AVEO Announces Publication of Positive Tivozanib Phase 2 Clinical Trial Results in *Journal of Clinical Oncology*

**Tivozanib Demonstrated Improved Median Progression-Free Survival Combined with a Well Tolerated Safety Profile in Patients with Advanced Renal Cell Carcinoma**

CAMBRIDGE, MASS., April 12, 2012 – AVEO Pharmaceuticals, Inc. (NASDAQ: AVEO) today announced that previously reported results from a successful Phase 2 clinical trial evaluating the efficacy and safety of tivozanib in 272 patients with advanced renal cell carcinoma (RCC) were published in the *Journal of Clinical Oncology*. The article, entitled, "Antitumor activity and safety of tivozanib (AV-951) in a Phase 2 randomized discontinuation trial in patients with renal cell carcinoma," is featured in the current online edition of the journal. Results demonstrated improved median progression-free survival (PFS) among patients treated with tivozanib compared to placebo, and that tivozanib was well tolerated with minimal off-target toxicities.

The positive results of this Phase 2 trial informed the design and implementation of TIVO-1, a pivotal Phase 3 clinical study in advanced RCC demonstrating tivozanib superiority over sorafenib in the primary endpoint of PFS in the first-line setting, top-line data from which were reported in January 2012.

“Current RCC therapies are associated with toxicities that can interfere with patients’ treatment regimens and impact treatment efficacy and activities of daily living,” said Dmitry A. Nosov, M.D., Ph.D., senior clinical researcher at the Blokhin Oncology Research Center, Moscow, Russian Federation, lead author of the Phase 2 study and TIVO-1 investigator. “Despite recent progress in treating patients with RCC, patients and physicians would benefit from a new RCC treatment option that delivers both improved efficacy and a more tolerable safety profile. The combined tivozanib efficacy and safety data demonstrated in this Phase 2 study supports tivozanib as a potential advancement in the RCC treatment landscape.”

Based on the positive Phase 2 data and success of the TIVO-1 trial, AVEO and its collaborator Astellas Pharma Inc. are moving forward with plans for submitting the tivozanib NDA in RCC in the third quarter of 2012, with the MAA submission to follow.
“We believe that the efficacy and safety profile consistently demonstrated by tivozanib and recently validated in our Phase 3 TIVO-1 trial represent an important step forward in the treatment of patients who have advanced RCC,” said William Slichenmyer, M.D., Sc.M., chief medical officer, AVEO. “We are pleased with the opportunity to collaborate with tivozanib study investigators on publishing these positive Phase 2 data in the Journal of Clinical Oncology, and look forward to advancing our work with our global partners at Astellas to bring tivozanib to patients who can benefit from this therapy.”

About Renal Cell Carcinoma
Advanced RCC, or kidney cancer, is the ninth most commonly diagnosed cancer in men and women in the U.S. Worldwide it is estimated that more than 250,000 people are diagnosed and more than 100,000 people die from the disease each year. RCC accounts for more than 90 percent of all kidney cancers. Currently available therapies provide less than one year of median PFS in treatment naïve patients and are associated with significant toxicities. These toxicities not only lead to high rates of dose reductions and interruptions (potentially compromising efficacy), but also can impact a patient’s quality of daily living. Second generation therapies are well positioned to meet these needs and advance the treatment of advanced RCC.

About Tivozanib
Tivozanib is a potent, selective, long half-life inhibitor of all three vascular endothelial growth factor (VEGF) receptors that is designed to optimize VEGF blockade while minimizing off-target toxicities. Tivozanib is an oral, once-daily, investigational tyrosine kinase inhibitor for which positive top-line results from a Phase 3 clinical study in advanced renal cell carcinoma have been reported, and is being evaluated in other tumors.

About the AVEO/Astellas Collaboration
In February 2011, AVEO and Astellas entered into a worldwide agreement outside of Asia to develop and commercialize tivozanib for the treatment of a broad range of cancers. Subject to regulatory approval, AVEO will lead commercialization of tivozanib in North America and Astellas will lead commercialization of tivozanib in the European Union. AVEO and Astellas are evaluating tivozanib in clinical trials in multiple solid tumors; updates on the progress of those trials are expected to be available in the coming months.

About AVEO
AVEO Pharmaceuticals (NASDAQ: AVEO) is a cancer therapeutics company committed to discovering, developing and commercializing targeted therapies to impact patients’ lives. AVEO’s proprietary Human Response Platform™ provides the company unique insights into cancer biology and is being leveraged in the discovery and clinical development of its cancer therapeutics. For more information, please visit the company’s website at www.aveopharma.com.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements of AVEO that involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this press release are forward-looking statements, within the meaning of The Private Securities Litigation
Reform Act of 1995. The words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “target,” “potential,” “could,” “should,” “seek,” or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among others, statements about: the potential for tivozanib to be a differentiated treatment option for patients; AVEO’s continued advancement of its clinical programs; and AVEO’s plans to file for regulatory approval of tivozanib in the U.S. and the E.U. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements that AVEO makes due to a number of important factors, including risks relating to: difficulties, delays or failures in AVEO’s ability to successfully research, develop or obtain and maintain regulatory approvals for tivozanib; the possibility that tivozanib will not achieve the regulatory approvals required for its successful commercialization either in the U.S. or abroad; potential delays in the initiation of other clinical trials of tivozanib; adverse general economic and industry conditions and those risks discussed in the section titled “Risk Factors” and elsewhere in AVEO’s most recent Quarterly Report on Form 10-Q and in its other filings with the Securities and Exchange Commission. The forward-looking statements in this press release represent AVEO’s views as of the date of this press release. AVEO anticipates that subsequent events and developments will cause its views to change. However, while AVEO may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. You should, therefore, not rely on these forward-looking statements as representing AVEO’s views as of any date subsequent to the date of this press release.

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5. Ravaud, A. Annals of Oncology 20 (Supplement 1): i7–i12, 2009