AVEO Announces Appointment of Nikhil Mehta, Ph.D., as Senior Vice President of Regulatory and Quality Assurance

CAMBRIDGE, Mass.–November 20, 2017 – AVEO Oncology (NASDAQ: AVEO) today announced the appointment of Nikhil Mehta, Ph.D., as Senior Vice President of Regulatory and Quality Assurance, effective November 20, 2017. In this role, Dr. Mehta will oversee all aspects of regulatory, quality and technical operations for the company's portfolio. Dr. Mehta brings to AVEO more than 25 years of experience in the biotechnology and pharmaceutical industries, having played a key role in the development and approval of important therapeutic products in the areas of oncology and orphan disease.

"Dr. Mehta brings to AVEO a depth of experience in regulatory affairs and oncology that we believe will be invaluable as we plan and advance our U.S. registration strategy for tivozanib as a potential treatment for renal cell carcinoma," said Michael Bailey, president and chief executive officer of AVEO. "Over the course of his career with companies such as Baxalta, Merck, Shire and ImClone Systems, Dr. Mehta's experience includes the development and execution of global regulatory strategies leading to the approval of a number of important oncology therapeutics including KEYTRUDA® (pembrolizumab) and ERBITUX® (cetuximab). I anticipate his integration into the AVEO team will be seamless and rapidly productive. In the very near term, we look forward to working with Dr. Mehta through the announcement of topline data from the pivotal TIVO-3 trial, which we anticipate in the first quarter of 2018, potentially followed by a U.S. regulatory filing in the second half of 2018."

"The AVEO team has made outstanding progress in advancing an important, differentiated therapeutic in tivozanib, including executing a confirmatory pivotal study, working alongside a partner to secure European marketing registration and initiating a new immunotherapy combination study," said Dr. Mehta. "I look forward to contributing to the next stages of this progress by leveraging my expertise and experience to help ensure AVEO's successful transition to a global commercial entity."

Most recently, Dr. Mehta served as Executive Vice President and Chief Regulatory Strategist at Tang Capital Management, where he played a key role in the establishment of two biopharmaceutical companies, Odonate Therapeutics and Sentier Therapeutics. Prior to Tang Capital, Dr. Mehta served as Global Head of Regulatory Affairs at Baxalta, a period during which the company gained approval for ADYNOVATE®, VONVENDI®, and OBIZUR. Prior to Baxalta, he was Vice President, Global Regulatory Affairs, Oncology, Hematology, Immunology and Diagnostics, at Merck & Company, where, among other accomplishments, he played a key role in the rapid development and first approval of Merck's blockbuster checkpoint inhibitor, KEYTRUDA. Prior to Merck, Dr. Mehta held positions of increasing responsibility within regulatory affairs at Shire HGT, ImClone Systems, Bristol-Myers Squibb and Hoffmann-La Roche, where he played key roles in the approvals of ELAPRASE®, VPRIV®, FIRAZYR® and ERBITUX. Dr. Mehta holds a Ph.D. in Chemical and Biochemical Engineering from Rutgers University.

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 and other cancers. 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 and cachexia (wasting syndrome). Tivozanib (FOTIVDA®) is approved by the European Commission for the treatment of adult patients with advanced renal cell carcinoma (RCC) in the European Union plus Norway and Iceland. 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: clinical, regulatory and commercial plans of AVEO and its partner EUSA Pharma with respect to tivozanib (FOTIVDA®); the expected timeline for reporting data from TIVO-3 and TiNivo; the role and expected benefits of tivozanib and other TKIs on a stand-alone basis, or in combination with or following immunotherapy; the expected enrollment of the TiNivo trial; expectations about the potential for additional payments by EUSA Pharma; the value of AVEO's partnerships in advancing its pipeline; and AVEO's strategy, prospects, plans and objectives, including as they pertain specifically to tivozanib. 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 tivozanib. 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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