

Avalon Reports Encouraging Initial Cesium Assay Results from Recent Lilypad Project Field Program

September 23, 2021

Toronto, Ontario--(Newsfile Corp. - September 23, 2021) - [Avalon Advanced Materials Inc.](#) (TSX: AVL) (OTCQB: AVLNF) ("Avalon" or the "Company") is pleased to announce that it has received initial assay results from grab samples collected during the summer exploration program on the Lilypad Cesium Project located 350 km north of Thunder Bay, Ontario. The new results confirm the exceptional cesium enrichment in several Lithium-Cesium-Tantalum ("LCT") pegmatite dyke occurrences on the property. Cesium is a rare element in growing demand for many new technologies, but with very limited supply following the cessation of mine production from the world's largest historical producer, the Tanco mine, near Bernic Lake, Manitoba.

The work program included line cutting, soil and biogeochemistry grid sampling, as well as geological mapping and sampling over the area of the known LCT pegmatite field (see map on-line at <https://www.avalonadvancedmaterials.com/projects/lilypad/>). The soil and biogeochemistry results have not yet been received but are anticipated to indicate directions for extensions of the known pegmatites and identify new pegmatite targets in overburden-covered areas for testing in a future drill program. Additional bulk sampling of the cesium-rich Pollucite Dyke was also carried out and Avalon now has about 400 kg of the pollucite mineralization available for further metallurgical testwork. Sub-samples of the bulk sample assayed at Saskatchewan Research Council averaged 3.02% Cs₂O, 1.07% Li₂O and 0.03% Ta₂O₅, similar to the average grade of the historic resource (below).

Assays of rock samples received to date have confirmed significant cesium values in four LCT dykes on the property with three samples assaying greater than 1% Cs₂O (Table 1). Two of the highest cesium values reported in this work are from the Western Extension of the Pollucite Dyke, about 180 metres west of the closest historic drill hole indicating potential to at least double its strike length. The Pollucite Dyke, with a historic resource estimate^[1] of 340,000 tonnes grading 2.294% Cs₂O and 0.037% Ta₂O₅ based on 9 holes drilled to a maximum vertical depth of 250 metres and along a strike length of just 140 metres, remains open for expansion to depth and along strike.

Samples assaying at or greater than 1% Cs₂O were also obtained from the Rubellite Dyke, a second pegmatite with high tantalum enrichment located about 500 metres east of the Pollucite Dyke. Two other little-explored pegmatites known as the Baseline and Opie Dykes were also found to contain significant cesium values (Table 1). Some samples are also highly enriched in lithium where it occurs mainly in coarse grained spodumene. One sample from the Spodumene Dyke with coarse spodumene crystals returned 3.34% Li₂O and the six samples collected averaged 0.7% Li₂O.

Commented President & CEO, Don Bubar, "the Lilypad Cesium Project is proving to be a globally unique example of a large field of cesium-enriched LCT pegmatite dykes with significant resource potential. With cesium continuing to be in very short supply, the Company is now well positioned to help Ontario become the new global leader in cesium production including innovation of new downstream applications."

Once all the geochemical survey results have been received and compiled along with the geological mapping data, next steps will be to plan for a diamond drilling program to test all the new targets including the western extension of the Pollucite Dyke. This work would ideally be scheduled during winter months when access can be made via a winter road.

The technical information included in this news release has been reviewed and approved by the Company's Vice President, Operations, Dr. William Mercer, P. Geo (Ont), a Qualified Person under NI 43-101. The field program was supervised by Project Geologist, Sarah Bodeving.

TABLE 1: Selected Individual Rock Analyses

Mineral Zone	Sample	Weight	Cs ₂ O
		kgs	(all in %)
Pollucite Dyke West Extension	B718501	1.12	1.96
	B718514	1.11	1.77
Rubellite Dyke	B718526	0.34	0.92
	B718527	0.60	2.65
Spodumene Dyke	B718502	0.73	nsr
	B718509	2.55	nsr
Baseline Dyke	B718523	0.34	0.54
Opie Dyke	B718524	0.28	0.41

Footnotes to table

1. All rocks are grab samples of surface outcrops and the sample weights above confirm the sample size.
2. The samples were analysed by ALS Laboratory, Vancouver using methods ME-MS81 for cesium and tantalum and ME-4ACD81 for lithium. Overlimit samples were reassayed with method ME-MS89L.
3. Conversion factors to oxides were 1.0602, 2.1527 and 1.2211 for Cs, Li and Ta respectively.
5. The QP relied upon ALS Laboratory for QAQC. In addition, the results are very similar to historic data and thus accepted by the QP as acceptable data. Also, **nsr** stands for "no significant result".

About Avalon Advanced Materials Inc.

Avalon Advanced Materials Inc. is a Canadian mineral development company specializing in sustainably-produced materials for clean technology. The Company now has four advanced stage

projects, providing investors with exposure to lithium, tin and indium, as well as rare earth elements, tantalum, cesium and zirconium. Avalon is currently focusing on developing its Separation Rapids Lithium Project near Kenora, Ontario while looking at several new project opportunities, including re-activating its 100%-owned Lilypad Cesium-Tantalum-Lithium Project in northwestern Ontario. Social responsibility and environmental stewardship are corporate cornerstones.

For questions and feedback, please e-mail the Company at ir@AvalonAM.com.

This news release contains "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation. Forward-looking statements include, but are not limited to, statements that the soil and biogeochemistry results are anticipated to indicate directions for extensions of the known pegmatites and identify new pegmatite targets in overburden-covered areas for testing in a future drill program, that two of the highest cesium values reported in this work are from the Western Extension of the Pollucite Dyke, about 180 metres west of the closest historic drill hole indicating potential to at least double its strike length, that the Company is now well positioned to help Ontario become the new global leader in cesium production including innovation of new downstream applications and that next steps will be to plan for a diamond drilling program to test all the new targets including the western extension of the Pollucite Dyke. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "potential", "scheduled", "anticipates", "continues", "expects" or "does not expect", "is expected", "scheduled", "targeted", "planned", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be" or "will not be" taken, reached or result, "will occur" or "be achieved". Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Avalon to be materially different from those expressed or implied by such forward-looking statements. Forward-looking statements are based on assumptions management believes to be reasonable at the time such statements are made. Although Avalon has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. Factors that may cause actual results to differ materially from expected results described in forward-looking statements include, but are not limited to market conditions, and the possibility of cost overruns or unanticipated costs and expenses as well as those risk factors set out in the Company's current Annual Information Form, Management's Discussion and Analysis and other disclosure documents available under the Company's profile at www.SEDAR.com. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Such forward-looking statements have been provided for the purpose of assisting investors in understanding the Company's plans and objectives and may not be appropriate for other purposes. Accordingly, readers should not place undue reliance on forward-looking statements. Avalon does not undertake to update any forward-looking statements that are contained herein, except in accordance with applicable securities laws.

^[1] *Cautionary note: the Lilypad resources described above are considered historic under NI 43-101 guidelines and have not been verified by an independent QP and therefore should not be relied upon. The Company is not treating the historic estimate as a current resource.*