Computational Fluid Dynamics (CFD) modeling further distinguishes Vapotherm High Velocity Therapy from generic high flow cannulas

EXETER, N.H.--(BUSINESS WIRE)-- Vapotherm, Inc. (NYSE: VAPO), a global medical technology company focused on the development and commercialization of its proprietary Vapotherm high velocity therapy® products, which are used to treat patients of all ages suffering from respiratory distress, today announced the online publication of “Validation of Human Upper Computational Fluid Dynamics Model for Turbulent Mixing” in the Journal of Fluid Dynamics. The full article will be published in the December issue of J. Fluids Engineering. Computational fluid dynamics uses advanced computer algorithms to understand gas flow characteristics in changing and complex systems.

This work validates findings presented at the 8th Thermal Fluids Engineering Conference in March 2023 in the presentation titled “Cannula Oxygen Therapy.” Researchers utilized computational fluid dynamics to evaluate and describe the impact of cannula design on air flow and gas exchange in the upper airway. Vapotherm’s unique small bore design generates higher gas velocity distinguishing it from other forms of high flow cannulas. The modeling confirmed that the higher velocity generated by the Vapotherm design results in improved CO_2 flush compared to other cannulas. This finding correlates with the known clinical benefits of Vapotherm’s High Velocity Nasal Insufflation (HVNI) therapy and is especially significant for patients with chronic obstructive pulmonary disease (COPD) and asthma. It is also important for patients who may not breathe with optimal efficiency such as those who are sedated for some medical procedures. (https://dl.astfe.org/conferences/tfec2023,1ee0374044f80bd3,2fec083b2a0b5e4e.html)

“This reaffirms that not all high flow devices are the same and shows the value of high velocity therapy for clearance of CO_2 and flush of the upper airway,” said Brian Lawrence, Chief Technology Officer at Vapotherm.

Dr. Jessica Whittle, Chief Medical Officer at Vapotherm said, “research like this helps clinicians stop and rethink their understanding of ventilation and to consider using high velocity therapy as a first line treatment for patients needing more than traditional oxygen.”

About Vapotherm

Vapotherm, Inc. (NYSE: VAPO) is a publicly traded developer and manufacturer of advanced respiratory technology based in Exeter, New Hampshire, USA. The Company develops innovative, comfortable, non-invasive technologies for respiratory support of patients with chronic or acute breathing disorders. Over 4.0 million patients have been treated with the use of Vapotherm high velocity therapy® systems. For more information, visit www.vapotherm.com. Vapotherm high velocity therapy is mask-free non-invasive respiratory support and is a front-line tool for relieving respiratory distress—including hypercapnia, hypoxemia, and dyspnea. It allows for the fast, safe treatment of undifferentiated respiratory distress with one tool. The HVT 2.0 and Precision Flow systems’ mask-free interface delivers optimally conditioned breathing gases, making it comfortable for patients and reducing the risks and care complexities associated with mask therapies. While being treated, patients can talk, eat, drink and take oral medication.

Website Information

Vapotherm routinely posts important information for investors on the Investor Relations section of its website, http://investors.vapotherm.com/. Vapotherm intends to use this website as a means of disclosing material, non-public information and for complying with Vapotherm’s disclosure obligations under Regulation FD. Accordingly, investors should monitor the Investor Relations section of Vapotherm’s website, in addition to following Vapotherm’s press releases, Securities and Exchange Commission (“SEC”) filings, public conference calls, presentations and webcasts. The information contained on, or that may be accessed through, Vapotherm’s website is not incorporated by reference into, and is not a part of, this document.

Legal Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements under the Private Securities Litigation Reform Act of 1995, including statements about the benefits of Vapotherm’s products. In some cases, you can identify forward-looking statements by terms such as “expect,” “continue,” “plan,” “intend,” “will,” or “typically,” or the

negative of these terms or other similar expressions, although not all forward-looking statements contain these words, and the use of future dates. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement. Applicable risks and uncertainties include, but are not limited to the following: Vapotherm has incurred losses in the past and may be unable to achieve or sustain profitability in the future or achieve its 2023 financial guidance including reduced cash burn; risks associated with its manufacturing operations in Mexico; Vapotherm's ability to raise additional capital to fund its existing commercial operations, develop and commercialize new products, and expand its operations; Vapotherm's ability to comply with its financial covenants, execute on its path-to-profitability initiative, convert excess inventory into cash and fund its business through 2023; Vapotherm's dependence on sales generated from its High Velocity Therapy systems, competition from multi-national corporations who have significantly greater resources than Vapotherm and are more established in the respiratory market; the ability for Precision Flow systems to gain increased market acceptance; Vapotherm's inexperience directly marketing and selling its products; the potential loss of one or more suppliers and dependence on its new third party manufacturer; Vapotherm's susceptibility to seasonal fluctuations; Vapotherm's failure to comply with applicable United States and foreign regulatory requirements; the failure to obtain U.S. Food and Drug Administration or other regulatory authorization to market and sell future products or its inability to secure, maintain or enforce patent or other intellectual property protection for its products; the impact of COVID on its business, including its supply chain, risks associated with the reverse stock split, Vapotherm's ability to regain compliance with the continued listing standards of the NYSE, market conditions and the impact of the reverse stock split on the trading price of Vapotherm's common stock, a possible delisting of Vapotherm's common stock and the other risks and uncertainties included under the heading "Risk Factors" in Vapotherm's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the SEC on February 23, 2023, and in its subsequent filings with the SEC, including its Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023, as filed with the SEC on August 8, 2023. The forward-looking statements contained in this press release reflect Vapotherm's views as of the date hereof, and Vapotherm does not assume and specifically disclaims any obligation to update any forward-looking statements whether as a result of new information, future events or otherwise, except as required by law.

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