



Aduro completed work on its First Milestone and submitted a report for third-party evaluation,

A critical step towards commercialization of their innovative chemical conversion technologies.

Sarnia, ON, December 2, 2021 – [Aduro Clean Technologies Inc.](#) (“Aduro”, or the “Company”) (CSE: **ACT**) (OTCQB: **ACTHF**) (FSE: **9D50**), is a Canadian developer of patented water-based technologies to chemically recycle plastics, and to transform heavy crude and renewable oils into new-era resources and higher-value fuels.

Aduro is pleased to announce that the Company’s scientists have completed their work in support of the First Milestone as set out in the Share Exchange Agreement dated October 22, 2021, and as amended in the Share Exchange Agreement. The details of this work have been summarized in a report and submitted for third-party evaluation.

The independent third-party evaluator named in the Share Exchange Agreement is Dr. Paul Charpentier, who will shortly report on his findings. His role is to:

- (i) Examine the methodology used by the Aduro scientists and the results obtained in view of the objectives defined in the Share Exchange Agreement, and then
- (ii) Certify if those objectives were met.

The results of the completed work of the First Milestone demonstrates that the patented Aduro Hydrochemolytic™ technology (HCT), developed and proven by Aduro in small batch R1 reactors, is viable for use in the types of continuous-flow reactors commonly used in commercial applications. In this case, HCT was applied to improve the properties of bitumen, but the technology has other important applications. For the demonstration, bitumen feedstock with an "API gravity" (density) of 14.6 °API was upgraded to lighter petroleum with a density of 19.1 °API. (Higher °API values mean lower density and higher market value.)

“Results achieved with the continuous-flow R2 pre-pilot reactor exceeded expectations. Compared to batch mode, it delivered equivalent upgrading results more quickly and at lower temperatures, and with lower catalyst loading,” says Marc Trygstad, CTO of Aduro. “We had already proven HCT in small-scale R1 batch reactors, but the efficiency of HCT in R2 increased by a factor far greater than 10. This significantly strengthens our projections regarding lower operating costs in commercial applications, along with improved scoring on environmental factors, such as reduced emissions and energy consumption,” adds Trygstad.

These results form the foundation for HCT scaleup to pilot plants, precommercial deployments, and full-scale commercial systems. They also create the context required for Aduro to further optimize its processes, and to engage potential partners and customers through demonstration projects. For example, the R2-scale work on bitumen supports the next-phase design of the pilot-scale R3 reactor system to process barrels-per-day of bitumen, which was begun in June 2021. Furthermore, lessons

learned from bitumen processing are also being applied to accelerate design of an R2-scale demonstration system optimized for upcycling of plastics, like polyethylene and polypropylene.

“My thanks to the Aduro technology team for supporting this critical milestone and exceeding our expectations. Having delivered on this key commitment to our investors, the knowledge gained allows us to now advance and accelerate our efforts on the next phase, which is the pilot-scale demonstration of HCT,” says Ofer Vicus, CEO of Aduro.

About Dr. Charpentier

[Dr. Paul Charpentier](#) is a Professor of Chemical & Biochemical Engineering at Western University in London, Ontario, where he has served as a faculty member for over 20 years. He holds a Master of Science degree in Polymer Chemistry from the University of Waterloo, and a PhD degree in Chemical Engineering from McMaster University.

About Aduro Clean Technologies

[Aduro Clean Technologies](#) is a developer of patented water-based technologies to chemically recycle waste plastics; convert heavy crude and bitumen into lighter, more valuable oil; and transform renewable oils into higher-value fuels or renewable chemicals. The Company’s Hydrochemolytic™ technology activates unique properties of water in a chemistry platform that operates at relatively low temperatures and cost, a game-changing approach that converts low-value feedstocks into 21st-century resources. With funding and support from [Bioindustrial Innovation Canada](#), the company has developed a pre-pilot reactor system to upgrade heavy petroleum into lighter oil.

For further information, please contact:

Ofer Vicus, CEO

ovicus@adurocleantech.com

Craig MacPhail, Investor Relations

ir@adurocleantech.com

604-362-7011

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The CSE has not reviewed, approved, or disapproved the content of this news release.