vital signs and examinations have also remained stable. In addition, no significant side effects from the treatment have been reported for any of the 16 boys treated to date.

In each cohort, including the final cohort of 20 mg/kg, data for the clinical effects of the treatment will be collected for 26 weeks from first dose.

“We are pleased with the continued, encouraging safety profile and believe this bodes well for our ability to progress to the final cohort at 20 mg/kg,” said Steve Shrewsbury, M.D. Chief Medical Officer and Senior Vice President of Preclinical, Clinical and Regulatory Affairs. “We look forward to the continued advancement of this trial and to the potential that exon skipping may hold as a first disease modifying therapy for DMD patients.”

Also presenting at the Action Duchenne Annual Conference was AVI collaborator Steve Wilton, Ph.D. Professor at the Center for Neuromuscular and Neurological Disorders, University of Western Australia, Perth, Western Australia, Australia. Wilton presented an overview of exon skipping and clinical trials and also chaired a workshop on exon skipping.

“The Action Duchenne Annual Conference brought together leaders in the research and treatment of Duchenne muscular dystrophy from arounf the world. It is exciting to hear about AVI’s ground-breaking progress in its trial of AVI-4658 and the potential for exon skipping drugs to help the thousands of DMD patients who do not have an effective therapy for this disease,” said Nick Catlin, Chief Executive Officer of Action Duchenne.

The open label dose-finding clinical trial is evaluating the systemic delivery of AVI-4658 once per week for 12-weeks by intravenous infusion. Although the study is primarily a safety trial, it includes measures of drug efficacy and pharmacokinetics and is being conducted in London, UK at the UCL Institute of Child Health / Great Ormond Street Hospital NHS Trust facilities by members of the MDEX Consortium led by Professor Francesco Muntoni and by Professor Kate Bushby at the Royal Victoria Infirmary, Newcastle-Upon-Tyne, UK, which is the coordinating center for the European Treat Neuromuscular Diseases (Treat-NMD) initiative. The clinical costs for the trial are provided, in part, by the UK Medical Research Council.

About Duchenne Muscular Dystrophy (DMD)

DMD is one of the most common fatal genetic disorders to affect children around the world. Approximately one in every 3,500 boys worldwide is afflicted with Duchenne Muscular Dystrophy with 20,000 new cases reported each year. It is a devastating

and incurable muscle-wasting disease associated with specific inborn errors in the gene that codes for dystrophin, a protein that plays a key structural role in muscle fiber function. Symptoms usually appear in male children by age three. Progressive muscle weakness of the legs and pelvis eventually spreads to the arms, neck, and other areas. By age 10, braces may be required for walking, and most patients are confined to a wheelchair by age 12. Eventually, this progresses to complete paralysis and increasing difficulty in breathing requiring ventilatory support. The condition is terminal and death usually occurs before the age of 30. The outpatient cost of care for a non-ambulatory DMD boy is among the highest of any disease. There is currently no cure for DMD, but for the first time ever, there are promising therapies in or moving into development.

About the MDEX Consortium

The MDEX consortium led by Professor Francesco Muntoni, is a multidisciplinary enterprise to promote translational research into muscular dystrophies, and is formed by the clinical groups of Professor Francesco Muntoni (UCL Institute of Child Health) and Professor Kate Bushby and Professor Volker Straub (Newcastle University), and scientists from Imperial College London (Professor Dominic Wells), UCL Institute of Child Health (Dr. Jennifer Morgan), Royal Holloway University of London (Professor George Dickson), Oxford University (Dr. Matthew Wood) and University of Western Australia (Professor Steve Wilton). In addition, the charities Muscular Dystrophy Campaign (MDC), Action Duchenne and Duchenne Family Support Group also participate in the Consortium. For more information, visit www.mdex.org.uk.

About AVI BioPharma

AVI BioPharma is focused on the discovery and development of RNA–based drugs utilizing proprietary derivatives of its antisense chemistry (morpholino-modified phosphorodiamidate oligomers or PMOs) that can be applied to a wide range of diseases and genetic disorders through several distinct mechanisms of action. Unlike other RNA therapeutic approaches, AVI's antisense technology has been used to directly target both messenger RNA (mRNA) and its precursor (pre-mRNA), allowing for both up- and down-regulation of targeted genes and proteins. AVI's RNA–based drug programs are being evaluated for the treatment of Duchenne muscular dystrophy as well as for the treatment of cardiovascular restenosis through our partner Global Therapeutics, a Cook Group Company. AVI's antiviral programs have demonstrated promising outcomes in Ebola Zaire and Marburg Musoke virus infections and may prove applicable to other viral targets such as HCV or Dengue viruses. For more information, visit www.avibio.com.

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