



PyroGenesis Confirms Securing Additional Government Funding of \$630,000 to Develop Novel Production Process to Transform Quartz into Fumed Silica
Total Funding of \$5.3MM

MONTREAL, QUEBEC (GlobeNewswire – September 8th, 2021) - PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (NASDAQ: PYR) (TSX: PYR) (FRA: 8PY), a high-tech Company (hereinafter referred to as the “Company” or “PyroGenesis”), that designs, develops, manufactures and commercializes advanced plasma processes and sustainable solutions to reduce greenhouse gases, today is pleased to confirm that, further to its press releases dated [May 27th](#) and [July 6th](#), 2021, it has now received \$630,000 in additional funding from a second government agency, for a total project value of approximately \$5.3MM (including sale of IP of \$3.3MM), all to be received by the Company.

As previously disclosed, PyroGenesis, in partnership with HPQ Silica Polvere Inc. (“HPQ Polvere”) a wholly owned subsidiary of HPQ Silicon Resources Inc. (“HPQ”), has been tasked to design, develop and manufacture downstream business opportunities by converting quartz to fumed silica, using a novel one-step plasma-based reactor. This process is designed to enable the reduction of hazardous waste and greenhouse gas (“GHG”) emissions when compared to legacy processes. Under the partnership agreement, PyroGenesis also benefits from (i) a 10% royalty (“Royalty”) on HPQ Polvere’s future sales (with set minimums never to exceed 100% of revenues), and (ii) the option to convert this Royalty at any time into a 50% ownership in HPQ Polvere.

Fumed silica is a white microstructure powder with high surface area and low bulk density. Its commercial applications have applicability in many industries including, but not limited to, personal care, pharmaceuticals, agriculture (food & feed), adhesives, sealants, construction, batteries and automotive. The demand for fumed silica is growing at 5.5% CAGR, with a global addressable market of US\$ 1.6 million in 2020 which is expected to grow to US\$ 2.3 billion in 2027¹.

“We are pleased to receive this final tranche of funding from a second government agency which further solidifies and validates the importance of this project to various government agencies. This process, if successful, will create an alternative solution that would eliminate the toxic by-products of legacy systems while reducing GHG emissions by approximately 90%,” said M. P. Peter

¹ Fumed Silica Market Size, By Product (Hydrophilic, Hydrophobic), By Application (Pharmaceutical, Beauty & Personal Care, Silicone Elastomers, Paints, Coatings & Inks, UPR, Adhesives & Sealants, Food & Beverages), Industry Analysis Report, Regional Outlook, Growth Potential, Price Trends, Competitive Market Share & Forecast, 2021 – 2027, Published Date: Mar 2021, Report ID: GMI4388 | Authors: Kiran Pulidindi, Akshay Prakash

Pascali, CEO and Chair of PyroGenesis. “Work has already begun, and we look forward to providing additional updates on our progress.”

About HPQ Silicon

HPQ Silicon Resources Inc. (TSX-V: HPQ) (OTCQX: HPQFF) (FWB: UGE), is a Canadian producer of Innovative Silicon Solutions, based in Montreal, building a portfolio of unique high value specialty silicon products. Working with PyroGenesis, HPQ is developing:

- The PUREVAP™ “Quartz Reduction Reactors” (QRR), an innovative process (patent pending), which will permit the one step transformation of quartz (SiO₂) into high purity silicon (Si) at reduced costs, energy input, and carbon footprint that will propagate its considerable renewable energy potential.
- The PUREVAP™ Nano Silicon Reactor (NSiR), a new proprietary process that can use different purities of silicon (Si) as feedstock, to make spherical Silicon Nano powders and nanowires; HPQ is also working with industry leader Apollon Solar of France to use their patented process and develop a capability to produce commercially porous silicon (Si) wafers and porous silicon (Si) powders.
- A new plasma-based process that will allow a direct conversion of Quartz into Fumed silica, therefore removing the usage of hazardous chemical in the production of Fumed silica and eliminating the Hydrogen Chloride Gas (HCl) associated with its manufacturing.

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 sustainable solutions which reduce greenhouse gases (GHG), and are economically attractive alternatives to conventional “dirty” processes. PyroGenesis has created proprietary, patented and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in four massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. 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 operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. 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.

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