



**PyroGenesis Announces 2020 Results:
Revenues \$17.8MM; Net Earnings and Comprehensive Income \$41.8MM
Gross Margin 58%; Current Backlog \$30MM; Basic EPS \$0.28**

MONTREAL, QUEBEC (GlobeNewswire – March 31st, 2021) - PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX: PYR) (NASDAQ: PYR) (FRA:8PY), a high-tech company, (the "Company", the "Corporation" or "PyroGenesis") that designs, develops, manufactures and commercializes plasma atomized metal powder, environmentally friendly plasma waste-to-energy systems and clean plasma torch products, is pleased to announce today its financial and operational results for the fourth quarter and fiscal year ended December 31st, 2020.

“We are happy to announce Q4, and fiscal year end, results for the period ending December 31st, 2020, which continue the historical trends began earlier in the year. Our full year revenues of \$18MM reflects the successful processing of backlog from signed contracts previously disclosed. The Board’s choice of strategy has been validated with the reporting of the second profitable quarter in a row. Further validating this strategy, net income from operations (before share-based expenses) was \$3.3MM for the year which is quite significant given the uncertain environment that 2020 was, and during which the Company not only retired virtually all of its debt, but also uplisted to the Toronto Stock Exchange and positioned itself for a NASDAQ listing in Q1 2021,” said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. “The successes of 2020, when combined with the results from our strategic investment, have contributed to a basic EPS of \$0.16 for the quarter, and \$0.28 for the year, both of which have exceeded previous guidance. With a strong balance sheet and approx. \$27MM of cash-on-hand as at this writing, the Company is well positioned to execute on its strategy of growth and solidify its position as an emerging leader in the reduction of greenhouse gas emissions, and as such, we expect these trends established in 2020 to continue.”

2020 results reflect the following highlights:

- Revenues of \$17,775,029, an increase of 269% over \$4,813,978 posted in the prior year,
- Net earnings and comprehensive income of \$41,768,404 an increase of \$50,939,521 over 2019,
- Net earnings and comprehensive income from operations (before share-based expenses) of \$2.9MM during fiscal year 2020 vs (\$7.9MM) posted over the same period in 2019,
- Gross margin of 58%, an increase of 21% year over year,
- Cash and cash equivalents at December 31, 2020 of \$18,104,899 (December 31, 2019: \$34,431),

- Backlog of signed contracts of \$30MM,
- Basic Earnings per Share (EPS) of \$0.28 for 2020 as compared to (\$0.07) in 2019,
- Total Assets at December 31, 2020 of \$74.5MM (December 31, 2019: \$9.6MM),
- Shareholders' Equity at December 31, 2020 of \$59.4MM (December 31, 2019: (\$6.1MM)).

OUTLOOK

Given the success over the last 18 months, PyroGenesis is well positioned, with a clean balance sheet, and approx. \$27 million cash-on-hand (as of this writing), to execute on all its organic growth strategies as well as actively pursuing growth through synergistic merger and acquisitions.

PyroGenesis has recently focused, and repositioned its offerings, to highlight the GHG emissions reduction benefits associated with the majority of its products. Interestingly enough, PyroGenesis' product lines do not generally need to incorporate GHG/environmental benefits to make sense economically. In other words, they do not require GHG/environmental incentives (tax credits GHG certificates, environmental subsidies) to make sense from a business perspective. We believe these incentives will be a tailwind that will add directly to shareholder value.

We consider this repositioning to be timely as many governments around the world are considering stimulating their respective economies by promoting environmental technologies. As such, Management expects that this repositioning will result in increased revenues.

Organic Growth:

Organic growth will be spurred on by (i) the natural growth of our existing offerings which can now be accelerated given our strong balance sheet and (ii) leveraging off our "Golden Ticket" advantage.

We have described in the past our Golden Ticket advantage as one which occurs when one sells directly, or is engaged directly, with the end user and, as a result, is "inside the fence". A Golden Ticket affords the opportunity to either, (i) cross sell other products or, ideally, (ii) identify new areas of concern that can be addressed uniquely by PyroGenesis. We call the latter our Coffee and Donuts strategy (if you are selling coffee you could generate additional revenues, with little additional effort, by adding on donuts).

Over the past several years, PyroGenesis has successfully positioned each of its business lines for rapid growth by strategically partnering with multi-billion-dollar entities. These entities have identified PyroGenesis' offerings to be unique, in demand, and of such a commercial nature as to warrant such unique relationships. We expect that these relationships are now positioned to transition into significant revenue streams.

DROSRITE™

Within the DROSRITE™ offering, the Company is aggressively exploring horizontal growth opportunities. The Company is currently bidding on an RFQ, valued at approx. \$40MM (estimated award date: within 4 months; estimated time to completion: approx. 15 months). Management notes that it has been very successful in the selection process to date, but does not yet consider it to be a high-probability outcome at this stage, and provides such as an example of its commitment to this strategy.

Additive Manufacturing

With respect to our Additive manufacturing offering, we expect to see significant year over year improvements in our 3D metal powders offering as our production kicks into gear by incorporating all the previously disclosed benefits (increased production rates, lower capex, lower opex) locked into our production line. There are major top tier aerospace companies and OEMs in both Europe and North America eagerly awaiting powders from this new state of the art production line. Whereas in the past we have been primarily targeting the very demanding Aerospace industry, we have recently expanded the target market to also address the unique needs of the electric vehicles marketplace who have recently approached us with their powder needs.

Plasma Torches

With respect to the Company's plasma torch offerings, we expect this offering to be significantly impacted by continued developments in the iron ore pelletization industry, where serious consideration is being given to replacing the fossil fuel burners, currently being used throughout the industry, with PyroGenesis' proprietary plasma torches, in an effort to reduce their carbon footprint.

To date, everything is proceeding as expected. Initial discussions have evolved into confirmation stages which typically consist of a computer simulation followed by a small torch order. These confirmation stages are expected, if successful, to result with a roll-out program to replace fossil fuel burners with PyroGenesis' plasma torches in the iron ore pelletization industry, in which PyroGenesis is patent protected.

PyroGenesis is proactively targeting other industries which are experiencing significant pressure to reduce GHGs, and which utilize fossil fuel burners as well.

Separately, the Company also offers plasma torches to niche markets where there is a high probability of on-going sales from successful implementation. One such example is the previously announced contract with a small company to produce a plasma torch ideal for tunnelling. PyroGenesis is currently re-evaluating its relationship with respect to this opportunity as there may be evidence that the real plasma-based tunnelling opportunity could lie outside of the scope of the current agreement.

As sales of PyroGenesis' plasma torches increase, the Company will also benefit from providing

proprietary spare parts from which the Company expects to generate significant recurring revenue, thus complementing the Company's long-term strategy to build upon a recurring revenue model.

HPQ/PUREVAP™

With respect to HPQ, the goal is expanding our role as HPQ technology provider for the game changing PUREVAP™ family of silicon processes which we are developing exclusively for HPQ and its wholly owned subsidiary HPQ Nano Silicon Powders Inc, namely:

- The PUREVAP™ “Quartz Reduction Reactors” (QRR), an innovative process (patent pending), which should permit the one step transformation of lower purity quartz (SiO₂) than any traditional processes can handle into a silicon (Si) of a higher purity level (2N-4N) that can be produced by any traditional smelter, at reduced costs, energy input, and carbon footprint. The unique capabilities of this process could position HPQ as a leading provider of the specialized silicon material needed to propagate its considerable renewable energy potential; and
- The PUREVAP™ Nano Silicon Reactor (NSiR), which, if successful, could position itself as a new proprietary low-cost process that can transform the silicon (Si) made by the PUREVAP™ QRR into the nano-silicon materials (spherical silicon powders and silicon nanowires) sought after by energy storage, batteries, electric vehicle manufactures and clean hydrogen sectors participants. The aim of the ongoing work is to position HPQ NANO as the first to market with a commercial scale low-cost nanoparticle production system.

We expect 2021 to be a year in which significant development occurs on both these fronts.

Growth through Synergistic Mergers and Acquisitions:

As previously disclosed, the Company would conservatively consider a synergistic M&A strategy to augment its growth, and the Company has been very actively involved in pursuing several opportunities in support of this strategy. In so doing, the focus has been on private companies exclusively which (i) primarily leverage the Company's Golden Ticket advantage/Coffee & Donuts strategy or (ii) could uniquely benefit from the Company's engineering advantage and/or international relationships.

The Company expects to be announcing specific details over the next few weeks as these opportunities become more binding on the parties involved.

DROSRITE™

We expect to be able to announce within the next several weeks, the conclusion of a joint venture relationship with an existing and proven technology provider. The technology is geared to uniquely handle the residues resulting from the processing of dross in the aluminum industry. We had

previously announced our intention to secure this technology and, if concluded, would not only make our traditional DROSRITE™ offering more appealing but could also be offered as a stand-alone product. We believe that valorizing the residues and producing high end products will further define us as the go-to company for all dross related processing. This is a prime example of our Coffee & Donuts strategy in play. For further clarity, the joint venture will only relate to the new technology and, as such, PyroGenesis will not have to vet in any assets, or IP (specifically not the DROSRITE™ technology).

Plasma Torches

PyroGenesis often considers opportunities to leverage its plasma expertise and has been reviewing a torch technology which could complement PyroGenesis' existing offerings, and leverage off of our unique relationships. The Company gives this a very low probability of success given the initial valuation, provided by the sole owner, in the context of publicly available data. However, PyroGenesis has identified similar opportunities and will evaluate them in due course.

Complimentary

The Company expects to announce in the next several weeks details regarding its intent to enter the Renewable Natural Gas (RNG) market via acquisition. PyroGenesis believes that it is in a unique position to take advantage of the lack of sufficient players (given anticipated demand) in the RNG marketplace by leveraging its engineering capabilities & existing relationships.

In conclusion, PyroGenesis is well positioned in 2021 to take advantage of its unique position in its four main business offerings to accelerate growth in each, with a particular emphasis on offerings geared to aggressively reducing GHG emissions. Furthermore, we do not expect at this point in time, given our strong balance sheet, a need to raise capital to execute on our growth strategy over the foreseeable future.

Financial Summary

Revenues

PyroGenesis recorded revenues of \$17,775,029 for the year ended December 31, 2020, representing an increase of 269% compared to \$4,813,978 recorded in 2019.

Revenues recorded in fiscal 2020 were generated primarily from:

- (i) PUREVAP™ related sales of \$4,163,059 (2019 - \$525,556)
- (ii) DROSRITE™ related sales of \$9,976,696 (2019 - \$560,916)
- (iii) support services related to systems supplied to the US Military \$1,425,883 (2019 - \$637,841)
- (iv) torch related sales of \$1,452,455 (2019 - \$2,323,351)

(v) other sales and services \$756,936 (2019 - \$766,314)

PUREVAP™ related sales includes revenue from the sale of technologies in the amount of \$3,610,000.

Cost of Sales and Services and Gross Margins

Cost of sales and services before amortization of intangible assets was \$7,445,171 in 2020, representing an increase of 113% compared to \$3,495,753 in 2019, primarily due to an increase in subcontracting, direct materials, an increase in foreign exchange charge on materials offset by a decrease in employee compensation, and investment tax credits.

In 2020, employee compensation, manufacturing overhead & other decreased to \$1,886,854 (2019 - \$2,230,361). Of note, the Company in 2020 applied for an amount of \$775,967 in wage subsidy from Revenue Canada under the CEWS “Canada Emergency Wage Subsidy” program. From this amount, \$118,416 was applied to employee compensation under cost of sales and services. Subcontracting and direct materials increased to \$5,429,175 (2019 - \$1,471,226), primarily due to the increased amount of contract values.

The gross margin for 2020 was \$10,302,668 or 58% of revenue compared to a gross margin of \$1,298,092 or 27% of revenue for 2019. As a result of the type of contracts being executed, the nature of the project activity had a significant impact on the gross margin and the overall level of cost of sales and services reported in a period, as well as the composition of the cost of sales and services, as the mix between labour, materials and subcontracts may be significantly different. The cost of sales and services for 2020 and 2019 are in line with Management’s expectations. The gross margin includes the full effect of the sale of intellectual property and royalties of \$3,610,000 in 2020. Excluding the effect of this revenue, the gross margin for 2020 would have been 47.2%.

Investment tax credits recorded against cost of sales are related to projects that qualify for tax credits from the provincial government of Quebec. Qualifying tax credits decreased to \$18,420 in 2020, compared to \$179,670 in 2019. The decrease is primarily related to fewer contracts being eligible for qualifying tax credits.

The amortization of intangible assets of \$27,190 in 2020 and \$20,133 for 2019 relates to patents and deferred development costs. Of note, these expenses are non-cash items and will be amortized over the duration of the patent lives.

Selling, General and Administrative Expenses

Included within Selling, General and Administrative expenses (“SG&A”) are costs associated with corporate administration, business development, project proposals, operations administration, investor relations and employee training.

SG&A expenses for 2020 excluding the costs associated with share-based compensation (a non-cash item in which options vest principally over a four-year period), were \$8,089,945, representing an increase of 34% compared to \$6,017,091 reported for 2019.

The increase in SG&A expenses in 2020 over the same period in 2019 is mainly attributable to the net effect of:

- (i) an increase of 79% in employee compensation primarily due to additional head count, an increase in commissions, bonuses, offset by an amount of \$504,339 received from Revenue Canada under the CEWS program.
- (ii) an increase of 14% for professional fees, primarily due to an increase in legal fees, public listing fees and patent expenses,
- (iii) an increase of 12% in office and general expenses, is primarily due to computer, internet, and security expenses,
- (iv) travel costs decreased by 71%, due to a decrease in travel abroad,
- (v) depreciation on property and equipment decreased by 63% due to lower amounts of property and equipment being depreciated,
- (vi) depreciation on right of use assets increased by 13% due to higher amounts of right of use assets being depreciated,
- (vii) investment tax credits were almost the same year to year, and include the recognition of investment tax credits in the amount of \$30,000,
- (viii) government grants decreased by 4%, due to lower levels of activities supported by such grants,
- (ix) other expenses decreased by 8%, primarily due to an increase in advertising, interest and bank expenses,
- (x) the tax assessment in 2019, represents the amount due from a taxation audit for the period of 2008 to 2011. The Company paid royalties for the use of intangible property prior to the purchase of the asset. The royalties were subject to a 25% withholding tax that was not deducted or withheld by the Company at that time.

Separately, share based payments increased by \$4,072,801 in 2020 over the same period in 2019 as a result of the stock options granted on July 16, 2020. This was directly impacted by the vesting structure of the stock option plan with options vesting between 25% and 50% on the grant date requiring an immediate recognition of that cost.

Research and Development (“R&D”) Costs

The Company incurred \$775,824 of R&D costs less \$1,033,412 of investment tax credits which reduce income taxes payable in current year less \$24,605 of investment tax credit refund from previous year, less \$83,451 of 2020 eligible investment tax credits, less government grants of \$365,433 totaling a net R&D cost of (\$731,077), on internal projects in 2020, a decrease of 186% compared to \$851,512 in 2019. The decrease in 2020 is primarily related to an increase of labor

resources allocated to non research and development contracts.

In addition to internally funded R&D projects, the Company also incurred R&D expenditures during the execution of client funded projects. These expenses are eligible for Scientific Research and experimental Development (“SR&ED”) tax credits. SR&ED tax credits on client funded projects are applied against cost of sales and services (see “Cost of Sales” above).

Net Finance Costs

Finance costs for 2020 totaled \$524,074 as compared with \$1,237,504 for 2019, representing a decrease of 58% year-over-year. The decrease in finance costs, is primarily attributable to the extinguishment of all term loans, other loans, and convertible debentures in 2020.

Strategic Investments

The adjustment to the fair market value of strategic investments in 2020 resulted in a gain of \$44,626,698 compared to a gain in the amount of \$176,237 in 2019, representing an increase of \$44,450,461. The increase is primarily attributable to the increased market share value of common shares and warrants owned by the Company of HPQ Silicon Resources Inc.

Net Earnings and Comprehensive Income (Loss)

- (i) an increase in product and service-related revenue of \$12,961,051 arising in 2020,
- (ii) an increase in cost of sales and services totaling \$3,956,475, primarily due to higher subcontract costs, and direct materials as a result of an increase in contracts in 2020,
- (iii) an increase in SG&A expenses not including share-based expenses of \$2,072,854 arising in 2020 primarily due an increase in employee commissions and bonuses,
- (iv) a decrease in R&D expenses of \$1,582,589 primarily related the recognition of investment tax credits in 2020 and prior years in the amount of \$1,141,468 which include amounts that reduce Canadian income taxes payable in 2020 and an amount of \$365,433 in government grants,
- (v) a decrease of \$1,981,410 in 2020 due to impairment of a Plasma Atomization 2019. The Company commenced construction on a new and improved Plasma Powder Production equipment,
- (vi) a decrease of \$386,121 in 2020 due to the write off, of powders and raw materials inventory in 2019,
- (vii) an increase in share-based expense of \$4,072,801,
- (viii) an increase in changes in fair market value of strategic investments and net finance costs of \$45,163,891,
- (ix) an increase in income taxes of \$1,033,412

EBITDA

The EBITDA in 2020 was \$43,824,533 compared to an EBITDA loss of \$7,384,862 for 2019, representing an increase of 693% year-over-year. The increase in the EBITDA in 2020 compared to 2019 is due to the increase in net earnings and comprehensive income of \$50,939,520, offset by a decrease in depreciation on property and equipment of \$105,717, an increase in depreciation on right-of-use assets of \$48,552, an increase in amortization of intangible assets of \$7,057, a decrease in finance charges of \$713,431 and an increase in income taxes of \$1,033,412.

Adjusted EBITDA in 2020 was \$48,069,141 compared to an Adjusted EBITDA loss of \$4,845,524 for 2019. The increase of \$52,914,665 in the Adjusted EBITDA in 2020 is attributable to an increase in EBITDA of \$51,209,395, an increase of \$4,072,801 in share-based payments, a decrease in inventory write-off of \$386,121, and a decrease in equipment write-off of \$1,981,410.

The Modified EBITDA in 2020 was \$3,442,443 compared to a Modified EBITDA loss of \$5,021,761 for 2019, representing an increase of 169%. The increase in the Modified EBITDA in 2020 is attributable to the increase as mentioned above in the Adjusted EBITDA of \$52,914,665 and an increase in chance of fair value of investments of \$44,450,461.

Liquidity

As at December 31, 2020, the Company has cash and cash equivalents of \$18,104,899. In addition, the accounts payable and accrued liabilities of \$4,708,051 are payable within 12 months. The Company expects that its cash position will be able to finance its operations for the foreseeable future.

On November 3, 2020, the Company closed a bought-deal short form prospectus offering of 3,354,550 units at a price of \$3.60 per unit for aggregate gross proceeds to the Company of \$12,076,380, including the full exercise of the over-allotment option. In connection with the offering, the Company paid \$1,934,154 in cash and issued 191,414 compensation options. Each compensation option entitles the holder thereof to purchase one unit at a price of \$3.60 until November 10, 2022. Each unit is comprised of one common share of the Company and one-half of one common share purchase warrant of the company. Each warrant entitles the holder to purchase one additional common share at an exercise price of \$4.50 for a period of 24 months.

At December 31, 2020, there have not been any material uses of the proceeds received from the offering.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a leader in the design, development, manufacture and commercialization of advanced plasma processes and products. The Company provides its engineering and manufacturing expertise and its turnkey process equipment packages to customers in the defense, metallurgical, mining, advanced materials (including 3D printing), and

environmental industries. With a team of experienced engineers, scientists and technicians working out of its Montreal office and its 3,800 m² and 2,940 m² manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The Company's core competencies allow PyroGenesis to provide innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. PyroGenesis' operations are ISO 9001:2015 and AS9100D certified. For more information, please visit www.pyrogenesis.com.

This press release contains certain forward-looking statements, including, without limitation, statements containing the words "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "in the process" and other similar expressions which constitute "forward-looking information" within the meaning of applicable securities laws. Forward-looking statements reflect the Corporation's current expectation and assumptions and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties including, but not limited to, our expectations regarding the acceptance of our products by the market, our strategy to develop new products and enhance the capabilities of existing products, our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Corporation with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Corporation's ongoing filings with the securities regulatory authorities, which filings can be found at www.sedar.com, or at www.sec.gov. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Corporation undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new information, future events or otherwise, except as required by applicable securities laws. Neither the Toronto Stock Exchange, its Regulation Services Provider (as that term is defined in the policies of the Toronto Stock Exchange) nor the NASDAQ Stock Market, LLC accepts responsibility for the adequacy or accuracy of this press release.

FURTHER INFORMATION

Additional information relating to Company and its business, including the 2020 Financial Statements, the Annual Information Form and other filings that the Company has made and may make in the future with applicable securities authorities, may be found on or through SEDAR at www.sedar.com, EDGAR at www.sec.gov or the Company's website at www.pyrogenesis.com.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, is also contained in the Company's most recent management information circular for the most recent annual meeting of shareholders of the Company.

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