AVEO Oncology to Present Updated Interim Results from the Phase 2 Portion of the TiNivo Study of Tivozanib and Nivolumab (OPDIVO®) in RCC at the ESMO 2018 Annual Congress

CAMBRIDGE, Mass. – October 9, 2018 – AVEO Oncology (NASDAQ: AVEO) today announced that updated interim data from the Phase 2 portion of the TiNivo trial of tivozanib and nivolumab (OPDIVO®) in advanced renal cell carcinoma will be presented at the European Society of Medical Oncology (ESMO) 2018 Annual Congress being held October 19-23, 2018 in Munich, Germany. The TiNivo study is a Phase 1b/2 multicenter trial of oral tivozanib (FOTIVDA®) in combination with intravenous nivolumab (OPDIVO®, Bristol-Myers Squibb), an immune checkpoint, or PD-1, inhibitor, for the treatment of metastatic renal cell carcinoma (mRCC).

The accepted abstract, which includes results from a poster presentation at the 2018 American Society of Clinical Oncology (ASCO) Gastrointestinal Cancers Symposium in January, is available via the ESMO 2018 Annual Congress website. Updated data will be presented at the ESMO conference.

Presentation Details

Title: TiNivo: Tivozanib combined with nivolumab: safety and efficacy in patients with metastatic renal cell carcinoma (mRCC)
Presenter: Philippe Barthelemy, Medical Oncology Department, Hôpitaux Universitaires de Strasbourg, Strasbourg, FR
Presentation Number: 878P
Date and Time: October 22, 2018, 1:05 p.m. CEST
Location: Hall A3 - Poster Area

About AVEO

AVEO Pharmaceuticals, Inc. (the "Company") is a biopharmaceutical company dedicated to advancing a broad portfolio of targeted medicines for oncology and other areas of unmet medical need. The Company's strategy is to retain North American rights to its oncology portfolio while securing partners in development and commercialization outside of North America. The Company is seeking to develop and commercialize its lead candidate tivozanib in North America as a treatment for advanced renal cell carcinoma ("RCC"). The Company has outlicensed tivozanib (FOTIVDA®) for oncology in Europe and other territories outside of North America. Tivozanib is approved in the European Union, as well as Norway and Iceland, for the first-line treatment of adult patients with RCC and for adult patients who are vascular endothelial growth factor receptor and mTOR pathway inhibitor-naïve following disease progression after one prior treatment with cytokine therapy for RCC. The Company has entered into partnerships for the development and commercialization of AV-203 (CAN017) and ficlatuzumab, both clinical stage assets in oncology. The Company is currently seeking a partner to develop the AV-353 platform, a preclinical asset, worldwide for the potential treatment of pulmonary arterial hypertension. The Company has

recently regained the rights to its AV-380 program for the potential treatment of cachexia and is considering a variety of options to advance the program's development.

For more information, please visit the Company's website at www.aveooncology.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 fact, contained in this press release are forward-looking statements. The words "anticipate," "believe," "expect," "intend," "may," "plan," "potential," "could," "should," "would," "seek," "look forward," "advance," "goal," "strategy," 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 Company's plans and strategies for commercialization of tivozanib in the United States and Europe; the potential for tivozanib to have clinical potential in immunotherapy combinations; creating an evidence-based guidepost for sequencing therapies in refractory disease; the Company's plan to seek a partner to develop the AV-353 platform; the Company's plans regarding AV-380 and AVEO's strategy, prospects, plans and objectives. AVEO has based its expectations and estimates on assumptions that may prove to be incorrect. As a result, readers are cautioned not to place undue reliance on these expectations and estimates. 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 AVEO's ability to enter into and maintain its third party collaboration and license agreements, and its ability, and the ability of its collaborators, licensees and other strategic partners, to achieve development and commercialization objectives under these arrangements; and AVEO's ability, and the ability of its licensees, to demonstrate to the satisfaction of applicable regulatory agencies such as the FDA the safety, efficacy and clinically meaningful benefit of AVEO's product candidates, including tivozanib. AVEO faces other risks relating to its business as well, including risks relating to its and its collaborators' ability to successfully enroll and complete clinical trials, including the TIVO-3 and TiNivo studies; AVEO's ability to achieve and maintain compliance with all regulatory requirements applicable to its product candidates; AVEO's ability to obtain and maintain adequate protection for intellectual property rights relating to its product candidates and technologies; AVEO's ability to successfully implement its strategic plans; AVEO's ability to raise the substantial additional funds required to achieve its goals, including those goals pertaining to the development and commercialization of tivozanib; unplanned capital requirements; adverse general economic and industry conditions; competitive factors; and those risks discussed in the section titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources" included in AVEO's quarterly and annual reports on file with the Securities and Exchange Commission (SEC) and in other filings that AVEO may make with the SEC in the future. 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 may cause its views to change. 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 other than the date of this press release. Any reference to AVEO's website address in this press release is intended to be an inactive textual reference only and not an active hyperlink.

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