Voyageur and Altillion Forge Landmark Alliance to Establish North America's First Vertically Integrated Iodine Drug Supply Chain

written by Raj Shah | June 23, 2025

June 23, 2025 (Source) – **Voyageur Pharmaceuticals Ltd. (TSXV:VM) ("Voyageur" or the "Company"),** a Canadian public company developing cost-effective imaging contrast media, is pleased to announce the signing of a non-binding Memorandum of Understanding (MOU) with U.S. based **Altillion Inc.**, a leading technology innovator in mineral extraction. The collaboration marks the launch of **Phase 1** in Voyageur's plan to develop North America's first fully integrated iodine-based drug manufacturing platform, building on progress in its barium contrast media program.

Securing Domestic Iodine – From Brine to Drug

Under the MOU, Voyageur and Altillion will validate the economics of Altillion's **proprietary iodine extraction technology,** targeting recovery rates of 90% and purity exceeding 99% I_2 crystalline flake, a critical pharmaceutical grade standard. Benchmark pricing for I2 flake currently sits at USD $70/kg ($70,000/tonne) (source: Iofina).

A bench-scale test will be conducted as a foundation for a broader feasibility study by an independent engineering firm. The study will assess technical, regulatory, and economic parameters for building:

- An iodine extraction facility on a saltwater disposal site in Oklahoma.
- A pharmaceutical manufacturing campus in Texas.

This infrastructure will serve as the foundation for Voyageur's vertical integration strategy in Iodine-based pharmaceuticals.

A Four-Phase Plan to Build the U.S. Iodine Drug Supply Chain

Voyageur's integration strategy will roll out in four phases:

- **Phase 1: Bench scale testing:** Validate Altillion's extraction process and finalize a licensing agreement for pharmaceutical iodine production.
- **Phase 2: Pilot Production 200 tonne/year**: Build an Active Pharmaceutical Ingredient (API) plant to supply the essential compound for iodine-based contrast agents and other therapeutics.
- **Phase 3**: Scale-Up Expand Iodine production to 1000 tonnes per year.
- **Phase 4: Full Manufacturing**: Construct a sterile injectable facility in Texas, enabling complete in-house iodine contrast drug production.

This strategy positions Voyageur to become the lowest-cost manufacturer in the segment while achieving full control over quality and supply chain continuity, from resource to finished drug products.

Non-Dilutive Funding Potential

Voyageur is in preliminary discussions with multinational contrast media companies for strategic funding partnerships. Additionally, the Company has retained a Washington, D.C. based advisory firm to lead its government relations and funding strategy. The Company aims to access federal, state, and local programs supporting strategic mineral development and pharmaceutical manufacturing. These efforts align with Voyageur's plans to expand U.S. operations over the coming months and years.

Responding to Global Iodine Supply Constraints

Global iodine supply remains under strain, with leading API producers unable to meet rising demand across healthcare, technology, and industry. This supply crunch has restricted expansion in the iodine contrast market, even as demand is driven by:

- Increasing chronic disease prevalence
- Expanded deployment of X-Ray and CT diagnostic equipment
- An aging global population

The global contrast media market is valued at **US$6.3B** and is projected to double to **US$12.6B** by 2032 (Sources: (Grand View Research and GE Healthcare). Despite this growth, North America remains 100% dependent on iodine drug imports – a strategic vulnerability Voyageur aims to resolve.

Voyageur's Competitive Edge

Upon full execution, Voyageur believes it will be the only iodine drug manufacturer in North America with end-to-end vertical control, from natural resource through final sterile injectable drug product. Coupled this with its unique approach to barium contrast, Voyageur is poised to become the first company with a fully integrated dual (barium and iodine) pharmaceutical-grade manufacturing platform in North America.

About Altillion Inc.

Altillion is a value-driven innovator focused on unlocking critical minerals from complex brine sources. Through its proprietary ALIX™ and IRIS™ technologies, Altillion enables the efficient extraction, concentration, and purification of lithium, iodine, copper, and other high-value elements. Backed by a seasoned team with deep operational expertise, Altillion delivers scalable, low-footprint solutions that drive down cost, maximize recovery and simplify downstream processing. By combining field-proven innovation with a commitment to economic and environmental performance, Altillion is reshaping the future of mineral recovery.

About Voyageur Pharmaceuticals Ltd.

Voyageur, a Canadian public company trading under the symbol VM on the TSX Venture Exchange, is in development of barium and iodine Active Pharmaceutical Ingredients (API) that offer high-performance and cost-effective imaging contrast agents. With a strategic focus on vertically integrating the barium and iodine contrast markets, Voyageur aims to become a key player by producing its own barium and iodine. In addition, Voyageur is pursuing the development of new endo fullerene drugs.

Voyageur's business plan is set to generate cash flow by working with established third-party GMP pharmaceutical manufacturers in Canada thereby ensuring the validation of its products by regulatory agencies worldwide. As Voyageur solidifies its presence in the market, it plans to transition into a high-margin domestic manufacturer of radiology drugs.

At the core of its operations, Voyageur owns a 100% interest in the Frances Creek Project. Currently, the world's pharmaceutical barium sulphate is almost entirely synthetically produced resulting in a less effective imaging quality product. Voyageur's Frances Creek resource boasts a rare and exceptional grade mineral suitable for the pharmaceutical marketplace that Voyageur believes will replace the current synthetic products with higher quality imaging products.

Voyageur's ambitious vision is to become the first vertically integrated company in the radiology contrast media drug market. By controlling all primary input costs, from the sourcing of raw materials to final production, Voyageur believes it can ensure quality and cost efficiency. With its approach, it embodies the motto of "From the Earth to the Bottle," highlighting Voyageur's commitment to responsible sourcing and manufacturing practices.

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Cautionary Statement Regarding "Forward-Looking" Information

This news release may contain certain forward-looking information and statements, including without limitation, statements pertaining to: the entering into of a licensing agreement with Altillion Inc.; the successful completion of the bench scale testing, feasibility study, non-dilutive funding, and the completion of Phases 2 through 4 of Voyageur's integrated iodine platform; expectations relating to what will be included in the feasibility study; the Company's plan to have a pharmaceutical manufacturing campus in Texas serve as the foundation of its vertical integration strategy; the Company's *expectation regarding the benefits of its vertically integrated model; the Company's plans to expand its US operations over the course of the following months and years; the Company's belief that it can be the only iodine drug manufacturer in North America with vertically integrated control over its natural iodine resource, intermediate compound production, API synthesis, and final drug manufacturing; the Company's belief that it can become one of the first to operate a fully-integrated iodine-based and barium-based pharmaceutical manufacturing platform; the Company's aim to become a key player in the barium and iodine contrast markets, the Company's plan to transition into a high-margin domestic manufacturer of radiology drugs; the Company's belief that the Frances Creek Project's mineral will replace the current synthetic products in the pharmaceutical marketplace with higher quality imaging products; and the Company's belief that it can ensure quality and cost efficiency by controlling all primary input costs. All statements included herein, other than statements of historical fact, are forward-looking information and such information involves various risks and uncertainties. There can be no assurance that such information will prove to be accurate, and actual results and future events could differ materially from those anticipated in such information. A description of assumptions used to develop such forward-looking information and a description of risk factors that may cause actual results to differ materially from forward-looking information can be found in the Company's disclosure documents on the SEDAR+ website at www.sedarplus.ca. Voyageur does not undertake to update any forward-looking information except in accordance with applicable securities laws.*