AVEO Oncology Announces $14M in Aggregate Gross Proceeds from Hercules Credit Facility and At-the-market Stock Offerings

Additional Resources Sufficient to Fund Planned Operations into the 4Q 2018

CAMBRIDGE, Mass. – June 27, 2017 – AVEO Oncology (NASDAQ: AVEO) today announced that it has secured $14 million in aggregate gross proceeds through its credit facility with Hercules Capital, Inc. (Hercules) and the sale of common stock via its at-the-market issuance sales agreement with FBR & Co. (FBR).

Pursuant to its 2010 loan and security agreement with Hercules, as amended in 2016, AVEO intends to draw down an additional $5 million in funding from Hercules and will defer the commencement of principal payments on its aggregate loan balance by six months from July 1, 2017 until January 1, 2018. Pursuant to its February 2015 at-the-market issuance sales agreement with FBR, AVEO has issued and sold shares of common stock for gross proceeds of $9 million, effectively exhausting the balance of its aggregate $17.9 million facility. Gross proceeds of the common stock sales are subject to a commission of 2%. AVEO believes that, with the addition of these resources to its existing cash on hand, its planned operations will be funded into the fourth quarter of 2018. This guidance excludes, among other things, any potential revenues from or payments to EUSA or other portfolio partnerships.

Pursuant to AVEO's December 2015 agreement with EUSA Pharma, the European licensee for lead candidate, tivozanib, AVEO is eligible to receive a $4 million research and development reimbursement payment from EUSA if the European Commission grants marketing approval for tivozanib, in addition to up to $12 million in additional milestones based on member state reimbursement and regulatory approvals, as well as a tiered royalty ranging from a low double-digit up to mid-twenty percent on net sales of tivozanib in the agreement's territories. On June 23, 2017, AVEO announced that the Committee for Medicinal Products for Human Use (CHMP), the scientific committee of the European Medicines Agency (EMA), has recommended FOTIVDA™ (tivozanib) for approval as a treatment for patients with advanced renal cell carcinoma (RCC).

"AVEO now has resources that we expect will take us well past the anticipated first quarter 2018 readout of the TIVO-3 trial, our U.S. pivotal trial in third-line RCC," said Michael Bailey, president and chief executive officer of AVEO. "With progress made to date in all three pillars of our tivozanib strategy, including European registration strategy, our North American clinical and regulatory strategy (TIVO-3), and our immunotherapy combination strategy (TiNivo), we look forward to a number of potential transformative events in the coming months. We intend to continue to maintain our streamlined operations, while leveraging external resources and our prior investments in tivozanib's commercial launch preparation, to ensure that our resources are directed toward maximizing the value of our pipeline for patients and our shareholders."

About AVEO

AVEO Oncology (AVEO) is a biopharmaceutical company dedicated to advancing a broad portfolio of targeted therapeutics for oncology and other areas of unmet medical need. The Company is focused on seeking to develop and commercialize its lead candidate tivozanib, a potent, selective, long half-life inhibitor of vascular endothelial growth factor 1, 2 and 3 receptors, in North America as a treatment for renal cell carcinoma. AVEO is leveraging multiple partnerships aimed at developing and commercializing tivozanib in oncology indications outside of North America, and at progressing its pipeline of novel therapeutic candidates in cancer, cachexia (wasting syndrome) and pulmonary arterial hypertension (PAH). 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," "will," "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 AVEO's cash balances and the period in which it anticipates cash will be available to fund its operations; the potential for tivozanib to be approved by the EC as a treatment for RCC; the potential benefits of tivozanib both as a stand-alone agent and in combination with other therapies; AVEO's expectations regarding the receipt of payments under its agreement with EUSA and the potential for such payments, if received, to favorably impact its financial condition; AVEO's beliefs about the potential for transformative events to occur in the coming months; AVEO's plans to continue to maintain its streamlined operations, leverage external resources and investments, and direct its resources toward maximizing value; timing of the anticipated readout of the TIVO-3 trial; AVEO's and its collaborators' future discovery, development and commercialization plans and efforts, including without limitation with respect to tivozanib, ficlatuzumab and AVEO's other programs and platforms; 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 agreements, and its ability, and the ability of its licensees and other partners, to achieve development and commercialization objectives under these arrangements; AVEO's ability, and the ability of its licensees, to demonstrate to the satisfaction of applicable regulatory agencies the safety, efficacy and clinically meaningful benefit of AVEO's product candidates, including without limitation risks relating to the ability of EUSA to successfully obtain approval of tivozanib from the EC. AVEO faces other risks relating to its business as well, including risks relating to its 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; developments, expenses and outcomes related to

AVEO's ongoing shareholder litigation; 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 Annual Report on Form 10-K for the year ended December 31, 2016, its quarterly reports on Form 10-Q 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.

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