



Xanadu and University of Alberta Partner to Accelerate Pharmaceutical Discoveries with Quantum Computing

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TORONTO, Aug. 13, 2026 (GLOBE NEWSWIRE) -- Xanadu Quantum Technologies Limited ("[Xanadu](#)"; NASDAQ/TSX: XNDU), a leading photonic quantum computing company, and the University of Alberta, have announced a strategic research partnership to pioneer novel quantum algorithms for cancer treatment. This partnership, led by the Xanadu algorithms team and Professor Alex Brown from the University of Alberta, aims to develop a quantum computing framework that can accelerate the design of next-generation photosensitizers used in photodynamic therapy, a powerful, non-invasive therapeutic cancer treatment.

Photodynamic cancer therapy uses light-activated compounds, called photosensitizers, to selectively destroy tumor cells, while avoiding the side effects of traditional cancer treatments, such as chemotherapy. However, discovering new and more effective photosensitizers can be difficult, as it requires either slow and costly experiments or classical simulations that don't take into account crucial interactions determining their effectiveness.

Xanadu has recently released [results](#) pioneering the use of quantum computers to simulate important light-matter interactions in photosensitizers, which are critical for determining key properties that are difficult to predict using classical computational approaches. These include their sensitivity to specific wavelengths and their efficiency in triggering cancer cell death. Professor Brown has published highly influential work on benchmarking computational simulations of photosensitizer systems. By combining their expertise, Xanadu and Professor Brown aim to further explore how quantum computing can overcome classical computational challenges in photodynamic drug discovery.

"Current methodologies for developing effective photosensitizers are hampered by a variety of hurdles. By leveraging early fault-tolerant quantum computers to model critical light-matter interactions within photosensitizers, we are positioning quantum computing as a highly competitive method for accelerating photodynamic drug discovery," said Dr. Christian Weedbrook, Founder and Chief Executive Officer of Xanadu.

"Photosensitizers are challenging systems because their performance depends on excited-state processes that are difficult to capture accurately with standard computational methods. By combining Xanadu's quantum algorithm expertise with our experience in modeling photodynamic therapy systems, we're excited to explore how fault-tolerant quantum computing could provide new tools for understanding and designing more effective light-activated cancer treatments," said Professor Alex Brown, Professor and Chair of the Department of Chemistry, University of Alberta.

This partnership aims to strengthen Xanadu's quantum-based workflow for drug design, expanding the framework to tackle increasingly sophisticated challenges in photosensitizer development. Professor Brown's contributions will be vital in identifying important mechanisms that determine therapeutic effectiveness. Together, Xanadu and University of Alberta will use quantum computing to push the boundaries of drug development and simulations for use in the pharmaceutical industry.

About Xanadu

Founded in 2016, Xanadu is a Canadian photonic quantum computing company with the mission to build quantum computers that are useful and available to people everywhere. Xanadu is building fault-tolerant quantum computers using light, with systems designed to compute at room temperature. Backed by more than \$600 million USD in funding, Xanadu develops both hardware and software, including [PennyLane](#), its open-source quantum computing platform. Xanadu is the first pure-play photonic quantum computing company to list on public markets (Nasdaq/TSX: XNDU) and is recognized globally for its breakthroughs in scalable quantum technologies. Visit [xanadu.ai](#) or follow on X [@XanaduAI](#).

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About University of Alberta

The University of Alberta exists to inspire and ignite the human spirit in pursuit of a better tomorrow. Its work is rooted in a commitment to creating a university community where everyone feels valued, barriers to success are removed, and thriving connections are fostered while honouring Indigenous identities, languages, cultures and world views. As one of the world's top 100 teaching and research universities, the U of A ranks among the Top 4 in Canada, providing a \$19.4 billion annual economic

impact in Alberta alone. The U of A seeks to challenge, to change and to always be Leading with Purpose.

Forward-Looking Statements

This communication includes "forward-looking statements" within the meaning of the U.S. federal securities laws and "forward-looking information" within the meaning of applicable Canadian securities laws (collectively, "forward-looking statements"). Forward-looking statements may be identified by the use of words such as "estimate," "plan," "project," "forecast," "intend," "will," "expect," "anticipate," "believe," "seek," "target," "continue," "could," "may," "might," "possible," "potential," "predict" or similar expressions that predict or indicate future events or trends or that are not statements of historical matters. We have based these forward-looking statements on current expectations and projections about future events. These statements include: statements regarding the ability to build novel quantum algorithms for cancer treatment; the ability to develop a quantum computing framework that can accelerate the design of next-generation photosensitizers used in photodynamic therapy; Xanadu's ability to support continued technology development, expand manufacturing capabilities, and accelerate the commercialization of its photonic quantum computing platform; Xanadu's ability to bring its technology to market; Xanadu's ability to scale its technology platform and advance toward practical, real-world use cases; Xanadu's ability to accelerate its commercial roadmap and leadership in photonic quantum computing; the expected benefits from having access to the public markets; Xanadu's ability to deliver long-term value to its shareholders; beliefs regarding the potential of light-based quantum systems to offer a path to scalable, fault-tolerant quantum computing; and Xanadu's mission to build quantum computers that are useful and available to people everywhere.

These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on as, a guarantee, an assurance, a prediction or a definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and will differ from assumptions, many of which are beyond the control of Xanadu. These forward-looking statements are subject to known and unknown risks, uncertainties and assumptions that may cause the actual results of the combined company following the transaction, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such statements. Such risks and uncertainties include: that Xanadu is pursuing an emerging technology, faces significant technical challenges and may not achieve commercialization or market acceptance; Xanadu's historical net losses and limited operating history; that there is substantial doubt about Xanadu's ability to continue as a going concern; Xanadu's expectations regarding future financial performance, capital requirements and unit economics; Xanadu's use and reporting of business and operational metrics; Xanadu's competitive landscape; Xanadu's dependence on members of its senior management and its ability to attract and retain qualified personnel; the potential need for additional future financing; Xanadu's ability to manage growth and expand its operations; potential future acquisitions or investments in companies, products, services or technologies; Xanadu's reliance on strategic partners and other third parties; Xanadu's concentration of revenue in contracts with government or state-funded entities; Xanadu's ability to maintain, protect and defend its intellectual property rights; risks associated with privacy, data protection or cybersecurity incidents and related regulations; the use, rate of adoption, and regulation of artificial intelligence and machine learning; uncertainty or changes with respect to laws and regulations; uncertainty or changes with respect to taxes, trade conditions and the macroeconomic environment; material weaknesses in Xanadu's internal control over financial reporting and the combined company's ability to maintain internal control over financial reporting and operate as a public company; the occurrence of any event, change or other circumstance that could give rise to the termination of the business combination agreement; the outcome of any legal proceedings or government investigations that may be commenced against Xanadu; failure to realize the anticipated benefits of the transaction; the ability of the combined company to issue equity or equity-linked securities in the future; and other factors described in Xanadu's filings with the SEC (www.sec.gov) and the Canadian Securities Administrators (www.sedarplus.com). These forward-looking statements are based on certain assumptions, including that none of the risks identified above materialize; that there are no unforeseen changes to economic and market conditions, and that no significant events occur outside the ordinary course of business. Additional information concerning these and other factors that may impact such forward-looking statements can be found in filings and potential filings by Xanadu with the SEC and the Canadian Securities Administrators, including under the heading "Risk Factors." If any of these risks materialize or assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements. In addition, these statements reflect the expectations, plans and forecasts of Xanadu's management as of the date of this communication; subsequent events and developments may cause their assessments to change. While Xanadu may elect to update these forward-looking statements at some point in the future, they specifically disclaim any obligation to do so, unless required by applicable securities laws. Accordingly, undue reliance should not be placed upon these statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this communication, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.